Daily Goals, Cognitions and Depressive Symptoms in Australia and Iran

by

Yasmin Asgari, B.Sc., M.Sc.

Submitted in fulfilment of the requirements for the degree of

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Deakin University

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I am the author of the thesis entitled

Daily Goals, Cognitions and Depressive Symptoms in Australia and Iran

submitted for the degree of Doctor of Philosophy

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To all participants in this study, my friends and relatives.

To my parents, my sister, and my brother.

To Kambiz, who is always by my side.

And, Ronak, who constantly inspired within me childish happiness.
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<td>AA</td>
<td>Anxious Arousal</td>
</tr>
<tr>
<td>ABS</td>
<td>Australian Bureau Statistic</td>
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<tr>
<td>ABS</td>
<td>Adaptive Bias Scale</td>
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<tr>
<td>ACH</td>
<td>Acculturation Heritage</td>
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<tr>
<td>ACM</td>
<td>Acculturation Mainstream</td>
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<td>AD</td>
<td>Anhedonic Depression</td>
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<tr>
<td>AGEN</td>
<td>Agency</td>
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<tr>
<td>ATQ</td>
<td>Automatic Thought Questionnaire</td>
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<td>ANOVA</td>
<td>Analysis of variance</td>
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<td>APA</td>
<td>American Psychiatric Association</td>
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<tr>
<td>BATD</td>
<td>Brief Behavioural Activation Treatment for Depression</td>
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<tr>
<td>BDI</td>
<td>Beck Depression Inventory</td>
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<tr>
<td>CALD</td>
<td>Culturally and Linguistically Diverse</td>
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<tr>
<td>CBT</td>
<td>Cognitive Behavioural Therapy</td>
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<tr>
<td>CIDI</td>
<td>Composite International Diagnostic Interview</td>
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<td>DGS</td>
<td>Daily Goals Scale</td>
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<tr>
<td>DIMIA</td>
<td>Department of Immigration and Multicultural Affairs</td>
</tr>
<tr>
<td>DAS</td>
<td>Dysfunctional Attitudes Scale</td>
</tr>
<tr>
<td>DIS</td>
<td>Diagnostic Interview Schedule</td>
</tr>
<tr>
<td>DFAT</td>
<td>Department of Foreign Affairs and Trade</td>
</tr>
<tr>
<td>DMHD</td>
<td>Dunedin Multidisciplinary Health and Development</td>
</tr>
<tr>
<td>DSM-III</td>
<td>Diagnostic and Statistical Manual of Mental Disorders, Volume 3</td>
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<td>DSM-III-R</td>
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<tr>
<td>Acronym</td>
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<tr>
<td>HOPE</td>
<td>Hope Scale</td>
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<tr>
<td>ICD</td>
<td>International Classification of Diseases</td>
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<td>KMO</td>
<td>Kaiser-Meyer-Olkin</td>
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<td>MANOVA</td>
<td>Multivariate Analysis of Variance</td>
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<td>MDD</td>
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<td>MDE</td>
<td>Major Depressive Episode</td>
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<td>MHSA</td>
<td>Mental Health Services in Australia</td>
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<td>MMPI</td>
<td>Minnesota Multiphasic Personality Inventory</td>
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<tr>
<td>NAATI</td>
<td>National Accreditation Authority for Translators and Interpreters</td>
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<tr>
<td>ND</td>
<td>Negative Disposition</td>
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<tr>
<td>NSNE</td>
<td>Negative Self-Concept and Negative Expectations</td>
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<td>OB</td>
<td>Optimistic Bias</td>
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<tr>
<td>PATH</td>
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<td>SADD</td>
<td>Standardized Assessment of Depressive Disorder</td>
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<td>SCL-90-R</td>
<td>Symptom Checklist-90-Revised</td>
</tr>
<tr>
<td>Abbreviation</td>
<td>Full Form</td>
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<tr>
<td>--------------</td>
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<tr>
<td>SS</td>
<td>Self Satisfaction</td>
</tr>
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<td>SDS</td>
<td>Self-rating Depressive Symptoms</td>
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<td>VIA</td>
<td>Vancouver Index of Acculturation</td>
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<tr>
<td>WCST</td>
<td>Wisconsin Card Sorting Test</td>
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<tr>
<td>WHO</td>
<td>World Health Organization</td>
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<tr>
<td>WHODAS II</td>
<td>World Health Organization Disability Assessment Schedule</td>
</tr>
<tr>
<td>YSR</td>
<td>Youth Self-Report</td>
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Abstract

The primary aim of this thesis was the development and validation of a new scale, the Daily Goals Scale (DGS). Specifically, the DGS was developed to measure the propensity to set and achieve small daily goals. Several studies have demonstrated that performing simple daily goals in the form of positive activities alleviates depressed mood. However, there is a paucity of scales for assessing the setting of simple daily goals. The second aim was to examine the DGS, and both negative and positive cognitions in relation to depression in a community setting. These aims were examined among both Australians and Iranians, as well as among Iranians living in Australia. Australia and Iran provide two contrasting cultures to study these relationships. In addition, Iranians living in Australia provide an additional context for examining the relationships as this group is influenced by both Western and Iranian culture. While there is extensive research, which examines the role of negative and positive cognitions in relation to depression among Western cultural groups, there has been limited research among non-Western cultures and very little among Iranians.

Three studies were conducted which included an initial assessment, Time 1 (T1), and an 8-week follow-up assessment, Time 2 (T2). The first study was conducted in Australia with 178 men and women at T1 (Study 1A) and 144 out of the original 178 at T2 (Study 1B). The second study was conducted in Iran with 357 men and women at T1 (Study 2A) and 288 out of the original 357 at T2 (Study 2B). The third study was conducted in Australia with 210 Iranian men and women at stage one (Study 3A) and 168 out of the original 210 at T2 (Study 3B). All participants completed the DGS, along with the Mood and Anxiety Symptom Questionnaire, Automatic Thoughts Questionnaire, Negative Disposition, Adaptive Bias Scale, and
Hope Scale. In addition, the Iranians in Study 3 completed the Vancouver Index of Acculturation in order assess participants degree if identification with Australian and Iranian culture.

The results provided evidence for the DGS factorial validity, internal consistency as well as stability over an 8-week span across all three follow-up assessments. Findings of all studies also showed convergent validity of the DGS. Discriminant validity was only found in the Australian sample (Study 1A and 1B). Moreover, all three follow up studies provided support for effects of positive cognitions at T1 in predicting anhedonic depression at T2 after controlling of initial anhedonic depression and negative cognitions. However, there was no support for the effect of acculturation orientation toward Iranian and Australian cultures in predicting anhedonic depression among Iranian-Australians.

The findings also showed a consistent similar pattern of associations between negative and positive cognitions and anhedonic depression and anxiety across all groups. The main differences were: a) the lack of discriminant validity for the DGS among both Iranian groups, b) the DGS did not predict depression among Australians, and c) the higher level of negative and positive cognitions, anhedonic depression and anxiety reported by Iranians compared to Australians.

In conclusion, the DGS demonstrated similar and sound psychometric properties in all groups. Furthermore, the pattern of associations between cognitions and depression was similar among Australians and Iranians. The findings are discussed in relation to previous research. Recommendations for future research and the implications for prevention and intervention strategies are also discussed.
Chapter 1: Introduction

Thesis Overview

Several studies have demonstrated that constructing simple daily goals in the form of positive activities alleviates depressed mood. However, the effectiveness of small daily goals in reducing depressive symptoms has been examined only in the context of activity scheduling, which produces pleasure and achievement in the daily routine of individuals. Research in this area has focused primarily on treating patients with clinical depression, with little regard for those with subclinical depression in the general population. Furthermore, while there is extensive research examining the role of negative and positive cognitions relative to depression in Western cultures, there has been limited research among Iranians. Further research is therefore needed to address the link between reduced depressive symptoms and small daily goals using a broader range of techniques than just activity scheduling, as well as the effects of these techniques on individuals with subclinical symptoms in community settings. Further research is also needed on how negative and positive cognitions relate to depression in the Iranian population, and how these compare to a Western population.

Depression is a serious and costly mental health problem globally (World Health Organisation [WHO], 2012), and the most common mental health problem in Australia (Hawthorne, Cheok, Goldney, & Fisher, 2003; Nehmy, 2010) as well as in Iran (Aeenparast et al., 2012; Barati, 2013; Fadaei, 2014). The causal mechanisms for depression are not yet fully understood (Layous et al., 2011), however its prevalence and prevention and treatment is a growing priority from a public health perspective (Ferrari et al., 2013; Karwoski, Garrat, & Ilardi, 2006; Street, 2002). While depression currently ranks fourth as a major contributor to global burden of disease, WHO (2012)
anticipates that depression will be the lead contributor by 2030. High prevalence, recurrence, relapse, comorbidity, and chronicity of depression are some of the challenging issues about depression that clinicians and researchers seek to understand, prevent, and treat (Addis & Martell, 2004; Layous, Chancellor, Lyubomirsky, Wang, & Doraiswamy, 2011; WHO, 2012). Depression is associated with severe loss of productivity in work and daily activities, and diminished social functioning (e.g. family conflict, losing friends, etc.; APA, 2000; McKnight & Kashdan, 2009). It is currently estimated that 35 to 44% of individuals presenting with depressive symptoms experience unsuccessful treatment and fail to recover from depression (McMakin, 2008).

Researchers propose that subclinical depression possibly starts as a transient symptom such as sadness or depressed mood, which may develop into clinical depression over time, and referred to as Major Depression Disorder (MDD; Beck & Alford, 2009; Muñoz, Beardslee, & Leykin, 2012). Most research has focused on MDD in primary care patients and has addressed various issues such as general health, onset, treatment, relapse, and potentially prevention strategies (Moras, 2006); however, research suggests that a proportion of individuals within the general community experience subclinical depressive symptoms (Pan, 2012). Unfortunately there are many unreported and untreated cases of depression in the community setting (Andrews & Henderson, 2000; Ayuso-Mateos et al., 2010; Jorm, Griffiths, Christensen, Parslow, & Rogers, 2004). This may be attributed to stigma, lack of knowledge about depression, service availability, inability to afford treatment costs, and inadequate health care services (Goldman, Nielsen, & Champion, 1999; Lam & Mok, 2008; Layous et al., 2011).
There is also evidence from several countries suggesting that the burden of disability is greater for those with subclinical symptoms in the community than for those with major depression (Ayuso-Mateos et al., 2010; Jorm, Christensen, & Griffiths, 2005; Judd, Schettler, & Akiskal, 2002; Rapaport et al., 2002). For example, higher social morbidity and costs, functional disability, diminished work productivity, serious risk of developing major depression, and need for more health care services are required by those with subclinical depressive symptoms than clinical depression (Goldney, Fisher, Dal Grande, & Taylor, 2004; Williams et al., 2010).

Interest in subclinical depressive symptoms in the general population, as an indicator of vulnerability towards clinical manifestations, has increased over the last decade (Muñoz, Beardslee, & Leykin, 2012). While the accumulated evidence implies that subclinical depressive symptoms which do not fulfil the clinical diagnostic criteria of depression may nonetheless present a costly personal and public health problem, there is a paucity of research on subclinical depression in community settings around the world (R. Kessler, personal communication, August, 2013; Pan, 2012). The high level of clinical depression in community settings provides a strong rational for also investigating subclinical depression in the general population.

Very limited research exists looking at subclinical depression in community samples promoting self-help strategies with the aim to prevent symptoms reaching a clinical threshold (e.g., Demutska, 2012; Jorm, Christensen, Griffiths, & Rodgers, 2002; Pan, 2011). Researchers have traditionally focused on the role of negative cognitions and cognitive theories to understand, control, and treat depression (Gotlib, & Joormann, 2010). Generally, cognitive theories of depression describe cognitive factors as negatively biased thoughts that include maladaptive concepts such as pessimistic thoughts, beliefs, and attitudes about the self, one’s personal world and the
future, and these have been shown to increase one’s susceptibility to depression (Beck, 1991). Cognitive Behavioural Therapy (CBT), which focuses on restructuring an individual’s pessimistic thoughts, beliefs, and attitudes, is one of the most efficacious treatments for depression (Mazzuchelli, 2010). While alleviating depressive symptoms is crucial, prevention strategies that target the community population are also a priority and may have considerable long-term public health benefits (Jorm, & Griffiths, 2006). This is because despite treatment options, relapse and recurrence of depression is common and so continues to be a major problem, suggesting that reducing the negative cognitions associated with depression may be insufficient for the treatment of depression or controlling depressive symptoms once they already exist (Nierenberg, Petersen, & Alpert, 2003; Rehm, 2010).

In contrast to traditional cognitive theories of depression which focus on eliminating negative cognitions to overcome depression, positive psychology focuses on the positive aspects of an individual’s cognitions to enhance the efficacy of prevention, treatment, and recovery from depression (Karwoski et al., 2006; Sheldon & King, 2001). Positive psychology emphasises building and reinforcing cognitions such as hope, optimism, and goal engagements to foster resilience against negative thoughts and experiences (Seligman, 2005; Snyder, 2000).

Goal engagement, as a cognitive and behavioural intervention, can reduce depressive symptoms by identifying links between individual’s activities and their mood (Addis & Martell, 2004). Focusing on daily goals and activities is a core component of various treatments for depression (e.g., cognitive behaviour therapy, interpersonal therapy, emotion-focused therapy) and can also be used in self-help approaches to depression management (Addis & Martell, 2004; Rehm, 2009). Daily goals that are simple and enjoyable are a form of activity scheduling which can help
relieve negative emotions, improve depressive symptoms, and restructure negative cognitions (Dobson et al., 2008; Lewinsohn, 1976; Nicklin, 2009; Rehm, 2010; Snyder & Lopez, 2009). Engagement in daily activities may also change and reduce the pattern of behavioural avoidance and inactivity characteristic of depressive symptoms (Thompson & Bullock, 2012), with evidence suggesting that number of activities is positively associated with levels of well-being in a nonclinical sample (Mazzucchelli, Kane & Rees, 2010).

Boosting simple and pleasant activities to prevent depression is fundamental to the positive psychology approach to treating depression (Seligman, 2010). Goal setting in particular has been linked to fostering optimism and hope relative to the prevention and treatment of depression, with research showing that hope and optimism help individuals with depressive symptoms to experience positive emotions and cognitions (e.g. confidence, motivation) through the process they use to achieve their goals (Hawkins, 2004; Rehm, 2010; Seligman, 1991; Seligman, Steen, Park, & Peterson, 2005; Snyder et al., 2000). Given that depression is a public health problem world-wide, it is important to explore how to provide easy, low-cost, and accessible self-help strategies enabling individuals to prevent, control, manage, and overcome their depressed mood in the absence of clinical services (Moussavi et al., 2007).

While research on the early intervention and prevention of depression is an important area of inquiry, the field is subject to cultural assumptions about how individuals experience and manifest depressive symptoms (Shiraev, & Levy, 2010). Successful interventions have been applied in Western societies using cognitive model strategies (Naeem et al., 2011), and complementary positive psychological approaches to depression prevention and treatment have grown over the past decade in Western societies (Carey, 2001). However, little is known about depression, and
negative and positive cognitions from a positive psychological perspective, in non-Western cultures such as Iran (Kennard, Stewart, Hughes, Patel, & Emslie, 2006).

While most theoretical and empirical depression-related research has been conducted in Western countries, an increasing number of studies conducted in non-Western cultures, such as Iran, suggest high levels of both sub-clinical and clinical depression (Gallup, 2013; Sadeghirad et al., 2010). Consistent with international depression research, the majority of studies in Iran have focused on MDD and comorbidities. Also similar to other non-Western countries, there is a substantial research gap in evaluating subclinical depressive symptoms in the Iranian general population, as well as in non-Western minority community settings in Western countries such as Australia.

‘Acculturation’, the process of entering and adopting a new culture such as in the case of Iranian migration to Australia, is an issue related to cross-cultural research on depression that deserves greater attention. The Australian government has highlighted the need to address the influence of cultural diversity in mental health, particularly in the case of depression (Klimidis, Minas, & Kokanovic, 2006). While Iranians constitute one of many minority groups in Australia’s culturally-diverse society, their population is growing fast (Ziaian, 2003). At present, there is no research examining positive and negative cognitions in relation to subclinical depressive symptoms and acculturation among Iranians in Australia; and to date, there is no research examining the prevalence of depressive symptomatology among Iranian-Australians.

The first aim of this thesis was to develop and validate the DGS, a new scale designed to measure individuals’ propensity to set and achieve small daily goals. In developing a new psychometric tool, it is important to investigate its cross-cultural
validity and reliability (Taouk, Lovibond, & Laube, 2001). To achieve this first aim, the psychometric properties of the DGS were examined in three community-based samples of Australians, Iranians, and Iranian-Australians. The second aim was to compare the relationship between the DGS, negative and positive cognitions, and anhedonic depression across these three different samples. The third aim was to examine if positive cognitions added any additional variance in predicting depression over the 8-week period, after accounting for initial levels of depression and negative cognitions. An additional aim was to investigate the relationship between acculturation and depression as well as negative and positive cognitions among Iranian-Australians.

The next part of this chapter provides a summary of the prevalence rates of depression in Western and non-Western societies, followed by an overview of depression in Australia, and brief examination of cultural aspects of depression.

**Epidemiology of Depression in the World**

Evidence suggests that the prevalence of depressive disorders is generally high across countries around the world; however, specific information on prevalence and distribution within many countries is non-existent (Kessler & Bromet, 2013; Patel, 2001). In the existing cross-cultural literature, most epidemiological studies have focused on clinical depression in primary care samples rather than subclinical or mild depression in community samples (Ayuso-Mateos, Nuevo, Verdes, Naidoo, & Chatterji, 2010; Kessler et al., 2010; Lyness et al., 2006; Waraich, Goldner, Somers, & Hsu, 2004). Due to the limited number of prevalence studies on subclinical depression in the general population, the following section provides an overview of the most relevant studies on both subclinical and clinical depression.
A 12-month follow up study conducted by Broadhead et al. (1990) focused on minor depression in an adult community residence of North Carolina (N = 872; aged ≥18 years) by using the Diagnostic Interview Schedule (DIS). Overall, 65% of participants presented symptoms of depression (mostly minor depression without core symptoms, 25.5%); a one-year follow up showed that 12.7% of participants had developed MDD. In another study, Naeem et al. (2011) focused on screening of depression in a Pakistani community sample (N = 103). According to the Pakistan Depression Questionnaire (PADQ), based on International Classification Diagnosis (ICD 10) criteria, 22.3% of participants displayed symptoms of minor depression.

The global prevalence and distribution of clinical depression in the general population has been reported in some studies. Weissman et al. (1996) conducted a cross-national comparison of the lifetime and 12-month prevalence of Major Depressive Episode (MDE) in community based populations of the USA, New Zealand, France, Germany, Puerto Rico, Canada, Italy, Korea, Taiwan, and Lebanon. The DIS and Diagnostic and Statistical Manual of Mental Disorders, third edition (DSM III), criteria were used to define depression in this study. Prevalence rates over 12 months varied between 0.8% in Taiwan and 5.8% in New Zealand, while lifetime prevalence ranged from 1.5% in Taiwan to 19.0% in Lebanon. In another population-based study, Moussavi et al. (2007) reported the 12-month prevalence of MDE across 60 countries. Applying ICD-10 criteria, the prevalence of MDE averaged 3.2% in participants without a comorbid physical disease.

Bromet et al. (2011) conducted a community epidemiological survey to investigate the prevalence of MDE around the world in 18 countries from every continent. Using the same protocol and measurements as the WHO (WHO CIDI version 3.0), the lifetime prevalence of depression was found to be higher in high-
income countries (15%) compared to low and middle-income countries (11%); MDE was highest in France, the Netherlands, New Zealand, and the USA (over 30%). Results for the 12-month prevalence of MDE was lowest in Japan (2.2%) and highest in Brazil (10.4%). This study also showed the incidence of MDE, which was very high in India (36%) and as low as 12% in China. The midpoint (5%) was consistent with previous surveys across all countries. Underlining the significance of these prevalence rates, the Global Burden of Disease 2010 study identified MDD as the most common cause of disability and malfunction, with the burden of MDD increasing by 37.5% between 1990 and 2010 (Ferrari et al., 2013).

This review of epidemiological surveys shows that the prevalence estimates of depression vary across and within different countries. This variation could be due to a combination factors such as practical issues, research design or measurement; however, it also highlights that prevalence rate estimates of subclinical depression in general populations across different cultural groups requires further investigation (Ferrari et al., 2013; Kessler & Bromet, 2013).

**Depression in Australia**

Australia has a population of 23.5 million (ABS, 2014), and is a multicultural society with over 200 culturally and linguistically diverse groups (Commonwealth of Australia, 2007). Australia has one of the largest proportions of immigrant populations in the world, with an estimated 24% of the total population (4.96 million people) born overseas (Commonwealth of Australia, 2008). The national language is English, and 64% of the population identify as Christian; however, there are many other languages and religions among its cultural diversity groups (Department of Foreign Affairs and Trade [DFAT], 2014).
Australia has a significant history of research on depression (National Health, 1999). Over the last three decades, the Australian Federal and State/Territory governments cooperated to develop and implement the National Mental Health Strategy, a national policy guiding the standardisation and improvement of mental health programs and services at the State/Territory level, to better address the mental health needs of Australians (ABS, 2008; beyondblue, 2011; Goldney, Hawthorne, & Fisher, 2004). The value of mental health research to the population is reflected by the high amount of interest, effort, and funding dedicated to control, prevent, and treat depression in Australia (Mental Health Services in Australia [MHSA], 2014). A variety of mental health care services such as consultations with both general practitioners and specialists, hospital based outpatient services, and community mental health care services are provided in Australia to help people with depression (MHSA). The rate of access for mental health services is approximately 96 services per 1,000 Australian people (ABS, 2009), and the Australian government also funds and delivers more services and supports for mental health issues based on the eligibility and broader needs of depressed individuals (MHSA).

Despite the provision of mental health services, depressive disorders remain a significant public health issue in Australia (beyondblue, 2011). A common problem associated with depression is comorbidity with other mental and physical illnesses, which is associated with higher impairment, higher risk of suicidal behaviour, and more frequent use of health services (ABS, 2009). For individuals with a physical illness, depression is the most prevalent comorbid mental disorder (64%), while depression and anxiety disorders are the most common co-occurring mental disorders (39%) in Australia (ABS, 2009). Relapse and recurrent depressive episodes are a key problem treating depression; evidence suggests that 77% of Australians with
depression had more than one episode of depression over a five-year period (Wilson, Duszynski, & Mant, 2003). Further to the problem of relapse, it may be that depressive symptoms are underestimated or underrecognised in both primary care and general populations, keeping services from those who need them (Kilkkinen et al., 2007; Williams, & Andrews, 2013).

The prevalence of depression is high in Australia: one in five people experience depression sometime in their lifetime (beyondblue, 2008; Kilkkinen et al., 2007; Manicavasagar, 2012). Surveys based on community samples further report four to 10% of the general population experience an episode of depression over a 12-month period (Andrews, Henderson, & Hall, 2001; Kessler et al., 2003; Kessler et al., 2006), while the ABS (2011) reported a prevalence rate of 7.6% in Australian adults aged 16 to 44 years. According to a modelling study based on Australian and Dutch prevalence data, the lifetime risk of one or more MDE’s was estimated as 30% for men and 40% for women (Kruijshaar et al., 2005).

The prevalence rate of subclinical depression in Australia has been estimated at approximately 12.9%, suggesting it is important to better understand this problem (Goldney et al., 2004; Williams et al., 2010). Risk of relapse is increased amongst those who continue to experience subclinical symptoms, or who have a history of depression, after recovering from an episode of depression (Ayuso-Mateos, Nuevo, Verdes, Naidoo, & Chatterji, 2010; Beck, & Alford, 2010).

Depression costs the Australian economy around $12.6 billion every year with more than six million working days lost due to impaired productivity attributed to depression (Manicavasagar, 2012). In addition to the significant daily social and financial burdens depression places on individuals and their families, over 80% of
attempted and completed suicide in Australia is attributed to depression (Manicavasagar, 2012; Moon, Meyer, & Grau, 1999).

In Australia, clinical assessment and diagnosis of depression is based on a review of the individual’s mental health history and a mental state examination using either DSM-5 (APA, 2013) or ICD-10-AM (Australian Modification) classification criteria (WHO, 2010). The DSM system has been used in Australian clinical practice for decades, incorporating both a dimensional and categorical subtyping system (National Health Priority Areas Report, 1999). Depressive symptoms are similarly defined by both the DSM and ICD, which are generally compatible except that ICD-10 is more sensitive in cross-cultural aspects (Bradley, 2013; Suija, 2010). These classification systems are used in research as well as in clinical assessment. The most common self-report measure of depressive symptoms in the community and in research populations is the Beck Depression Inventory (BDI; Beck, Steer, & Brown, 1996).

In Australia, the construct ‘depression’ has been defined as an affective disorder (or mood) with symptoms range from subclinical (not meeting the criteria as a disorder) to clinical depression (meeting criteria as a disorder; beyondblue, 2011; National Health Priority Areas Report, 1999). These diagnostic categories (clinical, subclinical and non-clinical) are based on the individual’s presentation of depressive symptoms, their severity, and duration (beyondblue, 2011; Mazzucchelli, 2010). Symptoms associated with depression are broad yet characteristically unique, being behavioural, emotional, physical and cognitive in nature, and can vary among individuals (beyondblue, 2011).

Most Australian studies have focused on the more severe form of depression rather than subclinical depressive symptoms in community settings. Although a
number of studies have been conducted on behavioural, physical, and emotional aspects of depression in Australia, the most research has focused on cognitive aspects of depression (e.g., Hawkins, 2004; Hawkins, & Miller, 2003; Hyder, 2013; Mazzucchelli, 2010).

A variety of different therapies are practiced in Australia to treat depressive disorders (e.g., cognitive behaviour therapy, interpersonal therapy, emotion-focused therapy, pharmacological treatment, etc.; beyondblue, 2011; Knauss, & Schofield, 2009). In addition to the efficacy of a therapeutic approach, treatment choices should depend on the severity of the individual’s symptoms, conceptualisation of depression, and the patient’s character. Evidence suggests that for severe forms of depression, combined medical and psychological intervention is particularly effective (Young, Weinberger, & Beck, 2001); however, a multi-component treatment using behavioural activation along with cognitive approaches appears to be the most efficacious treatment (Mazzucchelli, 2010; Knauss & Schofield, 2009). As past research has emphasised efficacious treatment for severe forms of depression, such as severe MDE, the clinical efficacy and utility of therapies designed to treat subclinical or mild depression remains unexplored in Australia (Knauss, & Schofield, 2009).

Regarding prevention of depression in Australian youth, some studies have demonstrated that targeted prevention programs are more effective than general interventions for adolescents (Goldney et al., 2004; Jorm, 2012; Sutton, 2007), and suggest that prevention strategies for young people with subclinical depressive symptoms could significantly reduce the onset and/or severity of depression (Manicavasagar, 2012).

A major concern for people experiencing depression in Australia is stigma (Jorm et al., 2006). Evidence suggests that individuals suffering from depression can
be reluctant to seek professional help in the community setting due to fear of being stigmatised, which may exacerbate depressive symptoms (Barney, Griffiths, Jorm, & Christensen, 2006). Although improving knowledge about depression is a large part of mental health programs in Australia, there is very little information about how to reduce the stigma associated with depression (beyondblue, 2011; Jorm et al., 2006). However, strategies such as building psychological resilience, self-help or first-aid management, and school-based prevention programs have been suggested as possible ways to reduce this stigma (beyondblue, 2011; Jorm et al., 2006).

Overall, although remarkable advances in the detection, treatment, prevention, disability, and burden management of depressive disorders have been made across Australia over the last decade, the occurrence of depression continues to challenge researchers and clinicians alike (Manicavasagar, 2012). More importantly, compared to clinical forms of depression, very limited research has been conducted about subclinical depression in the Australian community. Evidence suggests that clinical depression can be disabling, reducing individuals’ daily functioning and productivity, and requiring a higher level of health care (beyondblue, 2011). Considering the rate of relapse and recurrent depressive episodes, and the probable relationship of subclinical depressive symptoms associated with these, there is a need to focus on the aspects of subclinical depression to understand this relationship (Manicavasagar, 2012).

**Culture and Depression**

‘Culture’ can be described as a set of complex, multi-dimensional, and dynamic factors, comprising a significant framework for emotional and cognitive experiences (Bashiri, & Spielvogel, 1999; Stewart et al., 2004). Learned and transmitted beliefs, attitudes, behaviour, and practices, such as religious and spiritual traditions, are aspects of culture (APA, 2013). Culture also describes the personal,
social, and intergenerational lifestyle of a group shaped by historical, economic, ecological, and political forces. Cultural values influence all aspects of human life (Hofstede, 2001). The predominant cultural values of a community or country can determine individuals’ personal views on a wide range of social, psychological, and personal issues (Shiraev & Levy, 2010). Cultural values can thus also affect mood and consequently impact on the symptoms, expression, presentation, prevalence, diagnosis, and treatment of depression (Cinarbas, 2007; Marsella, 2003).

Two key types of influential cultural values will be discussed briefly here (Shiraev & Levy, 2010). ‘Traditional culture’ is a construct rooted in traditions, rules, symbols, and principles established predominantly in the past of a community, whereas ‘non-traditional culture’ (often called ‘modern culture’) is based on new principles, ideas, and practices. Cultural characteristics, such as ‘collectivism’ and ‘individualism’, are components of each respective cultural construct (Hofstede, 1980; Hui & Triandis, 1986; Triandis, 1995). Individualism is stronger in non-traditional Western countries (e.g., United States, Australia, Germany, and Sweden), and refers to values such as independence, autonomy, self-sufficiency, competitiveness, and pursuit of individual goals. People in individualistic Western societies are more likely to pursue needs, interests, and goals that are private and unique to them. Conversely, the core values of traditional, non-Western, collectivistic cultures (e.g. Taiwan, India, Japan, and Iran) are social harmony, family devotion, sociability, and giving priority to the goals and needs of the social group. In collectivist societies, the individual’s behaviour is determined by the norms, roles, and goals of their collective community, rather than by personal attitudes and perceived rights (Pridmore & Pasha, 2004). The essence of non-Western values is respect for tradition, respect for authority, and overall social stability (Shiraev & Levy, 2010). Moreover, the self is conceptualised
as part of a shared group identity (Triandis, 1994), so that perceived obligations and social norms influence individual behaviour (Cho, Mallinckrodt, & Yune, 2010).

These two distinct forms of culture –traditional and non-traditional- suggest that the manifestation of depressive symptoms could be differently conceptualised and experienced through the individuals’ cultural identity and its associated values. For example, in individualistic Western cultures depression as a construct is a negative emotional experience or personal pain, which the depressed individual can describe and display in their community without fear of serious social repercussion. However, in collectivistic non-Western cultures, displaying the emotional, cognitive, or affective components of depression is prohibited due to cultural norms and values which prioritise the well-being of the community over the individual, or infer the well-being of the community based on the behaviour of the individual. Displaying depressive symptoms in this context may reduce social support or damage ones community network (Shiraev & Levy, 2010).

Lastly, given that depression is a cross-cultural public health problem, it is important to consider how different cultures may conceptualise and influence the manifestation of depressive symptoms, by understanding culturally universal (‘etic’) symptoms and culturally specific (‘emic’) symptoms (Lavender, Khondoker & Jones, 2006; Marsella, 2003; Sue & Sue, 2008; Taouk, Lovibond & Laube, 2001). The etic perspective considers similarities among depressive symptoms expressed by individuals regardless of culture, with the aim of applying universal diagnostic criteria; while, the emic perspective acknowledges the cultural specificity which with some symptoms of depression are expressed (Kalibatseva, & Leong, 2011). Marsella (2003) emphasised that both universal and culture-specific aspects of depressive symptoms are connected and important in cross-cultural studies of depression.
In summary, cross-cultural research indicates that core symptoms of the depressive syndromes can be found in many cultures, although the range of depressive symptoms expressed between cultures may vary (Shiraev & Levy, 2010). Similarly, while most depressive symptoms are universal cross-culturally, some are culturally distinct, and all should be considered meaningful to recognise depressive symptoms in cross-cultural research and practice (Kleinman, 2004). Further research to better understand depression as a cultural-relevant construct, and how symptoms manifest in both traditional and non-traditional cultures, is recommended (Beck & Alford, 2009).

**Chapter Summaries**

Chapter 2 provides a review of the theoretical and empirical literature justifying the thesis. The review begins by defining depression, and then outlines the theoretical and empirical background of the two most influential cognitive theories of depression. Positive psychology is then introduced as a complementary perspective to traditional cognitive models. Optimism, hope, and goal-setting are each reviewed, and the importance of research into depression is highlighted with reference to these positive cognitions. The importance of small daily goals in relation to treating depression concludes this chapter.

Chapters 3 (Study 1A) and 4 (Study 1B) present respective empirical reports on the construction of the DGS and follow-up study using this measure, both conducted using an Australian sample. Study 1A examined the factor structure, reliability, and convergent and discriminant validity of the new DGS. In Study 1B, the stability of the DGS and associated measures was examined over an 8-week follow-up period. Furthermore, the DGS and both negative and positive cognitions were assessed as predictors of depression, using Time 1 (T1) and Time 2 (T2) responses.
Chapter 5 reviews the nature and cognitive aspects of depression in non-Western cultures, and more specifically reviews the background, nature, and cognitive aspects of depression among Iranians. A summary review of positive psychology in Iran is also provided.

Chapters 6 (Study 2A) and 7 (Study 2B) provide empirical reports on the replication of Study 1A and 1B, respectively, using an Iranian sample. In addition to the general aims previously explained with reference to Study 1A and 1B, specific aims of study 2A were to explore the factor structure of ABS and ND among Iranians as the first study of its kind, and also to investigate negative and positive cognitions in relation to anhedonic depression among Iranians.

Chapter 8 provides a historical overview of general migration and Iranian migration in Australia, before reviewing the significance of acculturation and relevant studies on acculturation and its implications for mental health among Iranians.

Chapters 9 (Study 3A) and 10 (Study 3B) provide empirical reports further investigating the psychometric properties of the DGS using an Iranian-Australian sample and examining the stability and predictive power of the DGS, respectively. Study 3A included an additional measure of acculturation and further to assessing the validity and reliability of the DGS, examined the impact of acculturation on depression in Iranians living in Australia. Chapter 10 examined cognitive and acculturation predictors of depression, and compares the results of Study 3B with Study 1B and 2B.

Lastly, Chapter 11 provides a summary and discussion of the main findings of each study. The limitations and suggestions for future research, theoretical implications of the findings and conclusions are also provided.
Chapter 2: Theoretical Background

Overview

This chapter first provides an appropriate definition of depression for the purposes of this thesis, followed by a review of two traditional cognitive theories of depression. These two theories include Beck’s (1967) cognitive theory and Seligman’s (1975) hopelessness theory, both of which emphasise specific types of negative cognitions that characterise the cognitive patterns of individuals experiencing depressive symptoms. Negative and positive cognitions in depression will next be considered from two perspectives: cognition in the contexts of cognitive theories of depression, and in the context of positive psychology. This review, framed from the positive psychology perspective, will present an alternative approach to understanding depressive symptoms by emphasising the role of positive cognitions.

This literature review will proceed to explore the constructs related to positive cognitions including optimism, hope, and goal setting. While the accumulated research evidence suggests that these related constructs significantly contribute to psychological resilience against depression and recovery from depression, this review will highlight the lack of appropriate measures for assessing the pursuit and achievement of simple daily goals. This review will conclude with a discussion on the need to develop a measure of simple daily goals to better understand and manage depressive symptoms.

Depression in this thesis

Researchers within the field of clinical psychology generally, and in the field of clinical depression specifically, adopt various definitions of depression and depressive symptoms. Such variations reflect the various theoretical perspectives and
methods used to define and measure depressive symptoms. To ensure clarity and consistency when discussing depression in this thesis, the psychological construct of ‘depression’ must first be reviewed and defined.

The term ‘depression’ may be conceptualised differently by clinicians, academics, researchers, and the community. Individuals from the general population may use the term to refer to a transient stage of low mood, which could be experienced by all individuals, irrespective of gender, age, and cultural backgrounds. On the other hand, clinicians and researchers use the term ‘depression’ to refer to a serious mental illness, which considerably affects an individual’s psychological and social functioning. Therefore, the use of the word depression may encompass several levels including mood state, as a group of symptoms, or a pathological state relating to a disease category, with inclusion and exclusion criteria (Lam, & Mok, 2008; Muñoz, Beardslee, & Leykin, 2012). The following section will provide a brief definition of both clinical depression as well as subclinical depression.

According to the continuity perspective on mental illness, unipolar depression should be considered as part of a dimensional spectrum, with symptoms ranging from non-clinical and increasing in severity, reaching clinical severity and meeting illness criteria for Major Depressive Disorder (MDD), with varying levels of duration and severity (Beck & Alford, 2009; Muñoz, Beardslee, & Leykin, 2012; Rapaport et al., 2002).

Non-clinical depressive symptoms refer to a transient mood or emotional state characterised by low mood, such as sadness, whereas MDD is the most severe and commonly diagnosed form of depression, which involves psychological, biological, and social symptoms impairs personal and social function. The Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5; APA, 2013) criteria for
MDD consist of nine symptoms. These symptoms include depressed mood (sadness), loss of interest (anhedonia), significant weight loss or weight gain, psychomotor retardation or agitation, social withdrawal, insomnia or hypersomnia, fatigue and loss of energy, feelings of guilt, lack of concentration, and suicidal ideation and/or behaviours. At least five of these symptoms should be present for a minimum period of two weeks and at least one of the five symptoms must be a core depressive symptom (‘anhedonia’, loss of interest, or ‘depressed mood’) for diagnosis to be made. Over time, the individual with MDD may show functional impairment in daily activities and avoid social contact.

In this range, subclinical depression (alternatively known as subthreshold, subsyndromal, or minor depression) is a term used to refer to depressive symptoms that do not meet the criteria for a diagnosis of a MDD. To diagnose subclinical depression, two to four symptoms of depression must be present with at least one core symptom that is either anhedonia or depressed mood for at least a two week period (APA, 2013). The importance of anhedonia as a core symptom of subclinical and clinical depression was proposed by the DSM-IV, although to date there is very limited research about this symptom (Demyttenaere, 2013; Dichter, 2010). Anhedonia is characterised as a state of low positive mood and is considered unique to depression (Clark, Beck, & Alford, 1999).

Overall, the definition and conceptualisation of depression provided in this thesis refers to subclinical depression, unless otherwise specified. Anhedonia (loss of interest), as a core depressive symptom, is a focus of this thesis’ studies. This thesis argues that the presence of anhedonia is a key indicator of an individual’s vulnerability to developing severe depression, such as MDD.
Cognitive Theories of Depression

Traditional cognitive theories of depression suggest that negative cognitions indicate vulnerability to depression and increase depressive symptoms (Beck, 1991; Clark, Beck, & Alford, 1999; Lightsey, 1994). ‘Cognition’ has been a key factor in understanding depression over the last forty years (e.g., Beck, & Alford, 2009; Butler, & Guest, 1989; Dobson, 2009; Jarrett, Vittengl, Doyle, & Clark, 2007). Cognitive theories of depression have focused on negative forms of cognition (or pessimism) in the aetiology, onset, maintenance, and treatment of depression (Cheng & Furnham, 2001). Such theories propose that individuals’ negative cognitive styles (e.g. negative thinking and beliefs), the methods they use to interpret and understand life events, and their perception of daily problems, predispose them to vulnerability to depression (Hamilton, 2000). Efficacious interventions designed for the treatment and prevention of depression are mostly based on cognitive models (Fisher, 2010; Rehm, 2010). Beck’s (1967) cognitive theory and Seligman’s (1975) hopelessness theory are two prominent cognitive theories of depression, and will be examined in the next section.

Beck’s Cognitive Theory

The first cognitive theory of depression was proposed by Beck (Beck, 1967; Beck, 1976; Beck, 1987) and has been influential in the study of depression over the past forty years, although it has been modified over time. Beck (1967, 1976) proposed that depression is a disorder of thinking as much as it is of mood, where cognitive symptoms of depression lead to affective and behavioural symptoms of depression. The model holds that all dysfunctional emotions and behaviours associated with depression are influenced by negative, often distorted, cognitions (Beck, & Alford, 2009). Beck (1991) recognised that a combination of factors within the genetic, biological, personality, developmental, social domain, and familial domain contribute
to depression. He also asserted that negative cognitions are central to depression although they may not to be the only cause of depression. In his theory, Beck (1967) introduced important cognitive concepts including negative automatic thoughts, maladaptive attitudes (schemas), cognitive errors, and the cognitive triad. He described various types of distortions, errors, and biases that distinguish the thinking of depressed individuals and make them susceptible to depression.

Negative automatic thoughts are distorted cognitions that result in biased negativistic evaluations, interpretations, and pessimism about the self, the world, and the future (Clark, Beck, & Alford, 1999). Automatic negative thoughts are unintentional and a product of depressed individuals' information-processing system. These thought patterns could result in a distorted perception of reality, and continually remind depressed individuals of their seeming inadequacy and the hopelessness of their situation (Beck, 1991).

Maladaptive attitudes are a collection of beliefs, knowledge, and negative attitudes about one’s self, which are converted into templates or ‘schemas’. Beck (1976) described schemas as cognitive concepts, which become cognitive content and contribute to the structure of an individual’s belief system. This belief system helps individuals figure out their experiences by screening, organising, and processing information. However, to sort and process information quickly, individuals tend to focus on information that fits their existing schemas, while distorting disregarding information at odds with the existing schemas (Soygüt, & Savasir, 2001). In depression-prone individuals, who may hold negative beliefs and attitudes about themselves, the default negative distortion and interpretation of information to affirm existing negative self-schema may result in depressed mood and further strengthen negative schemas (Fisher, 2010).
Cognitive errors are also important concepts introduced by Beck (1991). He argued that people experiencing depressive symptoms distort reality in a systematic manner, resulting in negative self-bias. Specific types of cognitive errors characteristic of depressed individuals include selective abstraction, overgeneralization, arbitrary inferences, and magnification.

In early cognitive theory, Beck (1967) proposed that depressed individuals maintained their depression via a triad of negative cognitive constructs; that is, depressed individuals have characteristically negative thoughts about the self, world, and future, which are used to repeatedly interpret themselves, their experiences, and their future in negative ways. Together, these constructs form the negative cognitive triad, leading to symptoms of depression (Barlow & Durand, 1999). The negative cognitive triad is the most important feature of Beck’s theory because it remains dormant until activated by life stressors (e.g., losing a job). Once these particular negative systems are activated, they influence information processing and cause negative automatic thoughts which force the individuals to see themselves, their world, and their future in a negative way (Beck, 1970).

Based on his theory, Beck (1967) developed cognitive therapy, an active and structured treatment process for depression which directly addresses and attempts to restructure negative cognitions. This therapeutic approach presumes that affect and mood is preceded by thought; to address negative mood, negative thoughts must first be neutralised. Thoughts are neutralised by helping the depressed individual to identify and correct false negative beliefs about themselves that contribute to negative mood and behaviours (Beck, 2008). By learning to replace negative thoughts with healthy thoughts, the self-concept, behaviour, and physical state of the depressed individual will improve.
While cognitive therapy was adapted across various studies as an effective treatment for depression during 1960s, a cognitive revolution in psychology took place in 1970s, as the focus moved from cognitive change to behaviour change (Beck, 2001). Cognitive therapy techniques and behavioural modification techniques were combined to form cognitive behavioural therapy (CBT; Beck, 2001). Behavioural components, such as activity scheduling, avoidance behaviour, and positive reinforcement, were already included in cognitive theory and therapy; however, emphasis was now placed on these components as contributors to, and not just consequences of, depression. CBT is currently used by clinicians to teach depressed individuals how to address their negative cognitions, while also addressing their avoidance and withdrawal behaviour by using daily activities and planning changes in their daily routines (Beck & Alford, 2009).

In summary, the cognitive theory of depression emphasises that systematic negative cognitions (such as dysfunctional or maladaptive thoughts, beliefs, or attitudes about the self, one’s personal world, and future) generate pervasive negativity and vulnerability to depression (Beck, 1967, 1999; Clark, Beck, & Alford, 2009; Clark et al., 1999; Young, Weinberger, & Beck, 2001). Cognitive theory and therapy have been progressively refined over the last 40 years, since the function of cognitions in depression and in treatment was first described by Beck in the 1960s (Knapp, & Beck, 2008; Mazzucchelli, 2010). Multiple studies have support Beck’s position, that negative cognitions are more common among depressed than nondepressed individuals (e.g., Beck & Alford, 2009; Hankin et al., 2009; Lewinsohn, Joiner, & Rohde, 2001).
The Hopelessness Theory

The second major cognitive model of depression is hopelessness theory (Abramson et al., 1989), which is a revision of the helplessness model (Abramson, Seligman, & Teasdale, 1978). In the original learned helplessness model, Seligman (1975) proposed that when people confront an unwanted situation and fail to escape this despite their initial attempts, they come to believe that they are helpless to change their current and future circumstances, become depressed, and cease attempting to escape. Individuals develop a comprehensive expectation that future outcomes will be unrelated to actions, resulting in learned helplessness (Maier & Seligman, 1976).

Over the years, the helplessness model has been modified by Abramson, Seligman, and Teasdale (1978), and again by Abramson, Metalsky, and Alloy (1989). Abramson et al. (1978) introduced the idea that individuals have an ‘attributional style’, which is a cognitive personality characteristic. A person’s attributional style (or alternatively, their ‘explanatory style’) consists of characteristic cognitions about the causes of life events, and reflects how a person habitually explains the causes of bad events. The types of explanations that people present for the causes of life events are their attributions and tend to fall into certain categories (Peterson & Seligman, 1984). Attributional style theory proposes that individuals with a cognitive style similar to that of learned helplessness are particularly vulnerable to hopelessness and depression. Depressed individuals have an internal, stable, and global attributional style for negative events, where they tend to attribute negative events to personal failings or incompetence, believe that the causes for negative events remain consistent over time, and believe that negative events impact all aspects of their life, rather than a narrow domain (Abramson et al., 1978). Depressed individuals also tend to attribute positive events to external, unstable, and specific causes. The occurrence of the
features of the attributional style can explain the onset of depressions associated with helplessness (Clark et al., 1999).

Later, Abramson and colleagues (1989) proposed a modified version of the helplessness model, namely the hopelessness theory of depression. This theory proposes that attributions (internal, stable and global) are likely to cause depression only when they produce a sense of hopelessness in the individual. Abramson et al. (1989) proposed that individuals experience hopelessness when they believe that a situation is not controllable, and that the situation will either result in unpleasant outcomes, or that the intended pleasant outcomes will not eventuate. This theory thus proposes that depression is predicted by hopelessness (Comer, 1998). To summarise, according to the hopelessness theory, depression is caused by a feeling of hopelessness in addition to the tendency to make internal, stable, and global attributions regarding the causes of negative events (Garber & Flynn, 1998).

Beck’s cognitive theory and Abramson et al.’s (1989) hopelessness theory provide similar explanations for cognitive precursors to depression, and there is extensive empirical support for both theories (Abramson et al., 2002; Hankin, Abramson, Miller, & Haeffel, 2004; Ingram, Miranda, & Segal, 2006). Beck's cognitive theory describes depression in terms of implicit dysfunctional beliefs, and negative schema (e.g., that one is unworthy and defective). When triggered by relevant stressful events (e.g., failure), these schema fuel biased perceptions, such as overgeneralising the implications of a setback, and thus sustain the person's negative outlook on self, the future, and the environment, which in turn maintains the depressed mood. Similarly, the reformulated hopelessness theory by Abramson et al. conceptualises cognitive vulnerability as the tendency to make negative inferences about the cause (i.e., stable and global attributions), outcomes, and the concept of self-
worth during distress. In this second model, negative cognitive styles interact with negative life events to contribute to increased depressive symptoms (Hankin, et al., 2004).

Both cognitive models propose that a form of cognitive impairment leads to vulnerability for depression (Abramson et al., 1989; Beck, 1967). There is considerable evidence supporting these theories’ view that cognitive vulnerabilities predict depression among adults, adolescents, and children (Hankin et al., 2009). Both theories refer to key cognitive vulnerabilities (negative cognitive style, self-worth, and hopelessness) that have been shown to be risk factors for depression (Garber & Flynn, 1998). Neutralising and altering negative cognitions, and hence negative mood and behaviour, using CBT thus represents a theoretically sound approach which evidence suggests has clinical utility and efficacy, both in the short and long term (Hankin et al., 2009; Jarrett et al., 2007; Mazzucchelli, 2010).

While cognitive vulnerability theories of depression highlight the significant role negative cognition plays as a contributor to depression, researchers’ understanding of positive cognition relative to depression has been neglected. Although Beck (2001) noted that depression represents a significant decline in positive cognitions, little attention has been given to understanding how positive cognition contributes to the development of depression. From an ontological perspective, the absence of positive cognitions is different from the presence of negative cognitions, and may be equally important to depression (Mackleod & Moore, 2000). For example, research suggests that lower levels of depressed mood is related to higher levels of positive cognition (Fisher, 2010). It has also been suggested that positive cognitions could be a fundamental construct to depressive resilience (Hawkins, 2004). A shift in perspective from negative to positive cognitions in
depression will help to understand the role of positive cognitions in prevention, prediction, and treatment of depressed mood. This contrasting approach, known as ‘positive psychology’ will be examined in the next section.

**Depression within the Positive Psychology approach**

The constructs of positive cognitions and resiliency, derived from the positive psychology perspective, compliment the cognitive vulnerability theories of depression previously described. Seligman and Csikszentmihalyi (2000) introduced the concept of positive psychology to the traditional psychology literature, and their perspective is now a leading model in psychology (Hoffman, Iversen, & Ortiz, 2010).

