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An investigation into the influence of cross-cultural differences in self-consistency and desirability on well-being and posttraumatic psychological adjustment.

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Abstract

Objectives: The self (content and structure) has been shown to play a major role in psychological processes involved in well-being and universal disorders, including depression, anxiety and posttraumatic stress disorder (PTSD). However, many theories of such disorders give little consideration to research demonstrating an influence of culture on the self. Furthermore, while research has considered self-concept structure (i.e., self-consistency), self-concept content has been given less attention. The objectives of the current study were to investigate the influence of cross-cultural differences in self-concept *structure* and *content* on well-being (Study 1a) and posttraumatic psychological adjustment (Study 1b).

Design: A two-group (British vs. East Asian) quantitative cross-sectional design was used. Participants (172 British, 122 East Asian) in Study 1a completed self-report measures assessing self-consistency and well-being. Of the participants in Study 1a, 83 British and 41 East Asian had experienced a traumatic event and thus also took part in Study 1b. In Study 1b participants completed measures assessing trauma-centrality and PTSD symptoms.

Results: British participants showed greater overall self-consistency. When investigating *content* (i.e., desirability of characteristics) British participants showed greater desirable types of consistency. In contrast, East Asian participants showed greater undesirable types of self-consistency. Significant relationships were found for both cultural groups between self-consistency and well-being. Specifically, consistency to undesirable characteristics was found to significantly correlate with lower levels of well-being (Study 1a). Relationships between self-concept (structure and content) and posttraumatic psychological adjustment were less clear (Study 1b).

Conclusions: This study highlights the complex relationship between self-concept and well-being and emphasises the importance of *structure* and *content*. It also draws attention to the influence of culture. Further research is required to make firm conclusions in relation to

PTSD. This study further supports the cross-cultural consideration of well-being and PTSD, highlighting the importance of future investigation when considering culturally appropriate models and interventions.

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TABLE OF CONTENTS

Abstract……………..…………………………………………………………..…………….…..I

Acknowledgements……………..………………………………………………..………..III

List of Tables……………………………………………………………………………..1

List of Figures……………………………………………………………………………1

1 Introduction…………………………………………………………………..………..…..2

1.1 Overview…………..……………………………………………………..……....…2

1.2 The Self…………………………………………………………………..………….5

1.2.1 Definition……………………...……………………………………………..……5

1.2.2 Self-concept………………………………………………………………………6

1.2.3 Self-consistency……………………………………………………...……….…..6

1.2.4 Importance of the self……………………...…………………………………...7

1.3 Well-being………...……………………………………………………...…………..8

1.3.1 Definition……………………...……………………………………………..……8

1.3.2 Depression...……………………………………………………………………9

1.3.2.1 Clinical features and diagnosis…………………..……………………………...9

1.3.2.2 Epidemiology and socio-economic impact……………………………………..9

1.3.2.3 Etiology…………………………………………………………………..11

1.3.2.4 Psychological theories of depression……………………………………….11

1.3.2.4.1 Cognitive theories of depression…………….…………………………...11

1.3.2.4.2 Self-complexity theory……………………………………………...12

1.3.2.5 Treatment approaches for depression……………………………………….13

1.3.3 Anxiety…....…………………………………………………………………..14

1.3.3.1 Clinical features and diagnosis…………………..…………………………….14

1.3.3.2 Epidemiology and socio-economic impact…………………………………14

1.3.3.3 Etiology……………………………………………………………………..15

1.3.3.4 Psychological theories of anxiety…..………………………………………16

1.3.3.4.1 Cognitive theories of anxiety…..…………..………………………..16

1.3.3.4.2 Self-complexity theory……………………………………………...17

1.3.3.5 Treatment approaches for anxiety….………………………………………18

1.3.4 Summary of depression and anxiety…....………………...……………………..18

1.4 The Self and Well-being…………………………………………………………19

1.4.1 Self-concept and well-being……………………...…………………….….19

1.4.2 Self-consistency and well-being……………………...……….…………..…..19

1.4.3 The impact of culture of the self and well-being……………………...………24

1.4.3.1 Culture and the self……….……………….…………………………..24

1.4.3.2 Culture and self-construals…..……………….…………………………..25

1.4.3.3 Culture and self-consistency…………….…………………………………27

1.4.3.4 Cultural differences in the relationship between the self and well-being…..28

1.4.3.5 The impact of self-concept content on the relationship between the self and well-being……..……………………………………………….…………30

1.5 Interim Summary……………………...…………………………………………33

1.6 Posttraumatic Stress Disorder (PTSD) ………………...…………………...………34

1.6.1 Clinical features and diagnosis………………...…………………...………34

1.6.2 Epidemiology……………...…………………………………...……...………35

1.6.3 Socio-economic impact……………...…………………...……………………35

1.6.4 Etiology……………...…………………...……………………………………36

1.6.5 Psychological theories of PTSD…...……………...…………………...………37

1.6.5.1 Dual representation theory ………………………………………..……..37

1.6.5.2 Self-memory system…………………………………...………..…….40

1.6.5.3 Cognitive appraisal model……………………………..…...………..…….42

1.6.5.4 Trauma centrality in identity and the self…………………...……..…….44

1.6.6 Treatment approaches for PTSD…..……………..…………………..………47

1.7 The self and PTSD………………………………..…………………..………48

1.7.1 Summary of relationships between the self-concept (including self-consistency) and PTSD………………...…………………...……………………………48

1.7.2 Cultural differences in the relationship between self-consistency and PTSD…...50

1.8 Interim Summary..……………………………...…………………...………51

1.9 Rationale for Current Study and Study Aims…………………..……………………53

1.10 Research Questions and Hypotheses………………...……………………..……..54

2 Method……………………………………………………………………..………57

2.1 Overview………...……………………………...……………………..……...57

2.2 Design…...……………………………………...…………………..………57

2.3 Participants…...……………………………...……………………..…………58

2.3.1 Inclusion and exclusion criteria…………………………………………….58

2.3.2 Sample size……………………………………..………………………..60

2.3.3 Recruitment procedure…………………………………….………………61

2.4 Measures…...……………………………...……………………..……………61

2.4.1 Situation-specific self-description task…………………………..………..…...61

2.4.2 HSCL-25………………………………………………………..….……………63

2.4.3 PDS…………………….………………………………………………………...64

2.4.4. CES………………………………….………………………….……….…...65

2.4.5 Demographic questionnaire……………………………….…...……………66

2.5 Ethical Considerations…...……………….…...……………………..……………66

2.5.1 Ethical approval…………………...……………………………….……..…...66

2.5.2 Informed consent……………………..…………………………….………..…..66

2.5.3 Managing risk and distress…………..…………………………….………..…...67

2.5.4 Confidentiality…………..…………………………..………..………………..67

2.6 Procedure…...…………………..…...…………………………..……..……………68

2.6.1 Pilot study……..…………………...…………………………….………..…...68

2.6.2 Data collection procedure………...…………………………….…….….…...69

2.6.3 Prize draw………...…………………………..……..…………………………69

2.7 Plan of Analysis…...…………………..…...…………………...……..……………70

2.7.1 Research question 1a……..……………………......…………….…………..….70

2.7.2 Research question 1b……..……………..…………………………….………..…...70

2.7.3 Research question 1c……..……………..…………………………….………..…...71

2.7.4 Research question 1d……..……………..…………………………….………..…...71

2.7.5 Research question 2a……..……………..…………………………….………..…...71

2.7.6 Research question 2b……..……………..…………………………….………..…...71

3 Results……………………………………………………………………..……..…73

3.1 Overview………...……………………………...…………………..………..73

3.2 Study 1a: Exploring Relationships between Self-consistency and Well-being……....73

3.2.1 Study participants…..…………………..…………………………….………..…..73

3.2.2 Treatment of data…..…………….……………………...……..………..…...74

3.2.3 Assumptions for parametric tests…..……………..……………………….…...75

3.2.3.1 Well-being variables……..…………………………………………..……..75

3.2.3.2 Self-consistency indices…..……………………………………...…….76

3.2.4 Descriptive data……………...…………….…..……………………………..…..76

3.2.5 Research question testing……...………………..………………………….…...76

3.2.5.1 Research question 1a……..…………………………………………..……..76

3.2.5.2 Research question 1b……..………………………………………..…….78

3.2.5.3 Research question 1c……..……………………………………….…..78

3.2.5.4 Research question 1d……..………………………………………..…….82

3.2.6 Summary of Study 1a results…..…..……………..………………………….…..83

3.2.6.1 Research question 1a summary……..……………………………..……..83

3.2.6.2 Research question 1b summary……..……………………………..……..83

3.2.6.3 Research question 1c summary……..……………………………..……..83

3.2.6.4 Research question 1d summary……..……………………………..……..84

3.3 Study 1b: Exploring Relationships between Self-consistency and Posttraumatic Psychological Adjustment……………………………………………………..………84

3.3.1 Study participants…..…….……………..………………………….……..…..84

3.3.2 Treatment of data…..……………..…………………..……….……..…...86

3.3.3 Assumptions for parametric tests…..……………..………………………….…..87

3.3.3.1 Posttraumatic psychological adjustment variables…….……………..…….87

3.3.3.2 Self-consistency indices…..……………………………………..…….87

3.3.4 Descriptive data………………...…..……………..………………………….…..88

3.3.5 Research question testing…..…...…..……………..…………………...…..…...88

3.3.5.1 Research question 2a……..…………………………………..…..……..88

3.3.5.2 Research question 2b……..………………………………………..…….89

3.3.6 Summary of Study 1b results…..…..……………..………………………….…..89

3.3.6.1 Research question 2a summary……..……………………………..……..89

3.3.6.2 Research question 2b summary……..……………………………..……..90

4 Discussion………………...……………………………………………………..………91

4.1 Overview………...……………………………...…………………..……...91

4.2 Summary of Findings…………………………...………………..…..………92

4.2.1 Study 1a……………………..…..……………..……………………………..…...92

4.2.1.1 Research question 1a……………..…………………………………..……..92

4.2.1.2 Research question 1b……………..…………………………………..……94

4.2.1.3 Research question 1c……………..…………………………………..……..94

4.2.1.4 Research question 1d……………..…………………………………..……96

4.2.2 Study 1b……………………..…..……………..……………………………..…...97

4.2.2.1 Research question 2a……………..…………………………………..……..97

4.2.2.2 Research question 2b……………..…………………………………..……98

4.3 Study Strengths and Limitations...………...………………………………..……...98

4.3.1 Design and procedure……………...……………..………………………….…..98

4.3.2 Sample…………...……………………………..………………………….…..99

4.3.3 Measures…………...……………..…………………………………...….…101

4.4 Theoretical Implications………...……….....…………………………………..……..103

4.4.1 Study 1a.…………...……………..…………………………………...……..103

4.4.2 Study 1b.…………...……………..…………………………………...….…109

4.5 Clinical Implications…………....………...…………………………………..……112

4.6 Future Research……….....………...……………...……………………………..……..115

4.7 Conclusions……….....………...………………………………………..………………...116

References……….....………...……………………………………..…………………………119

Appendices……….....………...……………………………………..………...………………140

List of Tables

Table 1. Demographic, well-being and self-consistency data by cultural group.

Table 2. Correlations between self-consistency (desirable and undesirable types of consistency) and well-being by cultural group.

Table 3. Demographic, posttraumatic psychological adjustment and self-consistency data by cultural group.

Table 4. Correlations (Pearson's r) between self-consistency (overall and desirable / undesirable types of consistency) and posttraumatic psychological adjustment by cultural group.

List of Figures

Figure 1. Participant flowchart.

1 Introduction

1.1 Overview

The self continues to be an area of significant psychological and philosophical interest. Consequently, many theories have developed in relation to different aspects of the self, including self-concept and self-consistency. These aspects of the self have a fundamental influence on many psychological processes, which are important when conceptualising and understanding psychological well-being and disorders, such as depression and anxiety. Depression and anxiety are of particular interest as they affect significant numbers of individuals and societies worldwide (Johnson, Weissman & Klerman, 1992; Mathers & Loncar, 2006) and are often used as indicators of levels of well-being (e.g., Diehl, Hastings, & Stanton, 2001; Sheldon, Ryan, Rawsthorne, & Ilardi, 1997).

Various ideas have been put forward about the relationship between the self and well-being. Of relevance to this thesis is the research investigating the influence of different self characteristics (self-concept content) and the degree of stability of these over time and context (self-consistency) on well-being. Traditionally, a consistent self-concept has been assumed to be fundamental to well-being (Lecky, 1945; Maslow, 1954; Rogers, 1951). However, two areas of work have recently suggested that this relationship may be more complex. First, the growth of cross-cultural psychology research has resulted in the questioning of whether psychological constructs and theories are as universal as once assumed. For instance, self-consistency has been found to be valued and important to well-being in individualistic cultures (i.e., cultures where ties between individuals are very loose) such as the United Kingdom and the United States (e.g., Suh, 2002). In contrast, in collectivistic cultures (i.e., cultures where ties between individuals are very tight), such as East Asian countries, self-consistency has been found to have less importance and relevance for well-being (e.g.,, Suh, 2002). Second, ideas have recently been put forward relating to

how both self-concept *content* (i.e., desirability of characteristics – honest vs. untrustworthy), as well as *structure* (i.e., self-consistency) can impact on the relationship between the self and well-being (Locke, 2006). However, while research (e.g., Cross, Gore & Morris, 2003; Suh, 2002) has examined the influence of culture on self-consistency (i.e., structure) and well-being, to date the influence of culture on the content as well as the structure of self-concept has not been explored cross-culturally. Therefore the aim of the first part of this research (Study 1a) is to investigate the influence of cross-cultural differences in self-consistency (i.e., structure) and desirability (i.e., content) on well-being.

Relationships between the self and well-being have also been explored in relation to posttraumatic stress disorder (PTSD), which is a universal disorder that can impact significantly on individuals and societies (Kessler, 2000a). It has been proposed that psychological processes relating to the self play important roles in the development and maintenance of PTSD (e.g., Brewin & Holmes, 2003). While psychological theories posit different ways of understanding the influence of these processes and the interplay between them, there is a general consensus that PTSD symptoms arise when trauma leads to disruptions in autobiographical memory (e.g., Brewin, Dalgleish, & Joseph, 1996; Brewin, Gregory, Lipton, & Burgess, 2010; Conway, 2005; Conway & Pleydell-Pearce, 2000; Ehlers & Clark, 2000). Autobiographical memory is the aspect of memory concerned with the recollection of personally experienced events and is central to our sense of self. Also, some PTSD theories focus more specifically on the self and propose that the desire for self-consistency leads to self-concept change following trauma, resulting in a trauma-centred identity and PTSD symptoms (e.g., Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000).

Although cross-cultural differences in the self have been found to play a role in processes potentially involved in posttraumatic psychological adjustment, such as self-

consistency, it has been suggested that PTSD theories (e.g., Berntsen & Rubin, 2006, 2007; Brewin et al., 1996, 2010; Conway, 2005; Conway & Pleydell-Pearce, 2000; Ehlers & Clark, 2000) often do not fully consider the influence of culture (Jobson, 2009). However, empirical work has started to explore this further. For instance, disrupted adjustment to trauma has been found to be related to stronger trauma-centred self-definitions only for individuals from individualistic cultures and not for individuals from collectivistic cultures (Jobson & O'Kearney, 2006, 2008), questioning the universality of theories suggesting that the development of a trauma-centred identity is always maladaptive (e.g., Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000). To date it has not been explored whether self-concept content, specifically desirability, as well as structure (i.e., self-consistency) can play a role in understanding posttraumatic psychological adjustment and furthermore this has not been explored cross-culturally. Therefore, the aim of the second part of this research (Study 1b) is to investigate the influence of cross-cultural differences in self-consistency (i.e., structure) and desirability (i.e., content) on posttraumatic psychological adjustment.

This introductory chapter will begin by presenting a brief description of the self. Next, psychological well-being will be described, focusing specifically on depression and anxiety. Relationships between the self and well-being will then be discussed, including a consideration of cross-cultural influences. The chapter will then describe PTSD, focusing on psychological processes involved in the development, maintenance and treatment of PTSD. Relationships between the self and PTSD will be highlighted, with a discussion of cross-cultural influences on these relationships. Finally the chapter will outline the rationale and aims of the current study, followed by the research questions and hypotheses to be tested.

1.2 The Self

1.2.1 Definition. The notion of the self has been discussed for many years, with definitions linking to philosophical perspectives. For example, John Locke, an English philosopher and physician during the Enlightenment period described the self as a continuity of consciousness, “since consciousness always accompanies thinking, and tis’ that, that makes every one to be, what he calls self” (Locke, 1690/2008, p. 208). William James (1890/1983), an American philosopher and psychologist, defined a man’s self in its widest sense as “the sum total of all that he can call his” (p. 273). He distinguished between the self as “I” or “knower”, referring to the process of active experiencing, and the self as “me” or “known”, referring to the content or thoughts relating to the experience. George Herbert Mead (1934), one of the first social psychologists to study the self, proposed that the self arises out of social interactions, within which language and communication with others plays a role in individuals’ reflections on the self as “me”. More recently, Baumeister (1999a) defined the self as the totality of a person, encompassing the physical self and internal aspects, such as identity and self-concept. Baumeister (1999b) proposes three major human experiences that form the basis of the self. The first is reflexive consciousness or being aware of the self. The second is interpersonal being, describing the self as a social entity, involving connections to others and characteristics that distinguish the self from others. Finally, the self is understood as having an executive function, enabling choices or actions to be made and control to be exerted. With numerous definitions existing, the notion of the self can be confusing, for example “whether self is appearing in the guise of mind, of consciousness, of body, of identity, or of personality” (Levin, 1992, p. 2). Therefore, it can be helpful to break down the notion of the self, defining it in terms of composite aspects, including self-concept and self-consistency.

1.2.2 Self-concept. Self-concept has been defined in social psychology as knowledge about the content of the self (Aronson, Wilson, & Akert, 2010). It relates to the "me" or "known" described by William James (1890/1983). Self-concept can be understood through considering the question "Who am I?". Based on this notion, Kuhn and McPartland (1954) developed the Twenty Statements Test (TST) as a method of assessing self-concept, through analysing completions of the sentence "I am……". Such statements provide insight into an individual's thoughts, beliefs or schemas that make up the knowledge of the self, or self-concept. This knowledge often relates to personal characteristics or traits that an individual views as fundamental to their personality. Models of self-concept generally differentiate between content and structure (Campbell, Assanand, & Di Paula, 2003). Content refers to self-beliefs, for example when answering the question 'Who am I?", whereas structure relates to how the contents are organised.

1.2.3 Self-consistency. Self-consistency relates to self-concept structure, referring to the degree to which self-concept elements, such as self-perceptions and meanings, are congruent. Three main types of self-consistency have been outlined (e.g., Boucher, 2010; English & Chen, 2007): cross-situational consistency (i.e., consistency across relationships or situations), temporal consistency (i.e., consistency over time), and internal consistency (i.e., congruence and coherence within the self-concept). Historically, the self was assumed to be stable and enduring (e.g., James, 1890), with individuals seeking to resolve inconsistent psychological experiences (Abelson et al., 1968), resulting in a self-concept comprised of stable characteristics that generalise across situations. This view aligns with trait theories of personality (e.g., Allport, 1937; Cattell, 1965; Eysenck, 1970), which generally assume that individuals possess broad predispositions or traits that describe personality and can influence behaviour. However, as theories of the self evolved and became more complex, for example by considering the self as a social entity, ideas about the self-concept developed. For

instance, it was posited that individual differences exist in relation to how variable self-conceptions are across different situations (Donahue, Robins, Roberts, & John, 1993; Sheldon et al., 1997).

Within this area of research, various terms have been used relating to self-consistency. For instance, Donahue et al. (1993) investigated self-concept differentiation, referring to the degree to which an individual's self is variable across social roles. Similar to self-consistency, self-concept differentiation measures self-concept structure. However self-concept differentiation describes the tendency to view one's self-concept as different across roles, therefore, higher levels of self-concept differentiation reflect lower levels of self-consistency. Also, Campbell et al. (2003) explored self-concept structure using measures reflecting self-concept unity (similar to self-consistency) and pluralism (similar to self-concept differentiation). Measures reflecting unity included assessments of self-concept clarity and the average correlation among an individual's self-aspects. Pluralism measures included assessments of self-concept complexity and compartmentalisation.

As research has progressed in this area, various ideas have emerged about different factors that contribute to individual differences in self-concept structure, including self-consistency and its related terms. One variable suggested to influence self-consistency variations is culture (Suh, 2002), which will be discussed in more detail in section 1.4.3.

1.2.4 Importance of the self. As Baumeister (1999b, p. 1) suggests, "no topic is more interesting to people than people" and "for most people, the most interesting person is the self". Hence, there is significant interest in the self and a vast amount of research dedicated to the area, with ideas still emerging and areas requiring further exploration (Baumeister, 1999b). Psychology's interest in the self is also the result of the fundamental influence of the self on various psychological processes; the self is intrinsically linked to actions, cognitions, interactions, personality and identity (e.g., Baumeister, 1999a; Markus & Kitayama, 1991;

Rogers, Kuiper & Kirker, 1977). These processes are important when conceptualising psychological well-being, and thus also psychological disorders, with different aspects of the self, such as self-consistency, playing specific roles in influencing psychological processes (e.g., Jobson, 2009).

In sum, whilst the self has always been an area of great interest, as definitions and understandings have evolved, the complexities related to different aspects of the self, such as self-concept *structure* as well as *content*, have emerged (e.g., Campbell et al., 2003). Research has started to explore the importance of these aspects in relation to various psychological processes, which are fundamental in understanding psychological well-being (e.g., Campbell et al., 2003; Donahue et al., 1993; Locke, 2006; Sheldon et al., 1997; Webb & Jobson, 2011).

1.3 Well-being

1.3.1 Definition. Although there are many definitions of well-being, a general agreement exists in which well-being is viewed as "the presence of positive emotions and moods (e.g., contentment, happiness), the absence of negative emotions (e.g., depression, anxiety), satisfaction with life, fulfilment, and positive functioning" (Center for Disease Control & Prevention, 2011, "How is well-being defined?" section, para. 1). Psychological well-being can also be conceptualised in relation to mental health, which is defined as a "state of well-being in which every individual realises his or her own potential, can cope with the normal stresses of life, can work productively and fruitfully, and is able to make a contribution to his or her community" (World Health Organization, n.d.). Given well-being is related to mental health, the presence of positive emotions and the absence of negative emotions, it is clear why many studies use measures of psychological disorders, such as levels of depression and anxiety symptoms, to investigate well-being (e.g., Diehl et al., 2001; Sheldon et al., 1997). As the current study uses depression and anxiety as indicators of well-

being, rather than specifically focusing on them as concepts, the following sections provide an overview of some of the key features and theories of depression and anxiety that are specifically relevant to the current study.

1.3.2 Depression.

1.3.2.1 Clinical features and diagnosis. Depression refers to a range of mental health problems characterised by "the absence of positive affect (loss of interest and enjoyment in ordinary things and experiences), low mood and a range of associated emotional, cognitive, physical and behavioural symptoms" (National Institute for Health and Clinical Excellence, 2010). To meet diagnostic criteria for a major depressive episode, the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV-TR; American Psychiatric Associaton; APA, 2000) stipulate the following five criteria (criteria A to E). Criterion A requires five symptoms to be present nearly every day over a two-week period and to represent a change from previous functioning. These symptoms include depressed mood most of the day, reduced interest in activities, weight loss or gain, changes in sleep patterns, psychomotor agitation or retardation, loss of energy, feeling worthless, difficulty concentrating and suicidal ideation or attempts. The symptoms must not meet criteria for a mixed episode, in which mania symptoms are also present (criterion B), and symptoms must cause significant distress or impairment in functioning (criterion C). Finally, symptoms must not be due to psychological effects of a substance or medical condition (criterion D), and must not be better accounted for by bereavement (criterion E). Various depressive disorder diagnoses exist, depending on the time-course of symptoms. For example, a recurrent depressive disorder describes two or more major episodes separated by at least two months, and dysthymic disorder describes less severe symptoms lasting for at least two years (APA, 2000).

1.3.2.2 Epidemiology and socio-economic impact. Depression is a universal phenomenon, which affects people from different countries and cultures, and is predicted to

become the second leading cause of disability worldwide by 2030 (Mathers & Loncar, 2006). A large-scale epidemiological study in the United States (US) found a twelve-month prevalence rate of depressive disorders of 6.60% and a lifetime prevalence rate of 16.20% (Kessler et al., 2003). A large-scale European study found an overall depressive disorder prevalence rate of 8.56%, with a higher rate for women (10.05%) compared to men (6.61%), and the highest mean rate (17.10%) being found in urban areas in the United Kingdom (UK) compared to other participating centres (Ustun, Ayuso-Mateos, Chatterji, Mathers, & Murray, 2004). The World Health Organisation (WHO) found worldwide prevalence rates for depressive disorders of 16 per 100 000 per year for males and 25 per 100 000 per year for females, with depression being the fourth leading cause of disease burden in the world (Ustun et al., 2004). The occurrence of depression in younger age groups has been highlighted, with three quarters of lifetime cases of mood disorders starting by 24 years of age (Kessler et al., 2005). Comparing depression rates cross-nationally, Bromet et al. (2011) reported lifetime prevalence rates of 15% for high-income countries, compared to 11% for low or middle-income countries. These statistics highlight the importance of research into the area of depression.

As well as bringing about significant personal and interpersonal distress, depression impacts on wider societies (Johnson et al., 1992). In a recent review, Richards (2011) outlined the significant costs of depression, including direct healthcare costs, decreased quality of life, absenteeism, decreased productivity and mortality costs. The annual cost of depression in Europe in 2004 was estimated to be $US 118 billion (Sobocki, Jonsson, Angst, & Rehnberg, 2006). A survey conducted by the Depression Alliance (2008) in the UK highlighted the substantial personal impact of depression, including on employment, quality of sleep, quality of life and daily activities.

1.3.2.3 Etiology. Guidelines put forward by the National Institute for Health and Clinical Excellence (NICE; 2010) comment on the breadth of explanations for causes of depression, including genetic, biochemical, endochrine and neurophysiological, psychological, and social processes and factors. However, it is generally agreed that the etiology is multi-factorial and that the risk factors are interrelated, with a combination of genetic, developmental, biological and interpersonal factors playing a role in the development of depression (Sjöholm, Lavebratt, & Forsell, 2009), by influencing an individual's vulnerability to depression in various ways for different people living in different circumstances (Harris, 2000). This is often referred to as the stress-vulnerability model, which was originally put forward as a conceptual framework for understanding psychosis (Zubin & Spring, 1977).

1.3.2.4 Psychological theories of depression. Although a range of psychological theories of depression exist, given the focus of the current study, this section will concentrate on two theories in which the self plays a fundamental role.

1.3.2.4.1 Cognitive theories of depression. Cognitive theories of depression (e.g., Beck, 1976; Beck, Rush, Shaw & Emery, 1979) generally take prominence and have increasing empirical support. Cognitive theories are rooted in information processing theory, which proposes that human minds process information that is received, rather than just responding to stimuli (Miller, Galanter, & Pribram, 1960). Cognitive theories also tend to incorporate behavioural concepts. Beck's (1976) cognitive theory of emotional disorders, including depression, is based on the idea that early experiences lead individuals to develop core beliefs about the self, the world and the future (the triad), which result in assumptions or rules for living developing in response to these core beliefs. In depression, core beliefs may be negative (the negative triad), leading to dysfunctional assumptions. These negative core beliefs can be triggered whenever an individual encounters a situation that resembles the

conditions in which the core beliefs were developed. When negative core beliefs are triggered, Beck suggests that a process is set off, in which Negative Automatic Thoughts (NATs) link together with emotions, physical symptoms and behaviour, in a cycle that maintains the individual's difficulties.

As described, cognitive theories highlight the importance of the self, particularly in relation to self-concept content, in understanding the psychological processes involved in depression. Negative beliefs and thoughts about the self (e.g., I am worthless) are seen as fundamental in the development and maintenance of depression, with negative self-beliefs playing a part in long-term vulnerability to depression, and NATS, often related to the self, playing a key role in the maintenance of depression.

1.3.2.4.2 Self-complexity theory. As understandings of the self developed, from being viewed as a unitary and stable phenomenon to a more complex, multi-faceted conceptualisation, theories started to emerge linking this new understanding to depression. Self-complexity theory (Linville, 1985, 1987) posited that a highly differentiated self-concept acts as a protective buffer against the depressive impact of stressful, negative life events. Self-complexity refers to both the differentiation and number of self-concept aspects (e.g., personality characteristics). Linville (1985, 1987) theorised that when a stressful event occurs, high levels of self-complexity limit the spread of negative self appraisal, and subsequent depressive mood, acting as a cognitive buffer against depression. This idea was supported empirically (Linville, 1987) in a study in which participants completed measures of self-complexity, life stressors, and well-being (e.g., depression and stress-related symptoms) at two time-points that were two weeks apart. A significant interaction was found, in which participants that reported higher levels of stress-related outcomes (i.e., lower well-being) after two weeks were those who reported more negative life-events and less self-complexity. This finding suggested that higher self-complexity acts as a protective buffer as stressful life-

events only impact on particular relevant self-aspects rather than spreading across various other self-aspects.

However, this theory has since come under significant scrutiny. For instance, the findings of a meta-analysis (Rafaeli-Mor & Steinberg, 2002) were very mixed in relation to the buffering hypothesis, with a small but reliable relationship actually being found between greater self-complexity and lower levels of well-being. Alternative explanations have also been put forward in relation to Linville's (1987) findings (e.g., Barnett & Gotlib, 1988; Solomon & Haaga, 2003). For instance, McConnell et al. (2005) proposed that individual differences, such as the degree of perceived control over multiple selves, may impact on the relationship between self-complexity and well-being, finding empirical support for self-aspect control as a mediating factor in this association.

Although the exact mechanisms underlying this idea may not be fully understood, self-complexity theory provides key ideas about the importance of self-concept structure in understanding psychological well-being and thus, disorders, including depression. Moreover, subsequent research has highlighted the influence of various individual differences on the relationship between self-concept structure and well-being, with this idea being discussed further in section 1.4.3 in relation to culture. Such psychological theories, as outlined in this section, are not only essential for understanding psychological well-being and disorders, but are also fundamental in the development of effective treatment approaches.

1.3.2.5 Treatment approaches for depression. Cognitive behavioural therapy (CBT) is a prominent treatment model for depression, and is recommended as the psychological treatment of choice (NICE, 2010). This recommendation is based on the evidence-base for cost-effective treatment, with several major reviews finding CBT to be more effective than other psychological therapies for depression (e.g., Gaffan, Tsaousis, & Kemp-Wheeler, 1995; Stuart & Bowers, 1995). CBT involves a combination of techniques designed to alter

maladaptive thought patterns and change behaviours that reinforce negative thinking styles. For example, thought challenging techniques are used to question and modify NATs, which often include negative thoughts about the self. Behavioural experiments can also challenge and alter NATs, through testing out their truth and validity in real-life situations. CBT can also involve altering deeper-rooted core beliefs about the self, the world and the future, either through specific strategies (e.g., Beck, 1995; Padesky, 1994) or as a consequence of making changes to thoughts and behaviour.

1.3.3 Anxiety.

1.3.3.1 Clinical features and diagnosis. Several anxiety disorders have been classified (APA, 2000), including phobias, panic disorder, Generalised Anxiety Disorder (GAD), Obsessive-Compulsive Disorder (OCD), Posttraumatic Stress Disorder (PTSD), and acute stress disorder. The main features of anxiety will be described in this section in relation to GAD, as GAD reflects a general presentation of the various features and symptoms of anxiety. PTSD is discussed in more detail in section 1.6, as it is a central focus of the current study.

To meet diagnostic criteria for GAD, the following criteria (criteria A to F) are outlined (APA, 2000). Excessive anxiety and worry about a variety of situations must be present for at least six months (criterion A), with an individual finding it difficult to control this anxiety (criterion B). Criterion C requires six symptoms to be present for most days over six months. These symptoms can include restlessness, fatigue, difficulty concentrating, irritability, muscle tension and sleep disturbance. The symptoms must not be due to another mental disorder (criterion D) or a substance or medical issue (criterion F), and they must cause clinically significant distress or daily functioning problems (criterion E).

1.3.3.2 Epidemiology and socio-economic impact. Anxiety is a universal phenomenon, affecting people from different countries and cultures (Kessler et al., 2009). A

UK survey estimated that one in six adults had an anxiety disorder of some type, with general rates found to be higher for women compared to men (Office for National Statistics; ONS, 2000). A US study (Kessler et al., 2005) found that anxiety disorders affect one in five adults, with women showing a significantly higher lifetime risk. A review of WHO surveys suggested that anxiety disorders are the most prevalent type of mental disorder in the general global population, putting forward an average lifetime prevalence rate of 16% and an average 12-month prevalence rate of 11% (Kessler et al., 2009). Prevalence rates vary widely between countries, with lifetime rates generally being higher in western developed countries, such as the United States (31.0%), New Zealand (24.6%) and France (22.3%), compared to developing countries, such as Ukraine (10.9%) and Nigeria (6.5%; Kessler et al., 2009). However, some exceptions were found, with Columbia, a less developed country, showing a relatively high prevalence rate (25.3%), and more developed countries, such as Italy (11%) and Spain (9.9%), showing relatively low rates (Kessler et al., 2009). Anxiety commonly occurs with depression (Robert & Hirschfeld, 2001), with 51.2% of individuals with major depression being found to have a comorbid anxiety disorder (Kessler et al., 1996).

Similar to depression, anxiety has been shown to have significant personal and societal impacts. For instance, in the US in the 1990s the estimated annual cost of anxiety disorders was $US 42.3 billion, consisting of costs for non-psychiatric ($23 billion) and psychiatric ($13.3 billion) medical treatment, as well as indirect workplace costs ($4.1 billion), mortality costs ($1.2 billion), and prescription pharmaceutical costs ($0.8 billion; Greenberg et al., 1999).

1.3.3.3 Etiology. Similar to depression, the etiology of anxiety is understood as multifactorial (NICE, 2011), with psychological, social and biological factors playing roles in the development of GAD. The theory of triple vulnerability (Bitran, Barlow, & Spiegel, 2009) conceptualises this as three kinds of distinct vulnerability. First, a generalised

biological vulnerability exists, for example in the form of a genetic tendency. Second, a generalised psychological vulnerability is usually present, for instance through early learning resulting in a sense of unpredictability and lack of control. Finally, a specific psychological vulnerability may be present, for example in the form of a traumatic event or learning from modelling that specific objects or events provoke anxiety. Overall, there is evidence that genetic factors (Skre, Onstad, Torgersen, Lygren, & Kringlen, 1993; Tadic et al., 2003) and environmental factors, such as difficult life events (Kessler et al., 1994), can increase an individual's vulnerability to develop GAD, with certain psychological cognitive styles also increasing the use of worrying as a coping strategy for some individuals when these events occur (Uhlenhuth et al., 2002).