Empirical and theoretical research has shown that traditional psychology has been skewed towards understanding and treating negative psychological phenomena (e.g., psychopathological modalities that seek to verify deficits, weaknesses, and vulnerabilities in individuals) at the expense of understanding positive psychological phenomena (e.g. resilience, self-growth, happiness, etc; Anselmo, 2010; Biswas-Diener, & Dean, 2007; Sheldon & King, 2001). The problem-focused approach within traditional psychology psychopathologises problematic behaviour and aims to reduce the associated suffering. However, because treatment from the problem-focused approach emphasises the negative psychological aspects of individuals, it minimises the recognition of many significant individual strengths, developments, and conclusions (Sheldon, & King, 2001). For example, by removing and repairing sufferings such as sadness and hopelessness in depression, positive states such as happiness and optimism do not appear spontaneously; nonetheless the importance of cultivating happiness and optimism in the absence of sadness and hopelessness as part of the depressed individual’s treatment is rarely acknowledged (Duckworth, Steen, & Seligman, 2005).
A growing body of evidence suggests that positive and negative cognitions function independently, rather than as a single system (Lightsey, 1994; McLeod & Moore, 2000; Sin, Porta, & Lyubomirsky, 2010). Although they influence each other, the absence of negative cognitions is not equal to the presence of positive cognitions (Sin, Porta, & Lyubomirsky, 2010). Seligman (1990) and his colleagues developed the positive psychological perspective of psychology to balance our understanding of the negative and positive aspects of human psychological functioning. The aim of positive psychology was to determine how individuals can stay psychologically healthy, live fulfilled lives, and flourish as communities (Barlow, 2002). Seligman (2002) asserted its purpose as “to catalyze a change in psychology from a preoccupation only with repairing the worst things in life to also building the best qualities in life” (p.3). Positive psychology research focuses on understanding positive traits, experiences, and social organisation (Anselmo, 2010). As stated by Fredrickson (2001), “the mission of positive psychology is to understand and foster the factors that allow individuals, communities, and societies to flourish” (p. 218). Positive psychology compliments rather than contrasts with traditional psychology, and is new only in emphasis rather than in content (Keyes & Lopez, 2002).

Positive psychology provides an alternative perspective from which to investigate mental disorder, such as depression. Positive Psychotherapy (PPT) is a strength based treatment approach, which proposes that depression can be treated effectively by relieving negative symptoms, but also by fostering positive emotions to strengthen positive cognitions (Anselmo, 2010; Seligman, 2011). These cognitive strengths can act as a buffer against depression relapse and promote resilience to depression. Seligman further proposes that PPT will produce long-term health
outcomes, such as life satisfaction, improved social involvement, and greater job performance.

PPT has the potential to decrease depressive symptoms by as much as 50% (Lopez & Snyder, 2003). Sin and Lyubomirsky (2009) conducted a meta-analysis of 51 studies that had applied PPT interventions to ameliorate depression, and found that overall the results from 25 studies suggested that PPT was a significant intervention for depressive symptoms.

The effect of happiness on reducing depressive symptoms was also tested by Seligman, Steen, Park and Peterson (2005). Participants with subclinical depressive symptoms ($N = 577$) completed an online study, and were randomly assigned to either complete an activity increasing happiness over a week, or to a control group with a neutral activity. Symptoms were assessed pre and post intervention, as well as at frequent points over the next six months. Activities designed to increase happiness activities included: recognising good things in life; performing acts of kindness; practicing optimism; and counting one's blessings. Activities in the control group required participants to write about their early memories. The results suggested that participants in the intervention condition experienced a significant decline in depressive symptoms, and also boost in happiness soon after intervention. This study suggests that single happiness-enhancing exercises, which are easy and self-directed, can improve mood in subclinical depressed individuals (Sin, Porta, & Lyubomirsky, 2010).

The significance of the positive psychology approach toward overcoming depression is that it not only targets the reduction of negative cognitions, but also cultivates positive cognitions, which foster resilience to depression but also enhances happiness and well-being (Seligman, 2011). Specific positive cognitive constructs
function as strengths that protect against vulnerability to depression, including optimism, hope, goals, engagement, happiness, courage, positive emotions and life meaning (Akhtar, 2012; Mazzucchelli, 2010; Seligman, 2005; Sin, & Lyubomirsky, 2009). For instance, when depressed individuals with a sense of helplessness are suggested to review and recognise their experiences of success, this process leads them to experience positive affect and a sense of strength. This recognition of personal strength provides momentum to help rebuild resilience against low mood states and depressive symptoms, and to move in positive direction that provides meaning and purpose to life (Akhtar, 2012). Some of these specific positive cognitive constructs, including optimism, hope, and goal-setting are particularly relevant to PPT, and will be reviewed in the next section.

**Optimism**

Optimism is a belief characterised by hopefulness and the tendency to expect and trust that future outcomes are favourable (Carver, Scheier & Segerstorm, 2010; Forgeard & Seligman, 2012). In contrast, pessimism is characterised by the tendency to expect that future outcomes will be unfavourable (Chang, 2001; Forgeard & Seligman, 2012). Optimism and pessimism are powerful cognitive filters that influence individuals’ perceptions of the world, and affect how they react and adapt to new situations (Forgeard & Seligman).

There are two prominent models of optimism. The first model was developed by Seligman (1991, 2011) and views optimism as an attributional (or explanatory) style. Seligman broadly defined optimism and pessimism each as attributional styles (ways people regularly explain and interpret life events). For instance, individuals who attribute negative outcomes to external, unstable, and specific factors are said to have an optimistic attributional style, whereas individuals who perceive that negative
experiences happen to them due to internal, stable, and global factors are said to have a pessimistic attributional style (Peterson et al., 1982). Individuals who exhibit extreme attributions and whose explanations are consistently negative across dimensions display greater impairment during difficult times and greater disengagement from goals (Chiara, 2002).

The second model of optimism was developed by Scheier and Carver (1985) and defines optimism as a generalised expectancy, and relatively stable tendency, to believe that one will experience good rather than bad future outcomes. In this model, optimists pursue goals that are personally valuable and attainable (Carver et al., 2009). According to the model of goal-directed activity by Scheier and Carver (2003), when individuals regulate and expect to attain the goal, their dispositional optimism is involved. This definition reflects dispositional optimism as a trait construct that derives from the processes of positive expectations which direct behaviour (Chiara, 2002).

Several studies have supported the relationship between optimistic attributional style and depression, including the Temple-Wisconsin Cognitive Vulnerability to Depression Project (Alloy et al., 2000, 2006; Chang, 2001). Such studies suggest that negative attributional style is a risk factor for both clinical and subclinical forms of depression (Chang, 2001; Chiara, 2002). Complimenting this perspective, cross-sectional and longitudinal studies generally find that a pessimistic attributional style precedes depressive symptoms, and may be a risk factor for later depression (Grimes, 2001).

Studies of dispositional optimism provide similar results to those examining optimistic attributional style. For example, a study conducted by Chang, Maydeu-Olivers, and D'Zurilla (1997) found a significant negative correlation between
optimism and depressive symptoms in a sample of college students. Hawkins and Miller (2003) similarly found that lower optimism was associated with higher depressive symptoms in a sample of 168 adult women, using the Adaptive Bias Scale (Miller, 2005) to measure optimism, and Positive And Negative Affect Schedule (PANAS; Watson et al., 1988) to measure depressive symptoms. While Hawkins and Miller found overall that pessimism was the strongest predictor of depressive symptoms, they nonetheless concluded that low optimism, as well as high pessimism, is a contributing factor to the development of depressive symptoms.

Optimistic attributional style and dispositional optimism are similar constructs, and assume that either positive or negative general expectancies about future events are a determinant factor of being optimistic or pessimistic (Alloy et al., 2000; Carver, Scheier & Segerstorm, 2010; Scheier & Carver, 1992). Goals disengagement is also described similarly in both models, and both models are consistent with past research negatively associating optimism and depressive symptoms. While they propose that an optimistic outlook fosters resilience to depression, they also emphasise that pessimism is a significant risk factor for depression (Alloy et al., 2000; Chang, 2001; Chiara, 2002).

Seligman’s (1991) and Scheier and Carver’s (1985) models of optimism seem to conceptualise optimism as a trait (dispositional) rather than a state (situational) construct; however both trait optimism (which is a relatively stable personality characteristic, consisting of a positive perspective towards general future events) and state optimism (which is transient and situation-specific) are both explored in research on optimism (Kluemper, Little, & DeGroot, 2009). Many studies have focused on researching optimism as a personality trait, but there is also evidence suggesting that optimism can be learned (Seligman, 2011). Research by Seligman (1998, 1991)
proposed and found that people can be ‘taught’ to be optimistic, a phenomenon called ‘learned optimism’. He found that individuals could change their negative beliefs to ‘non-negative’ beliefs, which are realistic and encourage action. Learned optimism has been explored by researchers and clinicians to foster positive traits and positive subjective experiences, with the aim to apply it therapeutically, and particularly as a preventative treatment for depression (Diener, 2000; Seligman, 1998).

Optimism appears to be protective against depressive symptoms, and is thus an important construct to consider when exploring theories of depression (Abramson et al., 1989). For example, the cognitive theory of depression indicates a strong negative relationship between optimism and depression (Abramson et al., 1989; Beck, 1976; Diener, 2000). Similarly, cognitive behavioural therapy emphasises the cultivation of optimistic thinking while targeting pessimistic attributional styles in order to treat depression (Beck et al., 1979; Gillham & Reivich, 2004). From the positive psychology perspective, optimism is a cognitive strength and is consistent with the traditional theoretical approach to depression (Chang, 2001; Snyder & Lopez, 2002). In this view, optimism can be seen as an adaptive cognitive bias in flourishing individuals, allowing them to positively perceive future outcomes and to expect good things to happen to them (Carver & Scheier, 2001).

Sin and Lyubomirsky (2009), conducted a meta-analysis of 51 positive psychology pre-post design interventions, published between 1977 and 2008, aiming to ameliorate depressive symptoms and to enhance well-being by cultivating positive feelings, positive behaviours, and/or positive cognitions. Overall, optimism was significantly and negatively related to depressive symptoms, but more importantly, the cultivation of optimism significantly decreased depressive symptoms and enhanced well-being across samples.
Optimism is considered a beneficial psychological characteristic, with cognitive, emotional, and motivational components (Carver, Scheier & Segerstorm, 2010; Peterson, 2000). Optimism is not only an important factor in fostering resilience to depression, but also boosts general well-being and hence mental health (Smith, 2000). Overall, optimists experience more positive moods, goal engagement, persistence in goal achievement, and they have better physical and mental health (Seligman & Csikszentmihalyi, 2000).

Hope

Snyder (2000) has proposed a cognitive model of hope. In this model, hope is defined as a positive motivational state that is based on setting goals, with two cognitive components including agency thinking (goal-directed determination) and pathways thinking (planning of ways to attain goals). According to hope theory, neither agency nor pathway thinking alone is sufficient to produce hope; instead, successful movement toward one’s goals requires connection of both these hope components. The first component, agency, involves a sense of successful use of energy in the pursuit of goals in one’s past, present, and future. It is the mental motivation used to initiate and sustain movement toward a goal (Snyder, 2000). The second component is the perceived ability to generate successful strategies or pathways to attain one’s goals. In other words, pathway thinking is the perceived capacity to imagine ways to reach a given goal, including the formation of subgoals along the way (Snyder).

These two components, pathways and agency thinking, interact with one another to lead the individual to pursue goals that are specific, important, and can probably be achieved. Increasing agency thoughts will make thoughts about how to produce workable pathways. Conversely, the person experiencing an increase in
pathways thoughts should have a concurrent movement of agency thoughts (Snyder, 1994). Although agency and pathway thinking can work simultaneously, at least one of either agency or pathway thinking is first needed to cultivate hope. For example, when an individual becomes motivated to achieve a goal, shortly thereafter the pathways related to attaining that goal may appear.

In hope theory, approaching and achieving a goal results in positive mood, while goal failure or withdraw from a goal leads to negative mood (Snyder, 2002). Snyder suggested that the quality of mood and feelings reflect the person's perceived level of hope in the particular situation (i.e. low mood reflects decreased hope, high mood reflects increased hope). Higher-hope individuals think positively about themselves, have an ability to identify and develop paths to goals, and set higher and more frequent goals. Such people approach goals with the belief that they are likely to be achieved, focussing on probable success. Conversely, low-hope individuals may be uncertain about the available pathways to goal achievement, and/or believe there is a lack of pathways towards their goals. Such people set extremely easy or extremely difficult goals, experience doubt about reaching their goals, and experience negative emotions when pursuing their goals, leading them to experience depressed mood (Snyder, 1994).

Snyder (2000) proposed that depression could be understood with reference to the hope theory. Hope theory can assist in understanding the onset and experience of depressive symptoms, but also contribute to treatment combating depressive symptoms (Cheavens, 2000). Like optimism, hope and depressive symptoms are strongly negatively correlated, with high-hope individuals experiencing fewer depressive symptoms compared to low-hope persons (Cheavens, 2000; Snyder et al., 1991). Chang (2003) examined the cognitive set of hope relative to depressive
symptoms and life satisfaction among a sample of middle-age men and women, and found that both agency and pathway thinking were negatively related to depressive symptoms. A longitudinal study by Arnau et al., (2007) similarly found a negative correlation between hope and depressive symptoms in a sample of college students, and further found that low agency significantly predicted increased likelihood to experience depression in the future. Research by Thimm and colleagues (2013), investigated hope cognitions among three participant groups (depressed individuals, previously depressed individuals, and individuals who had never experienced depression as a control group), and found that individuals who had never experienced depression reported significantly higher levels of hope compared to the depressed and recovered groups, and that the recovered individuals had higher hope levels than the depressed group. These studies suggest that in the absence of hope and its cognitive components agency and pathways thinking, individuals are likely to be vulnerable to the depressive symptoms.

High hope, conversely, is a positive cognition and a principal human strength, which can affect and buffer depressive symptoms (Seligman, 1998; Seligman, & Csikszentmihalyi, 2000). Hope theory posits that cultivating agency and pathways thinking in depressed individuals is a process of cognitive change, which may enable them to overcome their depression (Snyder et al., 2000). In order to reduce depressive symptoms, psychotherapy using hope theory emphasises creating hope by helping the individual set attainable goals, and then generate effective pathways toward that goal, fostering motivation and agency to apply those pathways in order to achieve said goal (Lopez, 2013; Snyder et al., 2000).

Cultivation of hope in depressed individuals features in cognitive behavioural interventions designed to improve an individual’s motivation to be involved in
activities and setting goals (Snyder, 2002). Hope theory suggests three practices to encourage cultivation and maintenance of hope in people with depression, including: clearly identifying a simple, attainable goal; restructuring negative thoughts regarding both agency and pathways; and establishing a practical plan to achieve the identified goal (Snyder, 2000). If a depressed individual believes that their desired goal is unattainable, they will give up and feel hopelessness; however, once a particular achievable and simple goal pursuit is completed, hope will be increased, creating a foundation for subsequent goal setting, achievement, and continued increase in hope (Snyder, 2000). In this way, the cognitive process of hope is cultivated by cyclic engagement in small, achievable goals, which can be increased by practice (Lopez, 2013; Lopez et al., 2004).

Past research supports this therapeutic approach. For example, the influence of hope on depression and coping was assessed in a sample of college students (N= 341) by Chang and DeSimone (2001). Hope was found to be a significant predictor of both depression and coping, supporting Snyder et al.’s (2000) work. Visser, Loess, Jeglic, and Hirsch (2013) examined hope and goal-oriented constructs in association with depressive symptoms and life events in a sample of college students (N= 386). They found that participants with greater hope reported significantly less depressive symptoms, after experiencing negative life events. The authors surmised that hope in the face of adversity was maintained by participants’ ability to identify and attain goals, subsequently contributing to less depressive symptoms. Shorey, Roberts, and Huprich (2012) assessed the impact of hope on depressive symptoms in a sample of 363 undergraduate students, using a cross-lagged longitudinal design across 2-week and 5-week intervals. Only hope was found to have a significant one-way influence
on depressive symptoms across the 5-week interval, emphasising the importance of hope in combating depressive symptoms.

Overall, hope theory and past research on hope suggests that cultivating hope by setting and achieving goals, along with pursuing and planning specific activities toward these goals, can modify negative cognitions and decrease depressive symptoms. Given that goal-attainment is central to hope theory, the next section provides an overview of goal-setting theory and research.

**Goal-Setting**

Goal-setting refers to the act of setting targets, with the aim of achieving outcomes one values, thereby fulfilling one’s needs (Locke, 2002). Goal-setting is essentially a subjective cognitive phenomenon, which can motivate and control an individual’s behaviour (Nicklin, 2009). Studies have focused on an array of factors pertaining to goal-setting, including goal achievement (Koestner, Lekes, Powers & Chicoine, 2002), goal pursuit (Bandura, 2001; Carver & Scheier, 1998; Deci & Ryan, 2000), the process of setting multiple goals (Shah, Friedman & Kruglanski, 2002), the content and framing of goals (Street 2002), goals hierarchy in terms of attainability (Locke, & Latham, 2006), performance goals (Dweck, 2000), and goal striving (Baumeister & Vohs, 2007; Carver & Scheier, 1998; Emmons, 2003). A further factor associated with goal-setting is that larger goals may be broken down to setting and attaining smaller, daily goals (McCurdy, 2008).

The importance of goals and activities in ameliorating and preventing depression has been the focus of both cognitive theories of depression and of the positive psychology perspective on depression. Behavioural activation is a common component that combines and integrates positive psychology intervention and cognitive behavioural therapy strategies to reduce depressive symptoms
(Mazzucchelli, 2010; Sin & Lyubomirsky, 2009). Indeed, daily goals and activities are a core component of behavioural activation in the treatment of depression.

From the perspective of cognitive theory, behavioural activation encourages depressed individuals to set daily activities, where an increased positive activities leads to mood improvement (Mazzucchelli, 2010). ‘Activity scheduling’ is a core component of behavioural activation (Addis & Martell, 2004; Beck et al., 1979; Rehm, 2009). Activity scheduling requires the depressed individual to first schedule their chosen activities, and then to perform, record and monitor daily activities that are simple and enjoyable (Beck et al., 1979). The setting of daily goals, which are simple and attainable activities conducted on a daily basis, is one specific type of activity scheduling.

The positive psychology perspective views daily activities as simple goals characterised by both pleasure and achievement, and which increase an individual’s behavioural engagement (Seligman, 2011). The importance of boosting simple and pleasant activities to prevent and/or reduce depressive symptoms is a fundamental component of positive psychology (Seligman, 2010). Evidence suggests that daily goals and activities are effective at reducing depressive symptoms, and also maintaining and elevating well-being (Mazzucchelli, 2010; Sin & Lyubomirsky, 2009).

From both the cognitive theory and positive psychology perspectives, the concept of small and simple daily goals is relevant to the current thesis insofar they are easy to engage in, are attainable, and are potentially pleasant, indicating they may be an intervention tool for individuals experiencing depressive symptoms. While many behavioural activation and goal studies investigated what kinds of goals
depressed individuals set and how they were pursued, there is currently insufficient research examining the direct relation between small daily goals and depressed mood.

**Daily goals and depression**

In this thesis, ‘daily goals’ refer to simple, attainable, and pleasant activities conducted each and every day. A daily goal is a subtype of activity scheduling, which can be referred to as another form of goal setting. Simple and easy daily goals (e.g. walking thirty minutes, having a cup of coffee outside, calling a friend on the phone, etc.) are the sort of goals that are attainable and possible to pursue in a short period.

Since the 1970s, many studies have shown a significant relationship between depressed mood and the use of daily goals and activities (e.g., Addis & Martel, 2004; Cuijpers, Straten & Warmerdam, 2007; Jacobson, et al., 1996; Lewinsohn, & Graf, 1973; Rehm, 2010). Depressed individuals tend to set more difficult or nonspecific goals, which are general and abstract (Dickson, 2013). Dickson asserted that by having nonspecific and broad goals, depressed individuals reduced their expectation of achieving their goals, resulting in lower motivation toward achieving goals. However, by pursuing small and specific goals, specific traits associated with depression (i.e., negative thoughts and the tendency to overgeneralise) can be reduced (Dickson, 2013; Rehm, 2010).

Research suggests that daily goals and activities have a considerable effect on different aspects of depressive symptoms, such as cognition (Young, Weinberger, & Beck, 2001), behaviour (Addis & Martel, 2004), motivation (Snyder et al., 1991), and emotion in individuals with depression (Miner, 2007; Seligman 2005). Evidence also suggests that while daily goals reframe negative cognitions, they are also influential on building positive aspects of cognition (Addis & Martel, 2004; Seligman, 2005).
In the cognitive theory literature, Beck et al. (1979) recommended constructing small daily goals in an attempt to alleviate negative mood and restructure negative cognitions. In their study, Jacobson et al. (1996) evaluated the outcomes from separate elements of Beck’s cognitive therapy for depression. These elements included behavioural activation, automatic thoughts, and the full cognitive behavioural treatment. Their sample included 42 men and 110 women with major depression who participated at three stages of assessment (intervention, six month follow-up, and a two-year follow up). Behavioural activation alone was found to be equal in efficacy to full cognitive behavioural therapy in the treatment of depression. Jacobson et al. findings provide strong evidence for the usefulness of behavioural activation in reframing negative cognitions.

While individuals with depression experience negative mood, they also lose interest in engaging in activities, increasing their likelihood of engaging in avoidance behaviour and experiencing emotional deficit, with avoidance behaviour and emotional disengagement increasing with depression severity (Addis & Martel, 2004). Depressed individuals may also avoid working towards goals due to low self-efficacy or because the goals they set, are too challenging. Behavioural theory on the treatment of depression suggests that daily activities counteract loss of motivation and avoidance behaviour, and also reduce rumination and inactivity (e.g. Martell, Addis, & Jacobson, 2001; Rehm, 2010). In a study conducted by Kasch, Rottenberg, Arnow, and Gotlib (2002), deficit of behavioural activation and avoidance functioning were examined. Clinical functioning was assessed at intake and also at an eight-month follow-up among 62 depressed and 27 non-depressed participants. Results indicated that whereas the non-depressed individuals had higher levels of behavioural activation, the depressed participants reported significantly higher levels of avoidance
behaviour and lower behavioural activation. Furthermore, for depressed individuals there was a strong correlation between decreased behavioural activation and increased severity of depression, as well as worse outcomes by the eight-month assessment. Considerable stability over time was found for both levels of behavioural activation and avoidance. Overall, results suggested that a deficit of activities, along with avoidance of activities, exacerbated depressive symptoms.

These findings are consistent with past research suggesting that people experiencing depression, and who believe themselves to be incapable of experiencing pleasure, can nonetheless develop pleasure by setting and achieving a few small daily goals and activities (Persons, Davidson, & Tompkins, 2001). By setting and achieving daily goals that are achievable and pleasant, individuals build self-efficacy and experience self-confidence via success, improving their mood in the short term and positively reinforcing this positive behaviour, and the pattern of behavioural avoidance and inactivity, in the long term, reducing feelings of depression (Kanter, Busch, & Rusch, 2009; Locke & Latham, 2006; Rhem, 2010; Thompson & Bullock, 2012).

Even after recovery, individuals remain vulnerable to behavioural avoidance of activity and its associated effects on mood and self-efficacy. Pinto-Meza et al. (2006) conducted a study examining behavioural activation as well as avoidance behaviour in relation to depression, using three groups of participants (15 individuals with current major depression, 35 who had recovered from major depression, and 30 non-depressed individuals). Using the Sensitivity to Punishment and Sensitivity to Reward Questionnaire (Torrubia, Avila, Moltó, & Caseras, 2001). Pinto-Meza et al. found that only the non-depressed group intended to complete activities, while both depressed and recovered participants showed similar levels of avoidance behaviour.
The authors concluded that less behavioural activities make vulnerability to depression even after recovery.

With respect to theory of emotions, Greenberg and Watson (2006) propose that depression occurs when individuals are not able to make any changes in their negative emotional experiences. Deficits in positive emotions could contribute to the maintenance of depressive symptoms (McMakin, 2008). A key component of cognitive treatment for individuals with depressive symptoms is to increase positive attributions and emotions about daily activities (McMakin, 2008). When depressed individuals value a goal they believe is achievable, that goal and its achievement takes on positive meaning for the individual. By pursuing and achieving easy goals, positive emotional reactions occur, followed by continued effort, persistence, and performance in a motivational cycle (Heath, Larrick, & Wu, 1999; Miner, 2007; Seligman, 2005).

A study by Yuan and Kring (2009) examined whether subclinical depression is characterised by reduced positive emotional experience. Two groups of participants, one with subclinical depression (N=36) and one without symptoms (N=36), reported their expected and actual emotional responses to winning and losing money in a computer task. Both groups experienced similar levels of negative emotion after losing money. However, the group with subclinical depression predicted that they would experience more pleasure than they actually did after winning money, while the control group experienced as much positive emotion as they predicted they would. Yuan and Kring concluded that the imbalance of positive and negative emotions was a key factor in experiencing depressive symptoms, and that those with subthreshold levels of depression experience conflict when responding with positive emotion. These findings suggest that reduced positive emotional experiences may potentially inhibit the pursuit of activities and goals in depressed compared to non-depressed...
individuals, as the depressed individual seems to experience less positive reinforcement than anticipated.

Setting and pursuing simple and achievable goals is related to increased motivation (Dweck, 2000). Emotion and motivation are interrelated constructs influencing goal attainment; when exposed to a stimulus, people respond emotionally and also motivate them to act towards a goal (Elliot, Eder, & Harmon-Jones, 2013). Elliot (2008) defined motivation as having two components: approach (motivation by, or the direction of behaviour towards, positive stimuli) and avoidance (motivation by, or the direction of behaviour away from, negative stimuli). In depressed individuals, approach and avoidance are two different types of goal pursuit behaviour; people who are depressed (or vulnerable to depression) have a higher level of avoidance and lower level of approach behaviour concerning goals and activities (Elliot et al., 2013; Pekrun, Elliot, & Maier, 2009).

Along with increased motivation, achieving daily goals improves an individual’s confidence, contributing to reduced depressive symptoms. The motivation model proposed by Scheier and Carver (2005) begins with the assumption that behaviour is organised around the pursuit of goals, which are interrelated to emotions (Carver & Scheier, 2005). The model consists of two elements: expectancy and value. Expectancy (beliefs and optimism) refers to the degree of confidence that the goal can be attained (e.g., if an individual lacks confidence, there will be no action). Value refers to how much a goal is valued (Locke, 2002). When depressed individuals accomplish activities that are consistent with their values, they are more likely to have positive and enjoyable experiences (Lejuez, Hopko, Acierno, Daughters, & Pagoto, 2011). Similarly, when depressed individuals hold positive expectancies about their goals, they feel hope, optimism, and motivation to attain
goals (Abramson et al., 2002), but experience depressive symptoms when they hold negative expectancies (Hyder, 2013). This model predicts that by successfully achieving a goal, an individual’s motivation and confidence will increase, leading to an increase in future goal pursuit (Carver & Scheier, 2005). Lack of confidence is sometimes referred to as self-doubt, which can impair effort both before and during the action towards a goal. To pursue goals, individuals must maintain sufficient self-confidence and remain engaged in their effort to attain their goal (Carver & Scheier, 2005).

Scheier and Carver’s (2005) model suggests that achieving simple daily goals can increase confidence, which is a cognitive strength providing psychological resilience to depressive symptoms (Hyder, 2012). Their approach to motivation is supported by both cognitive (Beck’s et al., 1979) and Hope theory (Snyder, 2000), and their model represents goal-setting, optimism, and confidence as interrelated constructs (Abramson et al., 2002; Ajzen & Fishbein, 1977).

Many studies have demonstrated the high efficacy of Brief Behavioural Activation Treatment for Depression (BATD) as a therapeutic treatment of depression (see Mazzucchelli, 2010). A significant component of BATD is monitoring daily goals and activities (Lejuez et al., 2011). As a simple, time-efficient, and cost-effective treatment, BATD cultivates behavioural activation in the depressed individual, which directly and indirectly focuses on engaging in various daily activities through monitoring and scheduling. For BATD, the depressed individual completes feasible and discrete activities, which is followed by positive cognitive and social consequences, resulting in the reduction of depressive symptoms and increase of positive thoughts and feelings (Lejuez et al., 2011). In a study conducted by Hopko, Lejuez, LePage, Hopko, and McNeil (2003), evidence supports the efficacy of
BATD as a treatment for depressed patients (Hopko et al., 2003). Twenty five inpatients with depression were treated using BATD to systematically increase their contact and involvement with positive activities. Patients moved through a hierarchy of activities, progressing from the simplest to most difficult activities using a behavioural checklist to monitor their progress. At the beginning of treatment, patients pursued small and easy daily goals and activities, and self-monitored their behaviour towards more difficult tasks. Participants overall experienced increased positivity and motivation and the completion of treatment. These results suggest a significant difference between the efficacy of standard hospital treatment, and tailored BATD in reducing depressive symptoms. Research by Gawrysiak, Nicholas and Hopko (2009) also examined the efficacy of BATD. The aim of this study was to examine if a single-session of BATD intervention was efficacious in reducing subclinical depressive symptoms in a sample of 30 university students. The brief BTAD intervention significantly reduced depressive symptoms in this sample, and also increased motivation and positive affect. Authors concluded that the single-session BATD intervention was a time- and cost- efficient strategy for students to overcome their depression, which could be helpful for students and busy university counselling services.

Several measures exist to assess different aspects of setting daily goals, although none of these specifically focuses on the propensity to set and achieve small daily goals. For example, the Striving Assessment Scale (Emmons, 1986) focuses on desire to attain a goal but not the actual setting of daily goals. Similarly, the Conditional Goal Setting scale (Street, 2001) assesses motivation to select a goal, but not complete the goal. The Hope Scale (Snyder et al., 1991) and the State Hope Scale (Snyder et al., 1996) both measure the thinking associated with attempting a goal.
(Snyder, 2000), and focus more on general life goals than daily goals. The only available instruments for planning and monitoring everyday goals and activities are the Activity Scheduling Form (Beck, Rush, Shaw, & Emery, 1979) and Daily Diaries (Hopko et al., 2003), both of which are clinical tools used in treatment, and have not been validated for their psychometric properties.

Overall, several studies have provided evidence to show that increasing the number of daily goals can improve depressed mood among individuals diagnosed with depression (e.g., Dobson et al., 2008; Lewinsohn, 1976; Nicklin, 2009; Snyder & Lopez, 2009). There is also strong evidence suggesting that daily goals contribute to positive changes in individuals with depression such as cognitive, emotional, behavioural, and motivational changes (e.g. Martell, Addis, & Jacobson, 2001; Persons, Davidson, & Tompkins, 2001; Rehm, 2010). Individuals with depression, who have anhedonic symptoms, may feel overwhelmed by setting up too many goals and activities (Addis & Martell, 2004); increasing their activity level could instead require scheduling of only a few simple and easily achievable tasks (Duckworth et al., 2005), although the number of scheduled activities is associated with higher levels of well-being in nonclinical samples (Mazzucchelli, Kane & Rees, 2010).

To date, there is no scale that measures the propensity to set and achieve small daily goals, and the postulated simple and small daily goals processes have not yet been empirically tested. This thesis aims to fulfil this gap in the literature, by developing, administering and evaluating the psychometric properties of a daily goals scale.

As the first stage of the Daily Goals Scale (DGS) has been investigated in Australia, a brief review of literature about depression and related issues in Australia is presented in Chapter 1.
Overview

Currently, there are several measures that assess different aspects of setting goals (this has been described in the goal setting section, Chapter 2) however, none of these specifically focuses on the propensity to set and achieve small daily goals. The overall purpose of the current study was the development and validation of a new scale, the Daily Goals Scale (DGS). Specifically, the DGS\(^1\) was designed to measure the propensity to set and achieve small daily goals.

The first aim of this study was to investigate the factor structure of the DGS in a community sample of adults. The second aim was to provide preliminary evidence for the scale’s convergent and discriminant validity. In order to show convergent validity, the DGS was examined in relation to anhedonic depression, hope, optimism and negative cognitions. In order to show discriminant validity, the DGS was examined in relation to a measure of anxiety. It was predicted that the DGS would be internally consistent. Furthermore, it was anticipated that there would be a negative correlation between the DGS and anhedonic depression and the other negative cognitions, but that DGS would be positively related to hope and optimism. In terms

\(^1\) The DGS has been granted to be stored in the American Psychiatric Association (APA) PsycTESTS database for the worldwide use (Since June 2014)
of discriminant validity, it was expected that the DGS would be unrelated to measure of anxiety$^2$.

**Method**

**Participants** $^3$

The participants were 62 men and 116 women with an age range of 18 to 70 years (M = 34.06 years, SD=13.02). The 116 women had an age range of 18 to 70 years and a mean age of 35.14 years (SD=13.02). The 62 men had an age range of 18 to 70 years and a mean age of 35.14 years (SD=13.2).$^4$

**Procedure**

The study was approved by the Deakin University Human Research Ethics committee. Participants were recruited using “snowballing” techniques (Costa & McRae, 1985). Given the limited resources available to the student, all participants were recruited via “snowball” sampling techniques. Questionnaire packets were given out to Australian colleagues, friends and family members, and they were then invited to assist with giving these out to their own contacts. All interested participants were given a questionnaire pack which included consent form, a prepaid addressed envelope and a plain language statement describing the study and inviting them to take part in this study (Appendix A). It also included the contact details of the principal investigator so that any interested person could obtain further information. Interested persons completed the packet of questionnaires in their own time and

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$^2$ The results of this study (1A) is published as a journal article (see Appendix D)
$^3$ Ninety-nine percent of participants were born in Australia.
$^4$ A summary of demographic variables for all studies is provided in Appendix E
returned the questionnaires and the consent form to the principal researcher in a reply-paid addressed envelope. Five hundred questionnaires were distributed and 178 were returned (35.6%).

On receipt of questionnaires, the questionnaires and consent forms were numbered (coded), detached and stored in separate locations. Moreover, in order to organise for the follow-up stage, the consent forms were dated upon receipt and subsequently used to provide the timing and addresses for posting (8 weeks after receipt of the completed respective T1 questionnaires).

**Measures**

All measures that were used in this study are presented in Appendix A. The cognitive inventories comprised the Daily Goals Scale (DGS), which was developed for this thesis, the Optimistic Bias (OB) and Self-Satisfaction (SS) subscales of the Adaptive Bias Scale (ABS; Miller, 2005); the Hope scale (Snyder, Harris, et al., 1991); the Negative Disposition (ND) subscale of the Questionnaire of Explanatory Style (QES; Hawkins, 2004); the Automatic Thoughts Questionnaire (ATQ; Hollon & Kendal, 1980). And depression and anxiety were assessed using the Mood and Anxiety Symptom Questionnaire (MASQ; Watson & Clark, 1991).

**Daily Goals Scale (DGS)**

The methods mentioned by DeVellis (2003) were used to design and generate the scale. Regarding scale construction, Clark and Watson (1995) state that all content relevant to the target construct should be systematically sampled using the relevant literature. The scale was preliminarily designed to be completed by participants (i.e., self-report) using Likert-type scale items. The content was generated using an initial pool of 13 items applied in past research (Beck, 1976; Persons, Davidson, & Tompkins, 2001; Snyder & Lopez, 2002; Street, 2001, 2002) with the aim of selecting
eight items, based on other published scales such as the Hope scale (Snyder et al., 1991).

Item content focused on the propensity to set and achieve small daily goals, and how the participants planned and viewed how to achieve their day-to-day goals. Specifically included were items that assessed goal orientation (e.g., I can see each day as a series of small personal goals to meet), goal setting (e.g., Sometimes I set myself little goals for the next day), willpower and discipline (e.g., I try my best not to leave small goals half done), goal successes (e.g., Sometimes at night I think of small goals I have achieved during the day), and goal review (e.g., Some mornings I review the little goals I achieved yesterday). The criteria for creating well-worded items included using simple terms, avoiding vague language, and avoiding the use of double negatives (Juntunen & Wettersten, 2006). The items were critically reviewed by an expert clinical psychologist to ensure that both the content and wording of items were appropriate. Two expert reviewers (senior psychologist researcher) also considered all items to verify their face-value content validity. The description of the DGS was reviewed by all three reviewers and the student, while the decision was made for all 13 items (instead of the anticipated eight items) were included to more fully reflect the content and purpose of the DGS. Changes to items were minimal, with only three words minor edited across three items. Each item was rated on a five-point scale that ranged from 1 = strongly disagree to 5 = strongly agree.5

5 Alternatively, items could be rated from 1 = strongly agree to 5 = strongly disagree. In that case, all items should be reverse scored. To reverse score an item, change 1 to 5, 2 to 4, 4 to 2, and 5 to 1. After reverse scoring, find the total score for the sum of all 13 items.
Adaptive Bias Scale
The 12-item Adaptive Bias Scale (ABS; Miller, 2004a) is a validated measure that contains two subscales measuring positive or Optimistic Bias (OB), construed as resilience to depressed mood, and Self-Satisfaction (SS). Both the OB and SS scales have 6 items which are rated on a 5-point scale ranging from 1= very untrue, 5= very true. Responses to these items are summed to yield a total score with higher scores representing greater optimistic bias or greater self-satisfaction. The scale has acceptable internal consistency, with an alpha value of .69 for a community sample (Buckby, 2002); high test–retest reliability (Doyle, 2004); and good convergent and discriminant validity (Miller, 2004a).

Hope Scale
The Hope Scale (Snyder, et al., 1991) is a 12-item scale designed to measure two components of Snyder’s conception of hope. These components comprise cognitive model of hope include two subscales. The first subscale is Agency, a sense of personal action related to goal attainment and goal-directed energy. The second one is Pathways, the ability to recognise or generate pathways to reach a goal and planning to accomplish goals. Of the 12 items, 4 items structure each Agency and Pathways subscales. The remaining four items are fillers. A 4-point rating scale (1= definitely false to 4= definitely true) was provided to participants to respond. Internal consistency reliability estimates have been found in acceptable ranges for the scale as a whole ($\alpha=.76$) (Snyder et al., 1996). Construct and discriminant validity of the Hope Scale has been demonstrated (Babyak, Snyder, & Yoshinobu, 1993; Snyder et al., 1991).

Negative Disposition
Negative Disposition (ND) is a 6-item subscale derived from the 45-item Questionnaire of Explanatory Style, (QES; Hawkins, 2004) and measures the tendency to attribute internal and stable causes to negative events as a form of
pessimistic construct. Items are rated on a 5-point scale that ranged from 1=highly unlikely to 5=highly likely. Scores were calculated by summing all items. Previous studies have shown that the scale has an acceptable internal consistency of .67, test-retest reliability of .82 and both convergent and discriminant validity (Hawkins & Miller, 2006).

**Automatic Thoughts Questionnaire**

The Automatic Thoughts Questionnaire (ATQ; Hollon & Kendall, 1980) is a 30-item scale designed to measure the frequency of automatic negative thoughts associated with depression. Personal maladjustment and desire for change (PMDC) and negative self-concept and negative expectations (NSNE) are two subscales of ATQ used in this study. Items are rated on a 5-point scale that ranged from 1=highly unlikely to 5=highly likely. ATQ has been found to have a high internal reliability, with values ranging from .86 to .96 (Hill, Oei, & Hill, 1989; Joseph, 1994). Convergent and discriminant validity for the scale have been established (Ingram, Kendall, Smith, Donnell, & Ronan, 1987).

**Mood and Anxiety Symptoms Questionnaire**

The short form of the Mood and Anxiety Symptom Questionnaire (MASQ; Watson & Clark, 1991) was used to measure symptoms specific to depression and anxiety in addition to symptoms of general psychological distress. The MASQ subscales, Anhedonic Depression (AD; 22 items), and Anxious Arousal (AA; 17 items) were used in this study. Participants indicate how much they have felt or experienced each item on a 5-point scale ranging from 1= not at all to 5= extremely. Higher scores on each of subscales reflect greater levels of depressive or anxious symptomology. Previous research has shown high internal consistency for both AD ($\alpha=92$) and AA ($\alpha=.86$) (Hankin, Abramson, Miller, & Haeffel, 2004). In addition,
the MASQ has demonstrated both construct, convergent and discriminant validity (e.g., Ralph & Mineka, 1998; Watson et al., 1995).

Results

Overview of Analysis
Following data cleaning and preparation, the current study first examined the factor structure of the DGS scale with the aim of producing a measure of small daily goals that would be acceptable to the general population for measuring the propensity to set and achieve small day-to-day activities. Correlational analyses were then conducted to evaluate the convergent and discriminant validity. Next, the reliability of the DGS and all other variables were tested.

Data Preparation and Preliminary Analysis Assumptions
Accuracy of input, missing values, linearity and normality were assessed by screening the data through the SPSS 19. The missing values (less than 2%) were replaced using the mean value for each variable. All variables used in the validation process were screened for normality and univariate outliers prior to analyses. Univariate normality was considered violated if standardised scores for the dependent variables were ±3.29 standard deviations beyond the group mean. Thirteen univariate outliers were identified on five of the variables including ABS-SS, ATQ-PMDC, ATQ-NSNE, QES-ND and MASQ-AA. Then these outliers were recoded back to the acceptable limit of the above criterion suggested by Tabachnik and Fidell (2007).

Multivariate assumptions of linearity, normality, and homoscedasticity were not violated. All variables used in the main analyses were found to have a normal distribution and there was no evidence of non-linearity.
Factor Structure of the DGS
Initially, the factorability of the 13 DGS items was examined. Three well-recognised criteria for the factorability of a correlation were used. Firstly, 12 of the 13 items correlated at least .30 with at least one other item, suggesting factorability. Secondly, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy was .89, above the recommended value of .60. Finally, the Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) was conducted and reached statistical significance, thus indicating the data were suitable for factor extraction. Given these overall indicators, the analysis was conducted with all 13 items.

Principal Component Analysis (PCA) extraction was used to produce the initial unrotated solution, and to examine for the presence of a general factor and then the appropriate number of factors was determined. The results indicated the presence of one factor, with eigenvalues greater than one accounting for 38.38% of the variance for the first run as shown in Table 3.1 only item 8 did not load on this factor and was removed from the scale.
Table 3.1
Factor loadings based on a Principal Component Analysis for 13 items from the Daily Goals Scale (DGS) at T1 in the Australian Sample (N=178)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can see each day as a series of small personal goals to meet</td>
<td>.70</td>
</tr>
<tr>
<td>2. I am very good at focusing my efforts on attaining a goal</td>
<td>.49</td>
</tr>
<tr>
<td>3. Sometimes I set myself little goals for the next day</td>
<td>.55</td>
</tr>
<tr>
<td>4. I try my best not to leave small goals half done</td>
<td>.40</td>
</tr>
<tr>
<td>5. I can see how my achievement of smaller goals enables me to build towards bigger goals</td>
<td>.65</td>
</tr>
<tr>
<td>6. For me, each day lets me make small achievements, such as watching TV, taking a shower, eating well, talking with a friend, etc.</td>
<td>.67</td>
</tr>
<tr>
<td>7. Sometimes at night I think of small goals I have achieved during the day</td>
<td>.71</td>
</tr>
<tr>
<td>8. My days are usually just about getting through to the end</td>
<td>-.24</td>
</tr>
<tr>
<td>9. I encourage myself to keep pursuing little goals every day</td>
<td>.78</td>
</tr>
<tr>
<td>10. It is success at the little goals that encourages me to try for bigger goals</td>
<td>.69</td>
</tr>
<tr>
<td>11. When I am feeling down, I still try to work towards very little goals</td>
<td>.63</td>
</tr>
<tr>
<td>12. Some mornings I review the little goals I achieved yesterday</td>
<td>.61</td>
</tr>
<tr>
<td>13. Sometimes I can lift my mood by thinking of little goals I have achieved</td>
<td>.44</td>
</tr>
</tbody>
</table>

Eigenvalue: 4.60
Variance (%): 38.38
**Internal Consistency**

Table 3.2 shows the internal consistencies for all the measures at the current study. The DGS’s internal consistency, as assessed by Cronbach’s alpha was high, .85. All internal consistencies were acceptable, and ranged from .69 to 86.

Table 3.2
*Internal Consistency for all Scales at T1 in the Australian Sample (N=178)*

<table>
<thead>
<tr>
<th>Measures</th>
<th>T1 Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGS</td>
<td>.85</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>.77</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>.77</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>.70</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>.69</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>.86</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>.69</td>
</tr>
<tr>
<td>QES-ND</td>
<td>.71</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>.72</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>.69</td>
</tr>
</tbody>
</table>

*Note: DGS = Daily Goals Scale, ABS = Adaptive Bias Scale, OB = Optimistic Bias, SS = Self Satisfaction, HOPE = Hope Scale, PATH = Pathways, AGEN = Agency, ATQ = Automatic Thought Questionnaire, NSNE = Negative Self-Concept and Negative Expectations, PMDC = Personal Maladjustment and desire for Change, QES = Questionnaire of Explanatory Style, ND = Negative Disposition, MASQ = Mood and Anxiety Symptom Questionnaire, AD = Anhedonic Depression, AA = Anxious Arousal*

**Descriptive Statistics**

Participants’ scores on the DGS ranged from 20 to 55 ($M = 39.33$, $SD = 6.61$). Table 3.3 displays the scale ranges, means and standard deviations of all of the other measures used in this study.

The results of this study identified that 51% of the participants scored above the cut-off score of 58 on MASQ-AD (Buckby, 2002), which is indicative of being at high risk of depression. Means and standard deviations obtained from this sample were also compared to those by other studies, in order to establish whether the current samples’ scores were similar to other community samples. As shown in Table 3.4, these were on the whole, comparable to those found in other studies. The mean and...
standard deviation for ATQ and Hope are provided in total scores due to unavailability of the score for each subscale.

A multivariate Pillai’s Trace F test was conducted to examine gender differences on all the included measures. This showed no overall significant gender difference, $F (1,178) = 1.48, p > .05$, thus men and women were combined in the subsequent analyses.
Table 3.3
Descriptive statistics for all variables for T1 in the Australian Sample (N=178)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Scale Range</th>
<th>Men (N=62)</th>
<th>Mean</th>
<th>SD</th>
<th>Women (N =116)</th>
<th>Mean</th>
<th>SD</th>
<th>Total Sample (N =178)</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGS</td>
<td>20-55</td>
<td>39.01</td>
<td>6.90</td>
<td>39.50</td>
<td>6.47</td>
<td>39.33</td>
<td>6.61</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABS-OB</td>
<td>12-30</td>
<td>21.72</td>
<td>3.09</td>
<td>22.17</td>
<td>3.05</td>
<td>21.99</td>
<td>3.19</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABS-SS</td>
<td>7-27</td>
<td>13.85</td>
<td>4.16</td>
<td>14.88</td>
<td>3.86</td>
<td>14.53</td>
<td>4.03</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>6-16</td>
<td>12.56</td>
<td>1.71</td>
<td>12.15</td>
<td>1.51</td>
<td>12.21</td>
<td>1.74</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>8-16</td>
<td>12.51</td>
<td>1.93</td>
<td>12.32</td>
<td>1.96</td>
<td>12.34</td>
<td>1.91</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>5-22</td>
<td>8.91</td>
<td>3.80</td>
<td>9.73</td>
<td>4.08</td>
<td>9.48</td>
<td>4.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>7-23</td>
<td>10.01</td>
<td>3.27</td>
<td>10.41</td>
<td>3.76</td>
<td>10.39</td>
<td>4.11</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QES-ND</td>
<td>6-25</td>
<td>13.53</td>
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<td>4.01</td>
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<tr>
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<td>35-81</td>
<td>58.14</td>
<td>9.02</td>
<td>58.87</td>
<td>8.96</td>
<td>58.57</td>
<td>9.43</td>
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<tr>
<td>MASQ-AA</td>
<td>17-46</td>
<td>28.35</td>
<td>5.76</td>
<td>28.77</td>
<td>5.84</td>
<td>28.60</td>
<td>5.82</td>
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</tbody>
</table>

Note. DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, SD = Standard Deviation, *p<.05. ** p<.01.
<table>
<thead>
<tr>
<th>Measure</th>
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<th>Prior studies</th>
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</tr>
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<td><strong>Mean / range</strong></td>
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<td>MASQ-AD</td>
<td>35-81</td>
<td>58.62 (9.42)</td>
<td>53.12 to 58.60</td>
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<tr>
<td>MASQ-AA</td>
<td>17-46</td>
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<td>ATQ</td>
<td>30-99</td>
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<td>QES-ND</td>
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<td>HOPE-PATH</td>
<td>6-16</td>
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<td>HOPE-AGAN</td>
<td>8-16</td>
<td>12.38 (1.77)</td>
<td>12.61</td>
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<td>ABS-OB</td>
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<td>ABS-SS</td>
<td>7-27</td>
<td>21.52 (3.99)</td>
<td>13.67</td>
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</tbody>
</table>

**Note.** DGS= Daily Goal Scale, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression, AA= Anxious Arousal, ATQ= Automatic Thought Questionnaire, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, SD = Standard Deviation, N/A = not applicable.
Convergent and discriminant validity of the DGS

Table 3.5 shows the correlations between all measures. The data yielded consistent evidence of convergent validity of the DGS. In line with expectations there was a moderate negative correlation between the DGS and MASQ-AD (-.40). It was also expected that the DGS scores would positively correlate with Hope and the two subscales of the ABS (OB and SS). Consistent with expectations, there were moderately high correlations between the DGS and Hope-Path (.34) and Hope-Agency (.42); and between the DGS and OB (.40). Also as it was expected, there was a moderate negative correlation between the DGS and QES-ND (-.37) and DGS and ATQ-PMDC (-.36) and a low negative correlation with ATQ-NSNE (-.24). The only unexpected finding was that SS failed to correlate with the DGS. Lastly, the results provided support for the discriminant validity in that there was no correlation between the DGS and AA (-.04).
<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
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<th>8</th>
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</thead>
<tbody>
<tr>
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<tr>
<td>2. ABS-OB</td>
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<td>3. ABS-SS</td>
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<td>4. HOPE-PATH</td>
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<td>.43**</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>5. HOPE-AGEN</td>
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<td>.47**</td>
<td>.02</td>
<td>.50**</td>
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<tr>
<td>6. ATQ-PMDC</td>
<td>-.36**</td>
<td>-.32**</td>
<td>-.38**</td>
<td>-.27**</td>
<td>-.40**</td>
<td>--</td>
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<td></td>
</tr>
<tr>
<td>7. ATQ-NSNE</td>
<td>-.24*</td>
<td>-.27**</td>
<td>-.37**</td>
<td>-.23*</td>
<td>-.44**</td>
<td>-.72**</td>
<td>--</td>
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<td></td>
<td></td>
</tr>
<tr>
<td>8. QES-ND</td>
<td>-.37**</td>
<td>-.31**</td>
<td>-.34**</td>
<td>-.32**</td>
<td>-.25*</td>
<td>-.43**</td>
<td>.34**</td>
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</tr>
<tr>
<td>9. MASQ-AD</td>
<td>-.40**</td>
<td>-.39**</td>
<td>-.21*</td>
<td>-.38**</td>
<td>-.36**</td>
<td>.52**</td>
<td>.45**</td>
<td>.36**</td>
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<td></td>
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<td>10. MASQ-AA</td>
<td>-.04</td>
<td>-.19*</td>
<td>-.14</td>
<td>-.21*</td>
<td>-.15</td>
<td>.56**</td>
<td>.43**</td>
<td>.30**</td>
<td>.26**</td>
<td></td>
</tr>
</tbody>
</table>

Note. DGS = Daily Goal Scale, ABS = Adaptive Bias Scale, OB = Optimistic Bias, SS = Self-Satisfaction, HOPE = Hope Scale, PATH = Pathways, AGEN = Agency, ATQ = Automatic Thought Questionnaire, PMDC = Personal Maladjustment and desire for Change, NSNE = Negative Self-Concept and Negative Expectations, QES = Questionnaire of Explanatory Style, ND = Negative Disposition, MASQ = Mood and Anxiety Symptom Questionnaire, AD = Anhedonic Depression, AA = Anxious Arousal. *p < .05, **p < .01.
Discussion

The present study was designed to develop and validate the new scale, the DGS, for measuring the propensity to set and achieve small daily goals. The findings suggest that the DGS comprises one factor reflecting ongoing daily goals. Furthermore, the DGS was found to demonstrate a high level of internal consistency and both convergent and discriminant validity.

Factor Structure and Internal Consistency of the DGS

Twelve of the 13 items loaded on a general factor reflecting strategies to help set and complete small daily goals. These included a range of strategies such as goal orientation, goal setting, use of willpower and discipline, focusing on successes, and reviewing goals. The coherence of this scale is further confirmed by the high internal consistency. Only item 8 (“My days are usually just about getting through to the end”) was deleted from the scale, as this item did not load on the extracted factor. This item is not focused on the achievement of any specific day to day goal but appears to be assessing the general goal of managing one’s overall day.

Convergent and Discriminant Validity

The findings of this study provided support for both the convergent and discriminant validity of the DGS. In line with expectations there was a moderate negative correlation between the DGS and MASQ-AD. The findings suggest that individuals with low scores on the DGS may experience more negative emotions and less positive meaning for daily activities. Inactivity associated with avoidance to engage in daily goals is one of the key factors to maintain depressive symptoms (Addis & Martell, 2004), and there is evidence that increasing meaningful and pleasurable activities assists individuals overcome passivity and avoidance.
(Thompson & Bullock, 2012). On the other hand, individuals with higher scores on the DGS are reporting lower scores on the MASQ-AD. This finding is consistent with other studies which suggest that promoting daily activities would be effective for the reduction of mild to moderate depressive symptoms in community and clinical settings (Veale, 2008).

The results also showed moderate negative correlations between the DGS and QES-ND and both ATQ-PMDC and ATQ-NSNE; while MASQ-AD had a positive correlation with QES-ND and both ATQ-PMDC and ATQ-NSNE. These results clearly show that the reduced propensity to set and achieve small daily goals is associated with both depressed mood and negative cognitions. When people are physically and emotionally inactive, they feel more overwhelmed which is often followed by increased pessimistic and negative cognitions making a downward loop for more negative thoughts and depressed feelings (Beck & Alford, 2009). Thus, setting and completing small daily goals may be useful to assist individuals to recognise and modify the frequency of mood-related negative cognitions. Furthermore, if individuals are successful in achieving their daily goals, positive cognitions (e.g. hope and optimism) may receive a boost resulting in enhancement of motivation for more activities (Feldman, Rand & Kahle-Wrobleski, 2009).

It was expected that the DGS would also correlate with Snyder’s Hope scale (Snyder, 2000). In line with expectations, there was a moderate positive correlation between the DGS and the Hope scale. Daily goals and hope are two interrelated components that enable individuals to accomplish their activities (Carver & Scheier, 2001). It has been suggested that attainable daily goals are needed to generate hope; however, hope is also needed to make purposeful progress towards achieving the goal (see Snyder et al., 2000).
The DGS also demonstrated a moderate positive correlation with ABS-OB, the measure of optimism. This finding is consistent with the views of Carver and Scheier (2001) who have argued that optimists believe that they are able to achieve their goals, and thus pursue them with more perseverance. Optimism results in positive meaning and values in normal daily activities. Additionally, one explanation for the positive relationship between the DGS and both ABS-OB and Hope is that these are related positive human strengths. As argued by Seligman (2005) optimism and hope are human strengths that can assist one grow and can be used to buffer the effects of depression.

The results also provided support for the discriminant validity of the DGS. There was no correlation between the DGS and MASQ-AA. The evidence from this study suggests that while the DGS is related to depression it is not related to anxiety. Therefore, the DGS would not be useful in any self-help approaches designed to monitor and manage anxiety.

**Conclusion**

In summary, a new scale, the DGS that measures the propensity to set and achieve small daily goals was developed and validated. The results provided evidence for the scale’s factorial validity. Findings also showed that the DGS was internally consistent. Moreover, both convergent and discriminant validity were demonstrated. In addition, given that the DGS is a simple and easy to understand scale, it can easily be incorporated into interventions by clinicians. The findings of Study 1A with their implications and limitations are further discussed in Chapter 11.
Overview

The first aim of Study 1B was to confirm the cross-sectional findings of T1 using follow-up data gathered 8-weeks following the initial testing (T2). This included the factor structure of the DGS, internal consistency, convergent and discriminant validity. The second aim was to evaluate the stability of the DGS, and all the other measures. Given the importance of positive cognitions, the last aim of this study was to examine if positive cognitions added any additional variance beyond negative cognitions in predicting depression over the 8-week period.

Method

Participants

The sample for this study were 144 out of the original 178 men and women who participated at T1. These included 50 men and 94 women with ages ranging from 18 to 70 years and a mean age of 34.16 years ($SD=13.12$). The women had an age range of 18 to 70 years and a mean age of 35.12 years ($SD=12.83$). The men had an age range of 18 to 69 years and a mean age of 34.98 years ($SD=12.00$). There was a 19% attrition rate from T1 to T2.

---

6 The results of this study (1B) were presented at an international conference (ICAP 2010; Melbourne)
Procedure
The participants completed the same questionnaires at T2 as per T1, with no reimbursement. As at T1, participants completed the questionnaires in their own time and returned these to the principal researcher in a reply-paid envelope. On receipt, these questionnaires were matched and numbered as T1, and stored in same location. All participants provided informed consent prior to participation. (Refer to Appendix A).

Measures
The same measures were used at T2 as those at T1 (Refer to Appendix A).

Results

Overview of Analysis
After data preparation, the PCA was conducted to examine the factor structure of the DGS items. Descriptive and correlation analyses were conducted to evaluate the psychometric properties such as internal consistency, convergent and discriminate validity, and stability of the DGS and all other variables. Moreover, in order to assess positive and negative cognitions in prediction of MASQ-AD, hierarchical regression was performed to determine if the positive cognitions at T1 predicted MASQ-AD at T2.

Data Preparation and Preliminary Analysis Assumptions
Data screening and statistical analyses were conducted using SPSS 20. The same data screening procedures of T1 were conducted for T2. All variables were screened for normality and univariate outliers prior to analyses. Five univariate outliers from three of the variables including ATQ-NSNE, QES-ND, and MASQ-AA were identified. These outlier scores were standardised to the values ±3.29 standard deviation beyond the group mean, which are acceptable limits recommended by Tabachnik & Fidell (2007).
In terms of multivariate outliers, Tabachnik and Fidell (2001) suggest the use of Mahalanobis distance with a critical Chi square value above the $p<.001$ cut-off criterion for detection of outliers. In this study, no multivariate outliers were identified. All variables were found to have a normal distribution and there was no evidence of non-linearity.

**Attrition Rates**
In terms of T2 (follow up at 8-week time), of the 178 participants, 144 men and women completed and returned the same questionnaires 8-weeks after T1. The decrease in the number of participants, who completed the questionnaires at T2, indicated that there was a 19% attrition rate from T1 to T2.

A MANOVA was performed in order to investigate any differences between participants who completed both T1 and T2 ($N=144$) with those who did not complete T2 ($N=34$). There was a statistically significant difference between the groups on the combined dependent variables, $F(10,167) = 2.48, p < .05$; Pillai’s Trace = .13; partial eta squared = .13. The univariate results showed that participants who completed both T1 and T2 reported significantly lower levels of anxiety ($M = 27.70, SD = 4.44$) than those ($N = 34$) who only participated at T1 ($M = 30.32, SD = 5.10$); $F(1,176) = 9.07, p < .05$, partial eta squared = .01.

**Factor Structure of the DGS**
The factorability of the 13 DGS items was examined using three well-recognised criteria explained in Study 1A (refer to Chapter 3 for details). The correlation matrix for the scale items revealed that all correlations were in excess of the recommended .30; the obtained KMO values were in excess of the minimal.60, being .88; and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance, thus indicating the data set that was suitable for factor analysis. The PCA extraction was carried out on the 13 items of the DGS to determine the appropriate number of factors. Similar to T1, the results indicated the
presence of one factor, with eigenvalues greater than one accounting for 43.31% of the variance for the first run as shown in Table 4.1. Moreover, in line with T1, only item 8 did not load on this factor, and thus was removed from the scale. Overall, all items loaded on one factor comprising the small daily goals scale. In addition, factor loadings were similar with those obtained at T1.

Table 4.1
Factor loadings based on a Principal Component Analysis for 13 items from the Daily Goals Scale (DGS) at T2 in Australian Sample (N=144)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I can see each day as a series of small personal goals to meet</td>
</tr>
<tr>
<td>2.</td>
<td>I am very good at focusing my efforts on attaining a goal</td>
</tr>
<tr>
<td>3.</td>
<td>Sometimes I set myself little goals for the next day</td>
</tr>
<tr>
<td>4.</td>
<td>I try my best not to leave small goals half done</td>
</tr>
<tr>
<td>5.</td>
<td>I can see how my achievement of smaller goals enables me to build towards bigger goals</td>
</tr>
<tr>
<td>6.</td>
<td>For me, each day lets me make small achievements, such as watching TV, taking a shower, eating well, talking with a friend, etc.</td>
</tr>
<tr>
<td>7.</td>
<td>Sometimes at night I think of small goals I have achieved during the day</td>
</tr>
<tr>
<td>8.</td>
<td>My days are usually just about getting through to the end</td>
</tr>
<tr>
<td>9.</td>
<td>I encourage myself to keep pursuing little goals every day</td>
</tr>
<tr>
<td>10.</td>
<td>It is success at the little goals that encourages me to try for bigger goals</td>
</tr>
<tr>
<td>11.</td>
<td>When I am feeling down, I still try to work towards very little goals</td>
</tr>
<tr>
<td>12.</td>
<td>Some mornings I review the little goals I achieved yesterday</td>
</tr>
<tr>
<td>13.</td>
<td>Sometimes I can lift my mood by thinking of little goals I have achieved</td>
</tr>
</tbody>
</table>
Internal consistency

Table 4.2 shows the internal consistencies for all measures at T2. These Cronbach’s alphas were acceptable for all measures and were similar to those obtained at T1. They ranged from .69 to .89.

Table 4.2
Internal Consistency for all Scales at T2 in the Australian Sample (N=144)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Cronbach Alpha</th>
</tr>
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<tbody>
<tr>
<td>DGS</td>
<td>.89</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>.72</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>.80</td>
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<tr>
<td>HOPE-AGEN</td>
<td>.72</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>.75</td>
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<tr>
<td>QES-ND</td>
<td>.75</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>.88</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>.79</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>.73</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>.69</td>
</tr>
</tbody>
</table>

Note: T2 = Time 2, ABS = Adaptive Bias Scale, OB = Optimistic Bias, SS = Self Satisfaction, HOPE = Hope Scale, PATH = Pathways, AGEN = Agency, QES = Questionnaire of Explanatory Style, ND = Negative Disposition, ATQ = Automatic Thought Questionnaire, NSNE = Negative Self-Concept and Negative Expectations, PMDC = Personal Maladjustment and desire for Change, MASQ = Mood and Anxiety Symptom Questionnaire, AD = Anhedonic Depression Time one, AA = Anxious Arousal, SD = Standard Deviation, *p<.05, **p<.01.

Descriptive Statistics

Means and standard deviations of all variables at T2 for men and women are presented in Table 4.3. Participants’ scores at T1 on the DGS ranged from 20 to 55 (M = 39.33, SD = 6.61), similar with T2 that it ranged from 24 to 55 (M = 40.07, SD = 7.01).

In order to examine gender differences on all the included measures, a multivariate Pillai’s Trace $F$ test was conducted. As at T1, the results showed no overall significant gender difference, $F (1,144) = 1.33$, $p > .05$, thus men and women were combined in the subsequent analyses.

Multivariate analysis of variance (MANOVA) was performed to investigate any differences across all variables among participants at T1 and T2. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers,
homogeneity of variance and multicollinearity with no serious violation noted. Ten dependent variables were included: the DGS, ABS-OB, ABS-SS, HOPE-AGEN, HOPE-PATH, ATQ-PMDC, ATQ-NSNE, QES-ND, MASQ-AD and MASQ-AA. The results showed that there was not statistically significant difference between T1 and T2 on any of dependent variables, $F(10,311) = 1.62, p > .05$; Pillai’s Trace = .05; partial eta squared =.05. Table 4.4 presented means and standard deviations of all variables at T1 and T2.

Consistent with T1, the results of this study identified that 44% of the participants scored above the cut-off score of 58 on MASQ-AD (Buckby, 2002) at T2, which is indicative of being at high risk of depression.

**Convergent and discriminant validity of the DGS**

The results of the current study are shown in Table 4.5. Consistent with the T1 findings, this study demonstrated evidence of convergent and discriminant validity of the DGS. The results indicated moderate negative correlations between DGS and the MASQ-AD (-.45), ATQ-PMDC (-.36) and ATQ-NSNE (-.36). Moreover, there were positive correlations between the DGS and ABS-OB (.51), ABS-SS (.24), HOPE-PATH (.56), and HOPE-AGEN (.42). Finally, consistent with findings of T1, the discriminant validity was indicated by the non-significant correlation between the DGS and AA (-.09).
<table>
<thead>
<tr>
<th>Measures</th>
<th>Scale Range</th>
<th>Men (N=50)</th>
<th>Women (N=94)</th>
<th>Total Sample (N=144)</th>
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<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>DGS</td>
<td>24-55</td>
<td>39.20</td>
<td>6.86</td>
<td>40.54</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>13-29</td>
<td>22.06</td>
<td>3.06</td>
<td>22.74</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>6-27</td>
<td>14.28</td>
<td>4.44</td>
<td>15.26</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>8-16</td>
<td>12.56</td>
<td>1.71</td>
<td>12.73</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>8-16</td>
<td>12.56</td>
<td>1.86</td>
<td>12.55</td>
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<tr>
<td>ATQ-PMDC</td>
<td>5-20</td>
<td>9.02</td>
<td>3.87</td>
<td>8.78</td>
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<td>ATQ-NSNE</td>
<td>7-23</td>
<td>10.62</td>
<td>4.34</td>
<td>9.67</td>
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<td>QES-ND</td>
<td>6-25</td>
<td>13.60</td>
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<td>13.76</td>
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<tr>
<td>MASQ-AD</td>
<td>39-78</td>
<td>58.58</td>
<td>9.52</td>
<td>57.31</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>20-36</td>
<td>27.64</td>
<td>6.00</td>
<td>27.31</td>
</tr>
</tbody>
</table>

Note: DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, SD = Standard Deviation. *p<.05. **p<.01.
Table 4.4
Descriptive statistics for all variables at T1 and T2 in the Australian Sample

<table>
<thead>
<tr>
<th>Measures</th>
<th>Scale Range</th>
<th>T1 (N=178)</th>
<th>T2 (N=144)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td></td>
<td>Scale Range</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>DGS</td>
<td>20-55</td>
<td>39.33</td>
<td>6.61</td>
</tr>
<tr>
<td>ABS-OB</td>
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<td>ABS-SS</td>
<td>7-27</td>
<td>14.53</td>
<td>4.03</td>
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<td>HOPE-PATH</td>
<td>6-16</td>
<td>12.21</td>
<td>1.74</td>
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<td>HOPE-AGEN</td>
<td>8-16</td>
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<td>ATQ-PMDC</td>
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<td>9.48</td>
<td>4.11</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>7-23</td>
<td>10.39</td>
<td>4.31</td>
</tr>
<tr>
<td>QES-ND</td>
<td>6-25</td>
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<td>3.96</td>
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<td>35-81</td>
<td>58.57</td>
<td>9.43</td>
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<tr>
<td>MASQ-AA</td>
<td>17-46</td>
<td>28.60</td>
<td>5.82</td>
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Note: ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, SD = Standard Deviation, *p<.05, ** p<.01.
<table>
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<tr>
<th>Measure</th>
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<th>7</th>
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<td>1. DGS</td>
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<td>.21*</td>
<td>.50*</td>
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<td>-.32*</td>
<td>-.23*</td>
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<td>8. QES-ND</td>
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<td>-.37*</td>
<td>-.36*</td>
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<td>-.37*</td>
<td>.32**</td>
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<td>9. MASQ-AD</td>
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<td>-.60*</td>
<td>-.22*</td>
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<td>-.56*</td>
<td>.62**</td>
<td>.31**</td>
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<td>10. MASQ-AA</td>
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<td>-.21*</td>
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<td>.53**</td>
<td>.55**</td>
<td>18</td>
<td>.25*</td>
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</table>

Note. DGS = Daily Goal Scale, ABS = Adaptive Bias Scale, OB = Optimistic Bias, SS = Self Satisfaction, HOPE = Hope Scale, PATH = Pathways, AGEN = Agency, ATQ = Automatic Thought Questionnaire, PMDC = Personal Maladjustment and desire for Change, NSNE = Negative Self-Concept and Negative Expectations, QES = Questionnaire of Explanatory Style, ND = Negative Disposition, MASQ = Mood and Anxiety Symptom Questionnaire, AD = Anhedonic Depression, AA = Anxious Arousal. *p < .05, **p < .01.
Stability of All Measures

Stability coefficients over the 8-week period were computed for all measures, as shown in Table 4.6. Overall, the stability coefficients between T1 and T2 ranged from .52 to .83. The least stable measure between T1 to T2 was HOPE-PATH (.52), while the most stable scale was ABS-SS (.80).

Table 4.6
Stability Coefficients between T1 and T2 for all Scales in the Australian Sample (N=144)

<table>
<thead>
<tr>
<th>Measure</th>
<th>T1-T2</th>
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<td>.60</td>
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<td>MASQ-AA</td>
<td>.65</td>
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</table>

Note. DGS= Daily Goal Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS=Self Satisfaction, HOPE=Hope Scale, PATH=Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, PMDC=Personal Maladjustment and desire for Change, NSNE= Negative Self-Concept and Negative Expectations, QES=Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ=Mood and Anxiety Symptom Questionnaire, AD=Anhedonic Depression, AA=Anxious Arousal.

Predicting Anhedonic Depression from Positive and Negative Cognitions

Preliminary analyses were performed to check the assumptions for hierarchical regression. There were no violations of the assumptions of normality, linearity, multicollinearity and homoscedasticity.

The results of the hierarchical regressions are shown in Table 4.7. The results of overall hierarchical regression model was statistically significant $F(9,134) = 14.47$, $p<.001$, explaining 49% of the variance. At step 1, T1 MASQ-AD scores significantly predicted T2 MASQ-AD scores, $\Delta F(1,142) = 81.41$, $p<.001$, and accounted for 36% ($adj \ R^2=.36$) of the variance. At step 2, when ATQ-PMDC, ATQ-NSNE and QES-ND were entered as additional predictors, the regression equation significantly improved
(7%) the amount of variance \((adj \ R^2 =.42)\), \(\Delta F (3,139) = 6.12, p<.001\). Only ATQ-NSNE was a significant predictor of MASQ-AD at T2. The positive direction of the relationship shows that individuals with higher ATQ-NSNE at T1 displayed higher levels of MASQ-AD at T2.

At the final step, ABS-OB, ABS-SS, HOPE-AGEN, HOPE-PATH and DGS were added to the model and these significantly improved the prediction of T2 MASQ-AD scores, \((adj \ R^2 =.46), \Delta F (5,134) = 2.88, p<.001\). At this step, ABS-OB was found to be a unique predictor, whereby individuals who had higher scores for the ABS-OB at T1 displayed lower MASQ-AD scores at T2.

Table 4.7

<table>
<thead>
<tr>
<th>Models/hierarchical steps</th>
<th>(R^2)</th>
<th>(\Delta R^2)</th>
<th>(B)</th>
<th>(\beta)</th>
<th>(sr^2)</th>
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<tbody>
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<td>-.10</td>
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</table>

Note: \(\Delta R^2 = R\) square change; \(sr^2\)=squared semi partial correlations; MASQ= Mood and Anxiety Symptom Questionnaire; AD= Anhedonic Depression; ATQ = Automatic Thought Questionnaire; PMDC=Personal Maladjustment and desire for Change; NSNE= Negative Self-Concept and Negative Expectations; QES = Questionnaire of Explanatory Style; ND = Negative Disposition; HOPE= Hope Scale, ABS= Adaptive Bias Scale; OB= Optimistic Bias, SS=Self Satisfaction, HOPE= Hope Scale, AGEN= Agency, PATH=Pathways, DGS= Daily Goal Scale. *p < .05, **p < .01.
Discussion
The present study was firstly conducted to confirm the cross-sectional findings of T1 using follow-up data gathered 8-weeks after initial testing. Consistent with T1, the findings demonstrated that the DGS comprises one factor reflecting small daily goals. Additionally, the DGS was found to show a high level of internal consistency, and both convergent and discriminant validity.

Stability Coefficients
The second purpose of this study was to evaluate the stability of the DGS and all the other measures across the 8-week period. The findings showed that all the scales were stable with the ABS-SS being the most stable and HOPE-PATH being the least stable.

Predictors of Anhedonic Depression
The third aim of this study was to examine whether positive cognitions added any additional variance beyond the initial MASQ-AD scores and negative cognitions as the predictors of the MASQ-AD at T2. In the present study, the largest proportion of the variance in subsequent MASQ-AD was accounted for by initial MASQ-AD. This finding supports previous research which has shown that initial depressive symptoms are the significant predictor of future depression (Hankin et al., 2004).

In addition to MASQ-AD, ATQ-NSNE at T1 was also found to be a unique predictor of MASQ-AD at T2. This indicated that individuals with higher scores on negative self-concept and expectation were more likely to experience depression. This finding is consistent with past research showing that negative self-concept and expectations as part of automatic negative thoughts predicts depressive symptoms (Calvete, & Connor-Smith, 2005).
In terms of positive cognitions, these results support that positive cognitions at T1 predict MASQ-AD at T2. However, the ABS-OB was the only variable to significantly predict MASQ-AD. The other variables, the DGS, HOPE-PATH, HOPE-AGEN and ABS-SS did not predict future depression uniquely.

The negative relationship between optimism and anhedonic depression indicated that individuals with higher level of optimism were likely to have less depressive symptoms. This finding is consistent with previous research that has shown optimism to buffer against initial depressive symptoms, and predicts depression (Hawkins, 1998; Marshall et al., 1992; Smith, 2001).

The above finding is also consistent with Australian research by Hawkins (2004) who suggested that optimism might protect against depression through the process of goals attainment. Optimistic individuals’ perceptions consist of positive sense of self and of personal control (Taylor et al., 2000). Thus, these positive resources may be enhanced through goal attainment and buffer against unpleasant realities and lead to more positive thinking. In addition, these results are consistent with those of other studies that suggest optimism promotes resilience to depression (Chang, 2003; Dunn, 1996; Karwoski et al., 2006; Levine, 2000; Scheier & Carver, 1992). Lightsey (1994) also suggested that the buffering function of positive cognitions in depression stems from individuals’ ability to generate more positive thoughts. It is also important to note that optimism, hope and goal setting are closely related constructs of positive cognitions (Snyder, 2002). While optimism is inversely related to depressive symptoms, it has been shown that optimism is positively associated with higher levels of motivation, hope and goal achievement (Buchanan & Seligman, 1995; Ridder, Schreurs, & Bensing, 2000; Wong & Lim, 2009). Moreover, there is evidence that optimistic individuals have a higher level of daily goals and
activities (Mazzuchelli, 2010). Therefore, the current results support previous research in two ways. First, there is a link between optimism and depressive symptoms that may enhance one’s resilience to developing depression (Smith, 2001). Second, because optimism is positively associated with hope and daily goals, boosting optimism directly may enhance both hope and daily goals and consequently prevent depressive symptoms (Seligman, 2011).

**Conclusion**

The results of Study 1B provided further support for the factor structure of the DGS and internal consistency, as well as convergent and discriminant validity. In addition, the results showed that the DGS was stable across time. Lastly, in terms of positive cognitions, the findings showed that optimism was the only predictor of anhedonic depression at T2. Further discussion and the implications of these results will be provided in Chapter 11.
Chapter 5: Depression in non-Western Cultures

Overview
This chapter provides a brief review of the nature and cognitive aspects of depression in collectivistic non-Western cultures compared to individualistic Western cultures. Similarities and differences are considered in order to emphasise the importance of culturally universal and culture-specific symptoms when assessing and treating depression. This chapter will also focus specifically on the prevalence, nature, and cognitive aspects of depression research relevant to the Iranian population. A short history and general background relating to Iranian culture are provided to contextualise universal and culture-specific symptoms found in this population.

Nature of Depression in non-Western Cultures Comparing to Western
Depressive feelings and sadness are a normal component of disappointment and grief, and are universally experienced by people around the world (Kleinman, 2004; Marsella, 2003). A large body of evidence shows that there are universal core symptoms of depression such as low mood (feelings of sadness), loss of energy, lack of interest in normally enjoyable activities, pessimism, inability to concentrate, and agitation (Ballenger et al., 2001; Barkow et al., 2004; Beck & Alford, 2009; Draguns & Tanaka-Matsumi, 2003). Evidence also suggests that most of these depressive symptoms are similar in both Western and non-Western cultures (Goldston et al., 2008; Shiraev & Levy, 2010; Yen et al., 2000). However, non-Western belief systems and cultural differences impact on the presentation of these depressive symptoms (Marsella, 2003; Nikelly, 1988). This suggests that while the perception and expression of depressive symptoms depend on the cultural context in which they
occur, the experiential nature of depressive symptoms are nonetheless similar across cultures (Carta et al., 2013).

While only a limited amount of research has investigated subclinical depressive symptoms in Western societies to date, even less research has been conducted in non-Western societies.

Jablensky et al. (1981) conducted comprehensive cross-cultural comparisons using the schedule for Standardized Assessment of Depressive Disorder (SADD) to examine similarities between depressive symptoms in Western and non-Western societies. Participants were recruited from Canada, Iran, Japan, and Switzerland. Similarities between specific symptoms were found, but levels and frequencies differed by culture. For instance, 68% of the Swiss sample displayed guilt feelings associated with depression, while only 32% of Iranians felt guilty; suicidal ideation was present in 70% of Canadians compared to 40% of Japanese; and somatisation was present in 57% of Iranians but only 27% of Canadians. While somatic symptoms were higher in non-Western cultures such as Iran, and ideational symptoms were higher in Western cultures such as Switzerland and Canada, these results also found that regardless of culture, the majority of depressed participants (76%) reported a common pattern of depressive symptoms including sadness, absence of pleasure, low energy, lack of concentration, and a feeling of inadequacy.

Crittenden et al. (1992) also investigated cultural effects on depressive symptoms, using the Self-rating Depressive Symptoms (SDS; Zung, 1965) scale among university students in four countries (United States, Korea, Philippines, and Taiwan). Psychological symptoms (e.g. low mood, loss of pleasure in activities, low self-esteem, pessimism etc.) were reported primarily in the United States and Taiwan, while somatic symptoms followed by psychological symptoms were the most
prevalent among Korean and Filipino students. These cross-cultural comparisons support Jablensky et al.’s (1981) findings regarding prevalence of somatic versus psychological symptoms in non-Western versus Western cultures, respectively, but also emphasise that manifestation of depression via psychological symptoms (including cognitive factors) across non-Western cultures is nonetheless common.

In another study, Schrier et al., (2010) examined the expression of depressive symptoms and the impact of symptoms on individual function in a mixed-gender Netherlands community sample. Participants included native Dutch \((N = 321)\), Turkish-Dutch \((N = 213)\), Moroccan-Dutch \((N = 191)\) and Surinamese-Dutch \((N = 87)\) groups. The Composite International Diagnostic Interview (CIDI 2.1) and the Symptom Checklist-90-Revised (SCL-90-R) were used to evaluate depressive symptoms by bilingual interviewers, and the World Health Organization Disability Assessment Schedule II (WHODAS II) measured impairments in functioning. Overall, the Turkish and Moroccan immigrant groups had higher levels of depressive symptoms compared to the native Dutch participants, although depressive symptoms were equally associated with functional impairment across ethnic groups.

There are at least three factors regarding the nature of depressive symptoms that influence and result in their varying presentation across cultures (Shiraev & Levy, 2010). These aspects include: understanding of the symptoms by individuals; how individuals disclose and describe their symptoms; and diagnostic practices.

The terms used to describe depression can play an important role in understanding and interpreting depressive symptoms across cultures (APA, 2013). Although the frequency of many depressive symptoms is similar across cultures, the idioms used to report these symptoms vary according to the cultural context (Marsella, 2003). While evidence strongly suggests that depression is reported as a
universal phenomenon, different ethnic groups and cultures may not recognise depression as a mental health problem (Marsella, 2003). There may not be a proper vocabulary to explain the feelings attributed to depressive symptoms in non-Western societies, in the sense that there is no equivalent term for depression (Kleinman, 2004; Marsella, 2003; Nikelly, 1988; Patel, 2001). The lack of a word for “depression” itself in some cultures might contribute to varying accounts of symptoms across cultures (Shiraev & Levy, 2010). For example, a study with Chinese participants found that this group emphasised the expression of somatic over psychological symptoms (Yen et al., 2000). A second study about the use of the term ‘depression’ in America and Japan found that the Japanese group similarly tended to describe somatic symptoms (e.g., headache or fatigue), while American participants described their symptom using mood-state terms (e.g., sad or lonely; Tanaka-Matsumi & Draguns, 1997).

Another factor that influences the manifestation of depressive symptoms is how people describe the symptoms in unfamiliar ways in non-Western societies (compare to the Western psychology perspective) (Shiraev & Levy, 2010; Veling, Blom, & Hoek, 2013). Reports from non-Western collectivistic cultures such as Turkey, China, Indonesia, India, Japan, Malaysia, and Africa show that individuals tend to describe their psychological and emotional distress in bodily and somatic form (Cinarbas, 2007; Draguns & Tanaka-Matsumi, 2003; Shiraev & Levy, 2010). For instance the cognitive aspects of symptoms such as self-rejection or guilt might be presented in the form of fatigue, headache, or reported pain in parts of their body (Shiraev & Levy, 2010). This does not mean that the psychological symptoms are absent, but rather that depressed individuals describe their symptoms in bodily form and psychological symptoms remain underreported (Yen, Robins, & Lin, 2000).
The aforementioned studies suggest that the way people understand their own symptoms, and the way they describe their symptoms, can result in varying presentation of depressive symptoms across cultures, although the nature of the symptoms are similar for Western and non-Western cultures (Shiraev & Levy, 2010). Overall, Western depression is often conceptualised with psychological symptoms, such as guilt, individualism and personal control (Kalibatseva, & Leong, 2011; Marsella, 2003). In contrast, non-Western belief in the unity of mind and body reflect the incidence of somatic symptoms (e.g., headache, fatigue, stomach ache), more than psychological or affective symptoms (Kalibatseva, & Leong, 2011; Shiraev, & Levy, 2010). It may be that cultural values influence whether and how individuals experiencing depression openly present and/or underreport their depressive symptoms (Kleinman, 2004; Shiraev, & Levy, 2010). For example in Middle Eastern cultures, individuals with sadness and low mood may complain about heart problems, while in Chinese culture they may express tiredness or imbalance rather than ‘feeling down’ (Marsella, 2003).

Along with an individual’s understanding and disclosure of depression, diagnostic practices may also influence how depressive symptoms are represented in non-Western societies. For example, past research suggests that in non-Western societies, professional practitioners are aware of stigmatisation of depression, and prefer to avoid diagnosing “depression” so as to avoid labelling and stigmatising their client (Kharaziha, 2011; Neary, 2000). Instead, the client may be diagnosed with a physical dysfunction that is treatable using conventional medicine (Neary, 2000). It is also important to note that the diagnostic criteria of the Diagnostic and Statistical Manual of Mental Disorders (DSM), which is a Western diagnostic tool for psychopathology, is widely used by practitioners in both Western and non-Western
cultures. It may be that cultural factors influencing description and disclosure of depressive symptoms in non-Western cultures may not be accounted for when diagnosing depression using this model (Mezzich, Kleinman, Fabrega, & Parron, 2002).

Due to globalisation, however, Western culture has begun to influence non-Western lifestyles in various ways, so that depressive symptoms in non-Western societies have grown in time to resemble those of Western societies (Marsella, 1985; Mezzich, Kleinman, Fabrega, & Parron, 2002; Draguns & Tanaka-Matsumi, 2003). Although the DSM has become a global diagnostic model, it is still dominated by Western theory, constructs, and symptoms about depression (N. Farnoody, personal communication, June 05, 2014). For instance, the fifth Edition of the DSM (DSM-5) describes depression as a mood disorder with associated somatic symptoms, and thus assumes both psychological and somatic aspects in manifestation of depression. While the current DSM incorporated both somatic and psychological symptomatology into its criteria, there are cultural characteristics of depressive symptoms (such as anger) that need to be considered in the DSM criteria (N. Farnoody, personal communication, June 05, 2014). Overall, depressive symptoms between Western and non-Western cultures appear to be universal in nature, but vary in how certain symptoms are understood, manifested, and diagnosed (Shiraev & Levy, 2010).

**Cognitive Aspects of Depression in non-Western Cultures**

Cognitions are one of the aspects of depression that can be influenced by cultural factors and are hypothesised to be important in the aetiology of depression (McLeod, & Moore, 2000; Shiraev & Levy, 2010). Although the most effective treatments for depression are based on cognitive interventions, the role that cognitions
play in depressive symptoms is poorly understood in non-Western cultures (Stewart et al., 2004).

According to Western cognitive theories, human adaptation and function are based on the structures, processes, and products of faulty or biased cognitive processing which are core aspects of the depressive experience (Beck & Alford, 2009). Cognitions can act as independent vulnerability factors for depression (Ingram, Miranda, & Segal, 2006; Segal, Williams, Teasdale, & Kabat-Zinn, 2012). In addition, Beck et al. (1979) proposed that negative cognitions are a universal susceptibility factor for depression. The search for a similar relationship between cognitions and depressive symptoms cross-culturally is important because cognitive models of therapy, which were developed in Western cultures, have been applied in non-Western cultures despite limited knowledge about the universality of depressive symptomology and hence diagnosis. This debate –whether cognitions of depression are universal or culture-specific, and to what extent- is ongoing (Jackson, 2003). Exploring both universal similarities and cultural differences regarding the assumptions upon which cross-cultural cognitive styles are based could aid our understanding of depression, so that culture-specific and efficacious treatments can be created (Ahmed & Bhugra, 2006). To do this, ‘Western’ ‘knowledge of depression, and the Western perspective guiding cultural analysis regarding this phenomenon, must be understood as limited by its cultural boundaries (Mezzich, Kleinman, Fabrega, & Parron, 2002).

Only a few studies have been conducted examining negative cognitions in relation to depression in non-Western societies. Due to the limited amount of research in this area, research pertaining both subclinical and clinical depression in cross-cultural studies, with any non-Western sample (e.g., adolescents) will be examined.
Anderson (1999) conducted one of the few studies on cognitive variables and depressive symptoms from a cross-cultural perspective. Maladaptive attribution styles (negative cognitions, i.e., self-blame and pessimism) were examined in relation to depressive symptoms between college student samples in China ($N=198$) and the United States ($N=193$). Consistent with collectivistic cultures, Chinese participants were more likely to view the self as interdependent and part of a social network (self as relative to others), reporting greater negative attributions to external factors, and consequently presenting a greater vulnerability to depression. This finding is also consistent with the notion that people in collectivistic cultures are more influenced by external regulations and norms compared to those of individualistic cultures, who are more influenced by internal events such as cognitions (Triandis, 1994). Overall, more cultural similarities than differences were found relative to attributional style and depression for both cultural samples, and while the strength of the correlation between attribution style and depressive symptoms varied by culture, the direction of this relationship was the same across samples (e.g., negative attribution positively correlated to depression). Despite differences in the concept of self, the role of attributional style in maintenance of depressive symptoms was similar for both the Chinese and United States participants. The author concluded that the similarities in attributional style relative to depression might reflect the underlying universal foundations of human cognitive processing.

Concerning negative cognitions and depressive symptoms, Stewart et al. (2004) evaluated a community sample of youths ($N = 2272$) in Hong Kong and the United States. Self-reported cognitive variables of negative cognitions, self-efficacy, and hopelessness were investigated relative to depressive symptoms. Results suggested that negative cognitions and self-efficacy were lower, and depressive
symptoms and hopelessness were higher, in Hong Kong participants than those in the United States. In both cultures, negative cognitions were associated with depressive symptoms, and predicted depressive symptoms six months later.

To modify negative cognitions among Japanese depressed individuals \((N=27)\), Fujisawa et al. (2010) conducted a study using cognitive behaviour therapy (CBT), resulting in a significant improvement in depressive symptoms. The authors concluded that targeting negative cognitions that maintain depressive symptoms, through behavioural intervention, increases positive outcomes in the treatment of Japanese depressed individuals.

There are no research studies that have examined depressive symptoms or depression from the positive psychology perspective in non-Western societies (Dorahy et al., 2000; Siravo, 2010). Thus, we do not know whether positive cognitions (e.g. optimism, hope, goal setting) are also related to depressive symptoms in non-Western cultures.

**Background on Iran**

Iran is a large country located in west Asia. It is the second-largest nation in the Middle East, and the 18th largest in the world, with a population of almost 77 million (Tehran, 2012). Approximately 60.4% of the population live in urban areas, and 39.6% in rural areas (Shadloo, 2011). There are a variety of subcultural groups and different local languages (e.g., Turkish, Kurdish, Lori, etc.). The majority of the population (about 89%) are Shi’ite Muslims (Khodaparast, 2008), and Persian (Farsi) is the official language of Iran.

Iran’s history of diagnosing and treating depression is almost 1000 years old (Shamloo, 2005). However, modern psychology, according to Western principles and
as a part of mental health sciences, was introduced to Iran less than four decades ago (Esmaeili, & Gudarzi, 2009; Tehran, 2012). Consequently, both research and mental health services around depressive disorders have changed and developed recently. Specifically, the background of research in depression studies has been increased in the last two decades (Esmaeili, & Gudarzi, 2009; Sabet, 2011). The centre of behavioural science and mental health research and services has been expanded in Tehran University (Tehran, 2012). The national mental health programs (National) are under development in Iran, with mental health services supported by the Ministry of Health, Treatment, and Medical Education (Khodayarifard, Rehm, Khodayarifard, 2007). Although in recent years the number of private psychological and psychiatric counselling centres has grown, the availability of public mental health centres in hospitals are limited, with only 7.9 beds per 100,000 people provided for mental health treatment, across 33 hospitals, which is considerably lower than in Australia (Dejman, 2010; Sanati, 2006). There is also a lack of collaboration between the primary health care system and the psychiatry divisions in hospitals. Based on the last evaluation of mental services in Iran, there were 75 community residential facilities, 46 community-based psychiatric inpatient units, and 855 outpatient mental health facilities available (WHO, 2008). Overall, the mental health services and programs in Iran are not as systematic or as strong as those provided in Australia.

**Nature of Depression in Iran**

In Iranians, clinical and subclinical depression may be experienced and manifest as distress, lack of pleasure and energy, sadness, sleep disturbance, inability to concentrate, feelings of worthlessness, and pessimism (Hashemi, 2012). The main symptoms of Major Depressive Disorder (MDD) resemble the affective, cognitive,
behavioural, and physical features of depression in Western individuals (Hashemi, 2012). Good, Good, and Moradi (1985) proposed that the construct of Iranian clinical depression is similar to that of clinical depression in Western cultures. The majority of studies in Iran, which relate to clinical depression, support Good et al.’s proposal, suggesting that the Western DSM criteria appropriately conceptualise MDD symptoms in Iran (Hakimshooshtari et al., 2007; Sadeghirad, 2010).

To date, only a few studies have investigated depression in Iran. Good et al. (1985) explored the interpretation and nature of dysphoria and depressive experiences using separate collaborated studies among Iranian students, clinical samples, a rural community sample, and also Iranian immigrants in the United States (between 1972 to 1982), to investigate how cultural factors influence the expression of depressive symptoms. The authors highlighted that presentation of depression is rooted in three cultural elements among Iranians: the concept of self (where greater sadness is valued as indicating thoughtfulness and personal depth); grief as a religiously motivated emotion in Iranian Shi’ism; and the Iranian idea of the tragic. Good et al. concluded that these three combined cultural elements exacerbate the perception of sorrow and grief among Iranians, creating a “cultural sadness”. However, they also concluded that Iranians have a distinct understanding of depressive symptoms, separate from this cultural sadness, as a disease that is similar to depression in the West. In addition, they identified four culturally-distinct factors including sadness (grief), anger, insecurity (mistrust), and sensitivity that are presented in depressive symptoms among Iranian depressed patients.

It is important to emphasise the significance of cultural sadness (grief) on Iranians’ development and experience of depression (Good et al., 1985; Holakouee,, 2011). The cultural sadness (gham o ghose in Persian; Pliskin, 1992) is seen as an
accepted and valued character by Iranians, as evidence for personal depth and faith, and is fostered via a number of social contexts and mediums (such as religious, literature, political, Persian poetry and personal aspects). It is possible that cultural sadness could provide a tendency towards negative affect and hence a vulnerability to depressive symptoms (Good et al., 1985; Holakouee, 2011; Pliskin, 1992).

Dejman et al., (2010) also studied the nature and understanding of depression in Iranians. Overall, 76 male and female participants of three ethnic groups in Iran (Kurd, Turk, and Fars) were assessed in how they described and interpreted (by focusing on women) their depressive symptoms. All participants used the Iranian term for depression (Afsordegi in Persian) to describe their moods. In addition, they identified both external (e.g., sociocultural, economic, war) and internal (e.g., biological, emotional, cognitive) factors that they perceived to be the cause of their depression. Key help-seeking attitudes that were identified included: spiritual connections (religion), positive thinking, family and friends, distraction from social problems, and getting help from a psychologist or counsellor, rather than a psychiatrist, to avoid stigma associated with diagnosis.

The paucity of research on depressive symptoms, both clinical and subclinical, among Iranians makes it difficult to draw conclusions about its impact, and cultural implications. Nonetheless, results regarding cognitive and affective symptoms associated with depression in Iranians are consistent with Beck’s cognitive and affective manifestation of depression (Beck et al., 1997). The limited findings on clinical depression in Iranians suggest that clinical depression symptoms are similar to those experienced in Western cultures (i.e. distress, lack of pleasure and energy, sadness, sleep disturbance, inability to concentrate), with the addition of culture-specific symptoms (e.g., sensitivity, mistrust). While research on subclinical
depression in Iranians is non-existent, if depression is perceived from a dimensional perspective (i.e., where clinical depression represents a pathologised endpoint for negative affect), then by extension subclinical depressive symptoms could be hypothesised as resembling those found in Western culture (i.e., one core symptoms such as anhedonia), with the addition of Iranian culture-related symptoms. Given the high prevalence of depressive symptoms in Iran, as well as a cultural tendency to value sadness (grief) as an accepted personal and social attribute, it is possible that cultural sadness exacerbates negative cognitions, and could increase vulnerability to depression. However, given that little is known about the relationship between subclinical and clinical symptoms, let alone the precursors to subclinical symptoms, this suggestion remains hypothetical and requires exploration by future research.

The following sections review key issues associated with understanding and researching depression in Iran, including diagnosis, stigma, comorbidity, prevalence, treatment, cognitive aspects of depression in Iran, and positive psychology in Iran.

**Diagnosis**

Individuals with clinical depression are generally placed in psychiatric settings, with symptom manifestation that is similar to and compatible with Western diagnostic criteria (Kleinman, & Good, 1985). Both the DSM (APA, 1994) and International Classification of Diseases (ICD; WHO, 1992) mental disorder classification systems have been used for the diagnosis of depressive disorders in Iran for the last 20 years. Current DSM criteria (currently the DSM-V; APA, 2013) are generally used as the standard diagnostic approach by researchers and clinicians, with the ICD used less frequently (N. Farnoody, personal communication, June 05, 2014). As in Australia, in Iran diagnosis of depression is made using diagnostic criteria from
the DSM (or ICD), in addition to structured clinical interviews (Sharifi et al., 2008). Diagnosis of depression using the DSM criteria appears consistent, suggesting that all the Western-oriented DSM depression criteria are sufficient to accurately assess depressive symptoms in Iranian patients (N. Farnoody, personal communication, June 05, 2014). Depression is diagnosed in Iran based on a combination of affective (e.g., sadness, anhedonia), cognitive (e.g., pessimism, low self-esteem, suicide), behavioural (e.g., avoidance activities, spending more time alone), and physical symptoms (e.g., fatigue, unexplained body pains; Hakimshoshtari et al., 2007; Hashemi, 2012; Sabet, 2011). These symptoms range from subclinical to clinical (Hashemi, 2012). As in Australia and other Western countries, most Iranian research on major depression has been conducted in primary care settings or with clinical populations, with less attention paid to subclinical depression (Hashemi, 2012).

**Stigma**

Iranians experiencing depression report fear of being stigmatised for their illness, as a key factor preventing help-seeking (Amini, 2012). Among Iranians, stigma is attached to the factors such as remarkable lack of knowledge and awareness about depression in communities, belief to attribute depressive symptoms to other reasons (e.g., social circumstances), and using the term ‘depression’, that may cause people not to seek treatment (Mashae, 2012; Tavakoli, Sharifi, Taj, & Mohamadi, 2010).

Little information exists about Iranian individuals’ knowledge and understanding of depression, and help seeking options (Tavakoli et al., 2010). According to a report from WHO (2010), the literacy rate for Iranian adults is 76.5%, which likely impacts on individuals’ knowledge about depression. In terms of beliefs
about depression, research suggests that depressed Iranian patients tend to attribute their depressive symptoms to precursors such as accidents, daily occurrences, unfavourable living conditions, or physical illness (Dejman, 2010). These attributions lead to reduced help-seeking for depressive symptoms (Fakhari, Akbari, & Shadi, 2005).

‘Afsoodegi’ is a conceptually equivalent Persian term for depression. However, Afsoodegi is a stigmatised term and hence is not commonly used, since its application can negatively influence the individual (Amini, 2012; Good et al., 1985). Tavakoli (2010) found that applying the term Afsoodegi may worsen depressive symptoms, given its stigmatising effect. He also demonstrated that social rejection and negative judgments were associated with stigma, and that only 15% of Iranians experiencing depression in their sample sought professional treatment. This suggests that around 85% of Iranians may not seek treatment for their depression, a higher figure than that reported for Australians by Andrews, Issakidis, and Carter (2001).

The Persian language has a rich vocabulary regarding the description and expression of various symptoms, aetiologies, and social conditions. Given the stigma associated with the term Afsoodegi, depressed Iranians prefer use the word ‘nārāhat’ (a noun, whose adjective is nārāhat), which means ‘uncomfortable’ and covers a range of conditions, from feeling upset, depressed mood, nervous, worried, disappointed, concerned, troubled, disrupted, not peaceful, restless, but also to experiencing a range of severe depressive symptoms (Kleinman, & Good, 1985). In addition, nārāhat covers feelings of weakness, and a variety of emotional and physical feelings (somatic symptoms) (Pliskin, 1992). There is less stigma attached to the term nārāhat, so depressed individuals feel more comfortable using this word to describe their negative emotions or depressive symptoms.
It is important to note, however, that knowledge about mental health generally and depression specifically has grown in Iran, particularly over the last decade (Amini, 2012). While depression remains highly stigmatised for Iranians, recent social changes, improvement in general knowledge about depression, and accessibility of information through the Internet, has made a remarkable impact on the level and nature of stigma among Iranians, boding well for a reduction in stigma associated with depression over time (Amini, 2012).