1.3.3.4 Psychological theories of anxiety. Similar to depression, various psychological theories of anxiety exist. This section will focus on the central role that the self plays in relation to two of these theories.

1.3.3.4.1 Cognitive theories of anxiety. Cognitive theories, incorporating behavioural elements (e.g., Beck, 1976; Beck, Emery & Greenberg, 1985; Wells, 1997) generally take prominence. At present there is substantial empirical support for such theories and corresponding treatment approaches (Butler, Chapman, Forman, & Beck, 2006). The roots underlying cognitive theories of anxiety are similar to those in depression, with information processing theory (Miller et al., 1960) and Beck's (1976) theory of emotional disorders playing fundamental roles. In anxiety disorders, cognitive theory focuses on two information processing disturbances that underlie anxiety; the preoccupation on danger or threat and an underestimation of personal ability to cope with this danger (Beck et al., 1985). These themes are reflected in the content of core beliefs about the self, the world and the future, and also in NATs (Wells, 1997). The role of behaviour is based on the idea that individuals engage in safety behaviours, such as avoidance, which are reinforced through the reduction of anxiety.

However in the longer-term these behaviours maintain anxiety, for example by the non-occurrence of the feared behaviour being attributed to the safety behaviour rather than to the fact that the feared outcome may not occur (Wells, 1997).

Similar to depression, cognitive theories (e.g., Beck, 1976; Beck et al., 1985; Wells, 1997) highlight the importance of the self in understanding psychological processes involved in anxiety. For example, one of the main themes proposed as important in information processing disturbances in anxiety relates to the underestimation of an individual's ability to cope (Beck et al., 1985), which is reflected in core beliefs and NATs about the self (e.g., I will not cope). These specific thoughts and beliefs relating to self-concept content are fundamental to cognitive understandings of anxiety.

1.3.3.4.2 Self-complexity theory. Although self-complexity theory (Linville, 1985, 1987) focuses on depression, as outlined previously, the finding that perceived self-aspect control may mediate the relationship between self-complexity and well-being (McConnell et al., 2005) may have theoretical implications for anxiety. Previous research has linked reduced self-control perceptions with greater proneness to anxiety and depression (e.g., Abramson, Seligman, & Teasdale, 1978; Thompson, Sobolew-Shubin, Galbraith, Schwan-Kovsky, & Cruzen, 1993). This finding along with the idea that perceived control over multiple selves is important in linking greater self-complexity with the buffering of depression (McConnell et al., 2005), suggests that self-complexity theory might be relevant to anxiety as well as depression. Overall, it seems that representations or perceptions of self-concept (e.g., perceived control) may play an important role in the conceptualisation of both anxiety and depression.

Such psychological theories, as outlined in this section, are not only essential for understanding anxiety, but are also fundamental in the development of effective treatment approaches.

1.3.3.5 Treatment approaches for anxiety. As described for depression, CBT is also a prominent treatment model for anxiety and is recommended by NICE (2011). This recommendation was partly based on a recent Cochrane review (Hunot, Churchill, & Silva de Lima, 2007), which concluded that CBT is an effective treatment for reducing anxiety symptoms in GAD. CBT for anxiety, similar to depression, uses a range of cognitive and behavioural techniques, including thought challenging, role plays, imagery, exposure tasks, and behavioural experiments (Wells, 1997). Whilst details of this treatment approach are not central to the current research, Wells (1997) provides further information about techniques, and several review articles (see Butler et al., 2006; Hunot et al., 2007) discuss the efficacy of CBT for anxiety.

1.3.4 Summary of depression and anxiety. Depression and anxiety are universal disorders, affecting large numbers of individuals from different cultures (Kessler et al., 2009; Mathers & Loncar, 2006) and resulting in significant personal, interpersonal and societal impacts (Greenberg et al., 1999; Johnson et al., 1992). Symptoms of depression and anxiety are often used as indicators of psychological well-being (e.g., Diehl et al., 2001; Sheldon et al., 1997). The etiology of depression and anxiety is understood as multi-factorial, with a combination of genetic, developmental, biological, psychological and interpersonal factors increasing an individual’s vulnerability to develop symptoms of depression and/or anxiety when stressful life-events occur (Harris, 2000).

Various psychological theories of depression and anxiety have been put forward (e.g., Beck, 1976; Linville, 1985, 1987), with some focusing more explicitly on the importance of the self in the development and maintenance of symptoms. For instance, cognitive theories propose that negative core beliefs and NATs relating to the self are fundamental in the development and maintenance of depression and anxiety, with core beliefs playing a role in long-term vulnerability, and NATs playing a key role in the maintenance of symptoms (Beck,

1976). Self-complexity theory (Linville, 1985, 1987) puts forward that self-concept structure is also central in understanding depression, proposing that a more complex and differentiated self-concept acts as a protective buffer against depression when an individual is faced with negative life events. Further investigations into this theory have provided alternative ideas, for example putting forward that perceived control over self-concept aspects may play a mediating role in the relationship between self-complexity and depression, whilst also proposing that such theoretical ideas may also be important in understanding anxiety (McConnell et al., 2005). These theories are not only central in understanding depression and anxiety, but also provide ideas about treatment approaches, with CBT being a prominent intervention model recommended by national guidelines (NICE, 2010, 2011). The next section of this chapter focuses specifically on theories and research regarding the relationship between the self and well-being.

1.4 The Self and Well-being

1.4.1 Self-concept and well-being. There has been a long association between self-concept and mental health or well-being, for example with theorists traditionally positing an association between accurate or realistic self-concept perceptions and well-being (Allport, 1943; Jahoda, 1958; Maslow, 1950). The next section explores the association between self-concept and well-being specifically in relation to self-consistency, an aspect which is central to the current research. Further discussion of this association is also included in section 1.4.3.5, in relation to self-concept content and specifically desirability, which is another aspect directly relevant to the current research.

1.4.2 Self-consistency and well-being. Traditionally, psychologists asserted that a consistent self-concept (self-consistency) is fundamental to well-being, thus associating inconsistency with maladjustment (Lecky, 1945; Rogers, 1951). Specifically it has been argued that inner conflicts must be “merged and coalesced to form unities”, in order to

achieve self-actualisation (Maslow, 1954, p. 233). However, since these early ideas, other theories have suggested that self-concept pluralism (i.e., inconsistency), rather than consistency, may be associated with well-being (Gergen, 1971) . Empirical studies have explored these assertions further. The findings of these studies will now be outlined, followed by a discussion about the methods used in order to measure self-consistency.

In one of the first empirical investigations into the relationship between self-consistency and well-being, Block (1961) found that role variability (i.e., lower self-consistency across situations) was associated with susceptibility to anxiety, as measured by a psychoneuroticism scale, $r = -.52$, $p < .001$. Role rigidity (i.e., higher self-consistency across situations) was not found to be associated with susceptibility to anxiety. These findings provided partial support to Block's (1961) hypothesis that the degree of consistency would show a curvilinear relationship with the degree of maladjustment. While providing important ideas to the area of research, including in relation to self-consistency measurement, which will be discussed later, it is possible that methodological limitations impacted on the findings. For example, as recognised by Block (1961), the small and homogenous sample of 41 college students may not have contained enough individuals who showed greater role rigidity.

Donahue et al. (1993) explored relationships between self-concept differentiation (i.e., inconsistency) and well-being. Self-concept differentiation was found to be strongly associated with lower levels of self-esteem, $r = -.39$, and higher levels of depression, $r = .44$, and neuroticism, $r = .30$, in a sample of 96 college students (all ps $< .01$). Also, in a sample of middle-aged women, self-concept differentiation was found to be significantly associated with higher levels of psychoneuroticism, $r = .48$, and anxiety, $r = .26$, and with lower levels of well-being, $r = -.31$ (all ps $< .01$). As the sample of middle-aged women had also been assessed at earlier stages in their life, it was possible to conduct a longitudinal analysis, finding correlations between self-concept differentiation in middle-age and higher levels of

psychoneuroticism and anxiety as well as lower levels of well-being at earlier stages in their lives. This study used a larger and less homogenous sample than Block (1961). Moreover, significant relationships were found between self-concept differentiation and well-being across various measures of well-being and within different samples, whilst also providing some potential evidence of this relationship over time.

Sheldon et al. (1997) investigated associations between cross-role variation (i.e., inconsistency) and psychological authenticity as well as subjective well-being. Greater self-concept differentiation, or lower self-consistency, was found to be significantly associated with higher levels of depression, $r = .37$, anxiety, $r = .34$, stress, $r = .38$, and symptomatology, $r = .34$ (ps $< .01$), and lower levels of self-esteem, $r = -.42$ ($p < .05$). Perceived authenticity in different roles was also found to be an independent predictor of well-being, suggesting that authenticity as well as self-consistency may be important for well-being.

More recently, Campbell, Assanand, and Di Paula (2003) investigated self-concept pluralism and unity, exploring whether these variables were related to psychological adjustment, as measured by scales of self-esteem and neuroticism. Measures of self-concept unity were found to be moderately related to measures of adjustment, whereas measures of self-concept pluralism were found to be unrelated to measures of adjustment. Campbell et al. acknowledged that whilst the findings relate to relationships between self-concept structure (i.e., self-consistency) and well-being, the measures of adjustment used also reflect aspects of self-concept content. They therefore suggested that further research should examine the main and interactive effects of both self-concept content and structure on psychological adjustment.

The studies outlined in this section can be critiqued further in relation to the method used to compute indices of self-consistency. Providing a methodological template, Block

(1961) investigated role variability by assessing the ranking of different characteristics in relation to interactions with eight different individuals. Each participant ranked 20 characteristics eight times, to describe themselves in eight interpersonal situations. For each participant, Spearman's correlation method was used to assess correlations of the eight adjectives, resulting in an 8x8 correlation matrix. Each matrix was factor analysed, and the percentage of total communal variance explained by the first unrotated factor was calculated, reflecting the degree of congruence among variables. The mean first factor loading (squared) divided by the average communality of the matrix provided an index of role variability for each participant, ranging from 1 to 100. This index could be compared between individuals, with higher values reflecting higher consistency.

This method formed a basis for further studies investigating self-consistency. For example, Donahue et al. (1993) used a measure of self-concept differentiation, in which participants rated attributes in the context of five different social roles. Factor analysis was used to measure the proportion of variance in the role-identity ratings that was not shared across roles, providing a measure of self-concept differentiation. Sheldon et al. (1997) also used a method rooted in Block's (1961) research, investigating variations across five roles in 40 characteristics based on the traits outlined in the five factor model of personality; openness, conscientiousness, extraversion, agreeableness and neuroticism (Costa & McCrae, 1994; McCrae & Costa, 1996, 2008; McCrae & John, 1992; Peabody & Goldberg, 1989). Correlations between each participant's roles were computed on the basis of the 40 characteristic ratings made in each role. Self-concept differentiation (i.e., inconsistency) was deemed as one minus the average of all correlations.

Whilst Campbell et al. (2003) used additional measures of self-concept pluralism and unity, such as measures of self-complexity (Linville, 1985, 1987) and self-concept clarity (Campbell et al., 1996), an index of self-consistency was also computed. Pearson's

correlation coefficient between each pair of situations was calculated. The average correlation of characteristics across all pairs provided a direct measure of unity (i.e., self-consistency), in contrast to Donahue et al. (1993)'s calculation of the unshared variance among roles, which provided an inverse measure of self-consistency (i.e., self-concept differentiation).

Although many of the methods used to compute indices of self-consistency (Campbell et al., 2003; Donahue, Robins, Roberts, & John, 1993; Sheldon et al., 1997) may appear different, it has been suggested that they are in fact equivalent measures that are linear transformations of each other. Therefore, which method is used will not make any substantive difference (Locke, 2006). Using Pearson's correlation coefficient to assess correlations in characteristics between pairs of situations (Campbell et al., 2003) is described by Locke (2006) as the between-situation correlation coefficient (BSCC), with other methods subjecting the BSCC to a factor analysis and using the eigenvalue (E) of the first principal component as an index of self-consistency, or using 1-E (Donahue et al., 1993) or 1-BSCC (Sheldon et al., 1997) as a measure of self-concept differentiation or inconsistency. Describing the relationship between these measures, Locke (2006) noted that E can be computed directly from the mean BSCC, using the formula E=1+BSCC(n-1), where n is the number of situations. Locke (2006) also made an important point about this method of measuring self-consistency; while it aims to measure an aspect of self-concept *structure*, it may be confounded by self-concept *content*, specifically the desirability of characteristics used in such studies. This idea is discussed further in section 1.4.3.5.

Whilst various strengths and limitations exist in relation to the studies described, the investigations of the relationship between self-consistency and well-being provide empirical support for the importance of self-concept structure for well-being. Furthermore, these studies provide useful ideas in relation to the measurement of self-consistency. However, one

limitation common to all of the studies is that the influence of culture on the relationship between self-consistency and well-being was not considered. This will be discussed further in the following section.

1.4.3 The impact of culture on the self and well-being.

1.4.3.1 Culture and the self. As the discipline of psychology developed largely in the developed world, researchers have started to become interested in the influence of cultural conditions on human behaviour, questioning whether psychological constructs are as universal as assumed. Much exploration into this area has centred around cultural differences derived from Hofstede's (1980) cultural dimensions theory, suggesting that culture influences the values and behaviour of individuals, along various dimensions. One of these dimensions, the individualism-collectivism dimension, is the most studied area in contemporary cross-cultural psychology (Green, 2005). Individualistic cultures describe cultures in which the ties between individuals are very loose, with individuals being given greater freedom by society, allowing them to predominantly look after the interests of themselves and maybe their immediate family (Hofstede, 1983). This is in contrast to collectivistic cultures, in which ties between individuals are very tight, with people looking after the interests of their in-group (e.g., extended family, tribe or village) and having beliefs that fit with this group (Hofstede, 1983). Triandis (1989) extended this cultural variation to the self, highlighting how cultural variation can influence the probabilities of individuals displaying different aspects of the self; private (i.e., cognitions involving traits, states or behaviours of the person, such as “I am introverted”), public (i.e., cognitions concerning the generalised other’s view of the self, such as “people think I am introverted”), and collective (i.e., cognitions concerning a view of the self that is found in some collective, such as “my family think I am introverted”).

Further cross-cultural studies investigating differences in personality have generally found that the “big five” personality dimensions originally identified in the US are also found

elsewhere, including in non-western societies (McCrae, 2002). It has also been found that African Americans show more of an external locus of control (i.e., believing that their life is controlled more by environmental factors that they cannot influence) compared to European Americans (Dyal, 1984). However, various concerns have been raised about such findings (Berry, Poortinga, Breugelmans, Chasiotis, & Sam, 2011). One such concern relates to whether locus of control can be generalised across various domains of behaviour (Berry et al., 2011). Furthermore, some studies have found other factors to be related to locus of control, such as academic achievement (e.g., Shepherd, Owen, Fitch & Marshall, 2006) and socioeconomic status (Berry et al., 2011), which have also been found to be associated with cultural differences in some societies, for example in relation to minority ethnic groups in the United States (e.g., Johnson, 2001; Sirin, 2005). These concerns may result in difficulties in analyses of cross-cultural differences in relation to locus of control (Berry et al., 2011).

Another area explored cross-culturally relates to differences in self-deprecation or self-enhancement. In a review, Heine, Lehman, and Markus (1999) commented on substantial evidence showing that compared to Japanese people, North Americans are more likely to describe themselves as having desirable characteristics. For instance, comparing distributions of self-esteem scores showed a skewed distribution for North Americans, such that the majority of North Americans reported high self-esteem, compared to more of a normal distribution for Japanese people. Furthermore, Heine et al. (1999) presented evidence for more self-critical orientations for Japanese people, for example highlighting that Japanese people reported a greater frequency of critical comments within conversations compared to North Americans.

1.4.3.2 Culture and self-construals. Further influential work by Markus and Kitayama (1991, 1994, 2010) focused on cultural differences in how individuals view themselves and the relationship between themselves and others, distinguishing between

independent and interdependent self-construals. An independent self-construal views individuals as separate and striving to discover and express unique attributes, characterising people from individualistic cultures such as the UK, US and Western Europe (Markus & Kitayama, 1991). The role of others is understood as being for self-evaluation and social comparison. In contrast to this, an interdependent construal focuses on the connectedness of humans, striving to maintain interdependence and seeing themselves as part of encompassing social relationships, characterising individuals from collectivistic cultures such as East Asia (Markus & Kitayama, 1991). The role of others is understood as being for self-definition. Markus and Kitayama (1991, p. 225) describe these distinctions as "general tendencies" of whole cultures, recognising individual and situational differences within cultural groups.

The collective-constructionist theory of the self (Kitayama, Markus, Matsumoto, & Norasakkunit, 1997), proposes that these self-construals are developed and maintained by three interlocking factors; philosophical traditions (i.e., historically constructed and socially distributed philosophical assumptions), social practices (i.e., patterns of social situations, acts, practices and meanings associated with cultural philosophical assumptions), and individual psychological processes (i.e., processes that support and reproduce the patterns of the cultural system).

These construals are viewed as part of self-relevant schemata, which make up the self-system and play a role in regulating interpersonal processes (Markus & Wurf, 1987). It has therefore been suggested that these construals can influence, or even determine psychological processes, such as cognition, emotion and motivation (Markus & Kitayama, 1991). In relation to cognition, it is proposed that interdependent self-construals result in representations of selves and others that are embedded in social contexts, with the social context possibly shaping cognitive activities (Markus & Kitayama, 1991). In terms of emotion, self-construals may influence emotional triggers and the types, intensity and

frequency of emotions (Mesquita & Walker, 2003). Finally, considering motivation, Markus and Kitayama (1991) propose that interdependent self-construals may result in more social motives, with agency or the capacity to make choices being experienced as an effort to adjust to other's needs. In contrast, independent self-construals may result in agency being experienced in relation to one's own needs.