**Comorbidity**

Depression is a substantial public health concern in Iran as for Western nations such as Australia, with key concerns including comorbidity, relapse and persistent depressive symptoms (Mazaheri, Hajebi, & Ghanbari, 2014; Sabet, 2011). Comorbidity of depression with physical illnesses or other mental disorders is prevalent, and may complicate description and diagnosis of depressive symptoms (Dadsetan, & Mansour, 1998; Hosseini et al., 2011; Iranmanesh, & Vakilian, 2009). Depression commonly co-occurs with medical illness such as diabetes and heart disease, but is also commonly associated with mental disorders such as panic disorder and obsessive compulsive disorder (Bahadorkhan, 1998; Javidi, 1993; Khamseh, Baradaran, Rajabali, 2007; Mohammadi, Ghanizadeh, Mohammadi, & Mesgarpour, 2006). As in Australia, in Iran the most common comorbidity for depression involves anxiety disorders (Harris et al., 1996; Kaviani, & Ghasemzadeh, 2003; Koohi-Habibi, Shabani, & Nojomi, 2007; Tiller, 2012). Relapse and recurrence of depression are also problematic, since at least 63% of individuals with major depression experience a further episode within two years (Kokabeh, 2002).
Prevalence

Prevalence estimates of depressive disorders vary between 6% and 37% across cities in Iran (e.g. Tehran, Rasht, Ardebil, etc.), however epidemiological studies have consistently shown a high prevalence of major depression across the country (AeenParast et al., 2012; Kharaziha, 2011; Mohit, 2009). Noorbala, Mohammad, and Bagheri Yazdi, (1998) estimated the overall prevalence of MDD in Iran to be 4.4%, and the prevalence of subclinical depression to be 4.8%. Within the past few decades, results from epidemiological studies suggest that mood and anxiety disorders are the highest reported mental health issue in Iran (Javidi, 1999; Kharaziha, 2011; Koohi-Habibi, Shabani, & Nojomi, 2007). The most frequent diagnosis of inpatient units in mental hospitals were depressive disorders (65%) (WHO, 2005).

Variation in prevalence estimates could be due to a combination of measurement issues, study designs, and practical factors impacting assessment. For example, the prevalence of current (30-day) depressive disorder was reported as 22.5% among participants in a community setting (Kaviani, Nazari, & Hormozi, 2002), while a cross-sectional population-based epidemiological study reported a prevalence rate for depressive disorders of 5% (Mohammadi, Noorbala, Malekafzali, Naghavi, Pouretemad, 2006). Another study using a community sample reported a 3% prevalence rate for major depression and 7.5% for subclinical depression (Modabber-Nia, Tehrani, Fallahi, Shirazi, & Modabber-Nia, 2008), while the results of a systematic review suggested the incidence and lifetime prevalence of major depression were 4.1% and 3%, respectively (Sadeghirad et al., 2010). Several studies suggest that the prevalence of depression is quite high among university students in different cities of Iran, ranging between 35% and 78% (Abedini, Davachi, Sobhani, Mahmoodi, & Safa, 2007; Dadkhah, Mohamadi, Mozafari, Mohamdnegad,
Dadkhah, 2009; Farhadi, & Amini, 2000; Hashemi, Bagheri, & Ghafarian, 2003; Hashemi, & Kamkar, 2001; Karami, 2009).

In regard to the high prevalence rate of depressive symptoms in Iran, Gallup (2013) conducted a survey among 138 countries to investigate negative emotions such as sadness. Iran reported the second-highest prevalence for negative emotions in the world. This high prevalence in sadness is consistent with research previously described regarding high rates of MDD, and highlights the need to further investigate negative cognitions generally, and ‘cultural sadness’ as previously discussed, among Iranians.

These epidemiological studies suggest that, Iran has a high prevalence of MDD; while the prevalence of subclinical depression reported in Iran (7.5%) appears lower than MDD. However, according to Kharaziha (2011) the real prevalence of depression in Iran remains unclear, since it is underreported, under recognised, and generally stigmatised, leading to alternative (less socially alienating) diagnoses.

**Treatment**

Treatment for clinical depression in Iran often involves the use of antidepressant medication, as half (53%) of population have free access to essential psychotropic medicines (Dejman, 2010). However, evidence suggests that the majority of depressed individuals prefer non-pharmacological treatment while at the same time they are still unfamiliar with psychotherapy and do not realise that therapy could help them (Kharaziha, 2011). Mohit (2009) suggested that a combination of medication and psychotherapy is the most effective treatment for depressive disorders. Little is known about the various type of psychotherapy with respect to long-term outcomes for depressed individuals in Iran (Kharaziha, 2011); however, CBT is the
most well-known therapy, and most research on treatment of depression has investigated the effectiveness of CBT (Hamdieh & Taraghijah, 2008). While research is limited, and there are fewer psychological services available in Iran compared to Australia, both countries share similar treatment concerns: individuals experiencing depression prefer non-pharmacological treatments; combined psychotherapy and antidepressants appear more effective for managing clinical depression; and CBT is the most common psychotherapy applied for depressed individuals.

**Cognitive aspects of depression in Iran**

The role of negative cognitions as vulnerability factors in the aetiology and maintenance of depression in Iran is poorly understood. Past research in Iran shows that there is a relationship between negative cognitions and symptoms of depression, but the nature of this relationship remains unclear (Ghassemzadeh, Mojtabai, Karamghaderi, & Ebrahimkhani, 2006). Similarly, very little research has investigated the association between cognitive dysfunction and subclinical depressive symptoms (Sabet, 2011). It should be acknowledged that research on the role of cognitions relative to depression in Iran is growing; however, research has tended to focus primarily on negative cognitions and their association with depression, in the context of understanding and applying CBT (Ranjbar, Torab, & Dadgar, 2010). This has enabled some forms of psychotherapy based on CBT (Beck et al., 1979) to have been improved and/or developed according to the Iranian culture, creating efficacious psychological treatment for depressive symptoms in Iran (Khodayarifard et al., 2007; Sabet, 2011).

In addition and consistent with Western studies on depression (refer to chapter 2), application of CBT in Iran emphasises teaching depressed individuals how to
recognise and change negative cognitions (maladaptive negative thoughts) (Khodayarifard et al., 2007). At present no research has examined the role of cognitions in relation to depression without CBT. Due to the limited research conducted with cognitions and subclinical depression, research pertaining to cognitions, subclinical depression, and CBT will be examined.

In order to clarify the process by which changes occur in the negative cognitions of subclinical depressed individuals, Kashani (2008) investigated the impact of group CBT on changes in attributional and core beliefs in a sample of 15 university students, using a pre-test, post-test, and follow-up design. Participants attended 16 group CBT sessions and completed the Beck Depression Inventory (BDI; Beck, Steer, & Brown, 1996) and Dysfunctional Attitudes Scale (DAS; Weissman, 1979). Participants reported an improvement in dysfunctional beliefs and reduction of depressive symptoms via changes in negative cognitions. Based on the cognitive model of depression (Beck, & Alford, 2010), dysfunctional beliefs generate negative thoughts in depressed individuals; reducing these beliefs will thus result in less negative thoughts. These results suggest that cognitive changes reduce depressive symptoms among Iranians in a similar way to what has been found in Western depression research.

In another study, Ranjbar, Torab, and Dadgar (2010) investigated the relationship between cognitive impairment and depressive symptoms in subclinical depressed individuals from primary care centres. An intervention group of 16 depressed individuals received eight sessions of CBT as well as antidepressant medication, while a control group of 16 depressed individuals received only antidepressant medication. Participants were also assessed pre-test, post-test, and one month after intervention, using the BDI and a cognitive impairment checklist. Results
suggested that modifying cognitive functioning through CBT as well as medication was superior to the use of medication alone, a significant decrease in depressive symptoms in the intervention group, but not the control group. The authors suggested that modifying negative cognitions could be an effective treatment for subclinical depression.

Concerning modifying negative cognitions, Khodayarifard, Rehm, and Khodayarifard (2007) examined a case study based on CBT and family therapy. The participant was a woman with major depression who attended five sessions alone and nine sessions with her family members. Prior to the first therapy session, the participant was assessed using the Minnesota Multiphasic Personality Inventory (MMPI; Butcher, 1989), the Symptom Checklist-90-Revised (SCL-90-R; Derogatis, 1994), and the BDI, along with a diagnostic clinical interview based on DSM-IV-TR criteria. The aim of the intervention, which focused on cultivating positive thinking, was to reduce the participant’s symptoms of depression and foster a healthy relationship with family members. This intervention reduced the participant’s negative cognitions and improved awareness about herself, as well as her family relationship. The role of the family in therapy was proposed to be particularly valuable because the family is the basic social unit for security, guidance, power, position, and is a permanent and primary source of support, encouragement, and help in case of minor or major problems as they occur in the depressed individual’s life.

In summary, CBT is the most common approach for treatment of depression in Iran, similar to Western countries (Khodayarifard et al., 2007). While the cognitive aspects of depression in Iran resemble those in Western cultures, more research is needed to fully understand the relationship between cognitions and depression within Iranian culture.
**Positive Psychology in Iran**

Positive psychology is a new perspective to Iranian research on depression and mental illness generally. Research around positive cognitions (e.g., optimism, hope and goal-setting) is still emerging, and only research investigating the relationship between hope and subclinical depressive symptoms has been conducted.

Namdari, Molavi, Malekpoor, and Kalantari (2011) investigated the effect of hope on subclinical depressive symptoms in a sample of 40 participants from primary care centres. Participants were divided into intervention and control groups; the intervention group received six weeks training in strategies to enhance hope according to a model proposed by Lopez et al. (2004), while the control group received no treatment. Groups were assessed before and after the intervention using the Values in Action Inventory of Strength (Peterson, & Seligman, 2006), Hope (Snyder et al., 2000), and Advanced Power Management (Namdari et al., 2011). The intervention group reported higher levels of hope with reduced depressive symptoms, compared to no changes in the control group. This finding is consistent with previous Western research demonstrating that hope is an important factor in decreasing depressive symptoms, and suggests that the relationship between hope and depression may be similar across cultures (Thimm, Brennen, & Wang, 2013).

A study by Raeesian, Golzari, and Borjali (2011) on the influence of hope on decreasing depressive symptoms revealed similar results. Twenty women with subclinical depressive symptoms, and a history of drug addiction, were recruited from a rehabilitation centre and divided into an intervention ($N=10$) and control ($N=10$) group. The intervention group completed an eight week program designed to increase hope according to the hope therapy developed by Snyder (2000). Hope (Snyder et al., 2000) and the BDI were assessed prior to, and after, intervention. Results suggested
that depressive symptoms decreased in the intervention group, but not in the control group. The intervention group also had a lower level of drug relapse (20%) comparing to the control group (70%) after intervention. The authors suggested that increasing hope is effective in reducing depressive symptoms and preventing short-term drug relapse. While results from these studies exploring the relationship between depression and positive cognitions support similar research findings in Western cultures, more research is needed to investigate the relationship between other positive cognitions and depression in Iranians.
Overview

In order to understand the similarities and/or differences between depression in Australia and Iran, the present study was designed to replicate Study 1A with an Iranian sample from Iran. To date there has been limited research that has examined depression in the community setting in Iran, but overall previous studies show that the nature of depression is similar to what has been found in Western studies (Good, Good, & Moradi, 1985; Dejman, 2010). However, there has been no research in Iran that has examined activity scheduling and the setting of daily goals, and how this relates to depression, negative cognitions and positive cognitions.

In line with Study 1A, the first aim of this study was to examine the factor structure of the DGS in a community sample of Iranian adults from Iran. The factor structure of two of the other measures that have yet to be examined among Iranians, ABS and ND was also investigated. The second aim of this study, also in line with Study 1A, was to demonstrate the convergent of the DGS by examining its relationship to depression, hope, optimism, and negative cognitions, and its discriminant validity by examining its relationship to anxiety. The third aim was to investigate the negative and positive cognitions in relation to depression among Iranians. The last aim was to examine the similarities and/or differences the DGS,
negative and positive cognitions, depression, and anxiety between Iranians and the Australian sample from Study 1A.  

**Method**

**Participants**

The participants were 136 (38.9%) men and 221 (61.1%) women with an age range of 18 to 75 years and mean age of 33.44 years ($SD=10.15$). While women were on average younger ($M=32.42$ years, $SD=11.22$) than men ($M=34.54$ years, $SD=10.35$), the difference was not significant.

**Procedure**

The study was approved by the Deakin University Human Research Ethics committee and in Iran by the Islamic Azad University Human Ethics research Services (Appendix B). Iranian participants were recruited using snowballing techniques within the student’s social networks in the Tehran province (capital city in Iran). Questionnaires along with the plain language statement, the consent form in Persian language (Appendix B), and a prepaid addressed envelope (included an address in Iran) were distributed to colleagues, friends, and family members. Further, participants were encouraged to assist with giving these out to their own contacts. The plain language statement clearly explained the study’s aim, procedures, risks and potential benefits to participants, privacy and confidentiality issues, and participants’ right to

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7 The outline of this study (2A) was presented at the 2nd Conference of Malaysian Psychology (Malaysia, 2012)
8 All participants were born in Iran.
9 A summary of demographic variables for all studies is provided in Appendix E
withdraw at any stage. All interested participants, were given and asked to complete a packet of questionnaires (Appendix B) and return in a reply-paid addressed envelope. Participants were assured of the confidentiality of their responses and were asked to feel free to complete the questionnaire in their own time but were asked to do so in one setting rather than over a couple of days, and to return the questionnaires as soon as possible upon completion. The questionnaire took about 30 minutes to complete and as in Study 1A, these were followed by the DGS, ABS, Hope, ATQ, ND, and the MASQ.

On receipt of questionnaires, the questionnaires and consent forms were numbered (coded), detached and stored in separate locations. Moreover, in order to organise for the follow-up stage, the consent forms were dated upon receipt and subsequently used to provide the timing and addresses for posting (8 weeks after receipt of the completed respective T1 questionnaires).

**Measures already available in Persian**

Three of the measures used in this study had been previously translated and used in other research studies in Iran. These included the Hope (Kermani, Khudapanahi, & Heydari, 2011), the ATQ (Ghassemzadeh et al., 2006; Nejati, 2001), and the MASQ (Ghanimi, 1998). Psychometric data for Iranian samples were also available for each of these.

The internal consistency for the Hope Scale (Snyder, Harris et al., 1991) in Iranian samples has been found to be high for the overall scale (.82), and the two subscales: Pathways (.88) and Agency (.79; Kermani et al., 2011). Test-retest reliability for a 2-week interval has also been found to be high (.81; Kermani et al., 2011; Nasiri, & Jokar, 2009). In addition, the Persian version of the Hope Scale is validated (with Simpson’s Hope Scale (1999) and the BDI) measures of hope
components (Agency and Pathways) in Iranian samples (see Heydari et al., 2009; Kermani et al., 2011; Nasiri, & Jokar, 2009).

The Persian version of the ATQ (Ghassemzadeh et al., 2006) has been found to demonstrate high levels of internal consistency (.96), high 2-week test-retest reliability (.84), and high convergent validity with the Beck Depression Inventory (BDI; Beck, Ward, Mendelson, Mock, & Erbaugh, 1961).

Lastly, the Persian version of the MASQ scale has also been shown to evaluate symptoms in depression and anxiety in addition to symptoms of general psychological distress. Ghanimi (1998) demonstrated the construct validity in relation to Neuroticism and Anxiety (Cattell, & Scheier, 1961) and the BDI. High internal consistency reliability (.75) and adequate 2-week test-retest reliability (.73) of the Persian version of MASQ have also been shown (Ghanimi, 1998). The Persian version of MASQ subscales, Anhedonic Depression (AD; 22 items), and Anxious Arousal (AA; 17 items) were used in this study.

**Measures not available in Persian**

The other measures, DGS, ABS and ND were translated into the Persian language for this thesis using the translation and back-translation guidelines for cross-cultural adaptation of self-report measures (Beaton, Bombardier, Guillemin, & Ferraz, 2000). In order to ensure the measures are comparable, these guidelines generally recommend a multistep process including translation and back-translation (Morales, 2001). Two bilingual professional (qualified) translators independently translated the questionnaires. The first translator was also a mental health practitioner in Iran. The second translator was accredited by National Accreditation Authority for Translators and Interpreters (NAATI) in Victoria, Australia. The student, who is fluent in both
Persian and English, also translated the questionnaires. Each translator completed the translation of DGS, ABS and ND independently. They then met to assess both similarities and differences. Differences were discussed and a consensus was reached.

In terms of the back-translation (Persian to English), the first draft was conducted by the student. The second draft of back-translation was performed by another professional translator without reference to the English-language version. Next, the two final back translated versions were compared to ensure equivalent meaning of items. Finally, based on translated and back-translated versions, slight modifications in the wording of some items were made by the students. All questionnaires are provided in both English (Appendix A) and Persian (Appendix B).

Results

Overview of Analysis
First, the PCA was conducted to examine the factor structure of the Persian version of the DGS, ABS and ND. The internal consistency of the DGS and all other scales were examined followed by the descriptive analyses. Correlational analyses were then conducted to evaluate the convergent and discriminant validity of the DGS. Finally, multivariate analysis of variance was used to compare the Iranian and Australian groups.

Data Preparation and Preliminary Analysis Assumptions
Data were screened using SPSS version 20 to assess accuracy of input, missing values, univariate outliers, linearity, and normality. Nine missing values were identified, and were replaced using the mean value for each variable. Twenty-one univariate outliers were identified using box-plots on seven variables including the DGS, ABS-SS, HOPE-PATH, ATQ-NSNE, ATQ-PMDC, QES-ND, and MASQ-AA.
Outliers on these seven variables were rescored to the values ±3.29 standard deviation from the mean, which are acceptable limits suggested by Tabachnik and Fidell (2007). Normality and homoscedasticity were not violated. All variables used in the main analyses were found to be normally distributed and there was no evidence of non-linearity.

Prior to data analyses, two multivariate outliers were identified as Mahalanobis distance with a critical Chi square value of 29.59 and above the \( p<.001 \) cut-off criterion recommended by Tabachnik and Fidell (2007). These two cases were removed.

Factor Structure of the DGS Persian Version
In order to examine the factorability of the 13 DGS items, the same criteria as in Study 1A (see Chapter 3) were used. The correlation matrix for the scale items revealed that all correlations were in excess of the recommended .30; the obtained KMO values were in excess of the minima .60, being .93; and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance, thus indicating that the data set was suitable for factor analysis. Consistent with the Study 1A and 1B, the results indicated the presence of one factor, with eigenvalues greater than one, accounting for 47.08% of the variance (see Table 6.1). In addition, the factor solution was similar to that found with the Australian sample, and as in Study 1A and 1B only item 8 did not load positively the factor.
Table 6.1
Factor loadings based on a Principal Component Analysis for 13 items from the Daily Goals Scale (DGS) at T1 in the Iranian sample (N=357)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Structure of the ABS Persian Version</th>
</tr>
</thead>
<tbody>
<tr>
<td>1.</td>
<td>I can see each day as a series of small personal goals to meet</td>
</tr>
<tr>
<td>2.</td>
<td>I am very good at focusing my efforts on attaining a goal</td>
</tr>
<tr>
<td>3.</td>
<td>Sometimes I set myself little goals for the next day</td>
</tr>
<tr>
<td>4.</td>
<td>I try my best not to leave small goals half done</td>
</tr>
<tr>
<td>5.</td>
<td>I can see how my achievement of smaller goals enables me to build towards bigger goals</td>
</tr>
<tr>
<td>6.</td>
<td>For me, each day lets me make small achievements, such as watching TV, taking a shower, eating well, talking with a friend, etc.</td>
</tr>
<tr>
<td>7.</td>
<td>Sometimes at night I think of small goals I have achieved during the day</td>
</tr>
<tr>
<td>8.</td>
<td>My days are usually just about getting through to the end</td>
</tr>
<tr>
<td>9.</td>
<td>I encourage myself to keep pursuing little goals every day</td>
</tr>
<tr>
<td>10.</td>
<td>It is success at the little goals that encourages me to try for bigger goals</td>
</tr>
<tr>
<td>11.</td>
<td>When I am feeling down, I still try to work towards very little goals</td>
</tr>
<tr>
<td>12.</td>
<td>Some mornings I review the little goals I achieved yesterday</td>
</tr>
<tr>
<td>13.</td>
<td>Sometimes I can lift my mood by thinking of little goals I have achieved</td>
</tr>
</tbody>
</table>

Factor Structure of the ABS Persian Version
In order to examine the factorability of the 12 ABS items (Persian version), as with the DGS, the same three well-recognised criteria were used as in Study 1A and 1B. The results showed all correlation values were above .30, the obtained KMO value was .75, and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance.

The PCA extraction was conducted to examine the initial unrotated solution for the ABS items followed by an oblique rotation. Consistent with the previous
studies with Australian samples (Doyle, 2004; Miller, 2004a), the results indicated the presence of two factors, and there were two eigenvalues greater than one accounting for 37.91% of the total variance (see Table 6.2). Factor one accounted for 23.68% of the variance and there were six items with loadings greater than .30. This factor corresponded to the Optimistic Bias (OB) subscale and appeared to be structured about optimism and positive feelings. In addition, the factor solution was similar to that results found with the Australian sample by Smith (2000). Factor two accounted for 14.31% of the variance and there were also six items with loadings greater than .30. Factor two corresponded to the Self Satisfaction (SS) subscale and appeared to be structured related to perception of being satisfaction with self.
Table 6.2

Factor loadings based on a Principal Component Analysis for 12 items from the Adaptive Bias Scale (ABS) at T1 in the Iranian Sample (N=357)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor1</th>
<th>Factor2</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am the type of person who looks on the bright side of life</td>
<td>.69</td>
<td>.17</td>
</tr>
<tr>
<td>I believe that positive thinking can overcome any obstacle</td>
<td>.70</td>
<td>.03</td>
</tr>
<tr>
<td>I believe in the idea that “life is what you make it”</td>
<td>.53</td>
<td>.07</td>
</tr>
<tr>
<td>My approach to life is “nothing ventured, nothing gained”</td>
<td>.59</td>
<td>-.01</td>
</tr>
<tr>
<td>I am a believer of the idea that ”every cloud has a silver lining”</td>
<td>.72</td>
<td>-.01</td>
</tr>
<tr>
<td>Some people might call me a “a hopeless optimist ”</td>
<td>.44</td>
<td>-.01</td>
</tr>
<tr>
<td>I doubt that others would ever gossip about me</td>
<td>.08</td>
<td>.55</td>
</tr>
<tr>
<td>It would be difficult for anyone to dislike me</td>
<td>.08</td>
<td>.38</td>
</tr>
<tr>
<td>I have never done anything foolish in front of others</td>
<td>-.12</td>
<td>.72</td>
</tr>
<tr>
<td>No-one would want to treat me unfairly</td>
<td>-.02</td>
<td>.74</td>
</tr>
<tr>
<td>I doubt that I ever disappointed my parents during childhood</td>
<td>-.03</td>
<td>.54</td>
</tr>
<tr>
<td>Nothing I have done has ever caused me the slightest regret</td>
<td>.01</td>
<td>.62</td>
</tr>
</tbody>
</table>

Note: Factor1 (OB)= Optimistic Bias, Factor2 (SS)= Self Satisfaction

**Factor Structure of the ND Persian Version**

The factorability of the six ND items (Persian version), was examined as with the DGS and ABS, and found to be suitable for PCA. The correlation matrix for the scale items were in excess of the recommended .30; the obtained KMO values was .74 in excess of the suggested value of .60, and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance. The results indicated the presence of one factor, with eigenvalues greater than one, accounting for 39.59% of the variance (see Table 6.3). In addition, the factor solution was similar to that found with the Australian sample (Hawkins, 2004) and similarly to be structured a pattern of negative self-concept and pessimism.
Table 6.3
Factor loadings based on a Principal Component Analysis for 6 items from the Negative Disposition (ND) at T1 in the Iranian Sample (N=357)

<table>
<thead>
<tr>
<th>Item</th>
<th>Eigenvalue</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You happen to be angry. Is it because you have a bad temper?</td>
<td>2.37</td>
<td>.62</td>
</tr>
<tr>
<td>2. You happen to be in a bad mood. Is it because you are easily annoyed?</td>
<td>2.37</td>
<td>.54</td>
</tr>
<tr>
<td>3. You happen to argue with other family members. Is it because you are argumentative?</td>
<td>2.37</td>
<td>.65</td>
</tr>
<tr>
<td>4. You happen to lose your faith in a friend or family member. Is it because you are unforgiving?</td>
<td>2.37</td>
<td>.74</td>
</tr>
<tr>
<td>5. You happen to feel lonely. Is it because you are not popular?</td>
<td>2.37</td>
<td>.59</td>
</tr>
<tr>
<td>6. You happen to annoy a friend. Is it because you are an inconsiderate person?</td>
<td>2.37</td>
<td>.62</td>
</tr>
</tbody>
</table>

Internal Consistency

The internal consistencies for all the scales, including the DGS, are presented in Table 6.4. Cronbach’s alpha was satisfactory for all measures, ranging from .70 to .89.

Table 6.4
Internal Consistency for all Scales at T1 in the Iranian Sample (N=357)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGS</td>
<td>.89</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>.73</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>.78</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>.75</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>.76</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>.78</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>.85</td>
</tr>
<tr>
<td>QES-ND</td>
<td>.70</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>.81</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>.85</td>
</tr>
</tbody>
</table>

Note: DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression, AA= Anxious Arousal.
Descriptive Statistics

A summary of means and standard deviations for all variables and for both genders are presented in Table 6.5. Participants’ scores on the DGS ranged from 24 to 55 ($M = 42.11$, $SD = 6.92$). The multivariate Pillai’s Trace test showed no overall significant gender differences, $F$ (1,355) =1.81, $p>.05$. Thus, men and women were combined in the subsequent analyses.

The results of this study identified that 70% of the participants scored above the cut-off score of 58 on MASQ-AD (Buckby, 2002). A chi-square test indicated that there was a significantly larger difference in the percentage of MASQ-AD in the current sample (70%) compared with the results from the Australian sample in Study 1A (51%), $\chi^2 (1, n=357) = 50.21, p<.001$.

Table 6.6 shows the descriptive statistics for both the Iranian and the Australian sample. A MANOVA was conducted comparing the Iranians and Australians on all variables: DGS, ABS-OB, ABS-SS, HOPE-AGEN, HOPE-PATH, QES-ND, ATQ-PMDC, ATQ-NSNE, MASQ-AD, and MASQ-AA. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, and homogeneity of variance with no serious violation noted. In terms of multicollinearity, there were three multivariate outliers above the $p<.001$ cut-off criterion recommended by Tabachnick and Fidell (2007). These three respondents were removed.

The MANOVA results indicated that there was an overall statistically significant difference between the two groups, Pillai’s Trace = .35, $F$ (10, 524) = 28.02, $p<.05$, partial eta squared = .35. Univariate tests showed that there were specific significant differences on nine variables as shown in Table 6.6. The mean
scores indicated that the Iranian participants scored higher than the Australians on all measures except the HOPE-PATH.
Table 6.5  
Descriptive statistics for all variables at T1 in the Iranian Sample (N=357)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Scale Range</th>
<th>Men (N=136)</th>
<th>Women (N=221)</th>
<th>Total Sample (N=375)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>DGS</td>
<td>24-55</td>
<td>41.87</td>
<td>7.45</td>
<td>42.37</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>14-30</td>
<td>22.75</td>
<td>3.90</td>
<td>23.38</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>6-28</td>
<td>16.61</td>
<td>4.30</td>
<td>17.21</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>7-16</td>
<td>12.40</td>
<td>2.38</td>
<td>12.26</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>7-16</td>
<td>11.97</td>
<td>2.18</td>
<td>11.89</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>5-24</td>
<td>11.57</td>
<td>4.10</td>
<td>12.40</td>
</tr>
<tr>
<td>QES-ND</td>
<td>6-27</td>
<td>15.14</td>
<td>4.41</td>
<td>15.64</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>38-91</td>
<td>62.88</td>
<td>10.88</td>
<td>64.01</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>17-53</td>
<td>31.83</td>
<td>9.38</td>
<td>32.90</td>
</tr>
</tbody>
</table>

Note: DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, SD= Standard Deviation, *p<.05, ** p<.01.
### Table 6.6
Descriptive and inferential statistics for Australians and Iranians samples at T1

<table>
<thead>
<tr>
<th>Measure</th>
<th>Australian Sample (Study1A (N=178))</th>
<th>Iranian Sample (Study2A (N=375))</th>
<th>F value</th>
<th>p value</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scale Range</td>
<td>Mean</td>
<td>SD</td>
<td>Scale Range</td>
</tr>
<tr>
<td>DGS</td>
<td>20-55</td>
<td>39.33</td>
<td>6.61</td>
<td>24-55</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>7-27</td>
<td>21.99</td>
<td>3.19</td>
<td>6-28</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>12-30</td>
<td>14.30</td>
<td>4.03</td>
<td>14-30</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>14-32</td>
<td>24.62</td>
<td>2.98</td>
<td>15-32</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>6-16</td>
<td>12.21</td>
<td>1.74</td>
<td>7-16</td>
</tr>
<tr>
<td>QES-ND</td>
<td>6-25</td>
<td>13.79</td>
<td>3.96</td>
<td>6-27</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>5-22</td>
<td>9.48</td>
<td>4.11</td>
<td>5-24</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>7-23</td>
<td>10.39</td>
<td>4.11</td>
<td>7-27</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>13-81</td>
<td>58.57</td>
<td>9.43</td>
<td>38-91</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>17-46</td>
<td>28.60</td>
<td>5.82</td>
<td>17-53</td>
</tr>
</tbody>
</table>

Notes: DGS= Daily Goal Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression, AA= Anxious Arousal. *p<.05. **p<.01.
Convergent and Discriminant Validity of the DGS

Table 6.7 shows the correlations between all measures. Consistent with the results of Study 1A and 1B, the current study provided support for convergent validity of the DGS. The findings showed a moderate negative correlation between the DGS and MASQ-AD (-.53), and ATQ-PMDC (-.38), and ATQ-NSNE (-.44) and a weak negative correlation between the DGS and QES-ND (-.22). Furthermore, DGS correlated moderately with HOPE-PATH (.50), HOPE-AGEN (.57), OB (.44), and in the low range with SS (.23).

These correlations were also compared with those obtained from the Australians in Study 1A (Chapter 3) using the test of significance between the correlation coefficients (Preacher, 2002). All correlations were similar except three correlations in Study 2A that were significantly higher than the Study 1A including the DGS and ATQ-NSNE (-.44) with (z-score=−2.46 and \( p < .05 \)), the DGS and HOPE-PATH (.50) with (z-score=−2.12 and \( p < .05 \)), and the DGS and HOPE-AGEN (.57) with (z-score=−2.16 and \( p < .05 \)).

Lastly, unlike in Study 1A and 1B with the Australians, this study did not provide support for the discriminant validity of the DGS, as unexpectedly, there was a low negative correlation between the DGS and the MASQ-AA(-.26).
Table 6.7

Summary of correlations for Scores on all measures at T1 in the Iranian Sample (N=357)

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DGS</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ABS-OB</td>
<td>.47**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ABS-SS</td>
<td>.27*</td>
<td>.23*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. HOPE-PATH</td>
<td>.50**</td>
<td>.45**</td>
<td>.21*</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. HOPE-AGEN</td>
<td>.57**</td>
<td>.42**</td>
<td>.28*</td>
<td>.64**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. ATQ-PMDC</td>
<td>-.38**</td>
<td>-24*</td>
<td>-29*</td>
<td>-.38**</td>
<td>-.53**</td>
<td>-</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. ATQ-NSNE</td>
<td>-22*</td>
<td>-31**</td>
<td>-34**</td>
<td>-.26*</td>
<td>-.50**</td>
<td>-.61**</td>
<td>-.74**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. QES-ND</td>
<td>-.22*</td>
<td>-31**</td>
<td>-34**</td>
<td>-.26*</td>
<td>-.17</td>
<td>-.41**</td>
<td>-.30**</td>
<td>-</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. MASQ-AD</td>
<td>-.53**</td>
<td>-.40**</td>
<td>-.25*</td>
<td>-.46**</td>
<td>-.58**</td>
<td>-.65**</td>
<td>-.57**</td>
<td>-.24*</td>
<td>-</td>
<td></td>
</tr>
<tr>
<td>10. MASQ-AA</td>
<td>-.26*</td>
<td>-.16</td>
<td>-.11</td>
<td>-.27*</td>
<td>-.34**</td>
<td>-.45**</td>
<td>-.56**</td>
<td>.26**</td>
<td>.46**</td>
<td>-</td>
</tr>
</tbody>
</table>

Note: DGS= Daily Goal Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, PMDC= Personal Maladjustment and desire for Change, NSNE= Negative Self-Concept and Negative Expectations, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression, AA= Anxious Arousal. HOPE= Hope Scale, ABS= Adaptive Bias Scale, DGS= Daily Goal Scale, *p < .05, **p < .01
Discussion

The current study was conducted to validate the DGS among Iranians. The results were consistent with the Australian findings from Study 1A and 1B showing that a one factor structure best summarised the DGS. In addition, the DGS was found to demonstrate a high level of internal consistency and convergent validity, as was found with the Australians. However, there was no evidence for its discriminant validity. The results of the current study also supported the factor structure and internal consistency of the Persian version of the ABS and ND. The results further showed strong associations between negative cognitions and depression among Iranians, which were similar to the Australians. The main differences were the higher mean scores of both negative and positive cognitions, depression and anxiety reported among Iranians compared to Australians.

Factor Structure and Internal Consistency of the DGS

The first aim of Study 2A was to examine the factor structure of the DGS. As found with the Australians, 12 of the 13 items loaded on one general factor, reflecting a range of strategies to help set and complete small daily goals (refer to Chapter 4). Only item 8, as found in Study 1A and 1B, was identified as an item that did not load on the extracted factor and it was deleted. The coherence of this scale was further confirmed by the high internal consistency.

Factor Structure and Internal Consistency of ABS and ND in Persian

The factor structure of the Persian version of the ABS and the ND was found to be similar to what has been found in Australian samples. In addition, both of the ABS subscales and the ND were found to demonstrate a high level of internal consistency. In the case of the ABS, PCA identified two underlying dimensions,
which corresponded to the two subscales, Optimistic Bias and Self-Satisfaction (Smith, 2001; Doyle, 2004). The result was consistent with the previous studies in Australia (Smith, 2000; Miller, 2004a). In the case of the ND, there was only one factor, as found by Hawkins (2004).

**Convergent and Discriminant Validity**

In order to establish the convergent and discriminant validity, the DGS Persian was examined in relation to anhedonic depression, negative and positive cognitions and anxiety. As with Study 1A and 1B, the results of Study 2A showed that the DGS was negatively correlated with the MASQ-AD. Thus as found with Australians and other Western samples, these findings suggest that Iranians with low scores on the DGS also experience more negative emotions and less positive meaning for daily activities. Low scores on the DGS also reflect the avoidance of engaging in daily activities, which further maintains depressive symptoms. Underpinning the development of the DGS is the behavioural activation approach (Rehm, 2010) that had yet to be examined among Iranians, but the current study suggests that similar processes are at work. Furthermore, this finding suggests that despite cultural differences, the nature of daily goals in relation to depression is similar across Iranians and Australians.

Furthermore, the findings of the present study suggest that individuals with higher level of daily goals and activities have less depressive symptoms. While this is consistent with other studies which suggest that promoting daily activities would be effective for the reduction of depressive symptoms (Dimidjian et al, 2003; Mazzucchelli, 2010; Veale, 2008), it is also consistent with positive psychology
approach that individuals who engage in daily activities have more positive well-being and mental health.

The results also showed low to moderate negative correlation between the DGS and both the ATQ-PMDC and ATQ-NSNE, as well as QES-ND. As with the Australian sample, these results indicate that setting less small daily goals are associated with negative thoughts and negative self-concepts. Setting and completing small daily goals may reduce negative thoughts along with negative self-concepts and expectations while it may enhance motivation for more activities. Similarly, if individuals are aware of their daily goals, they may recognise and modify the frequency of mood-related negative cognitions (Adis & Martel, 2004).

In terms of positive cognitions, the current findings demonstrated significant positive correlations between the DGS and both the ABS-OB and ABS-SS. These findings suggest that among Iranians those who are engaging in daily activities are more optimistic. These findings are also consistent with other research which has shown that individuals who believe they are able to achieve their goals, and thus pursue their goals with more perseverance are optimistic and hold positive expectations (Heinonen, 2004). In contrast, those who tend to withdraw their daily goals more easily, and are passive to achieving their goals are pessimistic and hold negative expectations (Carver & Scheier, 2005). Therefore, there is a possibility that also among Iranians, optimism contributes towards motivation with positive meanings and values in their normal daily activities.

In terms of hope and daily goals, and consistent with the results of Study 1A and 1B, the results of Study 2A showed that there was a significant positive correlation between the DGS and both HOPE-PATH and HOPE-AGEN. Hope is a cognitive strategy used to achieve and complete goals, thus attainable daily goals for
Iranians could generate hope, and then hope makes purposeful progress towards achieving the goal. In addition, this finding is consistent with Snyder’s (2000) research which showed that hope is a powerful determiner of motivation and behaviour toward both remaining engaged in goals and also for findings paths for continuing these goals.

Unlike in Study 1A and 1B, this study found no support for the discriminant validity of the DGS among Iranians. Study 1A and 1B suggested that while the DGS was related to depression, it was not related to anxiety. However, this study found a low negative correlation between the DGS and MASQ-AA, thus suggesting that Iranians who are more anxious are also less able to set and pursue their daily goals. This different finding may be a reflection of the higher levels of MASQ-AA experienced by Iranians compared to Australians. Another possible explanation for this result might be due to differences in the experience and expression of anxiety symptoms between individualistic and collectivistic cultures (Shiraev & Levy, 2010). For example, as for depressive symptoms, anxiety symptoms may be more likely to manifest as somatic symptoms (such as heart palpitations, chest pain, and digestive complaints) in collectivist cultures, allowing the anxious individual to avoid engaging in goal setting/achievement under the guise of ‘physical rest and recovery’. Similarly, individuals in collectivist cultures may experience performance anxiety associated with setting and achieving small goals, fearing judgement from their social group in case of failure to achieve. Hofmann, Asnaani, and Hinton (2010) suggest that individuals experiencing anxiety in collectivist cultures present with social anxiety in terms of not wanting to embarrass or shame themselves in front of others (as for individualistic cultures), but also in terms of not wanting to embarrass or offend others. From this perspective, individuals with anxiety in collectivist cultures may
experience a greater barrier to setting and pursuing small goals compared to those from individualistic cultures. In addition, there may be other characteristics of collectivistic cultures such as priority to maintain group harmony while suppressing negative emotions, or self-criticism that all influence the relationship between daily goals and anxiety. Further research is now needed to more fully examine these proposed explanations.

**Relationship between Cognitions and Depression among Iranians**

The third aim of the current study was to investigate negative and positive cognitions in relation to depression among Iranians. There are two important points that need to be discussed here. First, there were significant positive correlations between negative cognitions and anhedonic depression in the Iranian sample. Notably, the pattern of correlations between negative cognitions and anhedonic depression among Iranians were consistent with the Australians as well as previous Western findings (Hawkins, 2004; Hyder, 2012). While these results are consistent with Study 1A and 1B, these findings are also in agreement with previous studies in Iran that have shown that negative cognitions are associated with depressive symptoms (Sharifi, Mojtabaee, Ghasemzadeh, Karamghaderi, & Ebrahimkhani, 2008). In addition, these results corroborate the findings of a great deal of the previous Western work in this field (e.g., Beck & Alford, 2009; Hankin et al., 2004; Hawkins, 2004; MacLeod & Moore, 2000).

Second, there were significant negative correlations between positive cognitions and anhedonic depression among Iranians. These results are consistent with the Australian samples in Study 1A and 1B and suggest that the pattern of association between positive cognitions and depression is similar across Iranians and
Australians. These findings are also consistent with those Western studies, which have found that positive cognitions are negatively related to depression (Hawkins, 2004; Hayder, 2012; Lightsey, 1994). Based on very limited psychological evidence-based research about positive cognitions and depression in Iran, similar findings have shown that hope is negatively associated with depression among Iranians (Namdari et al., 2011; Raeesian, Golzari, & Borjali, 2011).

Comparing Iranians with Australians

The last aim of the present study was to examine the similarities and/or differences of the DGS, negative and positive cognitions, depression, and anxiety between Iranian and the Australian samples. First, the results showed that the prevalence rate of anhedonic depression among Iranians was significantly higher than Australians. In addition, the Iranians scored significantly higher than Australians on the DGS and all other measures except for the HOPE-PATH. There are several possible explanations for these findings. This includes the generally difficult life that Iranians experience economically, politically, and socially, but also their cultural view of sadness (gham o ghose), which is valued in collectivistic societies (Good et al., 1985; Pliskin, 1992). For instance, Good et al. elaborated on cultural sadness among Iranians that is reflected in their poetry, movies, religious ceremonies, rituals etc. could be part of their cultural ideologies. In other cultures including Sri Lanka, it also has been elaborated that being depressed, distressed, and ashamed, are parts of cultural ideologies (Obeyesekere, 1985). Obeyesekere further argues that to be a good Buddhist is to believe life is about suffering. Therefore, a normal state of life overlaps with sorrow and this is not a pathological condition.
A major finding of Study 2A was the higher prevalence rate of depressive symptoms (70%) among community group of Iranians, comparing to that found among Australians in both Study 1A (51%) and 1B (44%). This result is consistent with those of other studies from Iran which have shown that the rate of subclinical depression is high among Iranians (Abedini et al., 2007; Gallup, 2013; Hashemi, & Kamkar, 2001; Karami, 2009). There are several possible explanations for these findings. This includes the generally difficult life Iranians experience economically, politically, and socially, but also their cultural view of sadness (gham o ghose), which is valued in collectivistic societies (Good et al., 1985; Pliskin, 1992).

The higher rate of depression among Iranians may also be attributable to how religion can influence one’s mood, affect, behaviour and identity (Shafranske, 1996). Currently, Islam is Iran’s official religion; about 89% of Iranians are Shi’a Muslims with remaining 9% of Sunni Muslims and 2% split amongst several faiths including Zoroastrians, Jewish, Christians and Baha’i (Khodaparast, 2008). The core of Shi’ism focuses on grief and religious rituals denoting martyrdom of Shi’a Imams and death that is the dominant atmosphere imposed on the nation. There is evidence that Iranians idea of the “tragie”, which is fundamental in Iranian religion, secular literature and poetry, and social conditions, are all related to depressive symptoms (Good et al., 1985). In the Iranian culture, there is also a belief that grief and sorrow soften the heart, increase humane feelings and make the human being wiser and more emotionally mature (Aghaie, 2004).

The higher rate of depression among Iranians may also be due to the limited general knowledge and awareness about mental health and wellbeing in Iran. The lack of awareness about depressive symptoms may place individuals at higher risk of developing major depression (Hashemi, 2012). Although there have been remarkable
changes in understanding mental health issues in the last decade in Iran, there is still little awareness about depressive symptoms (Kharaziha, 2011). This may also relate to how individuals perceive the sources of mental conditions. Generally, Iranians are less likely to seek-help regarding psychological issues such as depressive symptoms (Dejman, 2010). Previous studies in Iran have shown that Iranian do not believe in psychotherapy, and have greater suspicion towards medication in treatment or controlling depressive symptoms (Dejman, 2010; Kharaziha, 2011). Thus, lack of knowledge about depressive symptoms and useful services, as well as the slow process of medicalisation of mental conditions in Iran, may further limit the help-seeking behaviours (i.e. approaching mental health practitioners such as psychologists and counsellors).

In addition, the results showed that Iranians scored significantly higher than Australians on negative cognitions. The higher negative cognitions may also be attributed to the tough economic, political and social uphills in Iran. However, they also reflect the high rate of depression among Iranians (Abedini et al., 2007; Hashemi, & Kamkar, 2001; Karami, 2009). Other research has shown that negative cognitions are strongly associated with depression among Iranians (Ghassemzadeh, Mojtabai, & Karamghadiri, 2005).

Another possible explanation is that the higher scores in negative cognitions among Iranians could be attributed to external factors. External factors (negative life events) refer to unsafe and difficult socioeconomic situations, and stressful life style, as negative self-concept, pessimism, negative thoughts and maladaptive beliefs (Dejman, 2010). Prior studies have noted that external factors increase the frequency of negative cognitions which, in turn, affect depressive symptoms (Beck, & Alford, 2010; Kwon & Oei, 1994). However, one of the issues emerging from past findings is
that due to the lack of knowledge, Iranians normalise negative cognitions and attribute them to the external factors (Dejman, 2010). For example, previous research has shown that negative thoughts and pessimism among Iranians are not viewed as factors that may increase one’s vulnerability to depressive symptoms but rather these are viewed as normal reactions to social problems or external stressors (Davidian, 2007).

The higher negative cognitions of the Iranians also need to be interpreted in relation to their higher positive cognitions. Due to the paucity of research on positive cognitions among Iranians it is difficult to draw strong conclusions about the higher scores that Iranians obtained on positive cognitions. In addition, since this study is the first to examine both negative and positive cognitions in relation to depression among Iranians, the interpretation of these results is based on positive psychology findings from Western countries.

MacLeod and Moore (2000) emphasised that negative and positive cognitions are two unrelated and separate dimensions, and that while building more positive cognitions is necessary to overcome depression, it does not decrease negative cognitions. One possible explanation for higher level of positive cognitions in Iranians could be that they develop more self-help strategies to boost positive cognitions in order to overcome or control depressive symptoms (Farnoodi, 2013). Therefore, due to higher negative cognitions and depressive symptoms, they may need greater positive cognitions to balance and overcome depressive symptoms.

Another explanation for higher level of positive cognitions among Iranians may also be related to the religious ideas and personal beliefs. Iranians believe that in case of any health issues such as depression they should empower themselves through praying and faith in God which would help them to increase their hope and optimism (Dejman, 2010; Good et al., 1985). Overall, personal beliefs relating to religion may
be a fundamental factor that enhances positive cognitions. Therefore, there is a possibility that Iranians increase their positive cognitions through reliance on personal religious beliefs to overcome depressive symptoms.

The structure of Iranian families and close friends may be another factor that contributes to their higher scores on positive cognitions. The family is considered a permanent and primary source that provides a support system for family members if a crisis or even a small problem arises (Dallalfar, 2002; Dejman, 2010; Holakouee, 2011). For example, in case of a family member having depressive symptoms, the family would help the depressed member through changing life’s conditions such as travelling, generating pleasant activities, cheerful family gathering, and making changes in the repetitive life styles (Dejman, 2010).

In terms of positive cognitions, hope pathways (HOPE-PATH) was the only positive cognitive variable that did not significantly differ between Iranians and Australians. Pathway thoughts involve the perceived capacity to develop effective routes toward attaining goals (Cleveland, 2008), and this appears to be similar across the two cultural groups. However, further studies are needed to verify this finding.

**Conclusion**
Evidence for the factorial validity, internal consistency and convergent validity of the DGS was found among Iranians. However, the discriminant validity was not supported. Results also provided evidence for more similarities than differences in associations between positive and negative cognitions in relation to depression across the Australian and Iranian groups. The main differences were the higher level of both negative and positive cognitions scores as well as depression and
anxiety reported among Iranians compared to Australians. The implications and limitations of Study 2A findings are discussed in Chapter 11.
Overview

The first aim of Study 2B (T2) was to provide further evidence for the psychometric properties of the Persian version of the DGS in community sample of Iranians. In order to ensure that the DGS measures the intended constructs, factor structure of the DGS, internal consistency, convergent and discriminant validity were re-examined. The second aim was to re-evaluate the factor structure of the Persian version of the ABS and ND. The next purpose was to assess the stability of the DGS and all other measures. The fourth aim was to examine the similarities and/or differences of the DGS, negative and positive cognitions, and depression between Iranians of the current study and Study 2A and the Australian sample from Study 1A, 1B. The last aim was to examine if positive cognitions added any additional variance beyond negative cognitions in predicting depression over the 8-week period.

Method

Participants

A total of 288 men and women completed the 8-week follow-up assessment out of an original 357 who took part in the initial assessment. The 193 women had an age range of 18 to 74 years and a mean age of 33.54 years (SD=12.83). The 95 men had an age range of 18 to 71 years and a mean age of 34.18 years (SD=12.32). The attrition rate from T1 to T2 was 19%.
**Procedure**

The participants at T2 completed the same questionnaires as per T1, with no reimbursement. After completion in their own time, participants returned the questionnaires to the principal researcher in a reply-paid envelope. On receipt, these were numbered and matched with T1, and stored in same location. A consent form was provided to all participants prior to participation. (Refer to Appendix B).

**Measures**

The measures consisted of the same questionnaires used at Study 2A (refer to Appendix B).

**Results**

**Overview of Analysis**

Following data screening, the PCA extractions were separately conducted to re-examine the factor structure of the Persian version of the DGS, ABS and ND scales. Then, descriptive and correlation analyses were conducted to evaluate the convergent and discriminant validity, internal consistency and stability of the DGS and all other variables. Moreover, in order to assess positive and negative cognitions in prediction of MASQ-AD, hierarchical regression was performed to determine if the positive cognitions at T1 predicted MASQ-AD at T2. Lastly, multivariate analysis of variance was performed to compare Iranian and Australian groups across time.

**Data Preparation and Preliminary Analysis Assumptions**

Data screening and statistical analyses were conducted using SPSS 20. The same data screening procedures of T1 were conducted for T2. All variables were screened for accuracy of input, missing values, univariate and multivariate outliers, linearity and normality. Five missing values were identified and replaced using the
mean value for each variables. Seven univariate outliers were identified using boxplots on five variables including ATQ-NSNE, ATQ-PMDC, ABS-SS, HOPE-AGEN and QES-ND. These outlier scores were standardised to the values ±3.29 standard deviation beyond the group mean, which are acceptable limits recommended by Tabachnik and Fidell (2007). Normality and homoscedasticity were not violated. Further, one multivariate outlier was identified using Mahalanobis distance with a critical Chi square value above the $p<.001$ cut-off criterion recommended by Tabachnik and Fidell (2007). This case was then removed prior to data analysis. All variables used in the following analyses were found to be normally distributed and there was no evidence of non-linearity.

**Attrition Rates**
In Study 2B (follow up at 8-week time), of the 357 participants, 288 men and women completed and returned the same questionnaires 8-weeks after T1. The decrease in the number of participants, who completed the questionnaires at T2, indicated that there was a 19% attrition rate from T1 to T2.

A MANOVA was conducted to investigate any differences between participants who completed both T1 and T2 ($N=288$) with those who did not complete T2 ($N=69$). There was not statistically significant difference between the groups on the combined dependent variables, $F (1, 355) = .82, p >.05$; Pillai’s Trace = .02; partial eta squared =.02.