1.4.3.3 Culture and self-consistency. Increasingly cross-cultural research has challenged the assumption that the self is stable and enduring with individuals universally seeking to resolve inconsistency (Abelson et al., 1968; James, 1983). Markus and Kitayama (1994) put forward that an independent self-construal promotes the task of maintaining independence of an individual as a self-contained entity and to be true to one's own internal structures. In contrast, an interdependent self-construal encourages interdependence with others, requiring an individual to adjust and fit depending on the relationship, engaging in collectively appropriate actions.

Researchers hypothesised that these variations in the experience and expression of the self may influence levels of self-consistency across situations and roles (Suh, 2000, 2002). Furthermore, findings emerged that put forward cross-cultural differences in the notion of self-consistency. For example, Iwao (1988) presented a scenario to American and Japanese participants, in which a daughter introduces a man whom she wishes to marry to her father. Although the father believes that he will never allow them to marry, he acts as if he is in favour of the marriage. The large majority of Americans disapproved of the father's inconsistency, whereas 44% of the Japanese participants thought that the father dealt with the situation appropriately. Kashima, Siegal, Tanaka and Kashima (1992) found that Australian participants (individualistic culture) had stronger beliefs about the importance of consistency between attitudes and behaviour when compared to Japanese participants (collectivistic culture). More recently, Suh (2002) investigated self-consistency differences between

American and Korean students, using the technique utilised by Donahue et al. (1993) and developed by Block (1961), to obtain an index of consistency. Participants were asked to rate the self-relevance of 25 characteristics, from the big five personality traits (Costa & McCrae, 1994; McCrae & Costa, 1996, 2008; McCrae & John, 1992; Peabody & Goldberg, 1989), in relation to the general self and four different relationship contexts. As expected, Americans showed significantly higher levels of self-consistency across situations when compared to Koreans ($p < .001$).

1.4.3.4 Cultural differences in the relationship between the self and well-being. As cross-cultural self-consistency differences were realised, it was hypothesised that dialectical beliefs, which are common in East Asian cultures, may support a tolerance of self-concept inconsistency (English & Chen, 2007), subsequently making the relationship between self-consistency and well-being for East Asians less meaningful (Boucher, 2010). Dialecticism is founded in Eastern philosophical and religious roots. It is a thought system which views reality as dynamic and full of contradictions, with everything being related and connected (Peng & Nisbett, 1999). When applied to the self-concept it implies the acceptance of inconsistency as natural, with self-concept changes occurring because behaviour is linked to the particular context (English & Chen, 2011). This idea has potential clinical implications for models of psychological disorders and treatment. Although different forms of self-consistency exist, as outlined in section 1.2.3, research into this area has focused on self-consistency across situations, with the following review of studies focusing on this type of consistency.

As well as demonstrating cross-cultural self-consistency differences, Suh (2002) investigated how this related to well-being, as measured by the five-item Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985) and positive and negative affect scores. The well-being of Koreans showed weaker relationships with self-consistency

(life satisfaction, $r = .22$, $p < .05$; positive affect, $r = .17$, $p =$ ns; negative affect, $r = -.23$, $p < .05$), compared to Americans (life satisfaction, $r = .49$, $p < .0001$; positive affect, $r = .31$, $p < .01$; negative affect, $r = -.50$, $p < .001$). This study highlighted cross-cultural self-consistency differences and challenged the necessity of consistency for well-being, suggesting that adjustment to different situations might be more important in collectivistic cultures. Strengths of this study, such as using a pilot study to check cultural representativeness of traits, high validity and reliability of measures and the thorough equivalence checking of translations, strengthen its contribution to the field. However, the study measured a specific concept of well-being, with measures relating to wider clinical presentations, such as depression and anxiety, potentially providing further information.

Cross et al. (2003) investigated whether the association between self-consistency and well-being is moderated by the degree to which individuals have a relational self-construal (i.e., the tendency to include close relationships in one's self-definition). The study distinguished between "low relationals" (similar to independent self-construal) and "high relationals" (similar to interdependent self-construal) using the Relational-Interdependent Self Construal (RISC) scale (Cross, Bacon, & Morris, 2000), which was shown to have high internal consistency and moderate correlations with other related scales. Self-consistency scores were computed using the technique used by Donahue et al. (1993) and developed by Block (1961). In a sample of North Americans, the association between self-consistency and well-being was stronger for "low relationals" than "high relationals". However, a strong association between RISC and self-consistency scores was not found, suggesting further research is needed to fully explain cross-cultural differences in the association between self-consistency and well-being. While this study also used the SWLS (Diener et al., 1985), a wider combination of reliable and valid well-being measures were used, including the Rosenberg Self-Esteem Scale (RSES; Rosenberg, 1965), the Center for Epidemiological

Studies-Depression scale (CES-D; Radloff, 1977), the Perceived Stress Scale (PSS; Cohen, Kamarck, & Mermelstein, 1983), and the Positive And Negative Affect Schedule (PANAS; Watson, Clark, & Tellegen, 1988). However, the relational distinction is a limitation of the study, as cross-cultural differences may encompass more concepts than just the degree to which individuals have a relational self-construal.

Whilst these studies provided important information about cross-cultural differences in the relationship between self-consistency (i.e., *structure*) and well-being, they have not considered how self-concept *content* may also influence this relationship. This will be discussed further in the following section.

1.4.3.5 The impact of self-concept content on the relationship between the self and well-being. Historically, psychological research has focused more on self-concept *content* (e.g., exploring personality characteristics), rather than on self-concept *structure* (e.g., self-consistency; Campbell et al., 2003). For instance, links have been explored between self-concept content and well-being (e.g., Wylie, 1979). Specifically, particular personality traits relating to the big five dimensions have been found to be associated with well-being. A meta-analysis (DeNeve & Cooper, 1998) indicated neuroticism to be the most important predictor of negative affect, and extraversion and agreeableness the greatest predictors of positive affect. Other studies have focused on illusions in self-concept perceptions and relationships with well-being, challenging the idea that accurate perceptions of oneself and the world are essential elements of mental health (Jahoda, 1958). For instance, Taylor & Brown (1988, 1994) put forward that most people actually exhibit positive illusions in relation to positive views of the self and the future and beliefs of greater control over environmental events. Furthermore, positive illusions were suggested as contributing to various behaviours that have been associated with mental health, such as contentment, the ability to care about others, and creativity. However, Colvin & Block (1994) scrutinised the empirical evidence and logic

underlying this theory, for example questioning the pervasive, enduring and systematic nature of positive illusions proposed by Taylor & Brown (1988).

Cross-cultural research has suggested that self-concept content may influence the relationship between the self and well-being. For instance, Kitayama et al. (1997) compared Japanese and American students in relation to their ratings of the imagined impact of events on their self-esteem. American students thought that they would experience a greater increase in self-esteem to positive situations than decrease in self-esteem to negative situations. Conversely, Japanese students thought that they would experience a greater reduction in self-esteem in negative situations than self-esteem enhancement in positive situations. These findings reflect important cross-cultural differences in self-criticism and self-enhancement that may influence relationships between the self and well-being.

Discrepancies between the content of actual and ideal self-concepts have also been explored. Heine and Lehman (1999) found larger discrepancies between actual and ideal self-concepts for Japanese participants compared to Asian Canadians, who in turn showed larger discrepancies compared to Canadians. Furthermore, a significantly stronger ($p < .05$) correlation between discrepancies and depression was found for Canadians, $r = .53$, compared to Japanese, $r = .30$, with the strength of Asian Canadians' correlation, $r = .36$, falling in between. This study added to the field, suggesting that self-concept content as well as structure may be more important for well-being in individualistic, compared to collectivistic, cultures.

Lynch, La Guardia, and Ryan (2009) focused on actual-ideal discrepancies in relation to self-concept content within different relationships. Relational well-being was assessed through measures of satisfaction, vitality, and positive and negative affect. Greater discrepancies were associated with lower levels of reported well-being for all cultures (Chinese, Russian and American). Cross-cultural differences were found in relation to

discrepancies for specific personality elements and how this relates to well-being. For example, for extraversion, neuroticism, agreeableness and openness, the relationships between larger discrepancies and poorer well-being were stronger for Americans compared to Chinese participants. These findings also emphasise the importance of content as well as structure in relationships between self-concept and well-being.

As the complexity started to emerge regarding the relationship between self-consistency and well-being, as well as the role that self-concept content may play in this relationship, Locke (2006) investigated this further in an individualistic culture. Locke broke down overall self-consistency (mean BSCC) into desirable types of self-consistency (endorsing desirable characteristics and denying undesirable characteristics) and undesirable types of self-consistency (endorsing undesirable characteristics and denying desirable characteristics). Desirable characteristics included terms such as “modest” and “cultured”, while undesirable characteristics included terms such as “boastful” and “temperamental”. Overall self-consistency (BSCC) was significantly positively correlated with desirable types of consistency, but not with undesirable types of consistency, suggesting that for participants from an individualistic culture the mean BSCC reflected consistency with respect to endorsing desirable characteristics and denying undesirable characteristics, rather than overall self-consistency.

In light of this finding, Locke (2006) compared evidence for the consistency hypothesis (that self-consistency predicts well-being) with evidence for the desirability hypothesis (that self-consistency predicts well-being because it relates to consistency to desirable characteristics). Locke explored whether self-consistency itself predicts well-being, as indexed by self-esteem and physical symptoms measures, or whether content plays a role. That is, whether a person is consistent in relation to desirable or undesirable characteristics. In relation to desirable types of self-consistency, strong relationships were found between

consistently endorsing desirable characteristics and higher self-esteem, and also between consistently denying undesirable characteristics and both higher self-esteem and lower levels of physical symptoms. In relation to undesirable types of self-consistency no significant relationships were found between consistently denying desirable characteristics and well-being, whilst significant relationships were found between consistently endorsing undesirable characteristics and both lower self-esteem and greater levels of physical symptoms. Also, when computing the BSCC separately for desirable and undesirable characteristics, Locke (2006) found that although overall self-consistency was positively correlated with well-being, when broken down, consistency to desirable characteristics was positively correlated with well-being but consistency to undesirable characteristics was not. Locke concluded that well-being is not associated with all types of self-consistency. Moreover, these results raise questions about research relying solely on an overall index of consistency, with Locke's (2006) method eliminating the confound between BSCC and self-concept desirability. To date, this has not been investigated cross-culturally. Therefore it is possible that desirability impacts on the cultural differences in relationships between self-concept and well-being.

1.5 Interim Summary

Various different aspects of the self have been found to have a fundamental influence on psychological processes, which are important when conceptualising psychological well-being and disorders (e.g., depression and anxiety). A consistent self-concept has traditionally been associated with psychological well-being (Lecky, 1945; Maslow, 1954; Rogers, 1951). However, cross-cultural research suggests that higher levels of self-consistency are evident in individualistic cultures when compared to collectivistic cultures, with self-consistency also being found to be more important to well-being in individualistic cultures (e.g., Suh, 2002). Recently, ideas have been put forward regarding the influence of self-concept *content*, specifically desirability, as well as *structure* (i.e., self-consistency), on the relationship

between self-concept and well-being (Locke, 2006). However, to date this has not been fully explored cross-culturally.

Therefore, the aim of Study 1a is to investigate how cross-cultural differences in self-consistency and desirability affect well-being, as indexed by symptoms of depression and anxiety. This study will focus on well-being and draw Locke's (2006) research into the field of cross-cultural research. The following sections pertain to Study 1b and will now focus on one particular anxiety disorder, PTSD. In these sections the relationships between the self and posttraumatic psychological adjustment, including from a cross-cultural perspective, will be considered.

1.6 Posttraumatic Stress Disorder (PTSD)

1.6.1 Clinical features and diagnosis. PTSD is an anxiety disorder that can affect people following exposure to traumatic events of an "exceptionally threatening or catastrophic nature" (NICE, 2005). To meet diagnostic criteria for PTSD (APA, 2000), a person must have been exposed to a traumatic event in which both of the following were present; the person experienced, witnessed or was confronted with an event or events involving actual or threatened death or serious injury, or a threat to the physical integrity of oneself or others, and the person's response involved intense emotions such as fear and helplessness. PTSD is characterised by reliving (i.e., intrusive recollection, such as through distressing images or dreams), avoidance (i.e., efforts to avoid associated thoughts, feelings or places, along with numbing of general responsiveness) and hyperarousal (i.e., difficulty falling or staying asleep, irritability, outbursts of anger, difficulty concentrating and hypervigilance) symptoms (APA, 2000). Finally, the person must experience the disturbance for more than one month and it must cause clinically significant distress or impairment in functioning (APA, 2000).

1.6.2 Epidemiology. A US survey of 1000 adults, with an equal gender split and equal split between Caucasian and African American participants found that 69% of participants had experienced a traumatic event in their lifetime (Norris, 1992). Other studies estimate lifetime trauma exposure ranging from 39.1% in a young adult urban population (Breslau, Davis, Andreski, & Petersen, 1991) to 84% in a university student sample (Vrana & Lauterbach, 1994). Although trauma exposure may be quite common, not all individuals develop PTSD. A large-scale US survey (Kessler et al., 2005) found the lifetime prevalence of PTSD to be 6.8%, with a higher rate being found for women (9.7%) compared to men (3.6%).

Traumatic events are common globally, including in ethnically diverse samples (e.g., Holman, Silver, Waitzkin, & Disorders, 2000), with PTSD being a worldwide, universal response to trauma exposure (Foa, Keane, Friedman, & Cohen, 2009). However, prevalence rates vary across countries depending on variation in trauma exposure (Kessler, 2000b). Higher levels of PTSD have also been found amongst ethnic minority groups, refugees and asylum seekers (Norris, Perilla, Riad, Kaniasty, & Lavizzo, 1999; Silove, Sinnerbrink, Field, Manicavasagar, & Steel, 1997), as well as in countries with warfare and political unrest (Margoob, 2006).

1.6.3 Socio-economic impact. As well as impacting on physical health, social functioning and interpersonal relationships (Olatunji, Cisler, & Tolin, 2007), PTSD has been found to have significant societal impacts. Kessler (2000b) notes that many of the life-course consequences of PTSD, such as educational problems, teen childbearing and marital instability, are also main factors in welfare dependency in western societies. In a global burden of disease analysis, PTSD was found to be accountable for almost 3.5 million years of healthy life lost worldwide in 2004 (WHO, 2008). PTSD was also estimated as being responsible for an annual US productivity loss of more than $US three billion, with societal

costs estimated to be substantially greater in countries affected by years of political and ethnic violence (Kessler, 2000a).

1.6.4 Etiology. A brief review of vulnerability factors and also of the biological understanding of PTSD will be provided in this section, with psychological theories of PTSD being discussed in more detail in the following section, as this is more relevant to the current research. A meta-analysis (Brewin, Andrews, & Valentine, 2000) identified three different categories of PTSD risk factors. First, risk factors such as gender, age at trauma and ethnicity predicted PTSD in some populations. For instance, younger age at trauma was a risk factor for military samples but not civilian samples, and being a member of an ethnic minority group was a stronger predictor in military samples compared to civilian samples. In contrast, a greater vulnerability for women compared to men was found in civilian samples but not for combat veterans. Second, factors such as education, previous trauma and childhood adversity were more consistent predictors, but varied depending on the samples and methods used. Finally, factors that had more unvarying effects were identified, including individual and family psychiatric history and childhood abuse. While these risk factors might provide useful information about vulnerability to PTSD following trauma, the amount of variance explained by these factors in the literature is small (NICE, 2005).

The link between trauma and neuroanatomy has been the subject of much research, in particular highlighting structural brain abnormalities in individuals with PTSD. For instance, smaller hippocampus and amygdala volumes have been found in individuals with PTSD compared to controls with and without trauma exposure (see Karl et al., 2006 for a review of the evidence). The hippocampus and amygdala are both structures in the limbic system, which are involved in the processing of memory and emotional reactions (Karl et al., 2006; Phelps, 2004). Also, adults with PTSD were found to have a significantly smaller anterior cingulated cortex, which has been put forward as playing a role in emotion (e.g., Decety &

Jackson, 2004), compared to controls with trauma exposure (Karl et al., 2006). Different ideas have been put forward about the direction of causality in these links. For example, biological effects of stress could result in hippocampal damage (Stein-Behrens, Lin, & Sapolsky, 1994), or alternatively, predisposing structural differences may increase PTSD vulnerability (Gilbertson et al., 2002).

1.6.5 Psychological theories of PTSD. In a review of psychological theories of PTSD, Brewin and Holmes (2003) highlighted various psychological processes that are fundamental in understanding the development and maintenance of PTSD, including memory, attention, cognitive-affective reactions, coping strategies, social support, and beliefs. Many of these processes have important links to the self, as conceptualised in some theories of PTSD. Various psychological theories of PTSD have been proposed and whilst it is important to note that other influential theories exist, such as emotional processing theory (Foa & Riggs, 1993; Foa & Rothbaum, 1998), this section will focus on specific theories that view the self as playing a central role, as these are most relevant to the current study. The self, self-concept and self-consistency are key elements within the following theories. Whilst memory is discussed in relation to the self, as it is not a central focus of the current study specifically it will not be explored in detail.

1.6.5.1 Dual representation theory. Brewin et al. (1996), in their dual representation theory, proposed that trauma experiences give rise to two types of memory or representational systems. The "verbally accessible memory" (VAM) system includes information that has been attended to before, during and after an event, being consciously processed and stored in long-term memory in a form accessible to deliberate retrieval and manipulation. The "situationally accessible memory" (SAM) system describes the output of non-conscious processing of trauma, including information from lower level processing, such as sights or sounds, which are not consciously processed and therefore cannot be deliberately

recalled. According to this theory, emotional processing, during which these representations enter into and are actively manipulated within working memory, involves two elements. The activation of SAMs aims to aid cognitive readjustment, whilst there is also a conscious attempt to integrate information relating to the trauma with pre-existing concepts and beliefs, through searching for meaning and making cause and blame judgements (VAM system).

Three possible outcomes of emotional processing are proposed. First, completion or integration is possible, with the trauma memory being fully processed and integrated with other memories and an individual's sense of self. The other less positive outcomes, leading to more severe and enduring PTSD symptoms, are chronic emotional processing and premature inhibition of processing. In chronic emotional processing the discrepancy between the trauma experience and prior assumptions is too great for integration to occur. In premature inhibition of processing, re-activation of VAMs and SAMs is avoided, inhibiting processing, however leading to SAMs being triggered involuntarily by stimuli that remind an individual of a traumatic event, for example in flashbacks, without the retrieval of the appropriate autobiographical context (VAMs). Chronic emotional processing and premature inhibition of processing are proposed as being more likely if larger discrepancies exist between trauma experiences and pre-existing self-beliefs.

More recently, this theory was revised (Brewin et al., 2010), to place it within a model of healthy memory and imagery. Contextual memory and its representations (C-reps) were proposed rather than VAMs, and sensation based memory and its representations (S-reps) were put forward rather than SAMs. Both systems are understood as playing a role in healthy memory as well as being reactivated as flashbacks in PTSD. Brewin et al. (2010) propose that in normal encoding of memories C-reps and S-reps are both created, with connections between the two. However, pathological encoding, for example in PTSD flashbacks, involves relatively stronger S-reps and weaker C-reps, with impaired connections between the two.

Dual representation theory has been backed up by empirical findings, for example in a study in which participants watched a trauma film under different conditions, with the number of intrusive memories over the following week being compared (Holmes, Brewin, & Hennessy, 2004). One condition involved participants carrying out a visuospatial task while watching the film, while another condition involved a verbal task. It was found that the visuospatial task condition was associated with reduced intrusive memories, suggesting that this task competed with the SAM representation system, leading to less well encoded perceptual information memories, resulting in less intrusions. The verbal task was associated with more intrusions compared to a control condition, suggesting that this task competed with the VAM representation system, resulting in a less comprehensive narrative account of the event, and subsequently more intrusions. Further studies have shown similar findings, with the completion of a visuospatial task during exposure to both trauma films (e.g., Deeprose, Zhang, Dejong, Dalgleish & Holmes, 2012; Stuart, Holmes & Brewin, 2006) and verbal reports (e.g., Krans, Naring, Becker & Holmes, 2010) resulting in reduced frequency of later involuntary memories. Such findings provide further support for the main ideas underlying the dual representation theory.

In sum, the dual-representation theory puts forward a theory of PTSD that focuses on memory, but in which the self also plays a role. Emotional processing of memory representations is understood as aiming to reduce negative affect by making adjustments to expectations about the self, in order to achieve integration of traumatic memories with other memories and an individual’s sense of self in the world. Greater discrepancies between trauma experiences and prior assumptions are proposed as increasing the likelihood of alternative outcomes of emotional processing, in which full processing and integration does not occur, resulting in PTSD symptoms such as flashbacks.

1.6.5.2 Self-memory system. The self-memory system (SMS; Conway, 2005; Conway & Pleydell-Pearce, 2000) provides a conceptual framework based on the interconnectedness of the self and memory, with memory being described as the "database of the self" (Conway, 2005, p. 594), and cognition, including memory, being viewed as goal-driven and motivated. The self, termed the "working self", is described as a "complex set of active goals and associated self-images" (Conway, 2005, p. 594). A reciprocal relationship between the working self and long-term memory is proposed, in which autobiographical memory is involved in goal processing, through putting constraints on the self, and the working self is involved in goal management, through modulating access to long-term knowledge. The main function of the working self is to maintain coherence between goals, through various processes such as modulating the construction of memories, determining accessibility of memories, and encoding and consolidating memories. As well as the working self goal structure, the working self conceptual knowledge is also fundamental to the model, describing self-conceptual knowledge, such as personal scripts, possible selves, attitudes, values and beliefs, which are independent of specific incidents but are connected to episodic memories and autobiographical knowledge, in order to activate instances that exemplify underlying concepts. The conceptual self takes into account "socially constructed schema and categories that define the self, other people, and typical interactions with others and the surrounding world", being influenced by "familial and peer socialisation, schooling, and religion, as well as the stories, fairy-tales, myths and media influences that are constitutive of an individual's particular culture" (Conway, 2005, p.597).

Autobiographical memory is understood as being "dominated by the force or demand of coherence" (Conway, 2005, p.596), aiming to resist goal change. Therefore, a traumatic event is viewed as unique, as it presents a "threat to current plans and goals to which the working self cannot adapt" (Conway & Pleydell-Pearce, 2000, p281). The working self may

try to lower accessibility of such events in the hierarchical goal structure, or may distort memories in order to maintain coherence and avoid goal-change and changes to the self. Any incongruence experienced due to trauma may motivate self-concept change over time, leading to the development of a trauma-centred identity and subsequent PTSD symptoms, in an attempt to maintain self-consistency (Conway, 2005). Conversely, if an individual is able to integrate a trauma experience into the autobiographical memory base, this allows for subsequent recollections to be controlled. However, for trauma survivors who are unable to do this, this theory proposes that PTSD symptoms such as intrusions will continue, until the current goal structure itself changes (Conway & Pleydell-Pearce, 2000).

Recent studies have started to explore whether empirical findings support the SMS theory. For example, Sutherland and Bryant (2008) compared trauma survivors' autobiographical memories in response to positive and negative cue words, finding that participants with PTSD reported more trauma-focused memories in response to positive cues than participants without PTSD, with retrieval of trauma-focused memories in response to positive cues being strongly associated with perceptions that one's actual self was discrepant from one's ideal self. This finding could be seen to support the SMS, as it would be expected that incongruence in the self-concept may influence autobiographical memories of trauma survivors, potentially leading to shifts in self-concept resulting in a trauma-centred identity. Furthermore, the SMS is supported by neuroanatomical findings, described in detail by Conway and Pleydell-Pearce (2000). Backing up the reciprocal relationship between memory and the self proposed in the SMS, Rathbone, Moulin, and Conway (2008) found that the number of memories generated by participants in relation to various self-images were normally distributed around the age at which they felt that self emerged, suggesting that self-images may play an organisational role within autobiographical memory, through activating memories associated with that self. These findings also supported the idea of a reminiscence

bump, with memories from this time being self-defining. Extending these findings, Rathbone, Conway, and Moulin (2011) found that imagined future events as well as autobiographical memories were clustered around periods of self-development, reflecting the powerful organisational effect of the self and suggesting that underlying this finding could be an attempt to promote a temporally stable and coherent sense of self.

In sum, the SMS puts forward a central role for the self in understanding PTSD, due to the reciprocal relationship between the self and memory. The SMS rests on the idea that "our very sense of identity depends on being able to recall personal history" (Rathbone et al., 2008, p. 1403). This theory suggests that if an individual is unable to integrate a trauma experience into the autobiographical memory base, the desire for self-coherence motivates self-concept change, resulting in a trauma-centred identity and PTSD symptoms, in order to maintain self-consistency.

1.6.5.3 Cognitive appraisal model. Similar to the SMS, the cognitive appraisal model (Ehlers & Clark, 2000) acknowledges that trauma memories may be difficult to integrate into a hierarchy of autobiographical knowledge, describing "a disturbance of autobiographical memory characterised by poor elaboration and contextualisation, strong associative memory, and strong perceptual priming" (Ehlers & Clark, 2000, p. 319). Additionally, Ehlers and Clark (2000) put forward a second process; that negative appraisals play a role in the maintenance of PTSD.

In relation to the first process put forward in this theory, Ehlers and Clark (2000) propose that the intrusion characteristics and the pattern of retrieval, such as flashbacks, which are characteristic of persistent PTSD, can be understood as being due to the way that trauma is encoded and laid down in memory. Building on the SMS (Conway, 2005; Conway & Pleydell-Pearce, 2000), trauma memories are understood as being poorly elaborated and inadequately integrated into the autobiographical memory base, lacking context in relation to

time, place, subsequent and previous information, and other autobiographical memories (Ehlers & Clark, 2000). This idea helps in understanding intentional recall difficulties in PTSD, as there is no clearly specified recall route, and flashbacks, as without temporal context flashbacks can be triggered by similar stimuli. Also, strong associative memory for traumatic material leads to predictions about future danger when presented with stimuli associated with the trauma. Finally, this theory puts forward that perceptual priming is particularly strong for stimuli that are associated temporally with a traumatic event, meaning that associated cues are more likely to be noticed, potentially triggering the trauma memory.

In relation to the second process put forward in this theory, explaining why PTSD symptoms persist in some trauma-exposed individuals but not others, Ehlers and Clark (2000) propose that PTSD develops due to a person processing a traumatic event in a way that results in a "sense of serious, current threat", through "excessively negative appraisals of the trauma and / or its sequelae" (p. 319). This threat can be external, for example viewing the world as a dangerous place, or internal, as a threat to one's view of oneself as capable and acceptable. Several negative appraisals are outlined that may be involved in this process. Appraisals of the event may include overgeneralisations, such as "bad things always happen to me", or appraisals of one's own feelings associated with the event, such as "I cannot cope with stress" (Ehlers & Clark, 2000, p.322). Appraisals of the trauma sequelae include interpretations of symptoms, such as "I'm going mad", appraisals of other's reactions, such as "they think I'm too weak to cope on my own", and interpretations of the trauma consequences, such as "I will never be able to lead a normal life again" (Ehlers & Clark, 2000, p.322). Appraisals are understood as influencing the emotional response following trauma, for example with an appraisal such as "It was my fault" potentially leading to feelings of guilt. The maintenance of PTSD symptoms is understood within this theory as being due to behavioural and cognitive strategies that prevent change in negative appraisals.

Various studies have provided empirical support to the cognitive appraisal model. For example, Kleim, Wallot, and Ehlers (2008) asked assault survivors, with and without PTSD, to complete an autobiographical memory retrieval task whilst listening to script-driven imagery, either of the assault or of an unrelated negative event. Participants with PTSD took longer to retrieve unrelated autobiographical information when listening to the imagery script of their assault, but not when listening to the unrelated negative event. These findings support the notion proposed by the cognitive appraisal model, that trauma memories are less well integrated into memory. Other studies have provided evidence that negative appraisals, as outlined in the cognitive appraisal model, are positively associated with PTSD symptoms. For example, in a retrospective study of risk factors for PTSD amongst UK armed forces personnel, appraisal of threat to life during the trauma was found to be the most important predictor of PTSD symptoms (Iversen et al., 2008). However, it is evident that limitations also exist in relation to such studies, including the possible lack of ecological validity in the first study described and the reliance on self-report in the second study described.

In sum, the cognitive appraisal model suggests that negative appraisals, as well as memory disturbances, are important in understanding PTSD. These negative appraisals may be external or internal, with internal appraisals focusing on the self, potentially posing a threat to one's view of oneself as capable and acceptable. Whilst other theories of PTSD, such as the dual representation theory and the SMS, focus more on the structure of the self, in relation to discrepancies between trauma experiences and pre-existing assumptions and also in relation to the desire for self-coherence, the cognitive appraisal model suggests that self-concept content is also important, focusing on how the content of negative appraisals may pose a threat to positive beliefs about the self.

1.6.5.4 Trauma centrality in identity and the self. Several studies (Berntsen, Willert, & Rubin, 2003; Byrne, Hyman, & Scott, 2001; McNally, Lasko, Macklin, & Pitman, 1995;

Sutherland & Bryant, 2006; Webb & Jobson, 2011) have found that PTSD symptoms are associated with the extent to which an individual views a trauma as being central to their understanding of their self and identity. For example, Byrne et al. (2001) asked participants how important a past traumatic event was to their current understanding of themselves, finding a positive correlation between ratings of importance to self-understanding and PTSD symptoms. Berntsen and Rubin (2006, 2007) theorised that self-change occurs following trauma, due to the trauma memory becoming perceived as important to the self and an individual's life story, which, combined with the need for self-consistency, leads to the trauma victim role becoming salient to identity. In contrast to theories that view trauma memories as being poorly integrated into a person's self-narratives (e.g., Ehlers & Clark, 2000), Berntsen and Rubin (2006, 2007) argue that due to their emotional impact, trauma memories are highly accessible and become a reference point for the organisation of autobiographical knowledge, impacting on future interpretations of events and experiences.

In contrast to the SMS (Conway, 2005; Conway & Pleydell-Pearce, 2000), Berntsen and Rubin (2006, 2007) view trauma memories as more extreme and salient forms of normal negative memories, rather than inherently different to other memories. Building on the SMS (Conway, 2005; Conway & Pleydell-Pearce, 2000), which views memory as the "database of the self", with memories acting as reference points that structure life narratives, Berntsen and Rubin (2006, 2007) put forward that trauma memories may also form such reference points, with this enhanced integration being problematic, potentially leading to PTSD symptoms. This theory proposes that trauma memories become a reference point for the organisation of everyday life experiences, acting as a turning point in an individual's life story. It is proposed that having a trauma as a salient turning point may lead to oversimplifications, for example focusing on aspects of life that can be explained by reference to the trauma whilst ignoring other aspects that defy such attributions. As autobiographical memories and life stories are

linked to the way an individual understands themselves, Berntsen and Rubin (2006) put forward that "if a trauma memory is seen as a central turning point in our life story it would most likely be regarded as a central component of our personal identity" (p. 221). Similar to the SMS, which suggests that incongruence combined with the drive for self-consistency motivates self-change, this theory views trauma as a "major causal agent" or "turning point", which leads to a trauma-centred identity, as a "way of optimizing the internal consistency of the life story" (Berntsen & Rubin, 2006, p.221).

An increasing number of studies have provided support for this theory, finding positive correlations between how central the trauma is to the life story and identity, as indexed by the Centrality of Events Scale (CES; Berntsen & Rubin, 2006) and PTSD symptoms, particularly intrusive memories (Boelen, 2009; Robinaugh & McNally, 2010; Rubin, Berntsen, & Bohni, 2008). Also, Berntsen and Rubin (2007) found that CES scores were positively correlated with severity of PTSD symptoms, even when controlling for anxiety, depression, dissociation and self-consciousness. Berntsen and Rubin (2006, 2007) suggest that these findings contradict the widespread view that poor integration of a trauma memory into an individual's life story results in PTSD symptoms, proposing that PTSD symptoms actually result from a trauma memory being fully integrated and becoming central to a person's life story.

In sum, Berntsen and Rubin (2006, 2007) provide a different understanding of PTSD to other theories, such as the dual representation theory, SMS and cognitive appraisal model, which all propose that PTSD symptoms arise when a trauma memory is less well integrated into autobiographical memory and the self-concept. In contrast Berntsen & Rubin (2006, 2007) put forward the idea that PTSD symptoms arise from centrality of trauma to the self and the life story rather than non-integration.

1.6.6 Treatment approaches for PTSD. Trauma-focused psychological interventions, including CBT and eye-movement desensitisation and reprocessing (EMDR), are recommended as effective PTSD treatments by NICE (2005). Trauma-focused CBT includes cognitive therapy techniques, exposure therapy, stress management, or a combination of these approaches, whilst EMDR describes a procedure in which individuals attend to the trauma memory and associations while their attention is engaged by a bilateral physical stimulation, such as eye movements (NICE, 2005). Desensitisation and reductions in arousal are believed to result from this direct processing in EMDR, with the targeted event moving from implicit to explicit memory, which no longer contains the disturbing effects.

Psychological theories of PTSD point to ideas regarding treatment approaches, offering understandings of the mechanisms underlying particular interventions. For instance, in line with dual-representation theory (Brewin et al., 1996; Brewin et al., 2010), it has been suggested that exposure therapy, in which images are held in focal attention, facilitates the transfer of S-reps into more elaborated C-reps, and that exposure therapy and EMDR can also facilitate the association between S-reps and C-reps (Brewin et al., 2010). Furthermore, based on this theory it has been suggested that individuals may benefit from cognitive restructuring within reliving and exposure sessions (Grey, Young, & Holmes, 2002), as this can lead to the creation of detailed VAMs, in which negative emotions that have been positively appraised are associated with various sensory cues. Therefore, when such cues occur, these detailed memories are more likely to be retrieved, inhibiting activation of SAMs. However it has been found that adding cognitive restructuring to exposure therapy failed to improve the latter treatment (Marks, Lovell, Noshirvani, Livanou, & Thrasher, 1988), prompting criticisms of this theory.

The SMS (Conway, 2005; Conway & Pleydell-Pearce, 2000) may point to treatment strategies such as cognitive therapy focusing on adapting self-perceptions and reducing the

likelihood of trauma memories being retrieved, as well as exposure therapy, potentially leading to new autobiographical memories. Cognitive appraisal theory provides a theoretical framework for the use of trauma-focused CBT as a treatment approach for PTSD, concentrating on the identification and modification of interpretations and appraisals. Whilst Berntsen and Rubin (2006, 2007) understand their findings to be only indirectly concerned with clinical intervention, relating this theory to PTSD treatments it is proposed that narrative work reconstructing a personal life story should not involve trauma being perceived as unique and superior to other possible vantage points, as this could enhance the salience of the trauma in relation to an individual's past, present and future self, further reinforcing the maladaptive trauma-centred identity.