**Factor Structure of the DGS Persian Version**
The criteria to examine the factorability of 13 items of the DGS Persian version, are those as outlined in Study 1A (Chapter 3). The correlation matrix for the scale items revealed that all correlations were in excess of the recommended .30; the
obtained KMO values were in excess of the minimal.60, being .94; and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance, thus indicating the data set that was suitable for factor analysis. Given these overall indicators, the PCA was conducted with all 13 items. Consistent with the findings of Study 2A (Chapter 6), the results indicated the presence of one factor, with eigenvalues greater than one, accounting for 48.97% of the variance (see Table 7.1). Moreover, the findings showed that in line with previous studies of 1A, 1B and 2A, that item 8 did not load on this factor, and was removed from the scale.

Table 7.1
Factor loadings based on a Principal Component Analysis for 13 items from the Daily Goals Scale (DGS) at T2 in the Iranian Sample (N=288)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can see each day as a series of small personal goals to meet</td>
<td>.74</td>
</tr>
<tr>
<td>2. I am very good at focusing my efforts on attaining a goal</td>
<td>.75</td>
</tr>
<tr>
<td>3. Sometimes I set myself little goals for the next day</td>
<td>.72</td>
</tr>
<tr>
<td>4. I try my best not to leave small goals half done</td>
<td>.70</td>
</tr>
<tr>
<td>5. I can see how my achievement of smaller goals enables me to build towards bigger goals</td>
<td>.79</td>
</tr>
<tr>
<td>6. For me, each day lets me make small achievements, such as watching TV, taking a shower, eating well, talking with a friend, etc.</td>
<td>.76</td>
</tr>
<tr>
<td>7. Sometimes at night I think of small goals I have achieved during the day</td>
<td>.67</td>
</tr>
<tr>
<td>8. My days are usually just about getting through to the end</td>
<td>-.15</td>
</tr>
<tr>
<td>9. I encourage myself to keep pursuing little goals every day</td>
<td>.65</td>
</tr>
<tr>
<td>10. It is success at the little goals that encourages me to try for bigger goals</td>
<td>.75</td>
</tr>
<tr>
<td>11. When I am feeling down, I still try to work towards very little goals</td>
<td>.73</td>
</tr>
<tr>
<td>12. Some mornings I review the little goals I achieved yesterday</td>
<td>.72</td>
</tr>
<tr>
<td>13. Sometimes I can lift my mood by thinking of little goals I have achieved</td>
<td>.55</td>
</tr>
</tbody>
</table>
**Factor Structure of the ABS Persian Version**

Prior to analyses, the factorability of the ABS was investigated through the process explained in Chapter 3 (Page 56). The correlation matrix for ABS items revealed that most correlations were in excess of the recommended .30; the obtained KMO values were in excess of the minimal .60, being .77; and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) was significant thus indicating a data set was suitable for factor analysis.

The PCA extraction was conducted to examine the initial unrotated solution for the ABS items followed by an oblique rotation. Items loading onto more than one factor were included in the factor with the highest loading, if the items were distinctive. Consistent with Study 2A, the results indicated the presence of two factors, and there were two eigenvalues greater than one accounting for 40.04% of the total variance (see Table 7.2). Factor one accounted for 25.97% of the variance and there were six items with loadings greater than .30. This factor corresponded to the OB subscale and appeared to be structured about optimism and positive feelings. In addition, the factor solution was similar to the results found with the Study 2A. Factor two accounted for 14.24% of the variance and there were also six items with loadings greater than .30. Factor two corresponded to the SS subscale and appeared to be structured related to perception of being satisfied with self. The result was consistent with Study 2A as well as the previous studies in Australia (Smith, 2000; Miller, 2004a).
Factor Structure of the ND Persian Version

First, the factorability of the six items of ND (Persian version), was examined through same criteria for the DGS and ABS in Chapter 6. All correlations were in excess of the suggested .30; the obtained KMO value was .72, above the recommended value of .60, and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance which revealed that the data set was suitable for factor analysis. Similar to the results of Study 2A, the results indicated the presence of one general factor, with eigenvalues greater than one, accounting for 41.30% of the variance (see Table 7.3). In addition, the factor solution was consistent to that found in

Table 7.2
Factor loadings based on a Principal Component Analysis for 12 items from the Adaptive Bias Scale (ABS) at T2 in the Iranian Sample (N=288)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor 1</th>
<th>Factor 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Eigenvalue</td>
<td>Variance (%)</td>
</tr>
<tr>
<td>1.</td>
<td>3.11</td>
<td>25.97</td>
</tr>
<tr>
<td>2.</td>
<td>1.71</td>
<td>14.24</td>
</tr>
<tr>
<td>3.</td>
<td>1.44</td>
<td>11.81</td>
</tr>
<tr>
<td>4.</td>
<td>1.22</td>
<td>9.86</td>
</tr>
<tr>
<td>5.</td>
<td>1.11</td>
<td>8.82</td>
</tr>
<tr>
<td>6.</td>
<td>1.02</td>
<td>6.61</td>
</tr>
<tr>
<td>7.</td>
<td>0.88</td>
<td>5.36</td>
</tr>
<tr>
<td>8.</td>
<td>0.77</td>
<td>4.36</td>
</tr>
<tr>
<td>9.</td>
<td>0.64</td>
<td>3.92</td>
</tr>
<tr>
<td>10.</td>
<td>0.55</td>
<td>2.65</td>
</tr>
<tr>
<td>11.</td>
<td>0.44</td>
<td>2.11</td>
</tr>
<tr>
<td>12.</td>
<td>0.38</td>
<td>1.13</td>
</tr>
</tbody>
</table>

Note: Factor 1 (OB)= Optimistic Bias, Factor 2 (SS)= Self Satisfaction
Study 2A and with the Australian sample (Hawkins, 2004). In line with the previous study, all items clearly fitted into a component with the focus of negative self-concept reflecting pessimism.

**Table 7.3**
*Factor loadings based on a Principal Component Analysis for 6 items from the Negative Disposition (ND) scale at T2 in the Iranian Sample (N=288)*

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You happen to be angry. Is it because you have a bad temper?</td>
<td>.66</td>
</tr>
<tr>
<td>2. You happen to be in a bad mood. Is it because you are easily annoyed?</td>
<td>.60</td>
</tr>
<tr>
<td>3. You happen to argue with other family members. Is it because you are argumentative?</td>
<td>.64</td>
</tr>
<tr>
<td>4. You happen to lose your faith in a friend or family member. Is it because you are unforgiving?</td>
<td>.74</td>
</tr>
<tr>
<td>5. You happen to feel lonely. Is it because you are not popular?</td>
<td>.61</td>
</tr>
<tr>
<td>6. You happen to annoy a friend. Is it because you are an inconsiderate person?</td>
<td>.69</td>
</tr>
</tbody>
</table>

**Internal Consistency**
The internal consistencies of all scales were also examined at T2. In line with T1, all measures used in this study showed acceptable item-total correlations. The Cronbach alphas ranged from .68 to .85. Table 7.4 displays internal consistencies for all variables.
### Table 7.4

*Internal Consistency for all Scales at T2 in the Iranian Sample (N=288)*

<table>
<thead>
<tr>
<th>Measures</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGS</td>
<td>.85</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>.71</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>.68</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>.75</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>.72</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>.78</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>.85</td>
</tr>
<tr>
<td>QES-ND</td>
<td>.72</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>.84</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>.85</td>
</tr>
</tbody>
</table>

*Note: DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression, AA= Anxious Arousal.*

### Descriptive Statistics

Table 7.5 shows the means and standard deviations of T2 for both men and women. Participants’ scores on the DGS ranged from 26 to 55 ($M = 41.89$, $SD = 7.05$). A comparison of Iranians at T1 and T2 is also provided in Table 7.6.

A MANOVA was performed in order to determine gender differences on all the included measures. The multivariate Pillai’s Trace test showed no overall significant gender difference, $F_{(1,286)} =1.76$, $p>.05$. Thus, men and women were combined in the subsequent analyses.

The results of this study identified that 63% of the participants scored above the cut-off score of 58 on MASQ-AD (Buckby, 2002). A chi-square test conducted in order to examine the differences in the level of MASQ-AD scores in the current study with Study 1B. The result indicated a significant difference in the percentage of MASQ-AD in the current sample (63%) compared with the results from Australians sample in Study 1B (44%), $\chi^2_{(1,n=288)} = 76.67$, $p<.001$. 
Comparison of Scores on all Scales for Study 2A, 2B, 1A and 1B
A repeated measures multivariate analysis of variance was performed to examine whether there were any statistically significant differences between groups of Australians, and Iranians across T1 and T2. All variables at T1 and T2 were entered into the analysis: the DGS, ABS-OB, ABS-SS, HOPE-AGEN, HOPE-PATH, QES-ND, ATQ-PMDC, ATQ-NSNE, MASQ-AD, and MASQ-AA. The within group factor was time and the between group factor was sample groups. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance and multicollinearity with no serious violation noted.

The MANOVA results indicated that there was an overall statistically significant difference between two groups, Pillai’s Trace = .06, $F (10, 421) = 2.89$, $p < .001$, partial eta squared = .06. When the results for the dependent variables were considered separately, univariate tests showed that there were specific significant differences on nine variables. Table 7.7 provided a summary of these results. Altogether, an inspection of the mean scores indicated that Iranian participants scored higher than Australians on the DGS, ABS-OB, ABS-SS, HOPE-AGEN, QES-ND, ATQ-NSNE, ATQ-PMDC, MASQ-AD, and MASQ-AA, (see Table 7.7). HOPE-PATH was the only variable that was similar between these two groups.
Table 7.5  
Descriptive statistics for all variables for T2 in the Iranian Sample (N=288)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Scale Range</th>
<th>Men (N=95)</th>
<th>Women (N =193)</th>
<th>Total Sample (N =288)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
</tr>
<tr>
<td>DGS</td>
<td>26-55</td>
<td>41.64</td>
<td>6.56</td>
<td>42.01</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>14-30</td>
<td>23.14</td>
<td>3.83</td>
<td>23.37</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>7-30</td>
<td>17.08</td>
<td>4.19</td>
<td>17.55</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>7-16</td>
<td>12.14</td>
<td>2.22</td>
<td>12.36</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>8-16</td>
<td>11.74</td>
<td>1.78</td>
<td>11.92</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
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<td>12.31</td>
<td>3.75</td>
<td>11.83</td>
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<tr>
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<td>7-27</td>
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<td>5.06</td>
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</tr>
<tr>
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<td>6-27</td>
<td>15.48</td>
<td>4.03</td>
<td>15.34</td>
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<tr>
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<td>11.06</td>
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<tr>
<td>MASQ-AA</td>
<td>18-57</td>
<td>31.30</td>
<td>9.53</td>
<td>33.22</td>
</tr>
</tbody>
</table>

Note: N =144 T2, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self-Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, SD= Standard Deviation, *p<.05, **p<.01.
Table 7.6
Descriptive statistics for all variables at T1 and T2 in the Iranian Sample

| Measures  | Scale Range | T1 (N=375) | | | Scale Range | T2 (N=288) | | |
|-----------|-------------|------------|---|---|------------|------------|---|
| DGS       | 24-55       | 42.11      | 6.92 | 26-55 | 41.89 | 7.05 |
| ABS-OB    | 14-30       | 23.14      | 3.88 | 14-30 | 23.29 | 3.76 |
| ABS-SS    | 6-28        | 16.98      | 4.43 | 7-30  | 17.39 | 4.54 |
| HOPE-PATH | 7-16        | 12.31      | 2.32 | 7-16  | 12.29 | 2.32 |
| HOPE-AGEN | 7-16        | 11.92      | 2.19 | 8-16  | 11.86 | 2.04 |
| ATQ-PMDC  | 5-24        | 12.08      | 4.02 | 5-24  | 11.99 | 4.01 |
| ATQ-NSNE  | 7-27        | 14.04      | 5.06 | 7-27  | 13.94 | 5.07 |
| QES-ND    | 6-27        | 15.45      | 4.43 | 6-27  | 15.38 | 4.49 |
| MASQ-AD   | 38-91       | 32.50      | 10.26 | 37-91 | 62.10 | 10.73 |
| MASQ-AA   | 17-53       | 32.50      | 8.92 | 18-57 | 32.59 | 9.61 |

Note: ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, SD = Standard Deviation.
Table 7.7
Descriptive and inferential statistics for the samples of Australians and Iranians at T2

<table>
<thead>
<tr>
<th>Measure</th>
<th>Australians (N=144)</th>
<th></th>
<th></th>
<th></th>
<th>Iranians (N=288)</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scale Range</td>
<td>Mean</td>
<td>SD</td>
<td>Scale Range</td>
<td>Mean</td>
<td>SD</td>
<td>F value</td>
<td>P value</td>
</tr>
<tr>
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<td>24-55</td>
<td>40.07</td>
<td>7.01</td>
<td>26-55</td>
<td>41.89</td>
<td>7.02</td>
<td>11.65**</td>
<td>.00</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>13-29</td>
<td>22.50</td>
<td>3.18</td>
<td>23-26</td>
<td>23.29</td>
<td>7.76</td>
<td>6.72*</td>
<td>.01</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>6-27</td>
<td>14.53</td>
<td>4.03</td>
<td>23-26</td>
<td>17.39</td>
<td>4.54</td>
<td>38.06**</td>
<td>.00</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>8-16</td>
<td>12.55</td>
<td>1.74</td>
<td>15-32</td>
<td>11.86</td>
<td>2.04</td>
<td>11.71**</td>
<td>.00</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>8-16</td>
<td>12.67</td>
<td>1.79</td>
<td>15-32</td>
<td>12.29</td>
<td>2.32</td>
<td>1.33</td>
<td>.24</td>
</tr>
<tr>
<td>QES-ND</td>
<td>6-25</td>
<td>13.70</td>
<td>4.23</td>
<td>6-27</td>
<td>15.38</td>
<td>3.99</td>
<td>17.82**</td>
<td>.00</td>
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<tr>
<td>ATQ-PMDC</td>
<td>5-20</td>
<td>8.86</td>
<td>3.74</td>
<td>30-116</td>
<td>11.99</td>
<td>4.01</td>
<td>63.33**</td>
<td>.00</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>7-23</td>
<td>10.02</td>
<td>3.85</td>
<td>30-116</td>
<td>13.94</td>
<td>5.07</td>
<td>80.59**</td>
<td>.00</td>
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<tr>
<td>MASQ-AD</td>
<td>39-78</td>
<td>57.75</td>
<td>9.18</td>
<td>37-91</td>
<td>62.10</td>
<td>10.73</td>
<td>23.12**</td>
<td>.00</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>20-36</td>
<td>27.43</td>
<td>5.41</td>
<td>18-57</td>
<td>32.59</td>
<td>9.61</td>
<td>48.06**</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note: DGS= Daily Goal Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, SD = Standard Deviation. *p<.05. ** p<.01.
Convergent and Discriminant Validity of the DGS

The correlations between all measures are reported in Table 7.8. Consistent with the results of T1, the data yielded evidence of convergent validity of the DGS. Results show high negative correlation between the DGS and MASQ-AD (-.57). Further, there was a high negative correlation between the DGS and ATQ-NSNE (-.56) and low to moderate negative correlation with both QES-ND (-.22) and the ATQ-PMDC (-.39). Furthermore, there were moderate positive correlation between the DGS and HOPE-PATH (.45) and strong positive correlation with HOPE-AGEN (.62). The DGS also showed a moderate correlation with ABS-OB (.55), and a low correlation with ABS-SS (.30).

These correlations were also compared with those obtained from Australians in Study 1B (Chapter 4) using the test of significance between the correlation coefficients (Preacher, 2002). All correlations were similar except that the correlation between the DGS and ATQ-NSNE was significantly higher (-.56) than found in Study 1B (-.36) with (z score=−2.66, p<.01). In addition, the correlation between the DGS and HOPE-AGEN (.62) was also significantly higher than Study 1B (.42) with (z score=2.69, p<.01).

Lastly, unlike in Study 1A and 1B with the Australians, this study did not provide support for the discriminant validity of the DGS, as unexpectedly, there was a moderate negative correlation between the DGS and the MASQ-AA(-.40). However, the result of discriminant validity in the current study was consistent with the results of Iranian sample in Study 2A (-.26) with (z score=−2.03, p<.01).
Table 7.8
Summary of intercorrelations for scores on all measures at T2 in the Iranian Sample (N=288)

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DGS</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ABS-OB</td>
<td>.55**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ABS-SS</td>
<td>.30*</td>
<td>.29*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. HOPE-PATH</td>
<td>.45**</td>
<td>.39*</td>
<td>.23*</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. HOPE-AGEN</td>
<td>.62**</td>
<td>.48**</td>
<td>.30*</td>
<td>.61**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. ATQ-PMDC</td>
<td>-.39*</td>
<td>-.25*</td>
<td>-.34*</td>
<td>-.30*</td>
<td>-.47**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. ATQ-NSNE</td>
<td>-.56**</td>
<td>-.39*</td>
<td>-.28**</td>
<td>-.47**</td>
<td>-.61**</td>
<td>-.74**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. QES-ND</td>
<td>-.22*</td>
<td>-.19*</td>
<td>-.32**</td>
<td>-.18</td>
<td>-.20*</td>
<td>-.36*</td>
<td>.30*</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. MASQ-AD</td>
<td>-.57**</td>
<td>-.40*</td>
<td>-.25*</td>
<td>-.46**</td>
<td>-.56**</td>
<td>.47**</td>
<td>.50**</td>
<td>.24*</td>
<td>--</td>
<td></td>
</tr>
<tr>
<td>10. MASQ-AA</td>
<td>-.40*</td>
<td>-.26*</td>
<td>-.11</td>
<td>-.27*</td>
<td>-.41**</td>
<td>.57**</td>
<td>.61**</td>
<td>.26*</td>
<td>.53**</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. DGS= Daily Goal Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, PMDC= Personal Maladjustment and desire for Change, NSNE= Negative Self-Concept and Negative Expectations, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression, AA= Anxious Arousal. *p < .05, **p < .01
Stability of All Measures

Stability coefficients were calculated for all scales over an 8-week period, and are shown in Table 7.9. Stability coefficients between T1 and T2 ranged from .73 to .78. The most stable measure between T1 and T2 was the HOPE-AGEN (.78), while the least stable measure was ABS-SS (.73).

Table 7.9
Stability Coefficients between T1 and T2 for all Scales in the Iranian Sample (N=288)

<table>
<thead>
<tr>
<th>Measure</th>
<th>T1-T2</th>
</tr>
</thead>
<tbody>
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<td>DGS</td>
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<tr>
<td>ABS-OB</td>
<td>.75</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>.73</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>.76</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>.78</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>.74</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>.77</td>
</tr>
<tr>
<td>QES-ND</td>
<td>.75</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>.74</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>.75</td>
</tr>
</tbody>
</table>

Note. DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression, AA= Anxious Arousal.

Predicting Anhedonic Depression from Positive and Negative Cognitions

Prior to analyses, all variables were screened and there were no violations of the assumptions of normality, linearity, multicollinearity and homoscedasticity. Table 7.10. shows the results of the hierarchical regression of the T1 negative and positive cognitions in predicting MASQ-AD scores at T2. At the first step, T1 MASQ-AD was entered to control for the effect of initial depression levels, \( \Delta F(1, 286) = 310.71, p<.001 \). T1 AD scores accounted for 52% \((adj R^2 = .52)\) of the variance in T2 MASQ-AD scores. At step 2, ATQ-PMDC, ATQ-NSNE and QES-ND were entered as additional predictors of MASQ-AD at T2. This accounted for an additional 4% variance \( \Delta F(3, 283) = 7.52, p<.001 \). At this step, only the ATQ-NSNE was the
significant predictor of MASQ-AD. The positive correlation here indicates that higher scores on NSNE at T1 predicted higher levels of MASQ-AD at T2.

At the final step, ABS-OB, ABS-SS, HOPE-AGEN, HOPE-PATH and the DGS were entered to the model. This was also found to be statistically significant, \( \Delta F(5, 278) = 6.43, p < .001 \). At this step, the DGS was found to be the unique predictor of T2 MASQ-AD scores, and the model added 5% to the variance (adj \( R^2 = .60 \)). The negative relationship between the DGS and MASQ-AD indicated that the higher scores of the DGS predicted lower scores MASQ-AD. Similar to the results of Study 1B, the overall hierarchical regression model was statistically significant, \( F(9, 278) = 46.74, p < .001 \), explaining 60% of the variance.

Table 7.10

Summary of hierarchical multiple regression analysis predicting Anhedonic Depression at T2 in the Iranians sample (N=288)

<table>
<thead>
<tr>
<th>Models/hierarchical steps</th>
<th>Predictors</th>
<th>R(^2)</th>
<th>( \Delta R^2 )</th>
<th>B</th>
<th>( \beta )</th>
<th>sr(^2)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Step 1</td>
<td>MASQ-AD</td>
<td>.52</td>
<td>.52**</td>
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<tr>
<td>Step 2</td>
<td>MASQ-AD</td>
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<td>.04*</td>
<td>.73</td>
<td>.72</td>
<td>.52**</td>
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<td>ATQ-PMDC</td>
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<td>-</td>
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<td>ATQ-NSNE</td>
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<td>.60</td>
<td>.59</td>
<td>.45**</td>
<td></td>
</tr>
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<td>QES-ND</td>
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<td>.08</td>
<td>.01</td>
<td>.00</td>
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<td>.47</td>
<td>.22</td>
<td>.03*</td>
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<tr>
<td>QES-ND</td>
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<td>-</td>
<td>.01</td>
<td>.03</td>
<td>.00</td>
<td></td>
</tr>
<tr>
<td>Step 4</td>
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<td>- .02</td>
<td>.00</td>
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<td>HOPE-AGEN</td>
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<td>- .07</td>
<td>- .03</td>
<td>.00</td>
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<td>HOPE-PATH</td>
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<td>- .08</td>
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<td>DGS</td>
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<td>-</td>
<td>- .41</td>
<td>- .10</td>
<td>.05*</td>
<td></td>
</tr>
</tbody>
</table>

Note: \( \Delta R^2 = R \text{ square change}; \) sr\(^2\) = squared semi partial correlations; MASQ= Mood and Anxiety Symptom Questionnaire; AD= Anhedonic Depression; ATQ = Automatic Thought Questionnaire; PMDC= Personal Maladjustment and desire for Change; NSNE= Negative Self-Concept and Negative Expectations; QES = Questionnaire of Explanatory Style; ND = Negative Disposition; HOPE= Hope Scale, ABS= Adaptive Bias Scale; OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, AGEN= Agency, PATH= Pathways, DGS= Daily Goal Scale. *p < .05, **p < .01.
Discussion

The present study was designed to further confirm the cross-sectional findings of T1 using follow-up data gathered 8-weeks after initial testing of Persian version of the DGS among a community sample in Iran. In line with T1, and Study 1 (both 1A and 1B) the findings demonstrated that the DGS comprised one factor reflecting propensity to set and achieve small daily goals. Additionally, the DGS was found to demonstrate a high level of internal consistency and convergent validity. However, there was no evidence regarding discriminant validity with anxiety subscale. Furthermore, consistent with Study 2A, the results provided support for the factor structure and high internal consistency of the both Persian version of the ABS and the ND.

Stability Coefficients

The findings of the current study provided evidence for the second aim by showing stability reliabilities for the DGS, supporting the scale as a stable measure. Consistent with Australians in Study 1B, the stability of the DGS in Persian provided further evidence for the usefulness of this scale in measuring propensity to set and achieve small daily goals among Iranians. In addition, the results showed stability for all the other measures across the 8-week period.

Level of Depression among Iranians

The results of Study 2B showed that the prevalence rate of MASQ-AD among community group of Iranians was considerably high (63%). While the current prevalence rate was consistent with Study 2A (70%), it was significantly higher than Study 1A (51%) and 1B (44%). Possible explanations regarding the high prevalence rate of depression in Iran were discussed in Chapter 6.
Comparing Iranian with Australian Groups on all Measures
As found in Study 2A, the results indicated that Iranians scored significantly higher than Australians on negative and positive cognitions as well as anhedonic depression across the 8-week period with higher scores among Iranians. The only exception was HOPE-PATH which was similar in both groups of Iranians and Australians. These findings were also discussed in Chapter 6.

Predictors of Anhedonic Depression
The regression analyses provided evidence to support the last aim of the current study. Consistent with Australians in Study 1B, the results showed a large proportion of the variance in subsequent depression was accounted for by initial depression and then by negative cognitions. In line with Study 2B and Western research, this study confirms that initial depressive symptoms is associated with future depression (Hankin et al., 2004; Hawkins, 2004).

Consistent with Australians in Study 1B, negative cognitions were the second strongest predictor of later depression, and notably, ATQ-NSNE at T1 was also the unique predictor of MASQ-AD at T2. Negative automatic thinking about self and future were strongly associated with depressive symptoms in both Iranian and Australian samples. This suggests that similar processes may underlie negative cognitions in relation to depression for both Iranians and Australians. The findings also provide further support for the validity of cognitive theories of depression (e.g., Abramson et al., 1978; Beck, 1979) among Iranians.

Moreover, similar with Australians in Study 2B, the results of this study demonstrated support for the positive cognitions in predicting MASQ-AD at T2 beyond and above negative cognitions. However, inconsistent with the Australians in Study 2B, the DGS at T1 was the unique predictor of anhedonic depression at T2. The
reason for this is unclear but it may have something to do with the importance of daily goals in relation to depression among Iranians in contrast to the optimism in Australians. Considering the higher level of depression among Iranians than Australians, one possible explanation might be that the DGS is more important when the level of depression is high. It is also possible that Iranians are more motivated to pursue their daily goals while Australians are more able to generate optimism in relation to depressive symptoms. However, more research is needed to examine these differences.

**Conclusion**

Overall, consistent with the results of Study 2A, this follow-up study demonstrated the same pattern of findings for the DGS in the Iranian community sample over time. The results provided further support for the factor structure of the Persian DGS as a culturally relevant self-report scale. Moreover, the DGS showed good internal consistency, convergent validity as well as satisfactory stability across time. However, unlike the results of Study 1A and 1B, this study did not provide discriminant validity for the DGS. In addition, the comparisons between Iranians and Australians across time provided initial evidence for the similarity of the DGS structure in two groups. While, the results demonstrated similarities in associations between positive and negative cognitions, with anhedonic depression between two Australian and Iranian groups, there were differences in the level of both negative and positive cognitions, anhedonic depression and anxiety with higher scores among Iranians. Lastly, the findings showed that the DGS at T1 predicted anhedonic depression at T2. These findings are discussed further in Chapter 11.
Chapter 8: Migration, Acculturation and Depression

Overview

Australia and Iran have provided two contrasting cultures to study the aims of this thesis. Iranians living in Australia will provide an additional context for examining each of the aims, as this group is influenced by both Western and Iranian culture. In this thesis, the term “immigrant” have been used to refer to a heterogeneous group of Iranians who immigrated to Australia through different ways (e.g., skilled migrated, refugees, asylum seekers). This chapter firstly provides a summary of migration in Australia, followed by a short history of Iranian immigrants in Australia. A brief review of acculturation, which has been proposed as an intra-cultural factor contributing to immigrants’ vulnerability to depression will also be provided. As there is no research to date investigating the relationship between acculturation and depression among Iranians in Australia, research pertaining to Iranians in other Western countries will be reviewed.

Migration and Australia

Individuals, groups, and communities migrate between countries for a number of reasons such as study opportunities, socio-economic issues, lifestyle improvement, political issues, and social momentum (Bhugra, 2003). The immigration and resettlement process influences all aspects of an immigrant’s life, including their physical and psychological health (Dow, 2010; Ebrahimian, 2005).

Australia is undergoing its largest immigrant flow in recent history (Schwartz, Unger, Zamboanga, & Szapocznik, 2010). Immigration is the main source of cultural
diversity in Australia, which has one of the largest proportions of immigrant populations in the world with an estimated 27% of the total population (6 million people) born overseas (ABS, 2011). In excess of 200 culturally and linguistically diverse (CALD) groups are represented (Commonwealth of Australia, 2007; Omeri & Raymond, 2009).

Immigration is a complex process that can influence immigrants’ mental health and susceptibility to depression (Demutska, 2012; Ornelas & Perreira, 2011). The migration process includes three key stages: pre-migration; transit/the migration journey; and post-migration (Ko & Perreira, 2010). Pre-migration stressors can include political turmoil and persecution, and social and economic difficulties. The second stage pertains to the hardships experienced during travel and all stresses during transition. In the post-migration stage, immigrants experience the process of adjusting their life to a new country, their settlement experiences, changes in family structure, and meeting the challenges of an unfamiliar culture and in many cases learning a new language (Ornelas & Perreira, 2011). Regardless of the type of migration (e.g., interstate or international), these factors may interact and enhance stress (Bhugra, 2003), which according to the cognitive model of depression increases the possibility of experiencing depressive symptoms (Beck & Alford, 2009).

The principles of Australia’s multiculturalism emphasise the importance of valuing differences and utilising the cultural knowledge and skills of people from different backgrounds (Commonwealth of Australia, 2008). The policy of Australian government is intended for all Australians, including those from CALD backgrounds (Commonwealth of Australia). Some mental health services have been provided by the Australian Government to reduce the burden of depression in the population, although it is unclear whether these effectively deal with depression among
immigrants. Understanding depression in Australian minorities has been highlighted as a priority by the government in order to better address cultural aspects of depression and minimise the risk of misdiagnosis within this group. Overall, a deeper understanding of depression in ethnic minority communities is needed to effectively coordinate research, practice, and policies concerning Australia’s CALD population (Minas, 2007).

The Iranian immigrant population is one minority community in Australia, whose members have migrated for various reasons (e.g., skilled migration, refugees, etc.). Research on depression in ethnic minority communities is extremely limited in Australia (Klimidis, Minas, & Kokanovic, 2006), and there has been limited psychological research on Iranian immigrants in Australia overall, making it a relatively unrecognised cultural minority group (Jamarani, 2009; Ziaian, 2003).

Iranians in Australia

The Iranian population in Australia is growing fast. Table 8.1 shows the growing population of Iranians in Australia over the last three decades. By 2011 approximately 34,454 Iranians had settled in Australia as immigrants or under the humanitarian programme (ABS, 2011). The number of Iranians account for 0.10% of the total Australian population of 22,779,574.

Given that pre-migration factors influence the experience of depressive symptoms, the factors forcing Iranians to immigrate should be addressed (Shekarabi, 2008). Several major factors have contributed to the migration of Iranians since 1979, including the Islamic Revolution, the war against Iraq, sociocultural insecurity, turmoil and instability in political and economic situation, fear of persecution, and lack of freedom in expression and religion (Hakimzadeh, 2006; Ziaian, 2003).
Table 8.1
Growing Iranian Population in Australia

<table>
<thead>
<tr>
<th>Year</th>
<th>Iranian Population</th>
</tr>
</thead>
<tbody>
<tr>
<td>1980-81</td>
<td>3,700</td>
</tr>
<tr>
<td>1981-86</td>
<td>7,500</td>
</tr>
<tr>
<td>1987-90</td>
<td>12,700</td>
</tr>
<tr>
<td>1991-96</td>
<td>16,200</td>
</tr>
<tr>
<td>1977-01</td>
<td>18,840</td>
</tr>
<tr>
<td>2002-06</td>
<td>22,550</td>
</tr>
<tr>
<td>2007-11</td>
<td>34,454</td>
</tr>
</tbody>
</table>

Source: ABS 2011

The largest wave of Iranian immigration to Australia occurred during the period immediately before and after the Islamic Revolution between 1978 and 1980 (Hakimzadeh, 2006; Jalali, 1982). Prior to this period, the number of Iranian immigrants was relatively small (Hulakuee, 2011). A few years after the Islamic Revolution, Iranians faced a major war between Iran and Iraq during the 1980s. A consequence of this war was an increase in religious, political, and economic refugees and asylum seekers, including many professionals, fleeing Iran for fear of persecution (Department of Immigration and Multicultural Affairs [DIMIA], 2007; Ziaian, 2003).

Migration processes are stressful, particularly for refugees. In terms of Iranians, pre-migration stressors and the difficulties and challenges associated with migration may exacerbate stressful experiences, contributing to depressive symptoms (Ziaian, 2003). The process of travelling to Australia may also be stressful (e.g. modes of travel, legality/illegality and associated processing, etc.). After migration to Australia, Iranians may experience a variety of adverse events, including discrimination (Adibi, 1998), difficulty adjusting to the new society and culture (ABS, 2007; Adibi, 2003; Khavarpour, & Hosseinpour, 2003), unemployment, and loss of family, friends, and home country (Ziaian, 2003). Traumatic experiences such as
leaving family and friends, conflict with the host culture, unemployment, and economical issues, in addition to learning a new language, may predispose minority communities to depression (Ahmed & Buhgra, 2006).

Given that Iran is itself a multicultural and multilingual society, the Iranian population in Australia is comprised of different groups from a variety of socioeconomic, political, and religious backgrounds (Alizadeh-khoei, 2008; Ziaian, 2003). However, Iranian immigrants in Australia share common cultural features, including a shared identity based on Persian cultural heritage and the Persian language, Farsi (Adibi, 1998; Jalali, 1982; Ziaian, 2003). Iranians in Australia celebrate their New Year (Nowruz) and other occasions by fostering harmony, integrity, and friendship for all age groups in their community (Ziaian, 2003).

Understanding the common cultural and historical roots of Iranians in Australia is fundamental to being better able to understand and address common sources of vulnerability to depression. Cultural organisations in minority communities can support immigrants and buffer them from the development of depressive symptoms by reducing the frequency, intensity, or duration of stressors (Heaney & Israel, 2008). However, clinicians must also be able to provide culturally-sensitive support and treatment if clinical depression arises, highlighting the necessity of understanding Iranian culture from a mental health perspective.

Overall, stressful events during the pre-migration period, travel stresses during transit, and challenging settlement processes in a new host culture during post-migration can have considerable impact on Iranian immigrants’ mental health and may increase vulnerability to depression (Ziaian, 2003). Due to the lack of extant research in this area, any conclusion regarding the relationship between negative and positive cognitions and depressive symptoms among Iranians minority cannot be
made. However, the interaction of the aforementioned factors in addition to intra-cultural variables (such as acculturation) may influence and exacerbate the experience of depressive symptoms.

**Acculturation**

Acculturation has been proposed as an intra-cultural factor contributing to immigrants’ vulnerability to depression (Dow, 2010). The most widely used definition of acculturation is proposed by Redfield, Linton, and Herskovits (1936) who defined acculturation as “those phenomena which result when groups of individuals having different cultures come into continuous first-hand contact, with subsequent changes in the original patterns of either or both groups” (p. 149). Acculturation can generally be defined as ‘the process of adjusting to a new culture’, however there is lack of consensus in the psychological literature about how best to conceptualise acculturation as a construct (Ryder, Alden, & Paulhus, 2001). Berry (1997) offers the most widely accepted and long-standing definition of acculturation, which is ‘the result of contact between a heritage (minority or origin) and mainstream (dominant or host society) culture through a dual process of cultural and psychological change at both an individual and group level’. These cultural and psychological changes include a wide range of domains (including collective activities, values, norms, attitudes, and behaviours) which may conflict between cultures (Berry, 2013; Sam, & Berry, 2010). There is evidence that the degree of acculturation experienced by immigrants is positively associated with their mental health and reduces their acculturative stress (Aprahamian et al., 2011; Ward, 1997; Ward, & Rana-Deuba, 1999). For instance, in their research, Kim, Sangalang and Kihl, (2012) found that older Korean immigrants
exhibited lower levels of depression when they had high social network support and were highly acculturated.

When moving from their heritage culture towards a new and unfamiliar mainstream culture, immigrants face two basic challenges. The first is the desire to maintain their past identity and heritage culture; and the second is the desire to have contact with the mainstream cultures (Berry, 2013; Sam & Berry, 2010). Specifically, Berry (2005), has outlined four different acculturation strategies: assimilation; integration; separation; and marginalisation. ‘Assimilation’ occurs when the individual develops a positive relationship with the mainstream culture, adopting the new culture and discarding their heritage cultural identity. ‘Integration’ occurs when the individual adopts the mainstream culture while also maintaining their heritage culture. Individuals who place a high value on holding on to the heritage culture may reject the mainstream culture and avoid interaction with members of the new society, ‘separating’ themselves from the new culture. ‘Marginalisation’ occurs when the individual rejects both their heritage and the mainstream cultures (Schwartz, Unger, Zamboanga, & Szapocznik, 2010).

Berry (2005) further suggests that there are three phases to acculturation: contact; conflict; and adaptation. ‘Contact’ is the way that a migrant approaches the new culture through experiences such as education, trade, or missionary activities. ‘Conflict’ occurs when individuals or groups are attached to their own cultural values yet are expected to take on new values in the mainstream culture. When an individual attempts to adopt new values and roles consistent with the dominant culture, this may conflict with their heritage culture’s values and traditional roles (Dow, 2010). The third phase to acculturation is ‘adaptation’, which occurs when individuals attempt to minimise the aforementioned values and role conflict between their heritage culture

...
and the dominant culture’s beliefs and practices. How well an individual adapts to a new culture is a key factor in determining mental health outcomes, with respect to resolving the stress of contact and conflict during the acculturation process (Castro, 2003).

Conflict during acculturation may predispose immigrants to experience depressive symptoms (Kadkhoda, 2001). Iranians who migrate to Australia are coming from a non-Western collectivistic culture to a Western individualistic culture. Moving from a non-Western to Western culture can create challenges and conflict for Iranian immigrants as they negotiate how their heritage culture’s values fit their new host culture (e.g., when creating and maintaining new social networks, economic issues, social mobility, learning new social ethics and norms, learning a new language, etc.). For instance, Iranians are family-oriented and typically patriarchal, where men hold the most powerful positions privately and publicly (Jalali, 2005; Kadkhoda, 2001). When a family is confronted by the individualistic cultural values of a Western culture such as Australia’s, some family members may reject their heritage cultural values while adopting the host culture’s values (Elia, 2001). Evidence suggests that this experience can be particularly stressful for an immigrant and their family, increasing the risk of depressive symptoms (Dow, 2010; Schwartz et al., 2013). In summary, the acculturation process may contribute to immigrants’ development of depressive symptoms via the strategies they adopt to adjust to the host culture, the state of immigrants’ mental health pre- and post- migration, and the influence of general psychological and cultural changes (Aprahamian et al., 2011; Bhugra, 2003; Dow, 2010; Schwartz et al., 2013; Ziaian, 2003).

There is no research to date investigating the relationship between acculturation, depressive symptoms, and negative and positive cognitions within
Iranians in Australian. Therefore, in the absence of relevant literature in Australia, a search was conducted for research that have been conducted in other Western countries, such as the United States and Canada. These countries include a large number of Iranian immigrants who have share similar cultural experiences with those living in Australia. However, only studies which were conducted in the United States were found to be more relevant with the topic of current studies, and thus reviewed in this thesis.

In one study, Kadkhoda (2001) studied relationships between acculturation, acculturative stress, and levels of depression and anxiety among Iranian immigrants in the United States. Adult participants \( N = 115 \) completed the Mendoza Cultural Life Style Inventory (Mendoza, 1989), the Kadkhoda Acculturative Stress Scale (Kadkhoda, 2001), the Beck Anxiety Inventory (1999) and the Beck Depression Inventory (Beck, 1997). Participants with strong attachment to their Iranian heritage culture had higher levels of acculturative stress, depression, and anxiety compared to participants who accepted and adapted to the mainstream (host) American culture. Kadkhoda concluded that as Iranians’ acceptance of and adaptation to the dominant American culture increased, their depression, anxiety, and stress decreased. However, these results are inconsistent with other research which has shown no correlation between acculturation and depression among Iranians (e.g., Elia, 2001; Holakouee, 2011).

The relationship between acculturation, depression, social support, and family conflict among young adult Iranian immigrants in the United States was examined in a study by Elia (2001). Ninety four Iranian young adults completed the Perceived Parental Cultural Lifestyle Inventory (Mendoza, 1989), the Perceived Social Support Scale (Procidano, & Heller, 1983), the BDI (Beck, 1997), and the Family Conflict
Scale (Elia, 2001). Higher depression was significantly related to lower perceived family support, but not acculturation and depression, suggesting the need for further research to evaluate the role of acculturation relative to depressive symptoms among Iranian adults.

In another study, Holakouee (2011) investigated the relationship between acculturation and the expression of emotional distress, depression, and somatisation among 124 Iranian Americans. Participants completed the Cultural Life Styles Inventory (Mendoza, 1989) and the Brief Symptom Inventory 18 (Derogatis, 2000), in addition to a checklist of culturally specific expressions of somatic symptoms. Results showed that there was no relationship between acculturation and depression, or between acculturation and emotional distress or somatisation, for this sample.

To conclude, the relationship between acculturation and depression has received little focus and the results of previous research are not consistent. In addition, the relationship between acculturation and depression has yet to be investigated among Iranians in Australia.
Chapter 9: STUDY 3A, Validation of the DGS among Iranian-Australians

Overview

The results of Study 1 (A and B) and Study 2 (A and B) provided support for the validation of the DGS among Australians and Iranians, respectively. In order to further understand the similarities and/or differences in depression between Australians and Iranians, the present study was designed to replicate Study 1A and 2A with an Iranian-Australian community sample.

In line with Study 1A and 2A, the first aim of Study 3A was to examine the factor structure of the DGS in a community sample of Iranian-Australian adults. The factor structure of the two Persian versions of ABS and ND scales was further investigated among Iranian-Australians. The second aim of this study, also in line with Study 1A and 2A, was to demonstrate the convergent validity of the DGS by examining its relationship to depression, hope, optimism, and negative cognitions, and its discriminant validity by examining its relationship to anxiety. The third aim was to examine the similarities and/or differences the DGS, negative and positive cognitions, depression between Iranian-Australians from this study and Iranians from Study 2A as well as the Australian sample from Study 1A. Another aim was to investigate the negative and positive cognitions in relation to depression among Iranian-Australians. Lastly, the study was designed to investigate acculturation in relation to depression as well as negative and positive cognitions.
Method

Participants\(^{10}\)

The participants were 88 (41.9%) Iranian men and 122 (58.1%) women with an age range of 18 to 75 years and mean age of 37.40 years (\(SD=12.19\)) who were living in Australia from urban and regional areas in Victoria. The 88 men had an age range of 18 to 75 years and a mean age of 37.97 years (\(SD=12.72\)). The 122 women had an age range of 18 to 74 years and a mean age of 37.04 years (\(SD=11.84\)).

Procedure

This study was approved by the Deakin University Human Research Ethics committee (Appendix C). Due to the limited resources available to the student, the participants in Study 3 (A & B) were only recruited from Victoria. In this study, participants were recruited using snowballing techniques within the student’s social networks in Victoria. A packet of questionnaires along with the plain language statement, consent form in the Persian language (Appendix C) and a prepaid addressed envelope were distributed to Iranian colleagues, friends, and family members. Further, participants were encouraged to assist with giving these out to their own contacts. The plain language statement clearly explained the study’s aim, procedures, risks and potential benefits to participants, privacy and confidentiality issues, and participants’ right to withdraw at any stage. All interested participants, were given and asked to complete a packet of questionnaires (Appendix B) and return in a reply-paid addressed envelope. Participants were assured of the confidentiality of

\(^{10}\) All participants were born in Iran.
their responses and were asked to feel free to complete the questionnaire in their own time but were asked to do so in one setting rather than over a couple of days, and to return the questionnaires as soon as possible upon completion. The questionnaire took about 30 minutes to complete and as in Study 1A and 2A, these were followed by the ABS, ATQ, Hope, ND, DGS and the MASQ.

On receipt of questionnaires, the questionnaires and consent forms were numbered (coded), separated and stored in separate locations. Moreover, in order to organise for the follow-up stage, the consent forms were dated upon receipt and subsequently used to provide the timing and addresses for posting (8 weeks after receipt of the completed respective T1 questionnaires).

**Measures**

The questionnaires consisted of the same Persian translated measures included in Study 2A and 2B (Appendix C). Descriptions of all measures are provided in Chapter 4 (Page 78) and Chapter 6 (Page 117). The Iranian sample in Australia completed all of the questionnaires with the addition of one instrument, namely the acculturation scale by Ryder, Alden, and Paulhus (2000). They completed this scale only at T1.

**Vancouver Index of Acculturation**

The Vancouver Index of Acculturation (VIA; Ryder et al., 2000) is a 20-item measure of acculturation which is designed and based on a bidimensional model of the construct that suggest individuals are capable of forming a cultural identity in both cultures. This scale includes two subscales: ‘mainstream culture’ and ‘heritage culture’ with separate sets of scores which indicate the level of acculturation along two dimensions. It requires respondents recognise their heritage culture and record it
according to what they identify in their culture. In the present study, ‘mainstream culture’ is referred to as ‘Australian culture’ while ‘heritage culture’ reflects ‘Iranian culture’.

There are ten aspects of acculturation in the VIA which include traditions, values, practices, marriage, behaviour, social activities, friends, entertainments, humour and comfort with people. Items are generated in pairs with one referring to ‘heritage culture’ e.g., “I am interested in having Iranian friends”, and the other to the mainstream culture under investigation e.g., “I am interested in having Australian friends”. The level of agreement with an item is rated on a 5-point scale from “1= strongly disagree”, to “5=strongly agree”.

Ryder et al. (2000) developed the VIA, and examined the psychometric properties with 150 college students (North American) who were identified as having Chinese ancestry. The concurrent validity was adequate by measuring and comparing each subscale with time spent living and being educated in a Western-English speaking country. For the ‘heritage culture’ the internal consistency coefficient was .79 and for the ‘mainstream culture’ it was .75.

**Translation and Back-translation of scales**

The VIA was translated into Persian first, and then this translated version was fine-tuned through back-translation method into English by a bilingual person who was not familiar with the instrument. The full procedure method of translation of the questionnaires is provided in Chapter 6. In addition, the Persian version of VIA are provided in Appendix C.
Results

Overview of Analysis
Following data cleaning and preparation, the PCA was conducted to re-examine the factor structure of the Persian version of the DGS, ABS and ND. Then, internal consistency of the DGS and all other scales were examined followed by the descriptive analyses. Correlational analyses were then conducted to evaluate the convergent and discriminant validity of the DGS. Finally, multivariate analysis of variance was conducted to compare all variables among Iranian-Australian, Iranian and Australian groups.

Data Preparation and Preliminary Analysis Assumptions
Data were screened using SPSS version 20 to assess accuracy of input, missing values, univariate outliers, linearity, and normality. Four missing values were detected and were replaced using the mean value for each variable. Fifteen univariate outliers were identified by using box-plots on eight variables including the DGS, ABS-OB, ABS-SS, HOPE-AGEN, ATQ-PMDC, ATQ-NSNE, QES-ND, and MASQ-AA. Outliers on these eight variables were rescoring to the values ±3.29 standard deviation from the mean, which are acceptable limits suggested by Tabachnik and Fidell (2007). Multivariate assumptions of linearity, normality, and homoscedasticity were not violated. Further, no multivariate outliers were identified as Mahalanobis distance with a critical Chi square value above the $p<.001$ cut-off criterion recommended by Tabachnik and Fidell (2001). All variables used in the following analyses were found to have normal distribution and there was no evidence of non-linearity.
Factor Structure of the DGS Persian Version

In order to examine the factorability of the 13 DGS items, the same criteria as in Study 1A (see Chapter 3) were used. The correlation matrix for the scale items revealed that all correlations were in excess of the recommended .30; the obtained KMO values were in excess of the minimal .60, being .94; and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance, thus indicating the data set that was suitable for factor analysis.