1.7 The Self and PTSD

1.7.1 Summary of relationships between the self-concept (including self-consistency) and PTSD. The psychological theories of PTSD outlined previously provide various ideas about the relationship between the self-concept and PTSD. The dual representation theory (Brewin et al., 1996; Brewin et al., 2010) acknowledges the role of the self in PTSD, suggesting emotional processing of different memory representations can lead to different outcomes depending on how well trauma memories are integrated with other memories and with an individual's sense of self in the world. PTSD symptoms are understood as arising when processing and integration cannot be achieved. Greater discrepancies between trauma experiences and prior assumptions are proposed as increasing the likelihood of non-integration, resulting in PTSD symptoms such as flashbacks.

The SMS (Conway, 2005; Conway & Pleydell-Pearce, 2000) provides a theory of PTSD in which the self plays a central role, due to the interconnectedness of the self and memory. The SMS suggests that the working self is involved in goal management, whilst the conceptual self incorporates self-conceptual knowledge, such as beliefs and values. Trauma is

viewed as presenting a threat to an individual's goals, to which the working self struggles to adapt, resulting in the trauma memory being event-specific knowledge that lacks context. The SMS proposes that the desire for self-coherence leads to attempts by the working self to lower the accessibility of memories that are incongruent with the goal structure, such as trauma memories, or to distort memories in order to maintain coherence and to delay or avoid changes in goals or the self. However, over time the desire for coherence may motivate self-concept change, to enable the memory of the event to be incorporated into a broader self-knowledge, leading to a trauma-centred identity, with PTSD symptoms continuing until the current goal structure itself changes.

The cognitive appraisal theory (Ehlers & Clark, 2000) also puts forward a further understanding of the role of the self in PTSD, focusing on the importance of negative appraisals in relation to the self. The cognitive appraisal theory acknowledges that the sense of threat experienced in PTSD can be an internal threat to self, suggesting that trauma may not fit with a person's own self-concept perception (Ehlers & Clark, 2000, p. 320). As well as considering self-concept structure, in relation to non-integration and the discrepancy between trauma and an individual's perceptions, this theory also recognises that self-concept content (i.e., specific negative appraisals), can play a role in the development and maintenance of PTSD.

Also focusing more on the self, Berntsen and Rubin (2006, 2007) provide a contrasting understanding of PTSD, proposing that PTSD symptoms arise from the centrality of trauma within the life story and the self rather than from non-integration. Berntsen and Rubin (2006, 2007) propose that the desire for self-consistency leads to self-change following trauma, due to the trauma memory being perceived as important to the self and the individual's life story, resulting in a trauma-centred identity and PTSD symptoms.

Whilst these theories provide different conceptualisations of PTSD and the role of the self in its development and maintenance, it is evident that the self is central to current understandings of PTSD and also to ideas about treatment.

1.7.2 Cultural differences in the relationship between self-consistency and PTSD. Whilst Conway (2005) acknowledges that the conceptual self is influenced by culture, many other psychological theories of PTSD do not focus on psychological understandings of the nature of the self, particularly in relation to the impact of culture on the relationship between the self and autobiographical memory (Jobson, 2009). For instance, many PTSD theories (e.g., Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000) propose that self-change following trauma is driven by the desire for self-coherence and self-consistency, however cross-cultural researchers have argued that the need for self-consistency varies across cultures, with findings showing that self-consistency is more important for well-being in individualistic cultures compared to collectivistic cultures (e.g., Suh, 2002). Based on ideas relating to cross-cultural differences in the self and self-construals (Markus & Kitayama, 1991, 1994, 2010; Triandis, 1989), and also in relation to self-consistency (Suh, 2002), researchers have started to investigate how these differences may play a role in understandings of PTSD.

Jobson and O'Kearney (2006) found that disrupted adjustment to trauma was related to stronger trauma-centred self-definitions for Australian students but not for Asian students. This finding questioned the universality of psychological theories of PTSD which suggest that the development of a trauma-centred self is maladaptive, leading to the development and maintenance of PTSD symptoms (Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000). Although the findings provided support for this idea in individuals from an individualistic culture (Australian) this was not the case for individuals from collectivistic cultures (Asian). Jobson and O'Kearney (2008) put forward further cultural

differences, finding that trauma-exposed individuals with PTSD from individualistic (i.e., independent) cultures reported more trauma-related goals, self-defining memories and self-cognitions, compared to trauma-exposed individuals without PTSD from independent cultures. No differences were found with individuals from collectivistic (i.e., interdependent) cultures.

These findings have been understood in relation to cross-cultural theory (Suh, 2002), suggesting that self-consistency is culturally variable, with self-consistency assumed to be necessary for well-being in individualistic cultures but not in collectivistic cultures. The threat to conceptual self model (Jobson, 2009) incorporates this idea into an understanding of PTSD, proposing that changes to identity and the self following trauma depend on the need for self-consistency, which is culturally variable. At present, it is less clear how self-concept content, as well as structure (i.e., consistency) may play a role in cross-cultural understandings of PTSD.

1.8 Interim Summary

PTSD is a universal disorder, which can impact significantly on individuals and societies. Various psychological processes, such as memory and processes relating to the self, have been found to be involved in the development and maintenance of PTSD. Several psychological theories have conceptualised the role of the self in the development and maintenance of PTSD, and there is a general consensus that self-concept (both in terms of content and structure) plays an important role in PTSD. Specifically, some theories of PTSD put forward that self-consistency plays a role in PTSD, with the desire for consistency or coherence leading to self-concept change following trauma, resulting in a trauma-centred identity (Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000). As well as considering self-concept structure (i.e., self-consistency), PTSD theories have also recognised the importance of self-concept content, for example in relation to negative

appraisals that may play a role in the development and maintenance of PTSD (Ehlers & Clark, 2000).

Despite considerable research indicating the influence of culture on the self, many PTSD theories do not consider the influence of cross-cultural differences in the self (Jobson, 2009; Markus & Kitayama, 1991, 1994, 2010; Suh, 2002), and empirical findings have started to question the universality of such theories (Jobson & O'Kearney, 2006, 2008). For example, disrupted adjustment to trauma has been found to be related to stronger trauma-centred self-definitions for individuals from individualistic cultures, but not for individuals from collectivistic cultures (Jobson & O'Kearney, 2006). Furthermore, whilst specific negative appraisals have been linked with PTSD (Ehlers & Clark, 2000) the wider influence of self-concept content, such as desirability of self-concept characteristics, as well as self-concept structure (i.e., self-consistency), on cross-cultural understandings of PTSD has not been fully explored to date.

In light of the idea that cross-cultural differences in self-consistency play an important role in models of PTSD (Jobson, 2009), Study 1b of the current study aims to explore this further. Also, as self-concept content as well as structure has been found to influence well-being (Locke, 2006), as discussed in section 1.4, Study 1b also aims to explore this in relation to PTSD. Specifically the aim of Study 1b is to investigate the cross-cultural differences in the influence of self-concept *content* (i.e., desirability) as well as self-concept *structure* (i.e., self-consistency) on posttraumatic psychological adjustment (i.e., PTSD symptoms and trauma-centred identity). Section 1.9 will now summarise the overall rationale for the current study and present the study aims. Section 1.10 will then put forward the research questions and hypotheses.

1.9 Rationale for Current Study and Study Aims

It is evident that the structure and content of the self-concept influence psychological processes, which are fundamental when conceptualising psychological well-being and disorders. Although self-consistency has often been linked to well-being (Lecky, 1945; Maslow, 1954; Rogers, 1951), cross-cultural research has challenged this idea. For instance, self-consistency has been found to be emphasised and more important to well-being in individualistic cultures when compared to collectivistic cultures (Suh, 2002).

In relation to PTSD, it has been suggested that trauma may lead to disruptions in autobiographical memory (e.g., Brewin et al., 1996; Brewin et al., 2010; Conway, 2005; Conway & Pleydell-Pearce, 2000; Ehlers & Clark, 2000). A central relationship exists between autobiographical memory and the self whereby autobiographical memory is central to the development, expression and maintenance of the self and in turn the self is central to the encoding, storage and retrieval of autobiographical memory (Conway, 2005; Rathbone et al., 2008). Additionally, in several of the prominent PTSD models self-consistency plays an essential role in the development, maintenance and treatment of PTSD (Berntsen & Rubin, 2006, 2007; Conway, 2005).

More recently two areas of empirical work have started to challenge the assumed association between self-consistency and well-being, with the current study focusing on these areas. Firstly, the majority of theories relating to well-being and PTSD do not consider the influence of cross-cultural differences in the self, therefore cross-cultural studies have started to question the universality of such theories (e.g., Jobson & O'Kearney, 2006). Secondly, research has started to consider the influence of self-concept *content*, specifically desirability, in addition to self-concept *structure* (i.e., self-consistency) on the relationship between the self and psychological well-being (Locke, 2006). To date this has not been considered in relation to PTSD and has not been fully explored cross-culturally.

Therefore, the current study aims to explore these areas further. Study 1a aims to investigate the influence of culture and content on the relationship between self-consistency and well-being, through bringing Locke's (2006) research into the cross-cultural field. Using a sample of British and East Asian participants, it aims to investigate how cross-cultural differences in self-concept *structure* (i.e., self-consistency) and *content* (i.e., desirability) affect well-being, as indexed by symptoms of depression and anxiety. Study 1b aims to extend this by focusing on one particular anxiety disorder, PTSD, in which self-consistency has been implicated in the development and maintenance of symptoms. Specifically, Study 1b focuses on psychological adjustment following trauma, investigating the influence of cross-cultural differences in self-concept *content* (i.e., desirability) as well as self-concept *structure* (i.e., self-consistency).

Whilst also potentially adding further theoretical information in relation to how self-concept structure and content can play a role in the development and maintenance of various psychological disorders, the current study could potentially have important clinical implications, as current treatment approaches are based on theoretical understandings. For instance, in relation to PTSD, further understanding could potentially help to inform current interventions, which are culturally limited (Foa et al., 2009). Psychological therapies based on Western models and theories may reflect a particular world view, and it is possible that therapeutic compliance, engagement, and effectiveness may be enhanced if the treatment model is harmonious with an individual's cultural beliefs (De Silva, 1999).

1.10 Research Questions and Hypotheses

The following research questions and hypotheses are proposed in relation to Study 1a:

1a. How do self-concept consistency and desirability differ cross-culturally? This question aims to replicate previous findings (Suh, 2002) in relation to cross-cultural self-consistency differences, and to investigate whether cultural

differences extend to both desirable and undesirable characteristics. Based on the collective-constructionist theory of the self (Kitayama et al., 1997; Markus & Kitayama, 1991, 1994, 2010) and previous research (Suh, 2002), it is predicted that British participants will show significantly greater self-consistency compared to East Asian participants. It is unclear how British and East Asian participants will compare when looking at self-consistency to desirable and to undesirable characteristics.

1b. How are cross-cultural differences in self-consistency related to well-being? Based on the collective-constructionist theory of the self (Kitayama et al., 1997; Markus & Kitayama, 1991, 1994, 2010) and previous research (Suh, 2002), it is predicted that higher consistency will be associated with greater well-being for British participants. Conversely, it is predicted that self-consistency will be less related with well-being for East Asian participants.

1c. How does desirability impact on the cross-cultural associations between self-consistency and well-being? Based on theoretical ideas (e.g., Beck, 1976) and previous research (e.g., DeNeve & Cooper, 1998; Kitayama et al., 1997) proposing that self-concept content (e.g., beliefs and thoughts about the self) is important to well-being as well as self-concept structure, it is hypothesised that desirability could influence the cross-cultural associations between self-consistency and well-being. Based on Locke's (2006) findings in an individualistic culture, it is predicted that for British participants greater self-consistency to desirable characteristics will be associated with greater well-being, and greater consistency to undesirable characteristics will not be associated with greater well-being. Specific predictions for East Asian participants are unclear.

1d. How do these potential associations (questions 1b and 1c) compare cross-culturally? Based on the collective-constructionist theory of self, as well as previous research (e.g., Suh, 2002), it is predicted that when comparing correlation coefficients of the two cultural groups, associations will differ significantly cross-culturally. It is predicted that correlations between consistency and well-being will be significantly stronger for British participants compared to East Asian participants. It is less clear how desirability will impact on this.

The following research questions and hypotheses are proposed in relation to Study 1b:

2a. How do cross-cultural differences in self-consistency and desirability affect posttraumatic psychological adjustment (i.e., level of trauma-centred identity and PTSD symptoms)? Based on the theoretical background (e.g., Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000) it could be predicted that participants with higher self-consistency (i.e., British) will show greater trauma-centred identity, and subsequently higher PTSD symptoms. However, if PTSD is understood similarly to well-being, higher self-consistency could be associated with lower PTSD symptoms. Predictions for East Asian participants are unclear. It is also unclear how desirability may impact on these relationships.

2b. If associations are found for research question 2a, does trauma-centred identity play a mediating role in the relationship between self-consistency (or potentially self-consistency to desirable / undesirable self-characteristics) and PTSD symptoms?

2 Method

2.1 Overview

This chapter describes and provides a rationale for the methodology used in the current study. The chapter includes a description of the study design, followed by information about participants and the recruitment process. Details of the measures are then provided, followed by a discussion of the ethical considerations. The study procedure is then described, and finally, the data analysis plan is outlined.

2.2 Design

The overall aim of the study was to investigate how cross-cultural differences in self-consistency and desirability influence well-being (Study 1a) and posttraumatic psychological adjustment (Study 1b). A two group (British vs. East Asian) quantitative cross-sectional design was used, in which the variables were assessed using self-report measures at one point in time. Study 1a aimed to explore cross-cultural differences in the associations between self-concept (structure i.e., self-consistency and content i.e., desirability) and well-being, as indexed by measures of depression and anxiety symptoms. Study 1b aimed to expand the concept of well-being by exploring cross-cultural differences in the relationships between self-concept (self-consistency and desirability) and posttraumatic psychological adjustment, as assessed using measures of trauma-centred identity and PTSD symptoms. Measures associated with Study 1b were completed by those participants in Study 1a who had experienced a traumatic event. The two group (British vs. East Asian) cross-sectional design allowed for differences between the two cultural groups to be investigated in relation to associations between self-consistency / desirability and levels of well-being and posttraumatic psychological adjustment.

2.3 Participants

2.3.1 Inclusion and exclusion criteria. A non-clinical student and community sample was used, consisting of British and East Asian participants. Inclusion criteria for British participants were defining their ethnicity as British and being born in the UK. Inclusion criteria for East Asian participants were defining their ethnicity as East Asian and having lived in the UK for less than five years. These criteria were imposed in order to increase the likelihood that the two groups reflected the different cultural groups accurately, fitting with Hofstede's (1983) description of individualistic and collectivistic cultures, with "national culture" and "early life experiences" playing a role in this distinction (p. 42). Additional inclusion and exclusion criteria were put in place for Study 1b. As Study 1b focused on posttraumatic psychological adjustment, participants were excluded from this part of the study if they had not experienced a traumatic event, as outlined on part 1 of the PDS (Foa, Riggs, Dancu, & Rothbaum, 1993a). Figure 1 shows a flowchart, outlining the numbers of participants who were included and excluded from the study at various points.

As the study aimed to investigate differences in well-being and posttraumatic psychological adjustment, as indexed by symptoms of depression, anxiety and PTSD, participants with high scores on these measures were not excluded. Research suggests that due to the high comorbidity between PTSD and depression, if such variables are controlled for or excluded, this could alter the diagnostic group variable, and potentially not be representative (Miller & Chapman, 2001).