Consistent with the Study 1A, 1B, 2A and 2B, the results indicated the presence of one factor, with eigenvalues greater than one accounting for 51.58% of the variance as shown in Table 9.1. Furthermore, the factor solution was similar to that found with the both Iranian and Australian sample, and as in Study 1 (A and B) and 2 (A and B) only item 8 did not load positively the factor.
Table 9.1
Factor loadings based on a Principal Component Analysis for 13 items from the Daily Goals Scale (DGS) at T1 in the Iranian-Australians Sample (N=210)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Structure of the ABS Persian Version</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Item</td>
</tr>
<tr>
<td></td>
<td></td>
</tr>
<tr>
<td>1.</td>
<td>I can see each day as a series of small personal goals to meet</td>
</tr>
<tr>
<td>2.</td>
<td>I am very good at focusing my efforts on attaining a goal</td>
</tr>
<tr>
<td>3.</td>
<td>Sometimes I set myself little goals for the next day</td>
</tr>
<tr>
<td>4.</td>
<td>I try my best not to leave small goals half done</td>
</tr>
<tr>
<td>5.</td>
<td>I can see how my achievement of smaller goals enables me to build towards bigger goals</td>
</tr>
<tr>
<td>6.</td>
<td>For me, each day lets me make small achievements, such as watching TV, taking a shower, eating well, talking with a friend, etc.</td>
</tr>
<tr>
<td>7.</td>
<td>Sometimes at night I think of small goals I have achieved during the day</td>
</tr>
<tr>
<td>8.</td>
<td>My days are usually just about getting through to the end</td>
</tr>
<tr>
<td>9.</td>
<td>I encourage myself to keep pursuing little goals every day</td>
</tr>
<tr>
<td>10.</td>
<td>It is success at the little goals that encourages me to try for bigger goals</td>
</tr>
<tr>
<td>11.</td>
<td>When I am feeling down, I still try to work towards very little goals</td>
</tr>
<tr>
<td>12.</td>
<td>Some mornings I review the little goals I achieved yesterday</td>
</tr>
<tr>
<td>13.</td>
<td>Sometimes I can lift my mood by thinking of little goals I have achieved</td>
</tr>
</tbody>
</table>

Factor Structure of the ABS Persian Version
In order to examine the factorability of the 12 ABS items (Persian version), as with the DGS, the same above three well-recognised criteria were used. The results showed all correlation values were above .30, the obtained KMO value was .76, and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance.
The PCA extraction was conducted to examine the initial unrotated solution for the ABS items followed by an oblique rotation. Consistent with the previous Iranian samples in studies 2A and 2B and also with Australian samples (Miller, 2004a), the results showed the presence of two factors, and there were two eigenvalues greater than one accounting for 41.00% of the total variance (see Table 9.2). Factor one accounted for most of the variance (28.10%), and there were six items with loadings greater than .30. This factor corresponded to the OB subscale and represented optimism and positive feelings. In addition, the factor solution was similar to that results found with the Iranian sample (Study 2A and 2B) as well as Australian sample by Smith (2000). Factor two accounted for 12.87% of the variance and there were also six items with loadings greater than .30. Factor two corresponded to the SS subscale which focussed on being satisfied with self. The results were consistent with those from the Iranian sample (Study 2A and 2B) as well as those from previous studies in Australia (Smith, 2001; Miller, 2004a).
Table 9.2
Factor loadings based on a Principal Component Analysis for 12 items from the Adaptive Bias Scale (ABS) at T1 in the Iranian-Australians Sample (N=210)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor1</th>
<th>Factor2</th>
</tr>
</thead>
<tbody>
<tr>
<td>Item</td>
<td>Eigenvalue</td>
<td>Variance (%)</td>
</tr>
<tr>
<td>1. I am the type of person who looks on the bright side of life</td>
<td>.74</td>
<td>28.10</td>
</tr>
<tr>
<td>2. I believe that positive thinking can overcome any obstacle I</td>
<td>.72</td>
<td>12.87</td>
</tr>
<tr>
<td>4. I believe in the idea that “life is what you make it”</td>
<td>.69</td>
<td>- .21</td>
</tr>
<tr>
<td>10. I am a believer of the idea that “every cloud has a silver lining”</td>
<td>.67</td>
<td>- .17</td>
</tr>
<tr>
<td>11. Some people might call me a “a hopeless optimist”</td>
<td>.52</td>
<td>- .11</td>
</tr>
<tr>
<td>5. My approach to life is “nothing ventured, nothing gained”</td>
<td>.47</td>
<td>12</td>
</tr>
<tr>
<td>7. I have never done anything foolish in front of others</td>
<td>-.16</td>
<td>.82</td>
</tr>
<tr>
<td>12. Nothing I have done has ever caused me the slightest regret</td>
<td>-.11</td>
<td>.69</td>
</tr>
<tr>
<td>6. It would be difficult for anyone to dislike me</td>
<td>-.18</td>
<td>.67</td>
</tr>
<tr>
<td>9. I doubt that I ever disappointed my parents during childhood</td>
<td>.10</td>
<td>.61</td>
</tr>
<tr>
<td>8. No-one would want to treat me unfairly</td>
<td>.21</td>
<td>.56</td>
</tr>
<tr>
<td>3. I doubt that others would ever gossip about me</td>
<td>.13</td>
<td>.48</td>
</tr>
</tbody>
</table>

Note: Factor1 (OB) = Optimistic Bias, Factor2 (SS) = Self Satisfaction

Factor Structure of the ND Persian Version
The factorability of the six ND items (Persian version), was examined as with the DGS and ABS, and found to be suitable for PCA. The correlation matrix for the scale items were in excess of the recommended .30; the obtained KMO values was .76 in excess of the suggested value of .60, and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance. The results indicated the presence of one factor, with eigenvalues greater than one, accounting for 45.10% of the variance (see Table 9.3). In addition, the factor solution was similar to that found in Study 2A, 2B, and with an Australian sample (Hawkins, 2004). In line with the
previous studies (2A and 2B), the ND items reflected a negative self-concept and pessimism.

Table 9.3
Factor loadings based on a Principal Component Analysis for 6 items from the Negative Disposition (ND) at T1 in the Iranian-Australian Sample (N=210)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Variance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You happen to be angry. Is it because you have a bad temper?</td>
<td></td>
<td>2.71</td>
<td>45.10</td>
</tr>
<tr>
<td>2. You happen to be in a bad mood. Is it because you are easily annoyed?</td>
<td></td>
<td>.71</td>
<td></td>
</tr>
<tr>
<td>3. You happen to argue with other family members. Is it because you are argumentative?</td>
<td></td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>4. You happen to lose your faith in a friend or family member. Is it because you are unforgiving?</td>
<td></td>
<td>.69</td>
<td></td>
</tr>
<tr>
<td>5. You happen to feel lonely. Is it because you are not popular?</td>
<td></td>
<td>.59</td>
<td></td>
</tr>
<tr>
<td>6. You happen to annoy a friend. Is it because you are an inconsiderate person?</td>
<td></td>
<td>.62</td>
<td></td>
</tr>
</tbody>
</table>

**Internal Consistency**

The internal consistencies for all the scales, including the DGS were assessed. Cronbach’s alpha were satisfactory, from .67 to 92. The results are presented in Table 9.4.

Table 9.4
Internal Consistency for all Scales at T1 in the Iranian-Australian Sample (N=210)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGS</td>
<td>.92</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>.68</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>.67</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>.80</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>.77</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>.76</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>.85</td>
</tr>
<tr>
<td>QES-ND</td>
<td>.75</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>.82</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>.83</td>
</tr>
<tr>
<td>ACH</td>
<td>.86</td>
</tr>
<tr>
<td>ACM</td>
<td>.84</td>
</tr>
</tbody>
</table>

*Note: DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, ACH= Acculturation Heritage subscale, ACM= Acculturation Mainstream subscale*
**Descriptive Statistics**

Table 9.5 shows a summary of means and standard deviations for all measures of Study 3A and for both genders. Participants’ scores on the DGS ranged from 28 to 55 ($M = 43.49$, $SD = 6.34$). Furthermore, a MANOVA was performed in order to determine gender differences on all the included measures. The multivariate Pillai’s Trace test showed no overall significant differences in gender, $F(1,208) = 1.05$, $p > .05$. Thus, men and women were combined in the subsequent analyses.

This study identified that 58% of the participants scored above the cut-off score of 58 on AD (Buckby, 2002), which is indicative of being at high risk of depression. A chi-square test indicated that there was no significant difference in the percentage of MASQ-AD in the current sample (58%) compared with the results from the Australian sample in Study 1A (51%), $\chi^2 (1, n=210) = 3.68$, $p > .05$. However, the chi-square result showed that the percentage of MASQ-AD in the current sample (58%) was significantly lower than Iranian sample in Study 2A (70%), $\chi^2 (1, n=210) = 15.33$, $p < .001$.

A MANOVA was conducted comparing the Iranian-Australians (Study 3A), Iranians (Study 2A) and Australians (Study 1A) on all variables including: the DGS, ABS-OB, ABS-SS, HOPE-AGEN, HOPE-PATH, QES-ND, ATQ-PMDC, ATQ-NSNE, MASQ-AD, and MASQ-AA. Table 9.6 shows means and standard deviations for all three groups of Iranian-Australian, Iranian, and the Australian sample at T1. Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, and homogeneity of variance with no serious violation noted. There was one multivariate outliers above the $p < .001$ cut-off criterion recommended by Tabachnick and Fidell (2007) and this case was removed. Due to
there being unequal numbers in each group, Pillai’s criterion was used to test for multivariate significance of analyses.

The MANOVA results indicated that there was an overall statistically significant difference between the three groups, Pillai’s Trace = .39, $F (10, 734) = 17.57, p<.05$, partial eta squared = .19. In addition, univariate tests showed significant differences across each of these three groups on each of the measures. Table 9.6, provides a summary of these results.

Post-hoc Tukey tests showed that Iranian-Australians scored significantly higher than Australians on the DGS, ABS-OB, ABS-SS, HOPE-PATH, QES-ND, ATQ-PMDC, and ATQ-NSNE. Iranian-Australians also scored significantly higher than Iranians on the HOPE-AGEN, and HOPE-PATH.

In addition, Post-hoc Tukey tests indicated that the Iranians scored significantly higher than the Australians on the DGS, ABS-OB, ABS-SS and QES-ND. Iranians also scored significantly higher than both Australians and Iranian-Australians on ATQ-PMDC, ATQ-NSNE, MASQ-AD, and MASQ-AA. Lastly, HOPE-PATH was the only variable that Iranians scored lower than both Iranian-Australians and Australians.
Table 9.5
Descriptive statistics for all variables at T1 in the Iranian-Australians sample (N=210)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Scale Range</th>
<th>Mean (Men N=88)</th>
<th>SD  (Men)</th>
<th>Mean (Women N=122)</th>
<th>SD  (Women)</th>
<th>Mean (Total Sample N=210)</th>
<th>SD  (Total)</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGS</td>
<td>28-55</td>
<td>43.35</td>
<td>6.76</td>
<td>43.59</td>
<td>6.34</td>
<td>43.49</td>
<td>6.50</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>16-30</td>
<td>23.54</td>
<td>3.62</td>
<td>24.08</td>
<td>3.20</td>
<td>23.85</td>
<td>3.38</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>6-29</td>
<td>17.12</td>
<td>4.16</td>
<td>17.66</td>
<td>4.62</td>
<td>17.43</td>
<td>4.43</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>5-16</td>
<td>12.80</td>
<td>2.28</td>
<td>12.81</td>
<td>2.25</td>
<td>12.80</td>
<td>2.26</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>7-16</td>
<td>12.47</td>
<td>2.03</td>
<td>12.47</td>
<td>2.21</td>
<td>12.47</td>
<td>2.12</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>5-20</td>
<td>10.65</td>
<td>3.33</td>
<td>10.83</td>
<td>4.04</td>
<td>10.76</td>
<td>3.75</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>7-24</td>
<td>12.27</td>
<td>4.20</td>
<td>12.10</td>
<td>4.79</td>
<td>12.17</td>
<td>4.24</td>
</tr>
<tr>
<td>QES-ND</td>
<td>6-25</td>
<td>16.13</td>
<td>4.53</td>
<td>15.04</td>
<td>4.45</td>
<td>15.50</td>
<td>4.50</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>38-87</td>
<td>59.94</td>
<td>9.55</td>
<td>60.33</td>
<td>10.65</td>
<td>60.17</td>
<td>10.18</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>18-41</td>
<td>27.32</td>
<td>6.01</td>
<td>28.30</td>
<td>5.76</td>
<td>27.89</td>
<td>5.87</td>
</tr>
<tr>
<td>ACH</td>
<td>23-50</td>
<td>38.31</td>
<td>5.70</td>
<td>37.90</td>
<td>5.84</td>
<td>38.07</td>
<td>5.77</td>
</tr>
<tr>
<td>ACM</td>
<td>22-46</td>
<td>34.10</td>
<td>5.47</td>
<td>34.76</td>
<td>4.58</td>
<td>34.48</td>
<td>4.97</td>
</tr>
</tbody>
</table>

Note: DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, ACH= Acculturation Heritage subscale, ACM=Acculturation Mainstream subscale SD = Standard Deviation.
Table 9.6
Descriptive statistics for all measurements of T1 in Study1A (Australians), Study2A (Iranians), and Study 3A (Iranian-Australians)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Study1A Australian (N=178)</th>
<th>Study2A Iranian (N=375)</th>
<th>Study3A Iranian-Australian (N=210)</th>
<th>Inter-study Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scale Range</td>
<td>Mean</td>
<td>SD</td>
<td>Scale Range</td>
</tr>
<tr>
<td>DGS</td>
<td>20-55</td>
<td>39.33</td>
<td>6.61</td>
<td>24-55</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>12-30</td>
<td>21.99</td>
<td>3.19</td>
<td>14-30</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>7-27</td>
<td>14.53</td>
<td>4.03</td>
<td>6-28</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>6-16</td>
<td>12.21</td>
<td>1.74</td>
<td>7-16</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>8-16</td>
<td>12.34</td>
<td>1.91</td>
<td>7-16</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>5-22</td>
<td>9.48</td>
<td>4.11</td>
<td>5-24</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>7-23</td>
<td>10.39</td>
<td>4.11</td>
<td>7-27</td>
</tr>
<tr>
<td>QES-ND</td>
<td>6-25</td>
<td>13.79</td>
<td>3.96</td>
<td>6-27</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>35-81</td>
<td>58.57</td>
<td>9.43</td>
<td>38-91</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>17-46</td>
<td>28.60</td>
<td>5.82</td>
<td>17-53</td>
</tr>
</tbody>
</table>

Note: DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, SD = Standard Deviation, η²= The effect size eta squared, *p<.05, **p<.01.
Convergent and Discriminant Validity of the DGS

The correlations between all measures are presented in Table 9.7. The data yielded consistent evidence of convergent validity of the DGS. In line with expectations, there was a strong negative correlation between the DGS and MASQ-AD (-.62). Furthermore, there was a high negative correlation between the DGS and ATQ-NSNE (-.55), and the ATQ-PMDC (-.53), and the DGS showed a moderate negative correlation with QES-ND (-.44). The results also showed that there were high positive correlations between the DGS and HOPE-AGEN (.61), and HOPE-PATH (.54), and a moderately positive correlation between the DGS and ABS-OB (.40) and a low correlation with ABS-SS (.29).

In terms of discriminant validity, unlike in Study 1A and 1B with the Australians, this study did not provide support for the discriminant validity of the DGS, as there was a moderate negative correlation between the DGS and the MASQ-AA (-.43). However, this result was consistent with Iranian samples in Study 2A (-.26) and 2B (-.40).

These correlations of Study 3A were also compared with those obtained from Iranians in Study 2A (Chapter 6) and Australians in Study 1A (Chapter 4) using the test of significance between the correlation coefficients (Preacher, 2002). The correlation between the DGS and HOPE-PATH from this study (.54) was significantly higher than the correlation obtained from Study 1A (.34) with (z score=2.60, \( p < .05 \)). Another significant correlation was found between the DGS and HOPE-AGEN obtained in this study (.61) that was significantly higher than Study 1A (.42) with (z score=-2.72, \( p < .05 \)). The current study results also showed that correlation between the DGS and ATQ-PMDC (-.53) was significantly higher than Study 2A (-.38) with (z
score = 3.08, p < .05), and Study 1A (-.36) with (z score = -2.07, p < .05). In addition, the correlation between the DGS and ATQ-NSNE (-.55) was significantly higher than found in Study 1A (-.24) with (z score = 3.63, p < .05).

Another significant correlation was found between the DGS and QES-ND (-.44) which was significantly higher than Iranian samples in Study 2A (-.22) with (z score = -2.28, p < .05). Lastly, the correlation between the DGS and MASQ-AD (-.62) was similar with Iranian samples in Study 2A (-.53) while it was significantly higher than Australian samples in Study 1A (-.40) with (z score = -2.93, p < .05).

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The internal consistency of VIA was found to be high. As presented in Table 9.4 the alpha coefficients were .86 for ‘Iranian culture’ dimension and .84 for ‘Australian culture’. The non-significant bivariate correlation of these two dimensions indicated that they were distinct and independent (.07, p < .05). The results also indicated that Iranian-Australians identified more closely to Iranian culture (M = 38.07) than Australian culture (M = 34.48), and t-test analysis showed this difference to be significant t(209) = 7.07, p < .001.

Moreover, correlations between acculturation factors (ACH and ACM) and depression in addition to the negative and positive cognitions are presented in Table 9.7. These showed that there were low negative correlations between MASQ-AD and both ACH (-.26) and ACM (-.24). In terms of negative cognitions, the results showed that there were low negative correlations between ACH and ATQ-PMDC (-.24), ATQ-NSNE (-.31), and QES-ND (-.19), as well as low negative correlations between ACM and ATQ-PMDC (-.25), ATQ-NSNE (-.23), and QES-ND (-.19).

The findings also indicated a low to moderate positive correlation between the DGS and both ACH (.30) and ACM (.20). Furthermore, there were low to moderate
positive correlations between ACH and ABS-OB (.28), ABS-SS (.23), HOPE-PATH (.35), and HOPE-AGEN (.33), as well as between ACM and ABS-OB (.29), ABS-SS (.31), HOPE-PATH (.27), and HOPE-AGEN (.22).
Table 9.7
Summary of intercorrelations for Scores on all measures at T1 in the Iranian-Australians Sample (N=210)

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
<th>11</th>
<th>12</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DGS</td>
<td>--</td>
<td>.40**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ABS-OB</td>
<td>.20**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ABS-SS</td>
<td>.20**</td>
<td>.40**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. HOPE-PATH</td>
<td>.54**</td>
<td>.56**</td>
<td>.36**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. HOPE-AGEN</td>
<td>.61**</td>
<td>.45**</td>
<td>.31**</td>
<td>.60**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. ATQ-PMDC</td>
<td>-.53**</td>
<td>-.37**</td>
<td>-.39**</td>
<td>-.50**</td>
<td>-.52**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. ATQ-NSNE</td>
<td>-.55**</td>
<td>-.40**</td>
<td>-.33**</td>
<td>-.51**</td>
<td>-.60**</td>
<td>-.72**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. QES-ND</td>
<td>-.44**</td>
<td>-.27**</td>
<td>-.29**</td>
<td>-.39**</td>
<td>-.33**</td>
<td>-.41**</td>
<td>.35**</td>
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<td></td>
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<td></td>
<td></td>
</tr>
<tr>
<td>9. MASQ-AD</td>
<td>-.62**</td>
<td>-.41**</td>
<td>-.33**</td>
<td>-.52**</td>
<td>-.50**</td>
<td>.51**</td>
<td>.52**</td>
<td>.36**</td>
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<tr>
<td>10. MASQ-AA</td>
<td>-.43**</td>
<td>-.22**</td>
<td>-.21**</td>
<td>-.32**</td>
<td>-.40**</td>
<td>.46**</td>
<td>.46**</td>
<td>.26**</td>
<td>.48**</td>
<td>--</td>
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<td></td>
</tr>
<tr>
<td>11. ACH</td>
<td>.30**</td>
<td>.28**</td>
<td>.23**</td>
<td>.35**</td>
<td>.33**</td>
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<td>-.31**</td>
<td>-.19</td>
<td>-.26**</td>
<td>-.19</td>
<td>--</td>
<td></td>
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<tr>
<td>12. ACM</td>
<td>.20**</td>
<td>.20**</td>
<td>.31**</td>
<td>.27**</td>
<td>.22**</td>
<td>-.25**</td>
<td>-.23**</td>
<td>-.19</td>
<td>-.24**</td>
<td>-.19</td>
<td>-.10</td>
<td>--</td>
</tr>
</tbody>
</table>

Note. DGS= Daily Goal Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS=Self Satisfaction, HOPE= Hope Scale, PATH=Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, PMDC=Personal Maladjustment and desire for Change, NSNE= Negative Self-Concept and Negative Expectations, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression, AA= Anxious Arousal. ACH= Acculturation Heritage Culture, ACM= Acculturation Mainstream Culture. *p < .05, **p < .01.
Discussion

The present study was designed to further validate the DGS among Iranian-Australians. The results of factor structure of the DGS, the internal consistency and convergent validity were similar to those found with the Australians and Iranians. However, no evidence was found for the DGS’s discriminant validity. In addition, the results of this study supported the factor structure and internal consistency of the Persian version of the ABS and ND. The results regarding negative cognitions and depression among Iranians were consistent with Study 2A and 2B. Furthermore, a comparison of Iranian-Australians with Australians and Iranians showed both similarities than differences between these three groups. Finally, the findings indicated that there was a weak relationship between acculturation and depression among Iranian-Australians.

Factor Structure and Internal Consistency of the DGS

As found with the Australians in Study 1A and 1B, and the Iranians in Study 2A and 2B, 12 of the 13 items of the DGS loaded on one general factor, reflecting a range of strategies focused on the propensity to set and complete small daily goals (refer to Chapter 4). In line with the findings of Study 1A, 1B, 2A and 2B, only item 8, was identified as an item that did not load on the extracted factor and it was deleted. In addition, the coherence of the DGS was supported by the high internal consistency.

Factor Structure and Internal Consistency of ABS and ND in Persian

The factor structure of the Persian version of the ABS and the ND was found to be similar to what has been found in Iranian samples in Study 2A and 2B. In addition, the coherence of both of the ABS subscales and the ND were further confirmed by the high internal consistency. Consistent with the results of Study 2A
and 2B, in the case of the ABS, PCA identified two underlying dimensions, which corresponded to the two subscales, Optimistic Bias and Self-Satisfaction, and in the case of the ND, there was only one factor.

**Convergent and Discriminant Validity**

As found with the Australian sample in Study 1A and 1B, and with the Iranian sample in Study 2A and 2B the DGS correlated negatively with anhedonic depression and all the measures, which assessed negative cognitions, but positively with all the measures, which assessed positive cognitions. Thus, Iranian-Australians with lower scores on the DGS are reporting higher levels of depression, higher negative cognitions but lower positive cognitions.

As already noted in previous chapters the negative correlation between the DGS and MASQ-AD, is consistent with previous research which has shown that inactivity is associated with avoidance to engage in daily goals and activities produce less positive reinforcement and is a central feature of depression (Addis & Martell, 2004; Thompson & Bullock, 2012; Veale, 2008). Overall, from a cultural perspective, these findings extend the body of Western research (Beck, & Alford, 2010; Demyttenaere, 2013; Di Giannantonio, 2013), by suggesting that Iranian individuals may experience depression in a similar manner.

The negative associations between the DGS and both ATQ-PMDC and ATQ-NSNE, as well as QES-ND among Iranian-Australians are also consistent with the findings of Australians and Iranians. However, the strength of the associations between these variables in Iranian immigrants in Australia was found to be significantly higher. A possible explanation might be that Iranian-Australians experience higher level of inactivity and avoidance along with more negative
cognitions due to the changes in situational and cultural conditions affecting the processes of adjusting to a new sociocultural context (Kosic, Kruglanski, Pierro, & Mannetti, 2004).

Regarding positive cognitions, the results of Study 3A demonstrated a significant positive correlation between the DGS and ABS-OB. These findings suggest that among Iranian-Australians those who have a positive outlook on their life may also have a stronger sense of ability to achieve their goals. In addition, optimism may be contributing towards positive meanings and values in their normal daily activities. Similarly, Serrano (2008) pointed out that migrants have optimistic attitudes toward their goals and activities. In addition, these findings are consistent and comparable with the results of all Studies 1A and 1B, (Chapter 3 and 4), 2A and 2B, (Chapter 6 and 7).

The current findings also showed that there was a significant positive correlation between the DGS and both HOPE-PATH and HOPE-AGEN. First, these findings further support hope theory that implies hope as a capacity to generate strategies to achieve goals and belief to peruse those strategies (Snyder et al., 2000). Second, considering the history of migration in Iranian-Australian sample, the association between hope components and daily goals suggests that hope as a cognitive strategy allows individuals to sustain movement toward attaining goals. Similarly, Serrano (2008) has argued that the source of strength for migrants is hope that also motivates them to pursue their goals. Although so far, there is no research that has examined the relationship between hope and any kind of goal-settings among Iranian-Australians, the findings are consistent and comparable with the results of both Australians (Study 1A and 1B, Chapter 3 and 4) and Iranians (Study 2A and 2B, Chapter 6 and 7).
One explanation for the positive relationship between the DGS and both optimism and hope is that these are two inter-related positive human strengths that can assist individuals to grow and can be used to buffer the effects of depression (Chang et al., 2013; Seligman & Csikszentmihalyi, 2000; Snyder, & Lopez, 2002). More importantly, Serrano (2008) suggested that the higher level of hope and optimism among immigrants motivate them to adjust to the migration process.

As with the Iranian sample in Study 2A and 2B, there was no support for the discriminant validity of the DGS, and the findings suggest that Iranian-Australians who engage in fewer daily goals may experience greater anxiety. As already explained in discussion section of Chapter 6, this finding may be due to differences in how anxiety is experienced and expressed among collectivist cultures. For example, among collectivist cultures there is more of a focus on somatic symptoms and individuals are more likely to present with social anxiety, and these may result in greater barriers to setting and pursuing goals (see pp. 124-125). However, more in-depth studies are needed to examine these differences.

**Relationship between Cognitions and Depression among Iranian-Australians**

Another aim of the current study was to investigate the relationship between anhedonic depression and negative and positive cognitions among Iranian-Australians. As found with the Iranian sample in Study 2A and 2B, the results indicated significant positive correlations between anhedonic depression and negative cognitions and significant negative correlations with positive cognitions among Iranian-Australians.

All the above correlations of Study 3A are consistent with the results of Study 2A and 2B providing further support for the association between depressive
symptoms and both negative and positive cognitions among Iranians. Due to the same
cultural background of Iranian-Australians and Iranians, the interpretations of these
correlations are similar to those provided for Study 2A in the discussion section of
Chapter 6.

**Comparing Iranian-Australians and Australians on all Measures**
A comparison of results at T1 for Iranian-Australian and Australian groups,
indicated that the pattern of correlations between the DGS and all variables were
consistent across the Iranian-Australian and Australian groups. Notably, these
findings lend support for the equivalence of propensity for setting daily goals and its
relation to depressive symptoms and both negative and positive cognitions in these
two different cultural groups.

Although the level of depression and anxiety between Iranian-Australians and
Australians was similar, Iranian-Australians scored significantly higher than
Australians on both negative and positive cognitions. Iranians in Iran also scored
significantly higher than Australians on both negative and positive cognitions, and
several cultural factors which may account for these differences were discussed (see
pp. 128-130). Cross-cultural studies indicate that cultural values influence people in
the way they express their emotions, thoughts, and attitudes (Marsella, 2003; Shiraev
& Levy, 2010). For example, Goldston (2008) and his colleagues showed that due to
cultural rules of emotional display, more somatic symptoms are reported by Asians
while they underreport their psychological symptoms. He further argues that the
combination of Asian’s tendency not to express feelings openly and their cultural
beliefs are influential on their response style. In another study, Yen et al. (2000) also
showed that when compared to Western patients, Chinese depressed patients tend to
preliminary report bodily symptoms while they experience affective and cognitive symptoms. That is, some express their attitudes forcefully while others less so. Overall, the results may reflect culturally relevant differences in response style. Arguably, it is possible that Iranians tend to express their symptoms much more strongly than Australians’ the tendency to use the extreme or middle response categories on ratings scales. Further research is now needed to examine these possibilities. However, the higher negative cognitions of Iranian-Australians may also be attributable to the high level of stress experienced during the process of migration, which involves adjusting and settlement in new sociocultural context (Dow, 2010; Moztarzadeh, 2011). On the other hand, the higher level of positive cognitions among Iranian-Australians are in line with the ideas of Serrano (2008), who suggested that basically immigrants have a positive outlook in their life, more positive thoughts about their ability to reach their goals, and are more optimistic and hopeful toward their future. Moreover, the higher level of daily goals in Iranian-Australians may reflect immigrants’ greater focus on plans and strategies in order to overcome any possible obstacles through the process of goal achievement (Cheavens et al., 2006). Further research is needed to more fully examine the experiences of Iranians living in Australia and how these are related to both their negative and positive cognitions.

Comparing Iranian-Australians and Iranians on all Measures
The comparison of Iranian-Australians and Iranians showed that the two groups were only similar on optimism. The prevalence rate of anhedonic depression (58%) in Iranian-Australians was significantly lower than Iranian sample (70%).

In addition, the Iranian-Australians scored significantly lower than Iranians on negative cognitions and anxiety. On the other hand, the Iranian-Australians scored
significantly higher than Iranians on some of the positive cognitions (DGS, HOPE-AGEN, and HOPE-PATH).

All above findings could be attributed to the fact that Iranians as immigrants in Australia have become involved in a safe and secure lifestyle and this may lead to less negative thoughts, depressive symptoms and anxiety in comparison to Iranians who live in Iran. Likewise, there is a possibility that Iranians who have relocated to Australia may be more hopeful and motivated to pursue their goals. However, more research is needed to examine these suggestions.

**Acculturation among Iranian-Australians**

An additional aim of Study 3A was to investigate acculturation orientation toward Iranian and Australian cultures in relation to anhedonic depression as well as negative and positive cognitions. Investigating scores on acculturation orientation toward Iranian and Australian cultures was deemed important as immigrants’ immersion in a new culture can result in changes at both the individual (e.g., values, attitudes, beliefs and identities) as well as the group level (i.e. social and cultural systems; Berry, 2003). These changes through acculturation orientation may contribute to the vulnerability to depression in immigrants and ethnic minority groups. Overall, the Iranian-Australians were found to be more orientated toward Iranian rather than Australian culture. Iranians are family oriented, and family is a primary source of support for members (Dallalfar, 2002; Dejman, 2010; Ziaian, 2003). Iranians’ higher tendency to remain oriented to their heritage culture could be attributed to a desire to maintain family closeness in the individualist culture of mainstream Australia. Immigrants may also feel ‘out of place’ and socially vulnerable when they migrate to Australia, and so may strengthen their orientation to their
heritage culture to feel protected and understood (Jalali, 1982; Nguyen, 2006; Ziaian; 2003). The current study’s finding that Iranian-Australians remain oriented towards their heritage culture is supported by similar past research on Iranian migrants living in other Western nations including the United States, the Netherlands, and the United Kingdoms (Safdar, Struthers, & Oudenhoven, 2009). Safdar et al. (2009) suggested that Iranian immigrants who are oriented toward their heritage culture have a stronger tendency to engage with their fellow Iranian community members. Past research also highlights that Iranian migrants take pride in their ethnic identity and frequently celebrate their national festivities or gatherings, suggesting that heritage culture is a source of self-esteem and sense of belonging for Iranian migrants (Jalali, 2005; Saghafi, 2009).

Although Iranian-Australians identified more closely with their Iranian culture, both their heritage and mainstream acculturation scores were related to depression, and to negative and positive cognitions. These findings indicate that Iranian-Australians are influenced by both their heritage and mainstream cultures, so this may account for why there were both similarities and differences when they were compared to Australians and Iranians. Further research is now needed to more fully examine how cultural factors may help us better understand these similarities and differences.

**Conclusion**

Overall, the current study showed further satisfactory evidence of psychometric properties of the Persian-version of the DGS. However, in line with Study 2A and 2B, this study did not support discriminant validity for the Persian DGS. In addition, the results showed more similarities than differences in associations
between positive and negative cognitions in relation to depression between these three groups. The main differences were the higher level of both negative and positive cognitions scores reported among Iranian-Australians compared to Australians; and lower level of both negative and positive cognitions scores compared to Iranians, which is worth pursuing in future research. Lastly, this study found that although Iranian-Australians were more oriented towards Iranian culture, both their heritage (Iranian culture) and mainstream (Australian culture) acculturation scores were related to depression, and to negative and positive cognitions. The implications and limitations of Study 3A findings are more fully discussed in Chapter 11.
Overview
The primary purpose of Study 3B (T2) was to provide further evidence for the psychometric properties of the Persian DGS in a community sample of Iranians in Australia. In order to ensure that the DGS measures the intended constructs, Study 3B re-examined factor structure of the Persian DGS, internal consistency, convergent and discriminant validity. The second aim was to re-examine the factor structure of the Persian version of the ABS and ND. The third aim was to assess the stability of the DGS and all the other measures. The fourth purpose was to examine the similarities and/or differences of the DGS, negative and positive cognitions, and depression between Iranian-Australians of the current study and Study 3A with the Australian sample from Study 1A, 1B and Iranian sample from Study 2A and 2B. The fifth aim was to investigate if positive cognitions added any additional variance beyond negative cognitions in predicting depression across 8-week time. Lastly, acculturation was also investigated in predicting depression at T2.

Method

Participants
A total of 168 men and women completed the 8-weeks follow-up assessment out of an original 210 who took part in the initial assessment. The 95 women had an age range of 18 to 75 years and a mean age of 37.48 years (SD=11.19). The 73 men had an age range of 18 to 72 years and a mean age of 38.16 years (SD=12.56). The attrition rate from T1 to T2 was 20%.
Procedure
The participants at T2 completed the same questionnaires as per T1, with no reimbursement. After completion in their own time, participants returned the questionnaires to the principal researcher in a reply-paid envelope. On receipt, these were numbered and matched with T1, and stored in same location. A consent form was provided to all participants prior to participation (Refer to Appendix D).

Measures
The same questionnaires that was used at T1 (Study 3A) was utilised at T2 (Refer to Appendix D). The only exception was that the VIA was removed from the pack of questionnaires.

Results
Overview of Analyses
After data screening procedure, the PCA extractions were conducted to re-examine the factor structure of the Persian version of the DGS, ABS and ND items. Then, descriptive and correlation analyses were conducted to evaluate the convergent and discriminant validity, internal consistency, and stability of the DGS and all other variables. Furthermore, multivariate analysis of variance was used to compare three groups including Australian, Iranian and Iranian-Australian groups across time. Lastly, in order to assess positive and negative cognitions in prediction of MASQ-AD, hierarchical regression was performed to determine if the positive cognitions at T1 predicted MASQ-AD at T2, and also acculturation as additional factor was added in the final step in order to investigate if this also predicted MASQ-AD at T2.
Data Preparation and Preliminary Analysis Assumptions
Prior to analyses, the same data screening procedures of T1 were conducted for T2 using SPSS 20. All variables were screened for missing values, univariate and multivariate outliers, linearity and normality. Seven missing values were identified and replaced using the mean value for each variable. Eleven univariate outliers were identified using box-plots on five variables including ABS-SS, HOPE-PATH, ATQ-PMDC, ATQ-NSNE, and QES-ND. These outlier scores were standardised to the values ±3.29 standard deviation beyond the group mean, which are acceptable limits recommended by Tabachnik & Fidell (2007). Two multivariate outliers were identified using Mahalanobis distance with a critical Chi square value of 31.46 and above the $p<.001$ cut-off criterion recommended by Tabachnik and Fidell (2007). These two cases were then removed prior to data analysis. Multivariate assumptions of linearity, normality, and homoscedasticity were not violated.

Attrition Rates
At T2 (follow up at 8-week time), 168 out of 210 participants, completed the same questionnaires 8-weeks after T1. The decrease in the number of participants, who completed the questionnaires at T2, indicated that there was a 20% attrition rate from T1 to T2.

A MANOVA was conducted to investigate any differences between participants who completed both T1 and T2 ($N=168$) with those who did not complete T2 ($N=69$). There was not statistically significant difference between the groups on the combined dependent variables, $F(10, 199) = 1.29$, $p >.05$; Pillai’s Trace = .05; partial eta squared = .05. The results showed that participants who completed both T1 and T2 reported similar mean scores to those who did not complete T2 ($N= 69$).
Factor Structure of the DGS Persian Version

Factorability of the 13 DGS items was examined by the criteria utilised at T1 (refer to Chapter 4 for details). The correlation matrix for the scale items revealed that all correlations were in excess of the recommended .30; the obtained KMO values were in excess of the minimal .60, being .94; and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance, thus indicating the data set that was suitable for factor analysis. Given these overall indicators, the PCA was conducted with all 13 items. Consistent with the findings of Study 3A (Chapter 9), and all previous studies (1A, 1B, 2A and 2B) the results indicated the presence of one factor, with eigenvalues greater than one accounting for 54.56% of the variance for the first run as shown in Table 10.1. Moreover, in line with the previous studies including 1A, 1B, 2A, 2B and 3A, only item 8 did not load positively on this factor, and was removed from the scale.
Table 10.1

Factor loadings based on a Principal Component Analysis for 13 items from the Daily Goals Scale (DGS) at T2 in the Iranian-Australians Sample (N=168)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor</th>
<th>Eigenvalue</th>
<th>Variance (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can see each day as a series of small personal goals to meet</td>
<td>.79</td>
<td>7.09</td>
<td>54.56</td>
</tr>
<tr>
<td>2. I am very good at focusing my efforts on attaining a goal</td>
<td>.71</td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sometimes I set myself little goals for the next day</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I try my best not to leave small goals half done</td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I can see how my achievement of smaller goals enables me to build towards bigger goals</td>
<td>.86</td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. For me, each day lets me make small achievements, such as watching TV, taking a shower, eating well, talking with a friend, etc.</td>
<td>.77</td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Sometimes at night I think of small goals I have achieved during the day</td>
<td>.79</td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. My days are usually just about getting through to the end</td>
<td>-.25</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I encourage myself to keep pursuing little goals every day</td>
<td>.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. It is success at the little goals that encourages me to try for bigger goals</td>
<td>.81</td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. When I am feeling down, I still try to work towards very little goals</td>
<td>.68</td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Some mornings I review the little goals I achieved yesterday</td>
<td>.73</td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. Sometimes I can lift my mood by thinking of little goals I have achieved</td>
<td>.58</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

**Factor Structure of the ABS Persian Version**

In order to examine the factorability of the 12 ABS items (Persian version), as with the DGS, the same above three well-recognised criteria were used. The results showed all correlation values were above .30, the obtained KMO value was .81, and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance.

In order to produce the initial unrotated solution for the ABS items, the PCA extraction was conducted followed by an oblique rotation. Consistent with the
previous studies (3A, 2A, and 2B) and also with Australian samples (Doyle, 2004; Miller, 2004a), the results indicated the presence of two components with eigenvalues greater than one explained a total of 46.75% of the total variance (see Table 10.2).

Factor one accounted for 33.76% of the variance and there were six items with loadings greater than .30. Consistent with Study 3A, 2A, and 2B this factor corresponded to the Optimistic Bias (OB) subscale and appeared to be structured about optimism and positive feelings. In addition, the factor solution was similar to that results found with the Australian sample by Smith (2000). Factor two accounted for 12.99% of the variance and there were also six items with loadings greater than .30. Similar to Study 3A, 2A, and 2B factor two corresponded to the Self Satisfaction (SS) subscale and appeared to be structured related to perception of being satisfaction with self. The result was also consistent with the previous studies in Australia (Smith, 2001; Miller, 2004a).
Table 10.2  
Factor loadings based on a Principal Component Analysis for 12 items from the Adaptive Bias Scale (ABS) at T2 in the Iranian-Australians Sample (N=168)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor1</th>
<th>Factor2</th>
</tr>
</thead>
<tbody>
<tr>
<td>I am the type of person who looks on the bright side of life</td>
<td>.76</td>
<td>.07</td>
</tr>
<tr>
<td>I believe in the idea that “life is what you make it”</td>
<td>.76</td>
<td>.15</td>
</tr>
<tr>
<td>I believe that positive thinking can overcome any obstacle</td>
<td>.75</td>
<td>.06</td>
</tr>
<tr>
<td>I am a believer of the idea that ”every cloud has a silver lining”</td>
<td>.73</td>
<td>.11</td>
</tr>
<tr>
<td>Some people might call me “a hopeless optimist ”</td>
<td>.52</td>
<td>-.10</td>
</tr>
<tr>
<td>My approach to life is “nothing ventured, nothing gained”</td>
<td>.48</td>
<td>.12</td>
</tr>
<tr>
<td>I have never done anything foolish in front of others</td>
<td>-.16</td>
<td>.84</td>
</tr>
<tr>
<td>Nothing I have done has ever caused me the slightest regret</td>
<td>.01</td>
<td>.72</td>
</tr>
<tr>
<td>It would be difficult for anyone to dislike me</td>
<td>-.06</td>
<td>.69</td>
</tr>
<tr>
<td>I doubt that I ever disappointed my parents during childhood</td>
<td>.10</td>
<td>.62</td>
</tr>
<tr>
<td>No-one would want to treat me unfairly</td>
<td>.20</td>
<td>.57</td>
</tr>
<tr>
<td>I doubt that others would ever gossip about me</td>
<td>.12</td>
<td>.49</td>
</tr>
</tbody>
</table>

Note: Factor1 (OB)= Optimistic Bias, Factor2 (SS)= Self Satisfaction

**Factor Structure of the ND Persian Version**

First, the factorability of the six items of ND (Persian version), was examined through the same criteria for the DGS and ABS in Chapter 6. All correlations were in excess of the suggested .30; the obtained KMO value was .83, above the recommended value of .60, and Bartlett’s Test of Sphericity (Tabachnick & Fidell, 2007) reached statistical significance which revealed that the data set was suitable for factor analysis. Similar to the results of Study 3A, 2A and 2B the results indicated the presence of one general factor, with eigenvalues greater than one, accounting for 52.93% of the total variance (see Table 10.3). In addition, the factor solution was consistent to that found in the Australian sample (Hawkins, 2004). In line with the
previous study, all items loaded on the extracted factor with the focus of negative self-concept reflecting pessimism.

Table 10.3
Factor loadings based on a Principal Component Analysis for 6 items from the Negative Disposition (ND) scale in the Iranian-Australians Sample (N=168)

<table>
<thead>
<tr>
<th>Item</th>
<th>Factor Loadings</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. You happen to be angry. Is it because you have a bad temper?</td>
<td>.68</td>
</tr>
<tr>
<td>2. You happen to be in a bad mood. Is it because you are easily annoyed?</td>
<td>.76</td>
</tr>
<tr>
<td>3. You happen to argue with other family members. Is it because you are argumentative?</td>
<td>.72</td>
</tr>
<tr>
<td>4. You happen to lose your faith in a friend or family member. Is it because you are unforgiving?</td>
<td>.81</td>
</tr>
<tr>
<td>5. You happen to feel lonely. Is it because you are not popular?</td>
<td>.68</td>
</tr>
<tr>
<td>6. You happen to annoy a friend. Is it because you are an inconsiderate person?</td>
<td>.71</td>
</tr>
</tbody>
</table>

Internal Consistency
The internal consistencies of all measures were also assessed at T2. Cronbach’s alphas were satisfactory and ranged from .71 to .89, as shown in Table 10.4.

Table 10.4
Internal Consistency for all Scales at T2 in the Iranian-Australians Sample (N=168)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Cronbach Alpha</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGS</td>
<td>.89</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>.77</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>.71</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>.79</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>.73</td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>.83</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>.88</td>
</tr>
<tr>
<td>QES-ND</td>
<td>.82</td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>.82</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>.82</td>
</tr>
</tbody>
</table>

Note: DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression, AA= Anxious Arousal.
**Descriptive Statistics**

Means and standard deviations of all variables at T2 for both men and women are presented in Table 10.5. Participants’ scores on the DGS ranged from 27 to 55 (\(M = 43.84, SD = 7.05\)). A comparison of Iranian-Australians at T1 and T2 is also provided in Table 10.6.

In order to investigate gender differences on all the included variables, a MANOVA was conducted. The results of multivariate Pillai’s Trace test indicated no overall significant gender difference, \(F(10,157) = 1.49, p > .05\). Thus, men and women were combined in the subsequent analyses.

The results of this study identified that 63 per cent of the participants scored above the cut-off score of 58 on AD (Buckby, 2002), which is the same level found in the Iranian sample in Study 2B. In addition, the chi-square test result showed that the percentage of MASQ-AD in the current sample (63%) was not significantly higher than Australian sample in Study 1B (44%), \(\chi^2(1, n=168) = 2.69, p > .05\).

**Comparison of Scores on all Scales for Study 3 (A and B), Study 2 (A and B) and Study 1 (A and B)**

A repeated measures multivariate analysis of variance was performed to examine whether there were any statistically significant differences between Iranian-Australians, Iranians and Australian groups on any of the 10 measures over time. Table 10.7 provided a summary of these results. All ten variables at T1 and T2 were entered into the analysis: the DGS, ABS-OB, ABS-SS, HOPE-AGEN, HOPE-PATH, QES-ND, ATQ-PMDC, ATQ-NSNE, MASQ-AD, and MASQ-AA. The within group factor was time and the between group factor was group.

Preliminary assumption testing was conducted to check for normality, linearity, univariate and multivariate outliers, homogeneity of variance and
multicollinearity with no serious violation noted. Due to there being unequal numbers in each group, Pillai’s criterion was used to test for multivariate significance of analyses.

The results revealed that there was an overall statistically significant difference between all three groups, Pillai’s Trace = .45, $F(20, 1178) = 17.12$, $p<.05$, partial eta squared = .29. In addition, univariate tests showed significant differences across each of these three groups on each of the measures. Table 10.7, provides a summary of these results.

Post-hoc Tukey comparisons showed that both Iranian-Australian and Iranian groups scored significantly higher than the Australians on the DGS, ABS-OB, ABS-SS, HOPE-AGEN, ATQ-PMDC and ATQ-NSNE and QES-ND. In addition, Iranian-Australians and Australians scored significantly higher than Iranians on HOPE-PATH.

Post-hoc Tukey tests also indicated that the Iranians scored significantly higher than the both Iranian-Australians and Australians on the ATQ-PMDC, ATQ-NSNE, MASQ-AD, and MASQ-AA. Lastly, there were no significant differences between Iranian-Australians and Australians on MASQ-AD, and MASQ-AA scores.
Table 10.5

Descriptive statistics for all variables at T2 in the Iranian-Australians sample (N=168)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Scale Range</th>
<th>Men (N=73)</th>
<th></th>
<th></th>
<th>Women (N=95)</th>
<th></th>
<th></th>
<th>Total Sample (N=168)</th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td>Mean (SD)</td>
<td>Mean</td>
<td>SD</td>
<td>Mean (SD)</td>
<td>Mean</td>
<td>SD</td>
<td>Mean (SD)</td>
<td></td>
</tr>
<tr>
<td>DGS</td>
<td>27-55</td>
<td>43.09 (7.38)</td>
<td>44.42 (6.78)</td>
<td>43.84 (7.05)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABS-OB</td>
<td>16-30</td>
<td>23.73 (3.98)</td>
<td>23.98 (4.80)</td>
<td>23.87 (3.63)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ABS-SS</td>
<td>16-29</td>
<td>17.34 (4.21)</td>
<td>17.89 (4.80)</td>
<td>17.65 (4.55)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>9-16</td>
<td>12.56 (2.14)</td>
<td>12.96 (2.06)</td>
<td>12.79 (2.10)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>8-16</td>
<td>12.24 (1.72)</td>
<td>12.76 (2.04)</td>
<td>12.54 (1.92)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATQ-PMDC</td>
<td>5-20</td>
<td>10.56 (3.73)</td>
<td>10.53 (4.14)</td>
<td>10.54 (3.95)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>7-21</td>
<td>12.16 (4.02)</td>
<td>11.16 (3.45)</td>
<td>11.60 (3.73)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>QES-ND</td>
<td>6-26</td>
<td>16.43 (4.64)</td>
<td>14.94 (5.18)</td>
<td>15.59 (4.99)</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>MASQ-AD</td>
<td>38-88</td>
<td>59.72 (11.13)</td>
<td>59.06 (10.47)</td>
<td>59.35 (10.73)</td>
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<td></td>
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<td></td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>19-38</td>
<td>26.72 (5.27)</td>
<td>27.31 (4.91)</td>
<td>27.05 (5.06)</td>
<td></td>
<td></td>
<td></td>
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<td></td>
</tr>
</tbody>
</table>

Note: DGS = Daily Goals Scale, ABS = Adaptive Bias Scale, OB = Optimistic Bias, SS = Self Satisfaction, HOPE = Hope Scale, PATH = Pathways, AGEN = Agency, ATQ = Automatic Thought Questionnaire, NSNE = Negative Self-Concept and Negative Expectations, PMDC = Personal Maladjustment and desire for Change, QES = Questionnaire of Explanatory Style, ND = Negative Disposition, MASQ = Mood and Anxiety Symptom Questionnaire, AD = Anhedonic Depression Time one, AA = Anxious Arousal, SD = Standard Deviation, *p<.05. **p<.01.
Table 10.6
Descriptive statistics for all variables at T1 and T2 in the Iranian-Australian Sample

<table>
<thead>
<tr>
<th>Measures</th>
<th>Scale Range</th>
<th>T1 (N=210)</th>
<th>SD</th>
<th>T2 (N=168)</th>
<th>Mean</th>
<th>SD</th>
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<tbody>
<tr>
<td>DGS</td>
<td>28-55</td>
<td>43.49</td>
<td>6.50</td>
<td>27-55</td>
<td>43.84</td>
<td>7.05</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>16-30</td>
<td>23.85</td>
<td>3.38</td>
<td>16-30</td>
<td>23.87</td>
<td>3.63</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>6-29</td>
<td>17.43</td>
<td>4.43</td>
<td>16-29</td>
<td>17.65</td>
<td>4.55</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>5-16</td>
<td>12.47</td>
<td>2.12</td>
<td>8-16</td>
<td>12.54</td>
<td>1.92</td>
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<td>HOPE-AGEN</td>
<td>5-20</td>
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<td>5-20</td>
<td>10.54</td>
<td>3.95</td>
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<tr>
<td>ATQ-PMDC</td>
<td>7-24</td>
<td>12.17</td>
<td>4.24</td>
<td>7-21</td>
<td>11.60</td>
<td>3.73</td>
</tr>
<tr>
<td>ATQ-NSNE</td>
<td>38-87</td>
<td>60.17</td>
<td>10.18</td>
<td>38-88</td>
<td>59.35</td>
<td>10.73</td>
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<tr>
<td>QES-ND</td>
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<td>5.87</td>
<td>19-38</td>
<td>27.65</td>
<td>5.06</td>
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</table>

Note: ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, SD = Standard Deviation.
Table 10.7
Descriptive statistics for all measurements of T2 in Study1B (Australians), Study2B (Iranians), and Study 3B (Iranian-Australians)

<table>
<thead>
<tr>
<th>Measures</th>
<th>Study1B Australians (N=144)</th>
<th>Study2B Iranians (N=288)</th>
<th>Study3B Iranian-Australians (N=168)</th>
<th>Inter-study Comparison</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Scale Range</td>
<td>Mean</td>
<td>SD</td>
<td>Scale Range</td>
</tr>
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<td>DGS</td>
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<td>7.01</td>
<td>26-55</td>
</tr>
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<td>ABS-OB</td>
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<td>22.50</td>
<td>3.18</td>
<td>14-30</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>6-27</td>
<td>14.53</td>
<td>4.03</td>
<td>7-30</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>8-16</td>
<td>12.67</td>
<td>1.79</td>
<td>7-16</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>8-16</td>
<td>12.55</td>
<td>1.74</td>
<td>8-16</td>
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<tr>
<td>ATQ-PMDC</td>
<td>5-20</td>
<td>8.86</td>
<td>3.74</td>
<td>5-24</td>
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<td>ATQ-NSNE</td>
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<td>10.02</td>
<td>3.85</td>
<td>7-27</td>
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<tr>
<td>QES-ND</td>
<td>6-25</td>
<td>13.70</td>
<td>4.23</td>
<td>6-27</td>
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<tr>
<td>MASQ-AD</td>
<td>39-78</td>
<td>57.75</td>
<td>9.18</td>
<td>37-91</td>
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<tr>
<td>MASQ-AA</td>
<td>20-36</td>
<td>27.43</td>
<td>5.41</td>
<td>18-57</td>
</tr>
</tbody>
</table>

Notes: DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, NSNE= Negative Self-Concept and Negative Expectations, PMDC= Personal Maladjustment and desire for Change, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression Time one, AA= Anxious Arousal, SD = Standard Deviation, η²= The effect size eta squared, *p<.05. **p<.01.
Convergent and discriminant validity of the DGS

Table 10.8 shows the correlations between all measures at T2. Consistent with the previous studies\(^1\), results showed satisfactory evidence of convergent validity of the DGS: there was a strong negative correlation between the DGS and MASQ-AD (-.67), and ATQ-NSNE (-.61), and a moderate negative correlation with ATQ-PMDC (-.51), and QES-ND (-.43). Further, this study found moderate positive correlations between the DGS and both ABS-OB (.48) and ABS-SS (.30). In addition, strong associations were found between the DGS and both HOPE-PATH (.65) and HOPE-AGEN (.62).