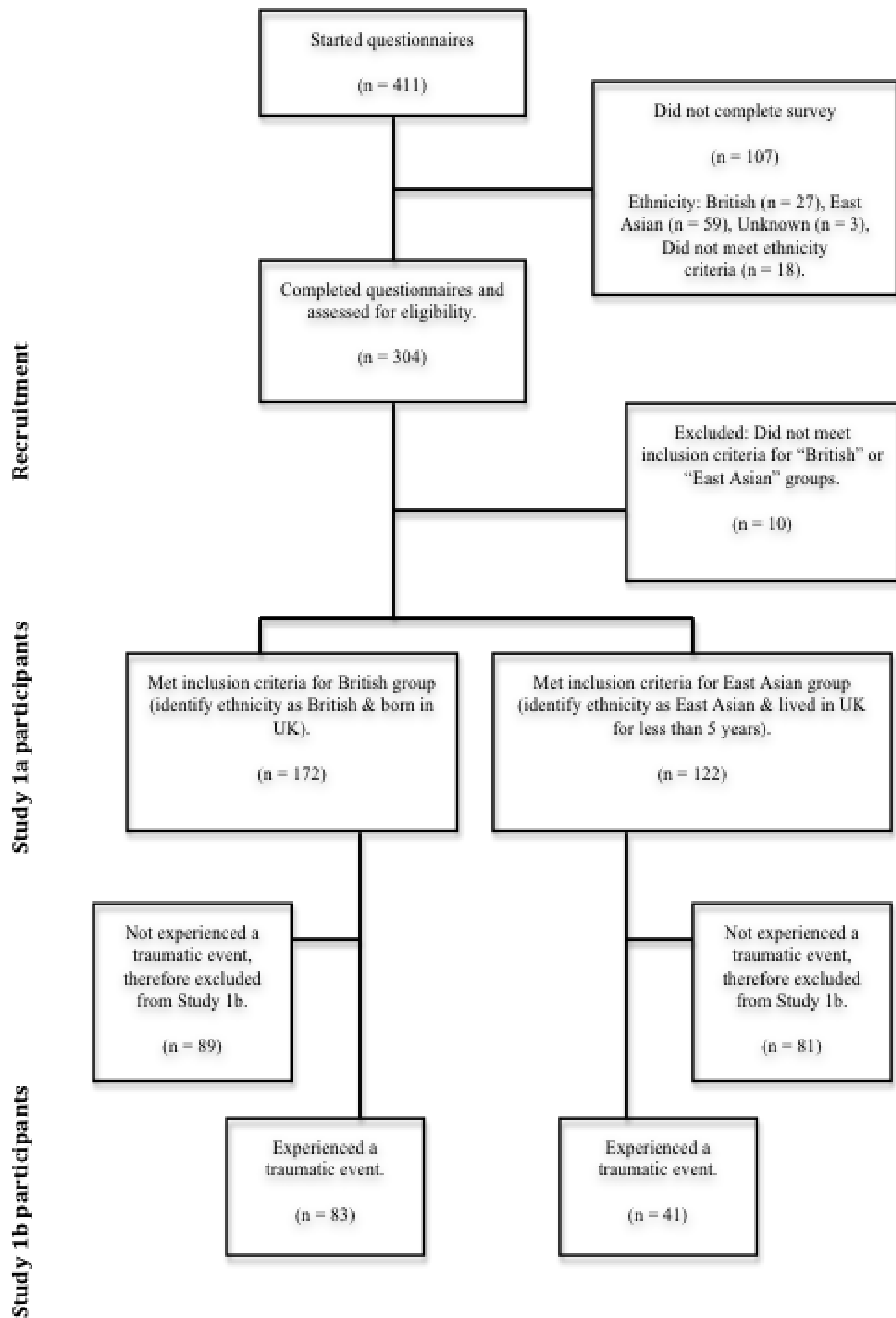

Figure 1. Participant flowchart.

2.3.2 Sample size. *A priori* power calculations were carried out using G*Power 3 (Faul, Erdfelder, Lang, & Buchner, 2007), and findings from previous studies (e.g., Suh, 2002) were used to estimate the sample size required for correlation analyses. Previous studies mostly reported medium to large effect sizes. In order to investigate the relationships between self-consistency / desirability and well-being, the planned sample size was 67 participants in each cultural group, based on an alpha error probability of .05 and a power of .80, with a medium effect size of .30. This sample size was also assessed as adequate to carry out comparisons of means, in order to assess cross-cultural differences in self-consistency / desirability, based on an alpha error probability of .05 and a power of .80, with a large effect size (based on Suh's (2002) findings). In order to carry out cross-cultural comparisons of correlation coefficients, it was estimated that a substantially larger sample size of 141 participants in each cultural group would be required. This again was based on Suh's (2002) coefficients; a medium effect size of .30, and assuming power of .80 and an alpha error probability of .05. However, this larger sample size was deemed potentially difficult to obtain, thus the smaller sample size of 67 participants in each group was the primary aim for recruitment and would be adequate to investigate all other research questions in Study 1a.

In order to obtain at least 67 participants in each cultural group for both parts of the study, it was estimated that greater numbers would be required, depending on the proportion of participants who had experienced a traumatic event. Based on Norris's (1992) finding that 69% of people had experienced some traumatic event in their lifetime, it was estimated that a sample size of at least 98 participants in each cultural group should provide at least 67 participants in each group who meet the inclusion criteria for Study 1b. If it did prove possible to recruit the larger sample size of 141 participants in each group, it was predicted that this would provide more than enough participants for Study 1b.

2.3.3 Recruitment procedure. A non-clinical student and community sample was used. The study was advertised at the University of East Anglia (UEA), with posters advertising the study (see Appendix A) being circulated in various ways. For instance, the information on the poster was sent out to the psychology participant panel email list and was circulated by the UEA media office as part of the internal weekly news bulletin. Various student societies, such as the UEA East Asian Students and Scholars Society, were contacted and asked to circulate information about the study to their members via email. The posters were displayed in various places at UEA, for example in communal student study areas. Prize draw entry was offered to participants, to assist with recruitment. Advertisements for the study highlighted a secure website address, which provided further information about the study, followed by the opportunity to participate in the study through the website.

2.4 Measures

All of the measures described below were presented to participants in English on the study website in the following order: Situation-specific self-description task (Locke, 2006), Hopkins Symptom Checklist (HSCL-25; Derogatis, Lipman, Rickels, & Cori, 1974), Posttraumatic Stress Diagnostic Scale (PDS; Foa et al., 1993a) and Centrality of Event Scale (Berntsen & Rubin, 2006).

2.4.1 Situation-specific self-description task. The situation-specific self-description task (Locke, 2006; Appendix B) was used to obtain a self-consistency index for each participant, based on Locke's (2006) method, which utilised the mean Between Situation Correlation Coefficient (BSCC). Participants were asked to indicate whether or not each of 20 self-characteristics describes how they tend to be in four different relationship contexts (with a male I know well, with a female I know well, with a male I do not know well, with a female I do not know well). The characteristics list (Appendix C), developed by Hampson (1998), includes sets from each area in the five factor model of personality (Costa & McCrae,

1994; McCrae & Costa, 1996, 2008; McCrae & John, 1992; Peabody & Goldberg, 1989). Within each of the five sets there are four characteristics, two desirable (one from each pole of the factor) and two undesirable (one from each pole of the factor). For example, desirable characteristics included cultured and down to earth, whilst undesirable characteristics included coarse and snobbish. The BSCC for each participant is computed through calculating the Pearson correlation coefficient for self-characteristics between each pair of situations. For each pair of situations, Locke (2006) describes YY as the number of characteristics to which the respondent responds "yes" in both situation 1 and 2, NN as the number of characteristics to which the respondent responds "no" in both situation 1 and 2, YN as the number of characteristics to which the respondent says "yes" in situation 1 and "no" in situation 2, and NY as the number of characteristics to which the respondent says "no" in situation 1 and "yes in situation 2. For each pair of situations, the covariance is calculated as (YY)(NN)-(YN)(NY), the variance is calculated as the square root of (YY+YN)(YY+NY)(NN+YN)(NN+NY), and the BSCC is calculated as the covariance divided by the variance. The mean BSCC across all pairs of situations provides an index of consistency for each participant.

This method is simple and routinely used in previous studies (Campbell, Assanand, & Di Paula, 2003; Locke, 2006; Suh, 2002), either exactly or through linear transformations. The BSCC has been shown to correlate positively ($r = .37$, $p < .01$; Suh, 2002) with the self-concept clarity scale (Campbell et al., 1996), which measures the degree to which one's self-concept is clearly and confidently defined, internally consistent and temporally stable. Also, 1-BSCC, measuring self-concept inconsistency, was found to positively correlate with the self-pluralism scale ($r = .41$, $p < .01$; McReynolds, Altrocchi, & House, 2000), a measure of the degree to which one perceives oneself as feeling, behaving and being different in different situations and at different times. These findings demonstrate construct validity of the BSCC

statistic as a measure of self-consistency. However, it has been pointed out that this measure, which aims to assess self-concept structure, could be confounded by self-concept content. Therefore, Locke's (2006) method of breaking the BSCC down further, eliminating the confound between BSCC and self-concept desirability, was used.

Locke's (2006) method was utilised to break down the BSCC into consistency to desirable or undesirable characteristics, distinguishing between four types of consistency: consistently endorsing the same desirable characteristic across situations ($YY_{desirable}$), consistently endorsing the same undesirable characteristic across situations ($YY_{undesirable}$), consistently denying the same desirable characteristic across situations ($NN_{desirable}$), and consistently denying the same undesirable characteristic across situations ($NN_{undesirable}$). Desirable types of consistency include $YY_{desirable}$ and $NN_{undesirable}$, and undesirable types include $YY_{undesirable}$ and $NN_{desirable}$. $YY_{desirable}$ is computed as the number of times a participant says "yes" to the same desirable characteristic in two different situations, summed across the 10 desirable characteristics and six two-situation combinations, providing a score ranging from 0 to 60. $YY_{undesirable}$, $NN_{desirable}$, and $NN_{undesirable}$ were computed similarly.

2.4.2 HSCL-25. The HSCL-25 (Derogatis et al., 1974; Appendix D) was used to measure well-being. The HSCL-25 is a two-part, 25-item symptom inventory, with part one comprising of 10 items that measure symptoms of anxiety and part two comprising of 15 items that measure symptoms of depression. For each item, individuals are asked to indicate how much the symptom described has bothered or distressed them during the past week using a four-point Likert scale, from 1 (*not at all*) to 4 (*extremely*). The mean score for all 25 items provides a total score, with the mean scores for the anxiety and depression items providing separate anxiety and depression symptom scores respectively. A cut-off score of 1.75 is often used for the HSCL-25, with the validity of this cut-off criterion being supported in various studies in relation to different diagnostic psychiatric interviews around the world (e.g.,

Hollander, Ekblad, Mukhamadiev, & Muminova, 2007; Mollica, Wyshak, de Marneffe, Khuon, & Lavelle, 1987; Sandanger et al., 1998). The HSCL-25 has been shown to possess high internal consistency (α = .84 - .87), high test-retest reliability (r = .64 - .80), and adequate inter-rater reliability (r = .64 - .80; Derogatis et al., 1974). It is regularly used in cross-cultural research (Jobson, 2011; Mouanoutoua & Brown, 1995). Internal consistency of the HSCL-25 in the present sample was found to be high, for the whole scale (α = .92), and also for the anxiety items (α = .84) and depression items (α = .91) separately. Internal consistency of the HSCL-25 was also found to be high when assessed for each cultural group separately (British: whole scale, α = .92, anxiety items, α = .84, depression items, α = .91; East Asian: whole scale, α = .92, anxiety items, α = .85, depression items, α = .89).

2.4.3 PDS. The PDS (Foa et al., 1993a; Appendix E) was used as one of the measures assessing posttraumatic psychological adjustment, measuring symptoms of PTSD relating to a specific identified traumatic event. The PDS is a 49-item self-report measure, split into four parts that correspond to DSM-IV (APA, 1994) criteria for diagnosing PTSD. Part 1 is a trauma checklist, which was used in the present study to determine whether participants had experienced a distressing traumatic event and consequently whether they were eligible to take part in Study 1b as well as Study 1a. If participants had experienced a traumatic event, as defined by Part 1 of the PDS, they continued completing the subsequent parts of the measure. Part 2 of the PDS asks participants to describe the traumatic event that bothers them the most, and then to answer questions relating to when the event happened, whether anyone was injured, if they perceived lives to be threatened, and whether they felt helpless or terrified. Part 3 assesses PTSD symptoms, with participants being asked to rate the severity of each of 17 symptoms. For each item, individuals are asked to indicate how much the symptom described has bothered them during the past month using a four-point Likert scale, from 0 (*not at all or only one time*) to 3 (*5 or more times a week / almost always*). Part 4 of the PDS

asks participants to state whether or not the symptoms described in Part 3 have interfered with various different aspects of their life during the past month. Through combining all parts of the PDS, a categorical diagnosis of PTSD can be made, if an individual's responses meet DSM-IV criteria (APA, 1994). Part 3 of the PDS provides a total symptom severity score, ranging from 0 to 51, which is often used in research studies, including cross-cultural studies (e.g., Jobson, 2011; Jobson & O'Kearney, 2008) and was utilised in the present study. The PDS has been shown to have high internal consistency (α = .91), adequate test-retest reliability (r = .74), concurrent and convergent validity with other measures of psychopathology (including the Structured Clinical Interview; Spitzer, Williams, & Gibbon, 1987), and predictive validity (Foa et al., 1993a). The PDS has been used in research with collectivistic cultures (e.g., Garcia, 2005). Internal consistency of the PDS was found to be high in the present sample (α = .94) and also when assessed for each cultural group separately (British, α = .93; East Asian, α = .94).

2.4.4 CES. The CES (Berntsen & Rubin, 2006; Appendix F) was used to assess trauma-centred identity, as another measure of posttraumatic psychological adjustment. It is a 20-item self-report measure, which investigates the extent to which a traumatic memory becomes a reference point for everyday inferences, a turning point in a person's life story, or a central component of personal identity (Berntsen & Rubin, 2006). Participants are asked to rate items on a five-point Likert scale, ranging from 1 (*Totally disagree*) to 5 (*Totally agree*), yielding a total score ranging from 20 to 100, with higher scores indicating enhanced autobiographical integration of the traumatic memory. The CES has high internal consistency (α = .94) and has been found through a factor analysis to have a single construct underlying it (Berntsen & Rubin, 2006). CES scores have also been found to correlate positively with PTSD symptom severity among students (Berntsen & Rubin, 2006) and combat veterans (Brown, Antonius, Kramer, Root, & Hirst, 2010). The CES has been used with participants

from various ethnic and cultural backgrounds (e.g., Berntsen & Rubin, 2006). Internal consistency of the CES was found to be high in the present sample ($\alpha = .95$) and also when assessed for each cultural group separately (British, $\alpha = .94$; East Asian, $\alpha = .96$).

2.4.5 Demographic questionnaire. All participants completed a brief demographic questionnaire (Appendix G), which gathered information regarding gender, age, ethnicity, level of education and the number of years participants had lived in the UK. Participants were also asked to rate their written English skills on a ten-point Likert scale, from 1 (*Very poor*) to 10 (*Extremely good*).

2.5 Ethical Considerations

2.5.1 Ethical approval. Ethical approval for this study, including the small-scale pilot study (described further in section 2.6.1), was sought from and granted by the UEA Faculty of Medicine and Health Sciences Research Ethics Committee. See Appendix H for relevant correspondence with the ethics committee, including the letter of confirmation of approval.

2.5.2 Informed consent. An information sheet (Appendix I) and consent form (Appendix J) were presented online to individuals accessing the study website, prior to commencement of the study. These documents informed individuals that participation in the study was completely voluntary and informed them of their right to withdraw from the study at any point prior to submitting their online responses without having to give a reason. Individuals were also informed that all data gathered in the study would be anonymous and treated as confidential, with no personal identifying information being collected. Contact details of the chief investigator and the research supervisor were provided on the information sheet, enabling individuals to ask questions prior to giving consent or at any point during the study. Individuals accessing the study website were asked to read the information sheet and consent form online and it was stated that by clicking to commence the questionnaires participants would be giving informed consent to take part.

2.5.3 Managing risk and distress. It was identified that some questions within the questionnaires may be distressing to some participants, particularly in Study 1b, which included questions about experiences of traumatic events. Participants were informed of their right to withdraw at any point, prior to submitting their answers online, if they became distressed. Contact details of various sources of support were also provided to participants, on the information sheet at the start of the study and as part of the debrief information presented online at the end of the study. Suggested sources of support included participants' General Practitioners, the Samaritans, and the Chinese Mental Health Association (CMHA), which provides a range of support services for Chinese people living in the UK. Contact details of the chief investigator and research supervisor were also provided for participants who wished to contact them if they found the study distressing and were interested in a fuller debrief opportunity, however no participants made contact for this reason.

Although past questions have arisen about trauma research, for example whether asking about trauma could re-traumatise an individual, research suggests this is not the case. When comparing reactions to trauma questions and other psychological questions through a self-report survey, trauma questions were found to cause relatively minimal distress and were perceived as having greater importance and cost-benefit ratings compared to other psychological research (Cromer, Freyd, Binder, DePrince & Becker-Blease, 2006). Trauma research has also been found to be a positive experience, which can provide personal gain (Newman, Walker & Gefland, 1999).

2.5.4 Confidentiality. Data were managed in accordance with the Data Protection Act (1998). All data collected were anonymous, by not including any identifying information. The online survey provider (Survey Monkey) strives to ensure that user data is kept secure, as outlined in their online security statement (http://www.surveymonkey.com/mp/policy/security/). Completed online questionnaire data

were printed by the chief investigator and were stored in a locked cabinet. After data had been printed and securely stored, it was deleted from the online survey provider. For analysis purposes, anonymous data tables were stored on an encrypted memory stick, secured with a password. Following completion of the research, data will continue to be stored in a locked archive room at UEA for five years, in line with current policy. Following completion of questionnaires, participants were instructed to email the chief investigator separately if they wished to enter the prize draw, to ensure anonymity of data. After the prize draw winners were randomly selected and informed, participants' contact details for the prize draw were securely destroyed.

2.6 Procedure

2.6.1 Pilot study. Prior to beginning the main study, a small-scale pilot study was conducted, to assess whether the two cultural groups viewed the 20 self-characteristics similarly in relation to desirability. The pilot study was carried out on the UEA campus, with 10 students from each cultural group (British and East Asian) taking part. The principal researcher was positioned in a central location on the university campus and randomly asked students passing by if they would be interested in taking part. If interested, eligibility was assessed using the inclusion criteria for the different cultural groups and if eligible participants were asked to rate each of the 20 characteristics from the list developed by Hampson (1998) on a ten-point desirability Likert scale, ranging from 1 (*Very undesirable*) to 10 (*Very desirable*). A Mann-Whitney U test was conducted for each characteristic, with no significant differences being found between the two cultural groups in relation to perceptions of desirability for each of the 20 characteristics ($ps < .05$). Due to these findings, it was deemed appropriate to use the same list of 20 characteristics, as outlined by Hampson (1998), for each cultural group when conducting the main study.