There was no support for the discriminant validity of the DGS as the results showed a moderate negative correlation between the MASQ-AA and the DGS (-.37). However, this result is consistent with Study 3A (T1), Study 2A and 2B’s findings (Iranian Samples).

Lastly, all correlations of Study 3B were compared with those obtained in previous studies (Study 3A, 1A, 1B, 2A, and 2B), using the test of significance between the correlation coefficients (Preacher, 2002). The results showed that the correlation between the DGS and ATQ-NSNE (-.61) was significantly higher than those found in Study 1A (-.24) with (z score=-4.27, \( p < .05 \)), and 1B (-.36) with (z score=-2.89, \( p < .05 \)). Moreover, in Study 3B the correlation between the DGS and MASQ-AD (-.67) was significantly higher than Study 1A (-.40) with (z score=-3.56, \( p < .05 \)) and also Study 1B (-.45) with (z score=-2.84, \( p < .05 \)). Similarly, the correlation between DGS and HOPE-PATH (.65) in the current study was

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\(^1\) Study 1A, 1B, 2A, 2B, and 3A
significantly higher than Study 1A (.34) with (z score=4.13, \( p < .05 \)). Moreover, in this study the correlation between the DGS and HOPE-AGEN (.62) was significantly higher than Study 1B (.42) with (z score=2.41, \( p \leq .05 \)).

The present study also found a significant correlation between the DGS and ATQ-PMDC (-.51) that was significantly higher than Study 2A (-.31) with (z score=-2.56, \( p < .05 \)). In addition, the correlation between the DGS and QES-ND (-.43) in the current study was significantly higher than those obtained in Study 2A (-.22) with (z score=-2.54, \( p < .05 \)) and 2B (-.22) with (z score=-2.41, \( p < .05 \)).
Table 10.8
Summary of Intercorrelations for scores on all measures at T2 for the Iranian-Australians Sample (N=168)

<table>
<thead>
<tr>
<th>Measure</th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
<th>6</th>
<th>7</th>
<th>8</th>
<th>9</th>
<th>10</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. DGS</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. ABS-OB</td>
<td>.48**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. ABS-SS</td>
<td>.30**</td>
<td>.45**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. HOPE-PATH</td>
<td>.65**</td>
<td>.59**</td>
<td>.39**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. HOPE-AGEN</td>
<td>.62**</td>
<td>.54**</td>
<td>.43**</td>
<td>.63**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. ATQ-PMDC</td>
<td>-.51**</td>
<td>-.38**</td>
<td>-.47**</td>
<td>-.43**</td>
<td>-.50**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. ATQ-NSNE</td>
<td>-.61**</td>
<td>-.43**</td>
<td>-.37**</td>
<td>-.50**</td>
<td>-.57**</td>
<td>-.70**</td>
<td>--</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. QES-ND</td>
<td>-.43**</td>
<td>-.21**</td>
<td>-.27**</td>
<td>-.32**</td>
<td>-.33**</td>
<td>-.36**</td>
<td>.35**</td>
<td>--</td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. MASQ-AD</td>
<td>-.67**</td>
<td>-.54**</td>
<td>-.34**</td>
<td>-.59**</td>
<td>-.57**</td>
<td>-.50**</td>
<td>.55**</td>
<td>.26**</td>
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<td></td>
</tr>
<tr>
<td>10. MASQ-AA</td>
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<td>-.32**</td>
<td>-.23**</td>
<td>-.27**</td>
<td>-.28**</td>
<td>.45**</td>
<td>.60**</td>
<td>.22**</td>
<td>.46**</td>
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</tr>
</tbody>
</table>

Note. DGS = Daily Goal Scale, ABS = Adaptive Bias Scale, OB = Optimistic Bias, SS = Self Satisfaction, HOPE = Hope Scale, PATH = Pathways, AGEN = Agency, ATQ = Automatic Thought Questionnaire, PMDC = Personal Maladjustment and desire for Change, NSNE = Negative Self-Concept and Negative Expectations, QES = Questionnaire of Explanatory Style, ND = Negative Disposition, MASQ = Mood and Anxiety Symptom Questionnaire, AD = Anhedonic Depression, AA = Anxious Arousal. *p < .05, **p < .01.
Stability of All Measures

Table 10.9 displays the stability coefficients for all measures over the 8-week period. The stability coefficients of all scales between T1 and T2 ranged from .74 to .86. The most stable measure between T1 and T2 was the ABS-OB (.85), while the least stable measure was ABS-SS (.73).

Table 10.9

<table>
<thead>
<tr>
<th>Measure</th>
<th>T1-T2</th>
</tr>
</thead>
<tbody>
<tr>
<td>DGS</td>
<td>.78</td>
</tr>
<tr>
<td>ABS-OB</td>
<td>.85</td>
</tr>
<tr>
<td>ABS-SS</td>
<td>.73</td>
</tr>
<tr>
<td>HOPE-PATH</td>
<td>.83</td>
</tr>
<tr>
<td>HOPE-AGEN</td>
<td>.80</td>
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<tr>
<td>ATQ-PMDC</td>
<td>.82</td>
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<tr>
<td>ATQ-NSNE</td>
<td>.74</td>
</tr>
<tr>
<td>QES-ND</td>
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</tr>
<tr>
<td>MASQ-AD</td>
<td>.76</td>
</tr>
<tr>
<td>MASQ-AA</td>
<td>.75</td>
</tr>
</tbody>
</table>

Note. DGS= Daily Goals Scale, ABS= Adaptive Bias Scale, OB= Optimistic Bias, SS= Self Satisfaction, HOPE= Hope Scale, PATH= Pathways, AGEN= Agency, ATQ= Automatic Thought Questionnaire, PMDC= Personal Maladjustment and desire for Change, NSNE= Negative Self-Concept and Negative Expectations, QES= Questionnaire of Explanatory Style, ND= Negative Disposition, MASQ= Mood and Anxiety Symptom Questionnaire, AD= Anhedonic Depression, AA= Anxious Arousal.

Predicting Anhedonic Depression from Negative and Positive Cognitions and Acculturation

Preliminary analyses were performed to check the assumptions for hierarchical regression. There were no violations of the assumptions of normality, linearity, multicollinearity and homoscedasticity. Table 10.10 shows the results of the hierarchical regression of the T1 negative and positive cognitions and acculturation in predicting MASQ-AD scores at T2. The variables were entered in four steps. At step 1, T1 MASQ-AD scores predicted T2 MASQ-AD scores, \( \Delta F (1, 166) = 230.85, p<.001 \); and this significantly accounted for 58% (adj \( R^2 = .58 \)) of the variance. After T1 MASQ-AD was controlled for, the inclusion of ATQ-PMDC, ATQ-NSNE and
QES-ND variables into the regression equation at step 2 failed to improve the prediction of MASQ-AD at T2 scores, $\Delta F (3, 163) = 2.37, p > .05$.

At the third step, the inclusion of ABS-OB, ABS-SS, HOPE-AGEN, HOPE-PATH and the DGS into the model improved the prediction of T2 MASQ-AD scores, $\Delta F (5, 158) = 8.11, p < .001$, accounted for 8% (adj $R^2 = .66$) of the variance and the DGS was the unique predictor.

Additionally, in order to test the influence of acculturation in prediction of MASQ-AD scores at T2, the two acculturation factors were added to the last regression model. At step 4, when ACH and ACT were entered as additional predictors, the model failed to increase the amount of variance explained (adj $R^2 = .59$), $\Delta F (2, 156) = .36, p > .05$. 
Table 10.10
Summary of hierarchical multiple regression analysis predicting Anhedonic Depression at T2 in the Iranian-Australians sample (N=168)

<table>
<thead>
<tr>
<th>Models/hierarchical steps</th>
<th>Predictors</th>
<th>$R^2$</th>
<th>$\Delta R^2$</th>
<th>$B$</th>
<th>$\beta$</th>
<th>sr²</th>
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<tr>
<td>Step 1</td>
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<td>Step 3</td>
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<td>ATQ-PMDC</td>
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<td>.01*</td>
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<td>.00</td>
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<td>.00</td>
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<td>HOPE-AGEN</td>
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<td>-</td>
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<td>.00</td>
<td>.00</td>
</tr>
<tr>
<td></td>
<td>DGS</td>
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<td>-</td>
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<td>-.36</td>
<td>.05*</td>
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<tr>
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<td>ACM</td>
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<td>-</td>
<td>-.07</td>
<td>-.03</td>
<td>.00</td>
</tr>
</tbody>
</table>

Note: $\Delta R^2 = R$ square change; sr²=squared semi partial correlations; MASQ= Mood and Anxiety Symptom Questionnaire; AD=Anhedonic Depression; ATQ = Automatic Thought Questionnaire; PMDC=Personal Maladjustment and desire for Change; NSNE= Negative Self-Concept and Negative Expectations; QES = Questionnaire of Explanatory Style; ND = Negative Disposition; HOPE= Hope Scale, ABS= Adaptive Bias Scale; OB= Optimistic Bias, SS=Self Satisfaction, HOPE= Hope Scale, AGEN= Agency, PATH=Pathways, DGS= Daily Goal Scale. ACH=Acculturation Heritage subscale, ACM=Acculturation Mainstream subscale*p < .05, **p < .01.
Discussion

The current study was designed to firstly confirm the cross-sectional findings of T1 using follow-up data gathered 8-weeks after initial testing of the Persian DGS among a community sample of Iranian-Australians. Consistent with all the previous studies, the results of Study 3B showed that the DGS comprises one factor reflecting propensity to set and achieve small daily goals, and it demonstrated a high level of internal consistency and convergent validity. Additionally, support for the factor structure and internal consistency of the Persian version of the ABS and ND was also found.

Stability Coefficients

The findings of current study showed satisfactory stability reliabilities for the DGS. In addition as with Study 2B and 3B, the results confirmed adequate stability for all the other measures across 8-week time. ABS-OB was the most stable subscale while ABS-SS was the least stable subscale.

Comparing Three Groups on all of Measures across Time

As found with Iranian-Australian sample in Study 3A, both Iranian-Australians and Iranians significantly scored higher than Australians on negative and positive cognitions. The only exception was HOPE-PATH, where the Iranians were found to score lower than two other groups. In addition, consistent with the findings of Study 3A, Iranians significantly scored higher than both Australians and Iranian-Australians on anhedonic depression and anxiety. These findings have already been discussed in Chapters 6 and 9.
**Predictors of Anhedonic Depression**

Consistent with Australians in Study 1B, and with Iranians in Study 2B, the results of Study 3B showed that initial anhedonic depression was the main contributor to future anhedonic depression. In addition and consistent with the results of Study 1B and 2B, Study 3B also demonstrated support for positive cognitions as predictors of depression, using the MASQ-AD. In line with the results for Iranians in Study 2B, this study showed that the DGS was a unique predictor of MASQ-AD over time for the Iranian-Australians. However, unlike in Study 1B and 2B, negative cognitions were not significant contributors to anhedonic depression. These findings highlight the greater importance of positive cognitions in predicting lower depression among Iranian-Australians. This may be attributable to the positive outlook about life that many immigrants have (Serrano, 2009). To date research has focused more on negative cognitions and the psychological impact these have on migrant mental health (Berry, 2003; Demutska, 2012; Dow, 2010), rather than on the benefit of positive cognitions relative to migrants' vulnerability to depression. Thus, further research is needed to examine the role of positive cognitions in this context.

Lastly, neither ACH (Iranian culture) nor ACM (Australian culture) predicted MASQ-AD over time, after controlling for initial MASQ-AD as well as negative and positive cognitions. Thus, the findings from this study also show that daily goals, hope and optimism are more important than acculturation orientation in predicting depression toward Australian and Iranian cultures. However, other variables not examined in this study may mediate the relationship between acculturation factors and depressive symptoms. For example, pre and post migration sociocultural experiences, and individual’s identification with collectivistic values, are other factors related to acculturation that may influence depression among Iranians (Dallalfar, 2002; Good et
al., 1985; Jalali, 1982; Saghafi, 2009). These factors need to be examined in future studies.

**Conclusion**

The current study demonstrated further support for the psychometric properties of the Persian version of the DGS and it was found to be stable over the 8-week period. While the results demonstrated similarities in associations between negative and positive cognitions with anhedonic depression in three groups over time, there were differences in the level of both negative and positive cognitions. Lastly, the DGS at T1 predicted anhedonic depression at T2, however, both acculturation heritage and mainstream failed to predict anhedonic depression at T2. Further discussion of these findings and the implications and limitations are provided in Chapter 11.
Chapter 11: General Discussion

Overview

Setting daily goals as simple and attainable activities is an important component of cognitive behavioural therapy for the treatment and management of depression, as it has been shown to have a powerful positive effect on mood (Addis & Martell, 2004; Dobson et al., 2008; Lewinsohn, 1976; Nicklin, 2009; Rehm, 2010; Snyder & Lopez, 2009). However, research to date has tended to focus on activity scheduling rather than directly on setting daily goals (Cuijpers et al., 2007), and no research has been previously conducted in non-Western cultures. This foreshadowed the need for a valid and reliable instrument that would measure the propensity to set and achieve small daily goals. Thus, the first main aim of this thesis was the development and validation of the DGS for measuring the propensity to set and achieve small daily goals.

The importance of engaging in daily goals and activities is suggested by previous research as it reduces depressive symptoms through motivating depressed individuals cognitively, emotionally and behaviourally (Addis & Martell, 2004; Cuijpers, Straten & Warmerdam, 2007; Jacobson, et al., 1996; Lewinsohn, & Graf, 1973; Nicklin, 2009). There is strong evidence that depressed individuals show greater pessimism, recall more thoughts that are negative, evaluate themselves unable to function or enjoy anything, and have avoidance behaviour than do nondepressed individuals (Abramson et. al., 2002; Addis & Martel, 2004; Garber, Weiss & Shanley, 1993). However, by setting small daily goals that are achievable, pleasurable and satisfying, individuals may develop more confidence and positive reinforcers for their
actions (Persons, Davidson, & Tompkins, 2001; Rhem, 2010; Kanter, Busch, & Rusch, 2009).

The rationale of the current research is based on the cognitive processes of daily goals that underlie both the cognitive-behavioural approach (Beck, & Alford, 2009) and positive psychology (Seligman, 2011), which promote resiliency through the motivation towards goals achievement and pleasure. Moreover, Taouk, Lavibond, and Laube (2001), previously have highlighted that in developing a new instrument it is important to investigate it across culture. For this thesis, the psychometric properties of the DGS were firstly investigated in an Australian community sample, and then in a non-Western community sample in Iran, as well as in an Iranian sample in Australia.

The second main purpose of this thesis was to examine how both negative and positive cognitions predicted depression over an 8-week period in each of the three different samples. The negative cognitions included negative automatic thoughts and negative disposition (pessimism). The positive cognitions included the DGS, optimism and hope. Extensive studies have shown the importance of both negative and positive cognitions in predicting depression in Western samples, however, there is a paucity of research with Iranians. Lastly, while acculturation is an important factor in understanding of minority groups’ mental health, acculturation in relation to depression and cognitions has not been previously investigated among Iranians in Australia. Thus, the current thesis also investigated acculturation as additional factor in relation to depression among Iranian-Australians.
The Development and Validation of the DGS

A one factor structure was found to best summarize the DGS across the three different samples. This factor reflected a range of strategies such as goal orientation, goal setting, use of willpower and discipline, focusing on successes, and reviewing goals. The fact that the same factor structure was found across all three samples, shows that the nature of setting and achieving daily goals is similar across Australians and Iranians even though cultural settings are very different. In Western countries such as in Australia, individualistic values which focus on attaining independent and individual goals are highly important, whereas collectivistic cultures that are more typical in non-Western counties (such as Iran), place more value on interdependent and group goals (Gurleyik, 2012; Shiraev, & Levy, 2010). However, irrespective of these cultural values, this study shows that underlying strategies of the DGS was similar among both Australians and Iranians.

One of the strategies assessed by the DGS is goal orientation, which is a construct for understanding how people are motivated toward increasing their ability to accomplish goals (Zweig, & Webster, 2004). It has been suggested that culture may contribute to the concept of goal orientation (Nicklin, 2009; Morrey, 2009). For example, in collectivistic cultures the quality of the individual’s relationship is dominant and overshadows attaining one’s personal goals (Stewart et al., 2004). However, the consistent results of the factor structure of the DGS in all current studies indicate that Iranians (as collectivistic) are similar to Australians (as individualistic) and use similar strategies to approach a task, and in setting and attaining goals.

Another strategy assessed by the DGS is goal setting which refers to the ability to identify a goal. Goal setting is a cognitive concept that increases positive
reinforcement and involvement in enjoyable activities (Beck, Rush, Shaw, & Emery, 1979). Throughout depression therapy, individuals learn how to first recognise the value of the goals and second how to increase positive thinking (e.g., positive self-statement) through the setting and accomplishing goals (Rehm, 2010; Voelz, Haeffel, Joiner, & Wagner, 2003). In addition, it has been suggested that goal-setting as part of positive cognitions can buffer or moderate depressive symptoms (Hawkins, 2004). Moreover, the results consistently indicated that Australians and Iranians are similar in this strategy.

Use of willpower and discipline is another strategy in the DGS that relates to individuals’ ability to remain motivated constantly and reach their goals eventually (Marks, 2014). As part of behavioural therapy, depressed individuals learn to build willpower and self-discipline toward achieving their goals (Lejuez et al., 2011; Sarafino, 2001). Therefore, enhancing willpower and self-discipline in the process from setting to achieving goals may enable depressed individuals to increase positive cognitions and mood (Rehm, 2010; Sarafino, 2001). The findings of the current studies indicated that this strategy was consistent for both Australians and Iranians.

Focusing on successes is an approach for achieving a goal that depressed individuals are less able to follow (Marks, 2014). Past research has suggested that when faced with problems, depressed individuals have a tendency to focus on failures instead of focusing on successes (Sorajjakool, 2001). Past research had not examined ability to focus on successes as a barrier to goal attainment in non-Western cultures; however, given the same factor structure of the DGS across all current studies, this ability and its relationship with goal achievement appeared to be similar among Australians and Iranians.
Reviewing goals is another strategy that allows individuals to modify their negative thinking in order to achieve their goals (Beck & Alford, 2009). Locke (2002) pointed out that reviewing goals allows for feedback and to assess if there is any progress in relation to goal achievement and is the most effective part of goal setting. In addition, it is one of the most important parts of behavioural treatment of depression, which allows developing new plans if the planned goals and activities were not completed (Sarafino, 2001). Consequently, depressed individuals alter their negative cognitions and attitudes while reconsidering barriers toward completing their goals (Lejuez et al., 2011). The results of the current studies found that ability to review goals was similar among Australian and Iranian cultures. Overall, the findings of the current studies showed the same factor structure underlying the DGS among Australians and Iranians.

In addition to the factorial validity, the findings also consistently provided support for the internal consistency, stability, and convergent validity of the DGS across all studies. However, support for the discriminant validity of the DGS was only found in the Australian sample. Possible explanations for this finding are provided in the discussion sections of Chapter 6 and 9. These include a higher level of anxiety among Iranians, different presentation and expression of anxiety symptoms, and the influence of distinct cultural values on the expression of anxiety symptoms in the Iranian samples (e.g., suppression of negative emotions) (Ghaffarian, 1998).

**DGS, Negative and Positive Cognitions in Predicting Depression**

The results across all three studies were consistent in that the stronger predictors of anhedonic depression at T2 were initial anhedonic depression. These findings are consistent with the view that depressive symptoms increase in severity and duration from non-clinical symptoms to subclinical and then to clinical symptoms.
of depression (Jorm, & Griffiths, 2006; Katon, 2003; Muñoz et al., 2012). Moreover, the results of all three follow-up studies indicated that the level of anhedonic depression in community setting is quite high.

Findings of both Study 1B and 2B were consistent with previous Western studies that have demonstrated that negative cognitions predict depression, thus negative cognitions are considered a risk factor for depression (Abramson et al., 1989; Calvete, & Connor-Smith, 2005; Hankin et al., 2004). Moreover, given that these results are similar across Australians and Iranians, they suggest that negative cognitions play the same role in the development of depression among Iranians as found in Western cultures. Considering that the prior cognitive research in Iran is scant, the present findings provide further evidence for the cognitive vulnerability of model of depression among Iranians. In addition, although cognitive models were developed in Western cultures (Stewart et al., 2004), these results show that negative cognitions do prospectively predict depressive symptoms and offer preliminary evidence to support cognitive theory with a non-clinical sample in Iran.

Contrary to Study 1B with Australians and Study 2B with Iranians, negative cognitions were not found to predict depression among Iranian-Australians in Study 3B. There may be other variables (e.g., high stress, the degree to which individual become stuck on focusing on their negative cognitions, and the concept of self in new cultural context) that intervene between negative cognitions and depression (Abramson et al., 2002; Hawkins, 2004; Matsumoto, 1999; Markus, & Kitayama, 1991; Tashakori, & Thompson, 1989). Thus, further research with Iranian immigrants is needed.

In addition, the findings of all three follow-up studies consistently demonstrated support for the positive cognitions in predicting anhedonic depression
beyond and above negative cognitions. However, these differed between Iranians and Australians. The unique predictor of anhedonic depression in the Australian sample was optimism, while in both Iranian groups the unique predictor was the DGS. As already argued in Chapter 4, optimism among Australians may be more important than daily goals. While the DGS overlaps with optimism in that optimism inherently encourages goal setting and achievement, previous research has shown that optimism is associated with higher levels of motivation and goal achievement (Scheier & Carver, 1992). More research is needed to examine this process and how it may be moderated by cultural variables.

The current findings for Iranians could not be compared to previous research, as no other study has yet examined positive cognitions, daily goals and depression among Iranians. However, the findings are consistent with the Western cognitive behavioural approach as the DGS predicted anhedonic depression among Iranians in Iran and Australia. They are also consistent with the positive psychology approach where the focus on daily goals and activities is viewed as promoting resilience to depression and increases in well-being (Mazzochelli, 2010; Seligman, 2011).

Other Differences between Australians and Iranians

Iranians scored significantly higher than both Australians and Iranian-Australians on anhedonic depression and anxiety. Possible explanations for this finding are presented in the discussion section of Chapter 6. Two of the factors specific to Iran include the tough economic, political and social challenges (Kharaziha, 2011) and the low level of awareness about depressive symptoms (Dejman, 2010; Good et al., 1985; Hashemi, 2012; Kharaziha, 2011).

Both Iranians and Iranian-Australians scored significantly higher than Australians on negative and positive cognitions. The only exception was Hope
Pathways where Iranians scored lower than the other two groups. Due to the lack of previous research in this area, it is difficult to explain these results; however, several possible explanations are examined in the discussions of Chapter 6 and 9. These include the tough economic, political, and social uphills experienced in Iran; cultural values (e.g., sadness and grief, suppression of negative emotions); a higher level of depression (which may explain the higher level of negative cognitions); and the concept of self (Abedini et al., 2007; Dejman, 2010; Good et al., 1985; Holakouee, 2011; Jalali, 1982; Tashakori, & Thompson, 1989). For higher positive cognitions, these explanations include boosting positive cognitions as self-help strategies, religious ideas and personal beliefs, and family as a source of support (Akhtar, 2013; Dejman, 2010; MacLeod, & Moore, 2000; Rehm, 2010; Saghafi, 2009).

Contributions to the Field and Strengths of the Thesis

This thesis has addressed a significant gap in the field and in three different cultural contexts, by developing and validating the DGS, a measure to assess propensity to set and achieve small daily goals. Small daily goals can cognitively motivate and regulate behaviour using intentionality and planning, and the importance of engaging in small daily goals in reducing depressive symptoms has been highlighted by research relating to cognitive behavioural therapy and behavioural activation (Addis & Martel, 2004; Cuijpers, Straten & Warmerdam, 2007; Rehm, 2010). In addition, this thesis investigated the association of daily goals and depressive symptoms (anhedonia) as well as negative and positive cognitions among Australians and Iranians. Finally, it assessed acculturation in relation to depressive symptoms and cognitions in Iranian-Australians.

A major strength of this thesis is its focus on assessing depressive symptoms in community-based samples. There is a paucity of research on subclinical depressive
symptoms in non-clinical and non-student populations. The use of community samples in this thesis increases the generalisability of its findings to the general population of the cultural groups sampled. Another strength is the use of a follow-up design in each study. Assessing participants on key measures before and after an 8-week interval for each study provided the opportunity to test the stability of each construct, but this also made it possible to examine both negative and positive cognitions, including the DGS, as predictors of depression. A further strength of this thesis was the examination of the aims across three independent and culturally diverse community samples (Australians, Iranians, and migrant Iranian-Australians) using the same design and measures (as well as similar methodology), which allowed the findings to be compared across groups.

This thesis has shown how lower anhedonia is strongly related to goal-engagement particularly setting and pursuing small daily goals, regardless of the cultural context. The overall inferences drawn from the empirical studies imply that it might be possible to predict avoidance patterns associated with inactivity towards depressive symptoms. From a clinical perspective, the importance of measuring small daily goals and assessment procedures will have significant diagnostic and therapeutic implications.

Results from the empirical studies will also be useful as a guide in the early detection of depressive symptoms and the development of preventative interventions. Cognitions in relation to depression have been suggested to be different in individualistic and collectivistic cultures (Marsella, 2003; Matsumoto, 1999; Shiraev & Levy, 2010). However, the findings in this thesis demonstrate the generalisability of the pattern of associations between cognitions and depressive symptoms across
two cultural groups. Thus, the present results contribute to our understanding of the universality of cognitive aspects of depression.

With respect to the paucity of research in cognitive aspects of depression in Iran, the consistent findings from the Iranian samples in this thesis not only make a unique contribution to the measurement of small daily goals in general, but also contribute to the currently small body of knowledge on negative and positive cognitions in relation to depression among Iranians. Although the cognitive theories applied in this thesis were initially developed in the Western cultural context, the current results provide support for the validity of traditional cognitive theories of depression (e.g., Abramson et al., 1978; Beck, 1979) among Iranians.

Lastly, the Iranian-Australians were found to be more oriented toward their heritage culture than their mainstream culture. This highlights the need for future research and treatment concerning this Australian cultural minority, particularly how to better direct mental health services they may need.

Limitations and Suggestions for Future Research

There are limitations related to all three follow-up studies of the current thesis that need to be noted. Although the factorial and concurrent validity of the DGS has been demonstrated across Australian and Iranians, it is a new scale that requires further validation. The DGS specifically focused on attending to, planning, setting and reviewing small daily goals. These are all important aspects of daily goals setting, and were all found to load on a single factor. However, this may be an artifact of the limited number of items that were included, so more research is now needed nationwide in Australia and Iran to more fully examine these different components by ensuring that more items are included to represent each component. In term of
prospective studies, future research is needed which examines both shorter-term and longer-term intervals.

The current studies have only examined cognitive factors in relation to the DGS. However, there are other factors that are related to different aspects of depression and worth pursuing in further research. These include self-efficacy (Bandura, 2006), motivation (Mayer, Faber, & Xu, 2007) and positive meaning in life (Seligman, 2005).

More research using the *emic*-based qualitative approach also needs to be conducted in order to enhance our understanding of the DGS in different cultures. In addition, while the DGS has been evaluated in three different cultural settings, it also needs to be evaluated in clinical samples. Moreover, despite the high level of depression among all three samples, a cautious interpretation of the present research is required, because the issue of whether self-reports for depression generalise to clinical depression remains contentious (Enns, Cox, & Borger, 2001; Hawkins, 2004). For example, an individual may over-report their symptoms, or they may not realise or understand that their symptoms are characteristic of depression. Therefore, self-reports need to be verified by clinical interviews.

The scope of this thesis focused on the DGS in a general community sample. However, more research is needed to better understand the relationship between the DGS and demographic variables such as age, marital status, education, socioeconomic status, and ethnicity. Understanding how each of the characteristics may moderate the relationship between daily goals and depressive symptoms would be informative for developing strategies for the prevention and treatment of depression.
The use of the DGS as a self-help strategy for preventing and overcoming depressive symptoms requires more research. Investigation in both trial and control groups is needed to explore how individuals can identify the link between their mood and avoidance patterns with inactivity by using the DGS or not using it. Then, more research is needed to investigate how the DGS could be useful in self-monitoring small daily goals by measuring before/after setting daily goals. In addition, a possible manual for applying the DGS as a strategy for self-help managing depressive symptoms and its benefit (e.g., low cost, no need for professional knowledge or help, no stigma, etc.) may address ways of recognising depression as soon as symptoms develop.

Given the limited resources available to the student, all participants were recruited via “snowball” sampling techniques (Costa & McRae, 1985), and the Australians and Iranian-Australians were only from Victoria. Further studies are needed which include more systematic sampling methods and Australians and Iranian-Australians from other states to ensure that the findings are more generalisable. In addition, it will be important to also obtain and examine if there are any differences across the groups in terms of demographic variables such as education, marital status, and type of employment, as these variables may account for some of the differences found in depression and cognitions across the three samples.

The sample of all of three studies was one of convenience and therefore may not be reflecting the levels of depressive symptoms found in the community. For instance, the number of participants who scored about the cut-off score indicative of subclinical depression in the Australian sample was 51%. This is high and even higher than the levels first reported with the original scale; however, other studies have also reported high levels of depression as assessed by the MASQ (Hankin et al.,
2004). It is possible that individuals with higher levels of depression were more interested in participating in the study, thus, additional studies which ensure a more representative sample of Australians, Iranians and Iranian-Australians are required.

It also needs to be noted that individuals who participated at T2 in Study 1B demonstrated lower levels of anxiety than those who only participated at T1 (1A). It is possible that participants with higher level of anxiety may have been reluctant to participate further. However, these propositions have not been tested and need to be examined in future research.

Other limitations were more specific to the studies with the Iranians. First, the use of Anxious Arousal measure of discriminant validity for the validation of the DGS did not demonstrate the expected discrimination between depression and anxiety among Iranians. The nature of anxiety may be different among Iranians but it may also be influenced by a number of factors (such as personality, cultural values etc.) that need to be explored in future research. Interview studies will be informative as participants’ responses can be probed more fully.

Another limitation of the studies with Iranians concerned the self-report measures of negative and positive cognitions that were translated from existing scales developed initially in the West. Although all of these scales in the current study were found to be internal consistent and factor analysis demonstrated their construct validity, further validation of these scales is needed to better understand the nature of cognitions among Iranians. There is also a possibility that some of the constructs investigated may have been more aligned with Western conceptions than with Iranian understandings. Further research is needed to more fully study depression and the other constructs examined in this thesis from a cross-cultural perspective. Given that less research with Iranians has examined whether cognitive factors would contribute
to depressive vulnerability, future research in Iran would benefit from developing and using local measures in addition to semi-structured interview to assess negative and positive cognitions. This will also assist to better understand the higher level of both negative and positive cognitions in Iranians compared to Australians, and eliminate that possibility that biases in response have occurred by utilising the self-report measures (Auerbach, Eberhart, & Abela, 2010).

The explained limitations of the lack of generalisability of results to clinical samples, discriminant validity of the DGS, and issues related self-report measures of negative and positive cognitions that outlined in Study 2 also apply to the Study 3 (A and B). In addition, the current results for Iranian-Australians indicated that they were more strongly oriented to their Iranian culture. There might be factors such as the importance of the family among Iranians, interpersonal values and the acculturation strategies they adopt to adjust to the host culture, that all may influence the orientation of Iranians toward their heritage culture (Dow, 2010; Shekarabi, 2008; Ghaffarian, 1998). Thus, these factors need to be considered in future research.

Considerably more work will need to be done to explore the cultural aspects of negative and positive cognitions among Iranian-Australians. In addition, other factors related to the Iranian migrant experience need to be examined in future studies. This includes Iranian immigrant’s susceptibility to acculturative stress and their length of residence in Australia, which both may be related to acculturation.

**Implications for Practice, Treatment and Prevention**

The results of Studies 1, 2 and 3 have practical implications that deserve consideration and could be incorporated into the prevention and treatment of depressive symptoms in both Western and non-Western cultures.
There is evidence that increasing daily activities may foster positive emotions and cognitions (such as optimism and hope) and reduce depressive symptoms (e.g., Layous & Lyubomirsky, 2012; MacLeod & Moore, 2000; Seligman, 2005, 2011). However, many individuals experiencing depression are unable to effectively change their activity levels without assistance. A strength of the DGS is its capacity to easily identify individuals who have a low propensity to set and achieve small daily goals. This will allow clinicians to develop tailored interventions which focus on the level of assisting individuals who require to raise their skill levels in this domain. This is a critical step toward behaviour change which is often overlooked. However, this skill needs to be mastered if the monitoring of small daily goals by the individuals is to be achieved. The simple format of the DGS also suggests that it may be suitable for individuals from a variety of cultures and communities.

Notably, the advantages of setting small daily goals are cost effective, with no need for professional help. This approach may minimise the stigma attached to depression, and is easily applicable and compatible for both Western and non-Western cultures. Thus, depressed and vulnerable individuals, regardless of their culture, may improve their ability to sustain movement toward setting small daily goals, including monitoring their own mood.

With respect to the growing initiation of eHealth program for overcoming depression (Manicavasagar, 2012), another important practical implication is that the DGS might be a beneficial tool for early management of changes in depressive symptoms as a self-help strategy. Therefore, the DGS would seem suited as a before/after scale to measure change in overall goal setting behaviour/attitudes in an intervention that targeted daily goal setting or activity scheduling. Moreover, the DGS could be allocated as an application in eHealth program or any online services...
to be available for individuals who are interested to pursue their changes in daily goals setting and monitoring their mood.

Given the similar results for both Australians and Iranians, the treatment implications are similarly applicable for Western or/and non-Western cultures. More specifically, previous research has shown that different aspects of depressive symptoms such as cognition, behaviour, motivation and emotion are influenced by daily goals and activities (Addis & Martel, 2004; Cuijpers, Straten & Warmerdam, 2007; Jacobson, et al., 1996; Miner, 2007; Seligman 2005; Young, Weinberger, & Beck, 2001). To date, daily goals and activities in the form of activity scheduling has been one of the key ingredients of all various psychotherapies for depression (Rehm, 2010). Whilst the DGS holds similar advantages to activity scheduling in terms of encouraging behavioural engagement, it can also measure intention to engage in activities, and possibly encourages awareness about both behavioural engagement and avoidance (inactivity). Hence, the DGS may serve as an initial step in conceptualising intervention strategies that influence depressed individuals’ intention to set small daily goals in both Australians and Iranians.

Another important finding is that the DGS has been shown to be useful at predicting depression among Iranians. Given that the DGS predicted depression in a community sample of Iranians in both Iran and Australia, with further adaptation it may be used by researchers and clinicians in Iran as an early screening measure to detect individuals at higher risk of developing major depressive symptoms. Thus, it is of great importance that Iranian health care professionals become aware of the importance and usefulness of role of daily goals and activities in relation to depression.
Despite those implications for the DGS and with respect to the positive psychology approach (Seligman, 2005), it has been pointed out that hope, optimism and daily goals are inter-related constructs. Depressed individuals need to develop more positive emotions, hope and engagement, not just reduce their negative feelings and sadness (Duckworth, Steen, & Seligman, 2005). Thus, the role of positive cognition in the treatment of depression deserves further attention. Boosting positive cognitions buffers the resiliency of individuals against depression (Duckworth, Steen, & Seligman, 2005; Frederickson, 2003; MacLeod, & Moore, 2000). Similarly, self-enhancing attributions for positive events may reduce hopelessness and aid in recovery from depression (Johnson et al., 1996, 1998; Needles & Abramson, 1990; Voelz, Haeffel, Joiner, & Wagner, 2003).

Lastly, with respect to the results of Study 3, Iranian-Australians were found to be more oriented toward their heritage culture, rather than the mainstream culture. However, at the bivariate level, this study also showed that regardless of their overall cultural orientation, cognitions, depression, and anxiety were related to their identification with their heritage and mainstream culture. Thus, the influence of both cultures need to be taken into when planning interventions for the treatment of depression among Iranian-Australians. However, more research on the role of acculturation in relation to depression is needed, as this study showed that acculturation was not predictive of depression, after initial levels of depression and both negative and positive cognitions were assessed.

Conclusions

The DGS was developed and validated for this thesis as a measure of propensity to set and achieve small daily goals in three independent, follow-up studies among Australian, Iranian, and Iranian-Australian community samples.
Factorial validity, internal consistency, stability, and convergent validity for the DGS were found in each sample. However, discriminant validity was only found in the Australian sample.

The pattern of correlations between all negative and positive cognitions, depression and anxiety were also remarkably similar, which suggests that the relationship between cognitions and depression is similar across cultures. In addition, the findings from the three follow-up studies show that positive cognitions are predictors of depression, independent of negative cognitions. These outcomes highlight the importance of researchers and clinicians attending to both negative and positive cognitions to understand and treat depression.

Overall, the results of each study indicated that the level of depression across three cultural contexts in community settings was high. Depression among Iranians from Iran was found to be particularly high, and requires more research to better understand whether individuals with these levels of symptoms are at risk of clinical depression. Iranians were also found to score significantly higher than Australians on negative and positive cognitions, depression as well as anxiety.

Lastly, the relationship between acculturation orientation toward Iranian and Australian cultures and depression in the Iranian-Australian sample was also examined. However, acculturation was not found to be a unique predictor of depression. Other factors associated with acculturation orientation toward Iranian and Australian cultures and depression require further study so that better mental health services can be developed and provided for this minority group.
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Appendix A

STUDY 1 (A and B) : ETHICS APPROVAL,
PLAIN LANGUAGE STATEMENT, CONSENT FORM, QUESTIONNAIRE AND
FOLLOW-UP PLAIN LANGUAGE STATEMENT
Ethics Approval

Research Services
Office of the Deputy Vice-Chancellor (Research) (Melbourne Campus)

MEMORANDUM

TO: Mrs Yasmin Asgari
    Psychology
    Geelong

FROM: Secretary, Deakin University Human Research Ethics Committee (DU-HREC)

DATE: 14 June 2006

SUBJECT: PROJECT: EC 23-2006 (Please quote this project number in future communication.)
THE ROLE OF OPTIMISM IN THE COGNITIVE FORMULATION OF DEPRESSION
(PHASE I STUDY)

This application was considered at the DU-HREC meeting held on 20 February 2006.

APPROVAL HAS BEEN GIVEN FOR YASMIN ASGARI, UNDER THE SUPERVISION OF DR ROBYN MILLER, SCHOOL OF PSYCHOLOGY, TO UNDERTAKE THIS PROJECT FOR A THREE YEAR PERIOD FROM 14 JUNE 2006.

The approval given by the Deakin University Human Research Ethics Committee is given only for the project and for the period as stated in the approval. It is your responsibility to contact the Secretary immediately should any of the following occur:
• Serious or unexpected adverse effects on the participants
• Any proposed changes in the protocol, including extensions of time.
• Any events which might affect the continuing ethical acceptability of the project.
• The project is discontinued before the expected date of completion.

In addition you will be required to report on the progress of your project at least once every year and at the conclusion of the project. Failure to report as required will result in suspension of your approval to proceed with the project.

Vicki Xafis
Secretary, DU-HREC
(03) 9251 7123

Signature Redacted by Library
Plain Language Statement

My name is Yasmin Asgari. I am currently conducting my Doctorate in Psychology at Deakin University. My research examines the relationship between personality characteristics, hypothetical situations and mood. This research is important, as it will add to our knowledge of the factors that influence mood. I am inviting you to take part in my project to be conducted under the supervision of Dr. Robyn Miller.

If you participate, you will complete a questionnaire about personality characteristics, hypothetical situations and mood. The questions about personality will ask you to indicate your agreement or disagreement with statements such as: “I believe positive thinking can overcome an obstacle” and “My life is a mess” or “Sometimes I set myself with goals for the next day”. The questions about situations ask you to indicate whether a given cause is a likely reason for an event if it happened to you. For example: “You happen to be angry. Is it because you have a bad temper?” You will also complete questions about your mood such as rating the extent to which you feel sad during the past week. Feel free to complete this questionnaire at your own pace, and there are no right or wrong answers for any question. Please respond to all the questions, and if you are not sure about an answer, respond in the way that best describes you. This questionnaire will take approximately 25-35 minutes to complete.

If you agree to participate in this study you will be asked to fill in this questionnaire on two separate occasions. The first questionnaire will be filled out now and the second in two month time. You will be asked to sign a consent form that contains you name and address. The follow up questionnaire will be posted to you at the address provided by you on the consent form. Please return the questionnaire and consent form in the supplied addressed, prepaid envelope.

The information that you gave me will remain totally confidential. The consent form and questionnaire are numbered and they will be kept in separate and secure places. At no time after receipt will any person have access to both consent and answer sheets. Upon completion of the study, data will be secured in a locked cabinet in the School of Psychology, Deakin University for a minimum period of SIX years from the date of publication. Individual results will not be reported, only grouped data.

Please feel free to withdraw from this study at any time from now until the completion of the questionnaire. If any of the questions raise concern or questions that you would like to deal with, please feel free to contact me, Yasmin Asgari, on (03) XXXXXXX, and I will locate an appropriate service in your area. Alternatively, you can contact Lifeline (Toll free) on 13 11 14, or the Crisis Line on 13 61 69.

If you are interested in a summary of the results feel free to contact me. Please note that only grouped results will be provided and not of individual results. This summary should be available after about six months by contacting me at the address below. Your participation in this important research is greatly appreciated.

Thank you.
Yasmin Asgari, School of Psychology, Deakin University, GEELONG 3217. Tel. (03) XXXXXXX yasg@deakin.edu.au
Dr. Robyn Miller, School of Psychology, Deakin University, GEELONG 3217.
Consent Form

DEAKIN UNIVERSITY HUMAN RESEARCH ETHICS COMMITTEE
CONSENT FORM: SURVEYS, QUESTIONNAIRES

I, (Name) ........................................... of (Address)..........................................................

..................................................

(Phone) ...........................................

Hereby consent to be a subject of a human research study to be undertaken

By Yasmin Asgari

and I understand that the purpose of the research is to examine the relationship between personality characteristics, hypothetical situations and mood.

I acknowledge that

1. Upon receipt, my questionnaire will be coded and my name and address kept separately from it.

2. Any information that I provide will not be made public in any form that could reveal my identity to an outside party ie. that I will remain fully anonymous.

3. Aggregated results will be used for research purposes and may be reported in scientific and academic journals.

4. Individual results will not be released to any person except at my request and on my authorisation.

5. That I am free to withdraw my consent at any time during the study in which event my participation in the research study will immediately cease and any information obtained from me will not be used.

Signature: Date:
Questionnaire

PLEASE READ THE PROVIDED PLAIN LANGUAGE STATEMENT CAREFULLY AS IT EXPLAINS THE INTENTION OF THIS PROJECT

This information is needed to tell us what sorts of people have taken part in this study.

Age (in years) _____ Gender (tick one) □Male □Female

Are you of Aboriginal or Torres Strait Islander descent? (Select one only)
□ No
□ Yes - Aboriginal
□ Yes – Torres Strait Islander
□ Yes – Aboriginal and Torres Strait Islander

In what country were you born?
□ Australia
□ Other country Name __________________________
Year of arrival in Australia __________________________

Do you speak a language other than English at your permanent home residence?
□ No
□ Yes Language __________________________

-----------------------------------------------------------------------------------------------------------------------------------

This scale contains 12 statements. Next to each statement is a rating scale. Circle the number that best describes you for each statement. There are no right or wrong answers to this questionnaire, just describe yourself as accurately and honestly as possible.

<table>
<thead>
<tr>
<th>1 Very untrue</th>
<th>2 Fairly untrue</th>
<th>3 Neutral</th>
<th>4 Fairly true</th>
<th>5 Very true</th>
</tr>
</thead>
</table>
1.  I am the type of person who looks on the bright side of life…………………........  1  2  3  4  5
2.  I believe that positive thinking can overcome any obstacle…………………........  1  2  3  4  5
3.  I doubt that others would ever gossip about me………………………………………  1  2  3  4  5
4.  I believe in the idea that “life is what you make it”………………………………………  1  2  3  4  5
5.  My approach to life is “nothing ventured, nothing gained”………………………………………  1  2  3  4  5
6.  It would be difficult for anyone to dislike me………………………………………........  1  2  3  4  5
7.  I have never done anything foolish in front of others………………………………………........  1  2  3  4  5
8.  No-one would want to treat me unfairly……………………………………………………………........  1  2  3  4  5
9. I doubt that I ever disappointed my parents during childhood.

10. I am a believer in the idea that "every cloud has a silver lining."

11. Some people might call me a "hopeless optimist."

12. Nothing I have done has ever caused me the slightest regret.

Below is a list of feelings, sensations, problems, and experiences that people sometimes have. Read each item and then mark the appropriate choice in the space next to that item. Use the choice that best describes how much you have felt or experienced things this way during the past week, including today. Use this scale when answering:

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Not at all</strong></td>
<td><strong>Sometimes</strong></td>
<td><strong>Moderately often</strong></td>
<td><strong>Often</strong></td>
<td><strong>All the time</strong></td>
</tr>
<tr>
<td>___</td>
<td>1. I feel like I am up against the world.</td>
<td>___</td>
<td>16. I can't get things together.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>2. I am no good.</td>
<td>___</td>
<td>17. I hate myself.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>3. Why can't I ever succeed?</td>
<td>___</td>
<td>18. I'm worthless.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>4. No one understands me.</td>
<td>___</td>
<td>19. I wish I could just disappear.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>5. I've let people down.</td>
<td>___</td>
<td>20. What's the matter with me?</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>6. I don't think I can go on.</td>
<td>___</td>
<td>21. I am a loser.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>7. I wish I were a better person.</td>
<td>___</td>
<td>22. My life is a mess.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>8. I am so weak.</td>
<td>___</td>
<td>23. I am a failure.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>9. My life is not going the way I want it to.</td>
<td>___</td>
<td>24. I'll never make it.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>10. I am so disappointed in myself.</td>
<td>___</td>
<td>25. I feel so hopeless.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>12. I can't stand this anymore.</td>
<td>___</td>
<td>27. There must be something wrong with me.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>13. I can't get started.</td>
<td>___</td>
<td>28. My future is bleak.</td>
<td></td>
</tr>
<tr>
<td>___</td>
<td>15. I wish I were somewhere else.</td>
<td>___</td>
<td>30. I can't finish anything.</td>
<td></td>
</tr>
</tbody>
</table>

Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

<table>
<thead>
<tr>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Definitely False</strong></td>
<td><strong>Mostly False</strong></td>
<td><strong>Mostly True</strong></td>
<td><strong>Definitely True</strong></td>
</tr>
</tbody>
</table>

___ 1. I can think of many ways to get out of a jam.
Please imagine yourself in the following situations. There may be many possible causes for the situations described. One possible cause has been given and is indicated in bold type. Please read each situation and the cause given. Circle a number to indicate whether the cause given is a Likely Reason for the situation if it happened to you.

<table>
<thead>
<tr>
<th></th>
<th>1</th>
<th>2</th>
<th>3</th>
<th>4</th>
<th>5</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td></td>
<td>Highly unlikely</td>
<td></td>
<td>Unlikely</td>
<td>Neutral</td>
</tr>
<tr>
<td>2</td>
<td></td>
<td>Likely</td>
<td>Highly likely</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

1. You happen to be angry. 
   Is it because **you have a bad temper**? ............................................................. 
   1 2 3 4 5

2. You happen to be in a bad mood. 
   Is it because **you are easily annoyed**? ............................................................. 
   1 2 3 4 5

3. You happen to argue with other family members. 
   Is it because **you are argumentative**? ............................................................. 
   1 2 3 4 5

4. You happen to lose your faith in a friend or family member. 
   Is it because **you are unforgiving**? ............................................................. 
   1 2 3 4 5

5. You happen to feel lonely. 
   Is it because **you are not popular**? ............................................................. 
   1 2 3 4 5

6. You happen to annoy a friend. 
   Is it because **you are an inconsiderate person**? ............................................................. 
   1 2 3 4 5

Please imagine yourself in the following situations. There may be many possible causes for the situations described. One possible cause has been given and is indicated in bold type. Please read each situation and the cause given. Circle a number to indicate whether the cause given is a Likely Reason for the situation if it happened to you.
Directions: Read each item carefully. Using the scale shown below, please select the number that best describes YOU and put that number in the blank provided.

<table>
<thead>
<tr>
<th>1 Strongly Agree</th>
<th>2 Agree</th>
<th>3 Neutral</th>
<th>4 Disagree</th>
<th>5 Strongly Disagree</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. I can see each day as a series of small personal goals to meet.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. I am very good at focusing my efforts on attaining a goal.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Sometimes I set myself little goals for the next day.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. I try my best not to leave small goals half done.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. I can see how my achievement of smaller goals enables me to build towards bigger goals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Sometimes I can lift my mood by thinking of little goals I have achieved.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Sometimes at night I think of small goals I have achieved during the day.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. My days are usually just about getting through to the end.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. I encourage myself to keep pursuing little goals every day.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. It is success at the little goals that encourages me to try for bigger goals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. When I am feeling down, I still try to work towards very little goals.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Some mornings I review the little goals I achieved yesterday.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>13. For me, each day lets me make small achievements, such as watching TV, taking a shower, eating well, talking with a friend and so on.</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Below is a list of feelings, sensations, problems, and experiences that people sometimes have. Read each item and then mark the appropriate choice in the space next to that item. Use the choice that best describes how much you have felt or experienced things this way during the past week, including today. Use this scale when answering:

<table>
<thead>
<tr>
<th>1 Not at all</th>
<th>2 A little bit</th>
<th>3 Moderately</th>
<th>4 Quite a bit</th>
<th>5 Extremely</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. Felt sad</td>
<td>32. Felt like I was having a lot of fun</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>2. Startled easily</td>
<td>33. Blamed myself for a lot of things</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>3. Felt cheerful</td>
<td>34. Hands were cold or sweaty</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>4. Felt afraid</td>
<td>35. Felt withdrawn from other people</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>5. Felt discouraged</td>
<td>36. Felt keyed up, “on edge”</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6. Hands were shaky</td>
<td>37. Felt like I had a lot of energy</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>7. Felt optimistic</td>
<td>38. Was trembling or shaking</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>8. Had diarrhoea</td>
<td>39. Felt inferior to others</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>9. Felt worthless</td>
<td>40. Had trouble swallowing</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>10. Felt really happy</td>
<td>41. Felt like crying</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>11. Felt nervous</td>
<td>42. Was unable to relax</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>12. Felt depressed</td>
<td>43. Felt really slowed down</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>13. Short of breath</td>
<td></td>
<td>44. Was disappointed in myself</td>
<td></td>
</tr>
<tr>
<td>---</td>
<td>---------------------</td>
<td>---</td>
<td>-----------------------------</td>
<td></td>
</tr>
<tr>
<td></td>
<td>14. Felt uneasy</td>
<td></td>
<td>45. Felt nauseous</td>
<td></td>
</tr>
<tr>
<td></td>
<td>15. Was proud of myself</td>
<td></td>
<td>46. Felt hopeless</td>
<td></td>
</tr>
<tr>
<td></td>
<td>16. Had a lump in my throat</td>
<td></td>
<td>47. Felt dizzy or light-headed</td>
<td></td>
</tr>
<tr>
<td></td>
<td>17. Felt faint</td>
<td></td>
<td>48. Felt sluggish or tired</td>
<td></td>
</tr>
<tr>
<td></td>
<td>18. Felt unattractive</td>
<td></td>
<td>49. Felt really “up” or lively</td>
<td></td>
</tr>
<tr>
<td></td>
<td>19. Had hot or cold spells</td>
<td></td>
<td>50. Had pain in my chest</td>
<td></td>
</tr>
<tr>
<td></td>
<td>20. Had an upset stomach</td>
<td></td>
<td>51. Felt really bored</td>
<td></td>
</tr>
<tr>
<td></td>
<td>21. Felt like a failure</td>
<td></td>
<td>52. Felt like I was choking</td>
<td></td>
</tr>
<tr>
<td></td>
<td>22. Looked forward to things with enjoyment</td>
<td></td>
<td>53. Felt like I had a lot to look forward to</td>
<td></td>
</tr>
<tr>
<td></td>
<td>23. Muscles twitched or trembled</td>
<td></td>
<td>54. Felt numbness or tingling in my body</td>
<td></td>
</tr>
<tr>
<td></td>
<td>24. Felt pessimistic about the future</td>
<td></td>
<td>55. Felt tense or “high-strung”</td>
<td></td>
</tr>
<tr>
<td></td>
<td>25. Had a very dry mouth</td>
<td></td>
<td>56. Felt hopeful about the future</td>
<td></td>
</tr>
<tr>
<td></td>
<td>26. Felt like I had a lot of interesting things to do</td>
<td></td>
<td>57. Felt like there wasn’t anything interesting or fun to do</td>
<td></td>
</tr>
<tr>
<td></td>
<td>27. Was afraid I was going to die</td>
<td></td>
<td>58. Seemed to move quickly and easily</td>
<td></td>
</tr>
<tr>
<td></td>
<td>28. Felt like I had accomplished a lot</td>
<td></td>
<td>59. Muscles were tense or sore</td>
<td></td>
</tr>
<tr>
<td></td>
<td>29. Felt like it took extra effort to get started</td>
<td></td>
<td>60. Felt really good about myself</td>
<td></td>
</tr>
<tr>
<td></td>
<td>30. Felt like nothing was enjoyable</td>
<td></td>
<td>61. Thought about death or suicide</td>
<td></td>
</tr>
<tr>
<td></td>
<td>31. Heart was racing or pounding</td>
<td></td>
<td>62. Had to urinate frequently</td>
<td></td>
</tr>
</tbody>
</table>
Follow-up Plain Language Statement

FOLLOW UP QUESTIONNAIRE
PLAIN LANGUAGE STATEMENT

Two months ago you completed a questionnaire for me, Yasmin Asgari. Thank you very much for your help so far. As part of my research you also agreed to complete a second questionnaire after an interval of two months. My research examines the relationship between personality characteristics, hypothetical situations and mood. This research is important, as it will add to our knowledge of the factors that influence mood. I am now inviting you to complete this final part of my project, conducted under the supervision of Dr. Robyn Miller.

This final questionnaire is identical to the questionnaire that you have already completed. Feel free to complete this questionnaire at your own pace, and there are no right or wrong answers for any question. Please respond to all the questions, and if you are not sure about an answer, respond in the way that best describes you. This questionnaire will take approximately 25-35 minutes to complete.

As you have already agreed to participate in this study, you are only required to fill in this final questionnaire. Please return the questionnaire in the supplied addressed, prepaid envelope provided as soon as possible.

The information that you gave me will remain totally confidential as you will not have put your name and address on the questionnaire. The consent form (previously provided) and questionnaires are numbered and they will be kept in separate and secure places. At no time after receipt will any person have access to both consent and answer sheets. Upon completion of the study, data will be secured in a locked cabinet in the School of Psychology, Deakin University for a minimum period of six years from the date of publication. Individual results will not be reported, only grouped data.

Please feel free to withdraw from this study at any time from now until the completion of the questionnaire. If any of the questions raise concern or questions that you would like to deal with, please feel free to contact me, Yasmin Asgari, on (03) XXXXXX, and I will locate an appropriate service in your area. Alternatively, you can contact Lifeline (Toll free) on 13 11 14, or the Crisis Line on 13 61 69.

If you are interested in a summary of the results do not hesitate to contact me. Please note that only grouped results will be provided and not individual results. This summary should be available after about six months by contacting me at the address below. Your participation in this important research is greatly appreciated.

Thank you.

Yasmin Asgari, School of Psychology, Waterfront campus, Deakin University, GEELONG 3217. Tel. (03) XXXXXX yasg@deakin.edu.au

Dr. Robyn Miller, School of Psychology, Waterfront campus, Deakin University, GEELONG 3217.
Appendix B

STUDY 2 (A and B) : ETHICS APPROVAL, PLAIN LANGUAGE STATEMENT, CONSENT FORM, QUESTIONNAIRE AND FOLLOW-UP
PLAIN LANGUAGE STATEMENT
Ethics Approval

DEAKIN UNIVERSITY
Human Ethics Research
Office of Research Integrity
Research Services Division
70 Elgar Road Burwood VIC 3125
Postst: 221 Bunwood Highway
Burwood Victoria 3125 Australia
Telephone 03 9251 7123 Facsimile 03 9244 6581
researchethics@deakin.edu.au

Memorandum

To: A/Prof Lina Ricciardelli
School of Psychology

B

From: Deakin University Human Research Ethics Committee (DUHREC)

Date: 06 February, 2011

Subject: 2010-256
Daily Goals and Depressed Mood: A Cross-Cultural Comparison

Please quote this project number in all future communications

The application for this project was considered at the DU-HREC meeting held on 06/12/2010.
Approval has been given for Yasemin Asgari, under the supervision of A/Prof Lina Ricciardelli, School of Psychology, to undertake this project from 9/02/2011 to 8/02/2013.

The approval given by the Deakin University Human Research Ethics Committee is given only for the project and for the period as stated in the approval. It is your responsibility to contact the Human Research Ethics Unit immediately should any of the following occur:

- Serious or unexpected adverse effects on the participants
- Any proposed changes in the protocol, including extensions of time.
- Any events which might affect the continuing ethical acceptability of the project.
- The project is discontinued before the expected date of completion.
- Modifications are requested by other HRECs.

In addition you will be required to report on the progress of your project at least once every year and at the conclusion of the project. Failure to report as required will result in suspension of your approval to proceed with the project.

DUHREC may need to audit this project as part of the requirements for monitoring set out in the National Statement on Ethical Conduct in Human Research (2007).

Human Research Ethics Unit
research-ethics@deakin.edu.au
Telephone: 03 9251 7123
From: Faculty of Psychology,  
Islamic Azad University,  
Karaj Branch, Karaj, Iran

Date: 14/01/2011

TO WHOM SOEVER IT MAY CONCERN

Subject: Daily Goals and Depressed Mood: A Cross-Cultural Comparison

According to the guidelines set by the Ethics Committee for Human Research at Islamic Azad University, Karaj branch, Iran and upon the request of Ms. Yasmin Asgari, PhD candidate of Psychology at Deakin University, Australia, an approval has been given for her to conduct the project titled “Daily Goals and Depressed Mood: A Cross-Cultural Comparison”.

Ms. Yasmin Asgari is to undertake to conduct this project in accordance with all the applicable legal requirements and ethical responsibilities. She also makes this application on the basis that it and the information it contains are confidential.

She certifies that all participants in this project will not be adversely affected and the project terminates by the expected completion date.

With Regards

Mohammad Hakami  
Ph.D. in Cross-cultural Psychology  
Dean of Faculty of Psychology  
Islamic Azad University  
Karaj Branch, Karaj, Iran  
Tel: +98 261 4182491
أظهارًا، يتم علاج المرضى بدومنة في مكان مريح ومريح موضع مريض
تحقيق من ي име ارتباط مباينات ضمنية، عالم، عو. خوفو، وبين و الحلم في دومن. إسادة
رامناني إن تحقيق نظر "ليما ريكابانلي " است
شركت شما در اين تحقيق غام برزك في انعام أن شما بان. برستمانامه در مورد شخصية ماندي: "من
تعقيد دارم كمال أدننمي عود متي در هر مشكن غنكي كدو" برستمانامه در مورد خال و رو
سواقاتي ماندي: "نما تاگهان حسابي ماندن. يا هو اين ليل است كه خاخ عيوبنا؟" سواقات ديگر در
مورد حالات حلقي ممكن است از شما برست كه در طول هننه کشتنی چند احساس دارمی و عم داشت.
جر کردن برست نامه ها در طو مرحله و به دامنه ترازا 8 هفته ادامه می‌گردد و بر کردن غر بر
نامه 15 تا 20 دفته طول می‌کشد. به سه را برست نامه یک یا چند یا که ارائه ارسال از بین
برداخته شده در اخبار شما برست می‌گردد. الگوی تجزیه دانشی که در برستمانامه چه در دومن و
غلط ندارند و آن را باید با توجهی به کنی به همه سوال ها حواب دهید. اگر اطمینان ندارید کام
گزینه جواب شما در، گزینه ای را انتخاب کنید که بهترین توضیح را برای شما دارد.
اگر کسی به برکناری برستمانامه می‌کند، أول بدن هرم رضایت را پرکنی. نام و آدرس توق سپی خود را در
آن بطوره و امضای کنید. پس از برکناری برستمانامه آن را به همه افراد رضایت نامه در یکت از بین تبناز و آدرس دار که در اختیار شماست گذاشته و آن را به صندوق پست بپینید. بررسی نامه نوم "را" خواهد بود.
از 8 هفته برای کان ارسال کنم. 

رضایت نامه برستمانامه هو دو شماره گزارش خواهند داشت و در جای امتی تهذیبات خواهند داشت و هیچکس به آن
دبیرسی نخواهد داشت. همه اطلاعات در یک کام تقدیم شود و در دانشگاه روانشناسی دانشگاه به
مدت حداقل 6 ماه که برای تاریخ‌گذاری عملیات انجام یافت. برست نامه به صورت گروهی برسر
خواهد شد که هر روز از افزایش اطلاعات کاملاً محدود شود. برزک اطلاعی که به شما امداد
تاریخی این تحقیق را دانشی به شما، می‌توانید با من تماس داشته و خلاصه تحقیق حدوداً 6 ماه پس از انام
آن کننده رضایت خواهید.

لطفاً هر شهران در طول انام برستمانامه احساس کردن که قادر به انام آن نبیکید. توقف کنید. هر لیگ
برست نامه در خواهد، را در توافق با من در میان پیگیری. شخیه بر مصرفی مراشک که زمانی به
مشابه چنین مثل ویدئوی تکرار نکنید. دو هر گزینه برست نامه اطلاعات طلی ارسال، شماره ثبت نام
واپسین از یک دکتر حکم دانشگاه شهید بهشتی (1) تکمیل نماید. 

Address: 
Yasmin Augani, School of Psychology, Waterfront campus, Deakin University, GEELONG 3217. Tel. (03) 5227 8426, yang@deakin.edu.au
پرسشنامه تحقیق

پرسش نامه: پرسشنامه تحقیق

اینچنان به نام: .................................................................، که در آدرس ................................................................. هستی به شماره تلفن ....................... راضی هستی که موضوع تحقیق انسانی از سوی خانم یا سایر مسئولانی که موضوع این تحقیق بررسی ارتباط میان خصوصیات شخصیتی، وضعیت های فرضی و خلاق و خوی می‌باشد، من تصمیم می‌گیرم که:

1) پرسشنامه به صورت گذاری شده به من مورد ارزیابی و نشان دهنده شده است.
2) هر اطلاعاتی که در این پرسشنامه فراهم می‌آورم به صورت که بتواند هویت من را به شخصی دیگر معرفی کند محرمانه باقی خواهد ماند و من ناشناد باقی خواهم ماند.
3) نتایج به دست آمده به منظور تحقیق استفاده خواهد شد و ممکن است در زورپانه های آکادمیک با علمی درج شود.
4) نتایج فردی به هیچ شخص دیگری داده خواهد شد مگر به دخواست و با اجازه من.
5) همچنان مختار خواهم بود تا در زمان طی تحقیق اجراه خوید را از استفاده از اطلاعات من در این تحقیق پس بگیرم و این اطلاعات در تحقیق مورد استفاده قرار نخواهد گرفت.

تاریخ
امضاء
Questionnaire

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1. In your opinion, what is the main reason for the increase in the price of commodities?
2. Have you changed your shopping habits due to the increase in prices?
3. Do you think the government should increase subsidies for essential goods?
4. Have you noticed any changes in your daily life?
5. Would you consider reducing your consumption of luxury goods?
6. How do you plan to adjust your spending habits?
7. Have you started looking for alternative suppliers?
8. Do you think the government is doing enough to address the issue of rising prices?
9. Have you started cutting back on non-essential expenses?
10. What steps are you taking to manage your finances better?
### نکات اصلی

1. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.
2. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.
3. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.
4. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.
5. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.
6. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.

### مثال

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### راهنمایی

1. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.
2. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.
3. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.
4. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.
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6. ممکن است بدن را به شکل مکملی و یا بدن را به شکل مکملی برگرداند.

### توضیحات

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ضيق لؤلؤة فرحك، وصدوم قلبي
لا يمكنني التوقف عن التفكير به،
كلماتك، أقوالي، واحسانك،
كلها ت êîëìàòû è ñîçäàëèñüêà íà äàøåãî ðàáîòàêå.

فيما يلي، بعض الأسئلة الموجهة إلى قوائم الأسئلة:

1. كيف يمكنك أن تساعدني في تحليل هذه النصوص؟
2. هل يمكنك توضيح مفهوم الحالة النفسية المذكورة؟
3. ما هو الفرق بين النص عن شكر والنص عن تأييد؟
4. كيف يمكنني استخدام النصوص في أبحاثي؟
5. ما هو الفضل في تحليل النصوص باستخدام هذه الأمثلة؟

(يرجى ملاحظة أن النصوص المذكورة في الجدول هي نصائح توضيحية وليست جزءًا من النص الفعلي.)
(23) عضلات می‌فرزند ای نگاهی می‌پرییند
(24) جستجو به ازای احساس بدنی ما می‌باشد
(25) حال می‌پیچد می‌باشد
(26) حس دمک‌داری و حرکت کردن
(27) حس کردن چهار چرخه
(28) حس کردن به هر صورت
(29) حس کردن به شروع کردن کلی تا از زمین
(30) حتی چپ برای گل نمود
(31) کلمه از آنجا که دراشت
(32) حس کردن گل داری که می‌کنند
(33) هم‌وقت را برای چبیچه‌های می‌کردن
(34) می‌پیچد و چرخه از صورت
(35) تکرار شده‌گی‌ها صورت
(36) حس کردن "بل مرز" هستم
(37) حس کردن کلی ارزو دارم
(38) صورتی‌زم
(39) بسته به میگرن احساسی کم‌کار داده
(40) در قرور دادن مشکل داشته
(41) حس کردن دوست داری که گری کن
(42) خواهان شدن احساس کردن
(43) حس کردن واقعاً کم‌هست
(44) از خود فهمیده بودم
(45) حال‌های نادر
(46) حس کردن دوست داشته
(47) حس کردن گری کن
(48) حس کردن خواهان شدن داشته
(49) احساس کردن با دوست داشته
(50) بر در قرور دادن نادر
(51) خواب احساسی می‌پری
(52) حس کردن احساسی که در گری داشت
(53) حس کردن دوست داری که گری کن
(54) حس کردن دوست داری که گری کن
(55) حس کردن دوست داری که گری کن
(56) به ویژه احساسی احساس داشته
(57) صورتی‌زم
(58) به نظر می‌رسد که به سرعت و راحتی حرکت می‌کردم
(59) ماهیم‌ها همیشه ستاره و نگرفت بودند
(60) به ویژه حس کردن خوب داشت
(61) به مرگ کردن چگونه داشت
(62) بی‌درد از داشت
پیگیری درخواست همکاری

دوست عزیز،
من پیامی عسگری دانشجوی دکترا در رشته روان شناسی در دانشگاه میکن هستم و موضوع مورد تحقیق من به ارتباط میان خصوصیات شخصیتی، حالات خلاقی و خوش بینی می‌پردازد. از اینکه در مرحله اول این تحقیق با من همکاری کردید، بسیار سپاسگزارم. برای انجام مرحله دوم این تحقیق، بپذیرید و بپذیرید، این پروژه شده خدمتتان فرستاده ام، این پرسشنامه هیچ فرقی با قبل ندارد.

شرکت شما در این تحقیق گام بزرگی در انجام آن می‌باشد. پر کردن پرسشنامه ها در طول مرحله و به فاصله تقیی 8 هفته انجام می‌گیرد. ویر کردن هر پرسشنامه 15 تا 20 دقیقه طول می‌کشد. به همراه این پرسشنامه یک پاکت پستی که هزینه ارسال آن از پیش پرداخت شده در اختیار شما قرار می‌گیرد. لطفاً پس از پرکردن پرسشنامه آن را در پاکت بگذارد و به صندوق بپندارید.

نکته مهم:
پرسشنامه ها به صورت گروهی بررسی خواهد شد نه فردی و از این رو اطلاعات شما یکجا محرومیت خواهد ماند. عنوان نام خود اختاری است.

برای هر گونه پرسش با اظهار نظر با آدرس، شماره تلفن یا ایمیل من در زیر تماس بگیرید.

از همکاری شما صمیمانه سپاسگزارم.

با آرزوهای سلامتی و موفقیت شما
واشنون عسگری

Address:
Yasmin Asgari, School of Psychology, Waterfront campus, Deakin University, GEELONG 3217.
Tel. (03) 5227 8426, yasg@deakin.edu.au
Appendix C

STUDY 3 (A and B) : ETHICS APPROVAL, PLAIN LANGUAGE STATEMENT, CONSENT FORM, QUESTIONNAIRE AND FOLLOW-UP
PLAIN LANGUAGE STATEMENT
Ethics Approval

DEAKIN UNIVERSITY
Human Ethics Research

Office of Research Integrity
Research Services Division
70 Elgar Road, Bunyip Victoria
Postal: 321 Bunyip Highway
Bunyip Victoria 3125 Australia
Telephone 03 9231 7123 Facsimile 03 9244 6581
research.ethics@deakin.edu.au

Memorandum

To:          A/Prof Lina Ricciardelli
             School of Psychology

B

cc: Yasmin Asgari

From:        Deakin University Human Research Ethics Committee (DUHREC)

Date:        09 February, 2011

Subject:     2010-255
             Daily Goals and Depressed Mood: A Cross-Cultural Comparison

Please quote this project number in all future communications

The application for this project was considered at the DU-HREC meeting held on 06/12/2010.

Approval has been given for Yasmin Asgari, under the supervision of A/Prof Lina Ricciardelli, School of Psychology, to undertake this project from 09/02/2011 to 09/02/2013.

The approval given by the Deakin University Human Research Ethics Committee is given only for the project and for the period as stated in the approval. It is your responsibility to contact the Human Research Ethics Unit immediately should any of the following occur:

- Serious or unexpected adverse effects on the participants
- Any proposed changes in the protocol, including extensions of time
- Any events which might affect the continuing ethical acceptability of the project
- The project is discontinued before the expected date of completion.
- Modifications are requested by other HRECs

In addition you will be required to report on the progress of your project at least once every year and at the conclusion of the project. Failure to report as required will result in suspension of your approval to proceed with the project.

DUHREC may need to audit this project as part of the requirements for monitoring set out in the National Statement on Ethical Conduct in Human Research (2007).

Human Research Ethics Unit
research.ethics@deakin.edu.au
Telephone: 03 9251 7123
اظهار نامه در خواست همکاری

من با خودم عضوی دانشجوی دکترای رشته روان شناسی در دانشگاه دیکن هستم و موضوع مورد تحقیق من به ارتباط میان خصوصیات شخصیتی، خلا و خور، خوژون بین و هرگونه می‌ورود. استاد راهنماي این تحقیق دکتر "آیدا ریکورتی" است.

شرکت شما در این تحقیق گام برگزی در انجام آن می‌باشد. بررسی‌نامه دیگر در مورد شخصیت مانند: "من عقیله‌های که مسئولیت اندازی‌های توکات بر هر مشکلی علیه کند" بررسی‌نامه‌های دیگر در مورد حالات خلاق ممکن است از شما نیز که در طول هفته گنجشته ویژه احساس ناراحتی و غم داشته‌اید.

پر کردن بررسی‌نامه‌های نامه‌ای در نور مرحله و به داشته‌شدن نظریه‌ای ۸ هفته انجام می‌گیرد و پر کردن به بررسی، نامه ۱۵ تا ۲۰ دقیقه طول می‌کشد. به حرکت‌های بررسی‌نامه بکار گرفته شده که هزینه‌ای ارسال آن از پیش برداخت شده در اختیار شما قرار می‌گیرد. لطفاً نرخه‌نامه داستان که در بررسی‌نامه ارسال کنید به درخواست‌تان می‌رسانید. گفته می‌شود هر ۸ هفته برای یک تا چند سال کم.

اگر میلی به بررسی‌نامه‌های انتخاب‌کننده، نامه‌ای دارد که به درخواست‌تان می‌رسانید. انتخاب‌کننده نامه‌ای دارد که به حرکت‌های بررسی‌نامه بکار گرفته شده که هزینه‌ای ارسال آن از پیش برداخت شده در اختیار شما قرار می‌گیرد. لطفاً نرخه‌نامه داستان که در بررسی‌نامه ارسال کنید به درخواست‌تان می‌رسانید. گفته می‌شود هر ۸ هفته برای یک تا چند سال کم.

رضایت‌نامه و بررسی‌نامه هر دو تشریح گزارشی داده و در جای اصلی دکترای خواهد تجدید و هیچگونه به آن کسب و کردن داشته نمی‌شود. همه اطلاعات در یک کمک فلش شده و در دانشگاه دیکن دانشگاه که به مدت حداقل ۶ سال از تاریخ جاب آن دکترای خواهد تجدید. بررسی‌نامه‌ها به صورت مبنا دری سی و دکترای خواهد ماند. اگر علاقه‌مندید که خلاصه‌ای از نتایج این تحقیق را داشته باشید، می‌توانید با من تماس بگیرید. خلاصه‌نامه تحقیق حدود ۶ ماه پس از انجام

ان کسب و کردن داشته نمی‌شود.

لطفا برای زمان در طول انجام بررسی‌نامه احساس کرده که قادر به انجام آن نیستید، توقف کنید. هر نوع بررسی که برخوانش، با می‌توانید با من در مورد میان دگرداریتی. همینطور در صورت بهبود مشکلی، می‌توانید به ممامز و توانایی می‌توانید با آن‌ها ارتباط برقرار کنید. برای این که در بررسی‌های اظهار نظر با آدرس آنها، توجه کنید که این ارتباط با بررسی‌های دیگری از مکان‌های دیگر سایتهای سیاست‌گذاری.

Address:
Yasmin Asgari, School of Psychology, Waterfront campus, Deakin University, GEELONG 3217. Tel. (03) 5227 8426, yasg@deakin.edu.au
کمیته آداب تحقیق انسانی دانشگاه دیکن
رضایت نامه: پرسشنامه تحقیق

اینجا نام (نام)..............................................................................................................................................................................، که در آدرس
...........................................................................................................................................................................................

سکن هستم به شماره تلفن................................................................... راضی هستم که موضوع تحقیق
انسانی از سوی خانم پاسیفکی باشم و میدانم که موضوع این تحقیق بررسی
ارتباط میان خصوصیات شخصیتی، وضعیت های فرضی و خلق و خر می باشد.

من تصمیم می کنم که:

1) پرسشنامه به صورت کدگذاری شده به من تحویل داده شده است و نام و آدرس
من از کجا جدا نشته است.

2) هر اطلاعاتی که در این پرسشنامه فراهم می آورم به هر صورت که باشد
هویت من را به شخصی دیگر معرفی گند محرمانه باقی خواهد ماند و من
ناشناس باقی خواهم ماند.

3) نتایج به دست آمده به منظور تحقیق استفاده خواهد شد و ممکن است در زورنال
های اکادمیک با علی درجه شود.

4) نتایج فردی به هیچ شخص دیگری داده نخواهد شد و مگر به درخواست و با اجازه
من.

5) همسان مختار خواهان بود تا در هر زمان طی تحقیق اجازه خود را از استفاده از
اطلاعات من در این تحقیق بسیاری پیدا کردم و این اطلاعات در تحقیق مورد استفاده
قرار نخواهد گرفت.

امضا
تاریخ
نمونه سوالات از پرسشنویسیات و شاخه‌های مختلف آزمون‌نویسی:

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در پاسخ‌گیری به این پرسشنویسیات، شاخه‌های مختلف آزمون‌نویسی در مورد کیفیت و کارایی آنها آزمایش شد. این پرسشنویسیات به‌طور کلی برای ارزیابی نیازهای شناختی و تربیتی چهارگانه به‌کار رفته است.
راهنمای: هر مورد به نکته‌ای کوتاهی و به‌استفاده از نهجی بندی زیر نوشته‌ای را که بهتر شما را توصیف می‌کند دوباره مطابق به‌شماره صحیح را پیدا کنید.

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در زیر فهرستی از احساسات، جنبه‌های مشکلات و جنایتهایی که همانگان گاهی دارد آمده است. هر مورد را بخوانید و از مزیت و معایب ماواندی که شامل زیر از دیگر نشان دهنده احساسات و شناخت و در مونیه‌ها و ارزیابی بیشتر انجام پذیرد.

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پیگیری درخواست همانی

دوست عزیز،
من بایستی عملیاتی دانشجویی در رشته روانشناختی در دانشگاه دیکن هستم و موضوع مورد تحقیق من به ارتباط میان خصوصیات شخصیتی، حالات خانواده و خوش بینی می‌پردازید. از اینکه در مرحله اول این تحقیق با من همکاری کردید، بسیار سپاسگزارم. برای انجام مرحله دوم این تحقیق، یک پرسشنامه و یک پیش انتخابی دریافت شده خدمتتان فرستاده ام، این پرسشنامه جهت فرایند یافتن یکی‌تایی مشابه تدابیر شرکت شما در این تحقیق گام بزرگی در انجام آن می‌باشد. بر کردن پرسشنامه ها در دو مرحله و به فاصله تقریباً 8 هفته انجام می‌گیرد و یک کردن هر پرسشنامه 15 تا 20 دقیقه طول می‌کشد. به همراه این پرسشنامه یک پیش‌بینی که هزینه ارسال آن از پیش پرداخت شده در انتخاب شما قرار می‌گیرد. لطفاً پس از پر کردن پرسشنامه آن را در پاکت بگذارید و به صندوق بین‌دانه بگذارید.

نظره مهندس
پرسشنامه ها به صورت گروهی بررسی خواهد شد و از این رو اطلاعات شما کاملاً محرمانه خواهد بود. عنوان نام خود انتخابی است.

برای هر گونه پرسش یا اظهار نظر با آدرس، شماره تلفن یا ایمیل من در زیر تماس بگیرید.

از همکاری‌های شما صمیمانه سپاسگزارم.

با آرزوهای سلامتی و نجاتی شما

پاسخ‌گویی عضویت

Address:
Yasmin Asgari, School of Psychology, Waterfront campus, Deakin University, GEELONG 3217. Tel. (03) 5227 8426, yasg@deakin.edu.au
Appendix D

COPY OF PUBLISHED ARTICLE
(RESULTS OF STUDY 1A)
Depression in the community setting: Development and initial validation of the Daily Goals Scale

Yasmin ASGARI and Lina Angela RICCIARDELLI
School of Psychology, Deakin University, Geelong, Victoria, Australia

Key words
community settings, daily goals, depression

Correspondence
Yasmin Asgari, School of Psychology, Deakin University, 27 Brougham St, Geelong, Vic. 3220, Australia.
Email: yang@deakin.edu.au

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Abstract
Background: Several studies have demonstrated that constructing simple daily goals in the form of positive activities alleviate depressed mood. However, currently there is a paucity of scales for assessing the setting of simple daily goals. The purpose of the current study was to evaluate the psychometric properties of the Daily Goals Scale (DGS), a new scale designed to measure the propensity to set and achieve small daily goals.

Methods: This study examined the construct validity and reliability of this new scale in a community-based sample of (N = 178) men and women (aged 18–70 years). All participants were asked to complete the DGS, along with the Mood and Anxiety Symptom Questionnaire, Automatic Thought Questionnaire, Negative Disposition, Adaptive Bias Scale, and Hope Scale.

Results: The results provided evidence for the scale’s factorial validity. Findings also showed that the DGS was internally consistent. Moreover, both convergent and discriminant validity were demonstrated. Notably, the DGS negatively correlated with anhedonic depression, but it was unrelated to the measure of anxiety.

Conclusion: The DGS demonstrated adequate psychometric properties and is an easy-to-use self-report measure of the propensity to set and achieve small daily goals.

Key Points
1 The Daily Goals Scale (DGS) was designed to measure the propensity to set and achieve small daily goals.
2 The DGS demonstrated acceptable psychometric properties.

Depression is a costly and disabling mental health problem around the world (World Health Organisation (WHO), 2012), and the most common mental health problem in Australia (Hawthorne, Cheek, Goldney, & Fishé, 2003; Nehmý, 2010). In addition to the high prevalence of depression, recurrence, relapse, co-morbidity, and chronicity for one’s whole life are additional aspects of depression that need to be considered (Addis & Martell, 2004; Layous, Chancellor, Lyubomirsky, Wang, & Doraïswamy, 2011; WHO, 2012). There are unreported and untreated cases of depression in communities (Andrews & Henderson, 2000; Jorm, Griffiths, Christensen, Parlow, & Rogers, 2004), often attributable to stigma, poor knowledge about depression and services available, inability to afford treatment costs, and inappropriate health-care services (Goldman, Nielsen, & Champón, 1999; Lam & Mok, 2008; Layous et al., 2011).

There are a large number of individuals in communities who experience at least some depressive symptoms (Jorm & Griffiths, 2006). Most of these individuals feel that they are able to cope and view it as their problem (Jorm & Griffiths, 2006). However, there is evidence to show that depressive symptoms, which increase in duration and severity, may lead to a major depressive disorder.
Research that has examined the treatment of clinical depression has grown significantly over the past two decades, but research that focuses on the prevention of depression is more limited (Nelson, 2010). Although alleviating depression is crucial, it has been suggested that prevention strategies that target the community population are needed (Form & Griffith, 2005). Moreover, there is limited research on non-clinical depression in community samples that promotes simple self-help strategies to prevent depressive symptoms before the first onset of depression. One core component of various different treatments (i.e., cognitive behavioral therapy, interpersonal therapy, emotion-focused therapy, and others), which can also be used in self-help approaches, is the focus of “activity scheduling” (Addis & Martell, 2004; Kohn, 2009; Kohn, 2009) highlights the need to research components that are common to different therapies such as activity scheduling. Through the activity scheduling (behavioral activation), individuals record and monitor daily activities that are simple and enjoyable, and this is used to help relieve negative moods and restructure negative cognitions (Rehm, 2019).

One specific type of activity scheduling is the setting of daily goals. Goals are simple and achievable activities that are conducted every day. Several studies have provided evidence to show that increasing the number of daily goals can improve mood among individuals diagnosed with depression (e.g., Dobson et al., 2008; Lewinsohn, 1976; Nicklin, 2009; Snyder & Lopez, 2009). There is also evidence showing that the number of activities is associated with higher levels of well-being among a non-clinical sample (Mazzucchelli, Kane, & Rees, 2010). In addition, engagement in daily activities may change the pattern of internal avoidance and inactivity that help to reduce the feeling of depression (Thompson & Bullock, 2012).

The importance of boosting simple and pleasant activities to prevent depression is also at the fundamental bases of positive psychology (Seligman, 2010). Positive psychology highlights qualities such as engagement in positive activities, hope, optimism, perseverance, and life meaning. Research about goal setting in the framework of positive psychology has also been linked to optimism and hope in the prevention and treatment of depression (Rehm, 2010; Seligman, 1991; Seligman, Stein, Park, & Peterson, 2005; Snyder et al., 2005). Studies have shown that hope and optimism help depressed individuals to experience other positive emotions and cognitions such as confidence and motivation through the process they use to achieve their goals (Hankins, 2001). Moreover, it has been found that positive emotions can foster successful performance in a variety of life domains (Layous et al., 2017).

There are several current measures that assess different aspects of setting daily goals; however, none of these specifically focus on the propensity to set and achieve small daily goals. For instance, the Staying Assessment Scale (Simmons, 1986) focuses on the desire to attain a goal rather than the actual setting of daily goals. Another measure, the Conditional Goal Setting scale (Stern, 2001) assesses the motivations towards selecting a goal. Two other related goal setting measures are the Hope Scale (Snyder et al., 1991) and the State Hope Scale (Snyder et al., 1996). Both of these scales measure the thinking associated with attempting a goal (Snyder, 2000) and they focus more on general life goals than daily goals. The only available instruments for planning and monitoring everyday goals and activities are the Activity Scheduling Form (Rehm, Bruch, Shaw, & Emery, 1979) and Daily Diaries (Hopko, Lejuez, LePage, Hopko, & McNeil, 2003). Both of these are clinical tools used in treatment but they have not been validated for their psychometric properties.

The overall aim of the current study is the development and validation of a new scale, the Daily Goals Scale (DGS). Specifically, the DGS was designed to measure the propensity to set and achieve small daily goals. The first aim was to investigate the factor structure of the DGS in a community sample of adults. The second aim was to provide preliminary evidence for the scale’s convergent and discriminant validity. In order to show convergent validity, the DGS was examined in relation to anhedonic depression, hope, optimism, and negative cognitions. It was predicted that there would be a negative correlation between the DGS and anhedonic depression and the other negative cognitions, but that DGS would be positively related to hope and optimism. In order to show discriminant validity, the DGS was examined in relation to a measure of anxiety and it was predicted that the DGS would be unrelated to this measure.

Method

Participants

The participants were 62 men and 116 women. They were aged between 18 to 70 years (mean (M) = 44.06, standard deviation (SD) = 13.02). Seventy-three percent were born in Australia and 23% spoke another language in addition to English.
Procedure
The study was approved by the Deakin University Human Research Ethics committee. Participants were recruited using "snowballing" techniques. Questionnaire packets were given out to colleagues, friends, and family members, and they were then invited to assist with giving these out to their own contacts. All interested participants were given a questionnaire packet which included a plain language statement describing the study and inviting them to take part. In the study, it also included the contact details of the principal investigator so that any interested person could obtain further information. Interested persons completed the packet of questionnaires in their own time and returned the information to the principal researcher in a reply-paid envelope. Five hundred questionnaires were distributed and 178 were returned (35.6%).

Measures

DGS
The DGS content was generated by an initial pool of 13 items from the literature (Beck, 1976; Persons, Davidson, & Tomkins, 2001; Snyder & Lopez, 2002; Street, 2001, 2002). Item content focused on the propensity to set and achieve small daily goals. Specifically included were items that assessed goal orientation (e.g., I can see each day as a series of small personal goals to meet), goal setting (e.g., Sometimes I set myself little goals for the next day), willpower and discipline (e.g., I try my best not to leave small goals half done), goal successes (e.g., Sometimes at night I think of small goals I have achieved during the day), and goal review (e.g., Some mornings I review the little goals I achieved yesterday). The items were reviewed critically by an expert clinical psychologist and two other experts working in the field to ensure appropriate content validity and clarity of the items (Kuntsche & Wettersten, 2006). Each item was rated on a 5-point scale that ranged from 1 = strongly disagree to 5 = strongly agree.

Negative Disposition (ND)
ND is a six-item subscale derived from the 45-item Questionnaire of Explanatory Style (QES; Hawkins, 2004) and measures the tendency to attribute internal and stable causes to negative events as a form of pessimistic construct. Items are rated on a 5-point scale that ranged from 1 = highly unlikely to 5 = highly likely. Scores were calculated by summing all items. Previous studies have shown that the scale has an acceptable internal consistency of .67, test-retest reliability of .82, and both convergent and discriminant validity (Hawkins & Miller, 2006).

Adaptive Bias Scales (ABS)
The 12-item ABS (Miller, 2004) is a validated measure that contains two subscales measuring positive or Optimistic Bias (OB), which can be seen as resilience to depressed mood, and Self-Satisfaction (SS). Both the OB and SS scales have six items which are rated on a 5-point scale, ranging from 1 = very untrue, 5 = very true. Responses to these items are summed to yield a total score, with higher scores representing greater optimistic bias or greater self-satisfaction. The scale has acceptable internal consistency, with an alpha value of .66 for a community sample (Buckley, 2002); high test-retest reliability (Doyle, 2004); and good convergent and discriminant validity (Miller, 2004).

Automatic Thoughts Questionnaire (ATQ)
The ATQ (Beck et al., 1980) is a 36-item scale designed to measure the frequency of automatic negative thoughts associated with depression. Personal maladjustment and disorder for change (PMDC) and negative self-concept and negative expectations (NSNE) are two subscales of ATQ used in this study. Items are rated on a 5-point scale that ranged from 1 = highly unlikely to 5 = highly likely. ATQ has been found to have a high internal reliability, with values ranging from .86 to .96 (Bull, Olé, & Hill, 1989; Joseph, 1994). Convergent and discriminant validity for the scale have been established (Ingram, Kervin, Smith, Dormoll, & Roman, 1987).

Hope Scale
The Hope Scale (Snyder et al., 1995) is a 12-item scale designed to measure two components of Snyder's conception of hope. These components include a sense of personal agency related to goal attainment and the ability to recognize or generate pathways to reach a goal. A 4-point rating scale (1 = definitely false to 4 = definitely true) was provided to participants to respond. Internal consistency reliability estimates have been found in acceptable ranges for the scale as a whole (α = .76) (Snyder et al., 1996). Construct and discriminant validity of the Hope Scale has been demonstrated (Babakus, Snyder, & Vodanovich, 1993; Snyder et al., 1994).

Mood and Anxiety Symptom Questionnaire (MASQ)
The short form of the MASQ (Watson & Clark, 1991) was used to measure symptoms specific to depression and
anxiety in addition to symptoms of general psychological distress. The MASQ subscales, Anhedonic Depression (AD; 22 items) and Anxious Arousal (AA; 17 items) were used in this study. Participants indicate how much they have felt or experienced each item on a 5-point scale, ranging from 1 = not at all to 5 = extremely. Higher scores on each of subscales reflect greater levels of depressive or anxious symptomology. Previous research has shown high internal consistency for both AD (α = .92) and AA (α = .86) (Kuckin, Abouassaly, Miller, & Healee, 2004). In addition, the MASQ has demonstrated both construct, convergent and discriminant validity (e.g., Ralph & Mineka, 1998; Watson et al., 1995).

Results
Factor Structure of the DGS
The factorability of the 13 DGS items was examined using three well-recognized criteria. Firstly, 12 of the 13 items correlated at least .3 with at least one other item, suggesting factorability. Secondly, the Kaiser-Meyer-Olkin measure of sampling adequacy was .89, above the recommended value of .60. Finally, the Bartlett’s Test of Sphericity (Tabachnik & Fidell, 2007) was conducted and reached statistical significance, thus indicating the data were suitable for factor extraction. Principal component analysis extraction was used to produce the initial unrotated solution. A varimax rotation was performed on the factor matrix. Three factors were retained, each accounting for 88% of the variance for this first run as shown in Table 1. Only item 8 did not load on this factor and was removed from the scale.

Descriptive Statistics and Internal Consistency
Participants’ scores on the DGS ranged from 20 to 55 (M = 39.33, SD = 6.41). The DGS’s internal consistency, as assessed by Cronbach’s alpha, was high, .85. Table 2 displays the reliabilities, scale ranges, M’s, and SD’s of all of the other measures used in this study. All internal consistencies were acceptable, and ranged from .69 to .85.

The results of this study identified that 51% of the participants scored above the cut-off score of 58 on AD (Buxby, 2002), which is indicative of being at high risk of depression. M’s and SD’s obtained from this sample were also compared with those by other studies. In order to establish whether the current samples’ scores were similar to other community samples. As shown in Table 3, these were on the whole, comparable with those

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Table 1: Factor loadings based on a principal component analysis for 13 items from the Daily Goals Scale (N = 178)

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<td>0.93</td>
</tr>
<tr>
<td>6.</td>
<td>0.94</td>
</tr>
<tr>
<td>7.</td>
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</tr>
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<td>9.</td>
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<td>10.</td>
<td>0.98</td>
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<tr>
<td>11.</td>
<td>0.99</td>
</tr>
<tr>
<td>12.</td>
<td>1.00</td>
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</tbody>
</table>

Table 2 also includes the correlations between all measures. The data yielded consistent evidence of convergent validity of the DGS. In line with expectations, there was a moderate positive correlation between the DGS and AD (r = .40). It was also expected that the DGS scores would positively correlate with Hope and the two subscales of the ABS (OB and SS). Consistent with expectations, there were moderately high correlations between the DGS and HOP-E (r = .44) and HOP-A (r = .42). Also as it was expected, there was a moderate negative correlation between the DGS and QES-ND (r = -.37) and DGS and ATQ-PM (r = .36).
and a low negative correlation with ATQ-NSMI (−.24). The only unexpected finding was that SS failed to correlate with the DGS. Lastly, the results provided support for the discriminant validity in that there was no correlation between the DGS and AA (−.04).

**Discussion**

The present study was designed to develop and validate the new scale, the DGS, for measuring the propensity to set and achieve small daily goals. The findings suggest that the DGS complies one factor reflecting ongoing daily goals. Furthermore, the DGS was found to demonstrate a high level of internal consistency and both convergent and discriminant validity.

### Factor Analysis and Internal Consistency

Twelve of the 13 items loaded on a general factor reflecting strategies to help set and complete small daily goals. These included a range of strategies such as goal orientation, goal setting, use of willpower and discipline, focusing on successes, and reviewing goals. The coherence of this scale is further confirmed by the high internal consistency. Only item 8 ("My days are usually just about getting through to the end") was deleted from the scale, as this item did not load on the extracted factor. This item is not focused on the achievement of any specific day to day goal but appears to be assessing the general goal of managing one's overall day.

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Convergent and Discriminant Validity

The findings of this study provided support for both the convergent and discriminant validity of the DGS. In line with expectations, there was a moderate negative correlation between the DGS and AD. The findings suggest that individuals with low scores on the DGS may experience more negative emotions and less positive meaning for daily activities. Inactivity associated with avoidance to engage in daily goals is one of the key factors to maintain depressive symptoms (Adams & Mastell, 2004), and there is evidence that increasing meaningful and pleasurable activities assists individuals overcome passivity and avoidance (Thompson & Balloock, 2012). On the other hand, individuals with higher scores on the DGS are reporting lower scores on the AD. This finding is consistent with other studies which suggest that promoting daily activities would be effective for the reduction of mild to moderate depressive symptoms in community and clinical settings (Weiss, 2008).

The results also showed moderate negative correlations between the DGS and both ND and ATQ: while AD had a positive correlation with both ND and ATQ. These results clearly show that the reduced propensity to set and achieve small daily goals is associated with both depressed mood and negative cognitions. When people are physically and emotionally inactive, they feel more overwhelmed which is often followed by increased pessimistic and negative cognitions, making a downward loop for more negative thoughts and depressed feelings (Lick & Alford, 2009). Thus, setting and completing small daily goals may be useful to assist individuals to recognize and modify the frequency of mood-related negative cognitions. If individuals are successful in achieving their daily goals, positive cognitions (e.g., hope and optimism) may receive a boost resulting in enhancement of motivation for more activities (Seldman, Rand, & Kahlke-Wrangel, 2009).

It was expected that the DGS would also correlate with Snyder’s Hope Scale (Snyder, 2000). In line with expectations, there was a moderate positive correlation between the DGS and the Hope Scale. Daily goals and hope are two interrelated components that enable individuals to accomplish their activities (Carver & Scheier, 2001). It has been suggested that attainable daily goals are needed to generate hope; however, hope is also needed to make purposeful progress towards achieving the goal (see Snyder et al., 2000).

The DGS also demonstrated a moderate positive correlation with OB, the measure of optimism. This finding is consistent with the views of Carver and Scheier (2001) who have argued that optimists believe that they are able to achieve their goals, and thus pursue them with more perseverance. Optimism results in positive meaning and values in normal daily activities. Additionally, one explanation for the positive relationship between the DGS and both OB and Hope is that these are related positive human strengths. As argued by Seligman (2005), optimism and hope are human strengths that can assist us grow and can be used to buffer the effects of depression.

The results also provided support for the discriminant validity of the DGS. There was no correlation between the DGS and AA. The evidence from this study suggests that while the DGS is related to depression, it is not related to anxiety. Therefore, the DGS would not be useful in any self-help approaches designed to monitor and manage anxiety.

Implications and Future Research

There is evidence that increasing daily activities may foster positive emotions and cognitions (such as optimism and hope) and reduce depressive symptoms (e.g., Lewis & Leshnower, 2012; MacLeod & Moore, 2000; Seligman, 2005). However, many individuals experiencing depression are unable to effectively change their activity levels without assistance. A strength of the DGS is its capacity to easily identify individuals who have a low propensity to set and achieve small daily goals. This will allow clinicians to develop tailored interventions which focus on the level of assistance individuals require to raise their skill levels in this domain. This is a critical step towards behaviour change which is often overlooked. However, this skill needs to be mastered if the monitoring of small daily goals by the individual is to be achieved. The simple format of the DGS also suggests that it may be suitable for individuals from a variety of cultures and communities.

More studies are now needed to test whether the monitoring of daily goals can reduce negative emotions and cognitions as well as improving the mood. This needs to be evaluated among individuals with mild depression but also among individuals who have yet to develop or demonstrate any depressive symptoms.

Limitations of the Present Study

Limitations in the present study need to be noted. Firstly, the sample was a convenience one and therefore may not be reflecting the levels of depressive symptoms found in the community. The number of participants who scored above the cut-off score indicative of subclinical depression was 31%. This is high and even higher than the levels first reported with the original scale; however, other studies have also reported high levels of depression as assessed by the MASQ (Farrand et al., 2004). It is possible that individuals with higher levels of depression...
were more interested in participating in the study, thus, additional studies which ensure a more representative sample of Australians are required.

The construct validity of the DGS has been demonstrated; however, given that it is a new scale, it requires further validation. The DGS specifically focused on attending to, planning, setting, and reviewing small daily goals. These are all important aspects of daily goal setting, and were found to load on a single factor. However, this may be an artefact of the limited number of items that were included so more research is now needed to more fully examine these different components by ensuring that more items are included to represent each component. More work is also needed to examine how well the DGS can predict depressive symptoms and other constructs in the longer term. Furthermore, examining how the DGS is associated with other measures such as self-efficacy (Bandura, 2006), motivation (Mayer, Fisher, & Xu, 2007), and positive meaning in life (Seligman, 2005) is also needed.

Conclusion

In summary, a new scale that measures the propaneness to set and achieve small daily goals was developed and validated. The DGS met the basic psychometric standards of self-report scales. In addition, given the DGS is a simple and easy-to-understand scale, it can easily be incorporated into interventions by clinicians.

References


Appendix E

A SUMMARY OF DEMOGRAPHIC VARIABLES FOR ALL STUDIES
### A Summary of Demographic Variables for All Studies

<table>
<thead>
<tr>
<th>Measures</th>
<th>Australians (N=178)</th>
<th>Iranian-Australians (N=210)</th>
<th>Iranians (N=375)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>N (A) %</td>
<td>N (O) %</td>
<td>N %</td>
</tr>
<tr>
<td>Country of Birth</td>
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<td>2 (.1)</td>
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</tr>
<tr>
<td>Language</td>
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<td>18 (10)</td>
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<tr>
<td>Education</td>
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<tr>
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<td>153</td>
</tr>
<tr>
<td>Length of Stay</td>
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</tr>
<tr>
<td></td>
<td>NA</td>
<td>NA</td>
<td>1-29</td>
</tr>
</tbody>
</table>

Note: N=number, A=Australia, O=other (second language), NA=Not Applicable, Low=high school and lower, Mid=bachelor, High=master and above
Length of Stay= ranged from 1 year to 29 years