2.6.2 Data collection procedure. Following completion of the pilot study, the study website was set up using Survey Monkey and advertisements were published to recruit participants, as described in Section 2.3.3. The study website was active for six months of data collection. After accessing the study website, individuals were presented with the information sheet and consent form, followed by the demographic questionnaire and measures. Participants were asked to complete the situation-specific self-description task and the HSCL-25 (Study 1a measures). Following this, participants were asked to complete Part 1 of the PDS, to determine whether or not they had experienced a distressing traumatic event. Participants only continued to complete the remaining parts of the PDS as well as the CES (Study 1b measures) if they indicated that they had experienced a traumatic event. All other participants were directed to the end of the study at this point. Following completion of the relevant online questionnaires, all participants were presented with contact details of the chief investigator and research supervisor, as well as contact details and advice for contacting sources of support, as described in Section 2.5.3.

2.6.3 Prize draw. On completion of the online questionnaires, participants were given the opportunity to enter a prize draw to win one of four £25 Amazon vouchers, as a way of thanking them for participating. Participants were asked to email the chief investigator separately if they wished to enter the prize draw, to ensure that information from the online questionnaires could not be linked to individual participants. Names and email addresses of participants who entered the prize draw were stored separately from the questionnaire data, in a secure email folder. On completion of the six-month data collection period, the chief investigator placed the names of all prize draw entrants into a hat and drew four names out at random to select the winning participants, who each won a £25 Amazon voucher. After informing the winners and arranging for delivery of the prizes, all contact details were securely shredded and permanently deleted from the email folder.

2.7 Plan of Analysis

All analyses were carried out using SPSS 19.0 (IBM Corp., 2010), with separate analyses being carried out for each part of the study (Study 1a and Study 1b). Data from the online questionnaires were entered into SPSS and visually inspected for missing or inaccurate entries. In order to consider the main features of the raw data, including the distributions, descriptive statistics were performed and histograms were produced. The data were examined for outliers and assumptions for parametric tests were assessed. If these assumptions were violated, transformations were performed on the data or non-parametric tests were used. See Chapter 3 for further information on this in relation to each variable. As multiple tests were performed, the Bonferroni correction was used when necessary to counteract associated problems, with more stringent alpha levels being set (Pallant, 2010, p. 209).

2.7.1 Research question 1a. Independent t-tests are based on the assumptions of normality and homogeneity of variance. Due to these assumptions not being met for both cultural groups in relation to mean BSCC scores (see Chapter 3), in order to test the hypothesis that British participants would show significantly higher self-consistency (mean BSCC scores) compared to East Asian participants, a Mann-Whitney U test was carried out. In order to compare how British and East Asian participants differed in relation to desirable types of consistency ($YY_{desirable}$ scores and $NN_{undesirable}$ scores) and undesirable types of consistency ($YY_{undesirable}$ scores and $NN_{desirable}$ scores), either independent t-tests or Mann-Whitney U tests were carried out depending on whether the data satisfied the assumptions for parametric tests.

2.7.2 Research question 1b. In order to examine the relationships between self-consistency and well-being, correlation coefficients were calculated to explore the correlations between mean BSCC scores and HSCL-25 scores (depression and anxiety separately) for each cultural group. Pearson's correlation coefficient was used when the data

met the necessary assumptions for carrying out parametric tests, with Spearman's correlation coefficient being used as a non-parametric alternative. In order to estimate effect sizes, Cohen's (1992) guidelines were utilised, describing $r = .10$ as a small effect size, $r = .30$ as a medium effect size and $r = .50$ as a large effect size.

2.7.3 Research question 1c. Similarly to the statistics used for research question 1b, Pearson's or Spearman's correlation coefficients were calculated to examine relationships between desirable types of self-consistency ($YY_{desirable}$ scores and $NN_{undesirable}$ scores) and HSCL-25 scores (depression and anxiety separately) for each cultural group. Similar calculations were also performed for undesirable types of consistency ($YY_{undesirable}$ scores and $NN_{desirable}$ scores).

2.7.4 Research question 1d. In order to compare significant associations found in research questions 1b and 1c cross-culturally, correlation coefficients were converted into z scores using tables provided by Pallant (2010, p. 142). This allowed for the observed value of z (z_{obs}) to be calculated using the following equation (Pallant, 2010, p. 140): $z_{obs} = (z_1 - z_2) / \sqrt{((1 / N_1\text{-}3) + (1 / N_2\text{-}3))}$. If the value of z_{obs} was found to be between -1.96 and 1.96, the correlation coefficients were deemed to not be statistically significantly different. However, if the value of z_{obs} was found to be outside of these boundaries, it was concluded that the correlation coefficients were significantly different.

2.7.5 Research question 2a. As all of the data in relation to this research question were found to be normally distributed (either untransformed or transformed), Pearson's correlation coefficients were calculated to examine relationships between self-consistency (overall and desirable / undesirable types separately) and posttraumatic psychological adjustment (CES and PDS scores separately) for each cultural group.

2.7.6 Research question 2b. If relevant associations were found between self-consistency, CES scores and PDS scores, a mediation analysis was planned, using

bootstrapping procedures recommended for smaller samples (MacKinnon, Lockwood, Hoffman, West & Sheets, 2002; Preacher & Hayes, 2004, 2008), to examine whether trauma-centred identity played a mediating role in any relationships between self-consistency and PTSD symptoms.

3 Results

3.1 Overview

This chapter is divided into two sections; the analysis of data relating to Study 1a followed by the analysis of Study 1b data. Each section commences with an overview of the participant details and an outline of the data management and analysis strategies. Assumptions for using parametric tests are then assessed. Following this, descriptive data are presented and results are then analysed in relation to each research question. Each section concludes with a summary of the findings.

3.2 Study 1a: Exploring Relationships between Self-consistency and Well-being

3.2.1 Study participants. Participants were 172 British participants and 122 East Asian participants. Participants in the East Asian group defined their ethnicity more specifically as Chinese (n = 77), East Asian (n = 16), Japanese (n = 10), Malaysian (n = 8), Malaysian Chinese (n = 3), Korean (n = 3), Vietnamese (n = 3), Taiwanese (n = 1) and Thai (n = 1). Table 1 shows that there were no significant differences between the two cultural groups (British and East Asian) in terms of gender distribution, χ^2 (1, N = 294) = 3.60, *ns*, or in terms of level of education, χ^2 (2, N = 293) = 1.60, *ns*. However, the British group were found to be significantly older on average (*Mdn* = 22) compared to the East Asian group (*Mdn* = 21), U = 8672, $p < .05$. In relation to time spent in the UK, as expected, the British group had lived in the UK for significantly longer (*Mdn* = 22) than the East Asian group (*Mdn* = 2), U = .00, $p < .001$. Also as expected, the British group reported significantly better English language ability levels (*Mdn* = 10) compared to the East Asian group (*Mdn* = 8), U = 3560, $p < .001$. In relation to anxiety symptom scores, no significant difference was found between British (*Mdn* = 1.60) and East Asian participants (*Mdn* = 1.70), U = 10589.50, *ns*. However, East Asian participants showed significantly higher depression symptom scores (*Mdn* = 1.80) compared to British participants (*Mdn* = 1.67), U = 12305.50, $p < .05$).

Table 1

Demographic, well-being and self-consistency data by cultural group.

	British n = 172	East Asian n = 122
Age range, years (mean, SD)	18 – 71 (27.66, 12.22)	18 – 45 (22.19, 3.88)
Gender (n, %)		
Male	38 (22.10)	39 (32.00)
Female	134 (77.90)	83 (68.00)
UK residency in years	27.30 (1.99)	1.99 (1.34)
English language ability [a]	9.19 (1.08)	7.42 (1.54)
HSCL-25 mean score		
Anxiety items	1.72 (.50)	1.74 (.54)
Depression items	1.78 (.58)	1.95 (.58)
Overall self-consistency (mean BSCC)	.55 (.23)	.43 (.24)
Desirable types of self-consistency		
$YY_{desirable}$	35.88 (9.49)	29.55 (9.77)
$NN_{undesirable}$	40.11 (12.82)	35.15 (12.03)
Undesirable types of self-consistency		
$YY_{undesirable}$	6.95 (6.87)	9.31 (7.41)
$NN_{desirable}$	9.91 (6.18)	12.19 (6.66)

Note. Mean (standard deviation) data unless otherwise stated.

[a] Based on participant self-assessment.

3.2.2 Treatment of data. Study 1a data were screened and analysed using SPSS version 19.0 (IBM Corp., 2010). No missing data or identifiable errors in relation to the main variables were found in the data set. The data were screened for outliers, with values more than three standard deviations from the mean being removed from the data for each variable,

as many statistical techniques are sensitive to outliers. In relation to self-consistency data (mean BSCC, $YY_{desirable}$, $NN_{undesirable}$, $YY_{undesirable}$ and $NN_{desirable}$) two outliers were removed for British participants and four outliers were removed for East Asian participants. In relation to well-being data (HSCL anxiety and depression scores), one outlier was removed for a British participant.

3.2.3 Assumptions for parametric tests. Data in relation to each variable were assessed to consider whether or not the assumptions for the use of parametric tests were met. Histograms provided useful preliminary visual information about distribution shapes (Field, 2005; Pallant, 2010). Normality was assessed formally through using the Kolmogorov-Smirnov test (Field, 2005) and homogeneity of variances was assessed using Levene's test (Field, 2005). The findings in relation to individual variables are now discussed in more detail.

3.2.3.1 Well-being variables. Levene's test revealed equal variances across cultural groups for depression symptom scores (mean scores for HSCL-25 depression items) and anxiety symptom scores (mean scores for HSCL-25 anxiety items). Examination of the Kolmogorov-Smirnov statistic for HSCL-25 data showed that distributions for both the British and East Asian groups were not normally distributed in relation to depression symptom scores or anxiety symptom scores. Despite log transformations achieving a normal distribution for the East Asian group's depression symptom scores, anxiety symptom scores for the East Asian group and the anxiety and depression symptom scores for the British group remained not normally distributed. Due to these findings, non-parametric tests were used in the following analyses when using well-being data associated with the British group and when comparing well-being data between cultural groups. Non-parametric tests were also used when analysing anxiety symptom scores for the East Asian group.

3.2.3.2 Self-consistency indices. Levene's test revealed equality of variances across cultural groups for the index of overall self-consistency (mean BSCC scores), as well as for indices of desirable types of self-consistency ($YY_{desirable}$ and $NN_{undesirable}$ scores) and undesirable types of self-consistency ($YY_{undesirable}$ and $NN_{desirable}$ scores). Examination of the Kolmogorov-Smirnov statistic showed that the data in relation to mean BSCC scores were normally distributed for the East Asian group but not normally distributed for the British group. In relation to desirable types of consistency $YY_{desirable}$ scores were found to be normally distributed for both cultural groups, however $NN_{undesirable}$ data were found to be normally distributed for the British group only. Data for both cultural groups were found to be not normally distributed in relation to undesirable types of self-consistency ($YY_{undesirable}$ and $NN_{desirable}$ scores). Transformations were conducted, and following a square root transformation, with a constant being added prior to the transformation to ensure that the data did not include negative values, $NN_{desirable}$ data were normally distributed for both cultural groups. Due to these findings, non-parametric tests were used for data that were not normally distributed, including instances of comparison with normally distributed data.

3.2.4 Descriptive data. Descriptive data are presented in Table 1.

3.2.5 Research question testing. Data analysis findings are discussed below in relation to the research questions associated with Study 1a.

3.2.5.1 Research question 1a. It was hypothesised that British participants would show significantly higher levels of overall self-consistency compared to East Asian participants. It was unclear how desirable and undesirable types of self-consistency would vary across cultural groups. As five comparisons were conducted within this research question, the Bonferroni correction was applied, providing a critical significance level of α = .01.

A Mann-Whitney U test found that as hypothesised British participants (*M = .55, Mdn* = .58) showed significantly higher mean BSCC scores compared to East Asian participants (*M = .43, Mdn* = .44), $U = 7248.50$, $p < .001$, $r = -.25$. As a significant difference had been found between cultural groups in relation to depression symptoms scores, a subsidiary Analysis of Covariance (ANCOVA) was conducted to examine whether depression scores may have influenced this finding. When accounting for depression scores, there was still a significant difference between British and East Asian participants in overall self-consistency scores, $F(1, 287) = 6.17$, $p < .05$, showing that depression did not account for the cultural difference found.

In relation to desirable types of self-consistency, $YY_{desirable}$ scores and $NN_{undesirable}$ scores were compared across cultural groups. In relation to consistently endorsing desirable characteristics ($YY_{desirable}$) British participants showed significantly higher levels of self-consistency ($M = 35.88$, $SE = .72$) compared to East Asian participants ($M = 29.55$, $SE = .88$), $t(292) = 5.57$, $p < .001$, $d = .65$. British participants also showed significantly higher levels of self-consistency ($Mdn = 41$) compared to East Asian participants ($Mdn = 36$) in relation to consistently denying undesirable characteristics ($NN_{undesirable}$), $U = 8162$, $p < .01$, $r = .19$.

In relation to undesirable types of self-consistency, East Asian participants showed significantly higher levels of consistency ($M = 3.29$, $SE = .93$) compared to British participants ($M = 2.96$, $SE = .08$) in relation to consistently denying desirable characteristics ($NN_{desirable}$), $t(290) = -2.75$, $p < .01$, $d = -.30$. East Asian participants ($Mdn = 8$) also showed significantly higher levels of consistency compared to British participants ($Mdn = 4$) in relation to consistently endorsing undesirable characteristics (YY_{undes}), $U = 12782$, $p < .01$, $r = .20$.

In sum, these results show that British participants show higher levels of self-consistency in general and also in relation to desirable types of self-consistency, compared to East Asian participants. In contrast, East Asian participants appear to show greater levels of self-consistency compared to British participants in relation to undesirable types of self-consistency.

3.2.5.2 Research question 1b. It was hypothesised that higher levels of overall self-consistency would be associated with greater well-being for British participants and that overall self-consistency would be less related to well-being for East Asian participants. As only two correlation coefficients were calculated for each cultural group, with one being calculated for each well-being measure for each cultural group, there was no need to apply Bonferroni's correction for this research question.

Spearman's correlation coefficient showed significant relationships for British participants between overall self-consistency and both measures of well-being; depression symptom scores, $r_s = -.16$, p (one-tailed) $< .05$, and anxiety symptom scores, $r_s = -.13$, p (one-tailed) $< .05$. These correlations show that higher overall self-consistency is related to lower levels of depression and anxiety symptoms (i.e., higher well-being) for British participants, which is consistent with the hypothesis.

In relation to East Asian participants, no significant relationship was found between self-consistency and anxiety symptom scores, $r_s = -.06$, *ns* (one-tailed). However, a significant relationship was found between overall self-consistency (mean BSCC scores) and depression symptom scores, $r = -.19$, p (one-tailed) $< .05$. This correlation shows that higher levels of overall self-consistency are related to lower levels of depression symptoms for East Asian participants.

3.2.5.3 Research question 1c. It was hypothesised that for British participants greater self-consistency in relation to desirable types of consistency would be associated with greater

well-being and greater self-consistency in relation to undesirable types of consistency would not be associated with greater well-being. The predictions for East Asian participants were unclear. Table 2 shows the findings in relation to this research question. As four correlation coefficients were calculated for each cultural group for each of the well-being measures, the Bonferroni correction was applied ($\alpha = .0125$) for use in this research question (Field, 2005).

Table 2

Correlations between self-consistency (desirable and undesirable types of consistency) and well-being by cultural group.

	British		East Asian	
	Depression symptoms	Anxiety symptoms	Depression symptoms	Anxiety symptoms
Desirable types of consistency				
$YY_{desirable}$	r_s = -.16	r_s = -.11	r = -.10[a]	r_s = -.08
$NN_{undesirable}$	r_s = -.24*	r_s = -.29*	r_s = -.45**	r_s = -.27**
Undesirable types of consistency				
$YY_{undesirable}$	r_s = .26**	r_s = .29**	r_s = .39**	r_s = .27**
$NN_{desirable}$	r_s = .13	r_s = .15	r = .07[ab]	r_s = .12

[a] Log transformed well-being data used. [b] Log transformed self-consistency data used.

* $p < .0125$ (one-tailed). ** $p < .0125$ (two-tailed). r_s = Spearman's rho. r = Pearson's r.

Examining the relationships for British participants, Spearman's correlation coefficients found that in relation to *desirable* types of self-consistency ($YY_{desirable}$ and $NN_{undesirable}$ indices), significant negative relationships were found between $NN_{undesirable}$ scores and both depression and anxiety symptom scores. No significant relationship was found between $YY_{desirable}$ scores and depression symptoms or anxiety symptoms. These results partly supported the hypothesis; one out of two types of desirable self-consistency was found to have a significant association with higher levels of well-being.

Examining the relationships for British participants in relation to *undesirable* types of self-consistency ($YY_{undesirable}$ and $NN_{desirable}$), Table 2 shows that significant positive relationships were found between $YY_{undesirable}$ scores and both depression and anxiety symptom scores. This finding shows that for British participants, consistently endorsing undesirable characteristics was associated with greater depression and anxiety symptoms

(i.e., lower well-being). No significant relationships were found between $NN_{desirable}$ scores and depression scores or anxiety scores. These results provide support for the hypothesis; for British participants, higher self-consistency in relation to undesirable types of consistency was not associated with greater well-being.

In relation to East Asian participants, $YY_{desirable}$ data were normally distributed, as were transformed $NN_{desirable}$ data and transformed depression data. All other data in relation to this research question were not normally distributed. Therefore, where it was possible to examine relationships between two normally distributed variables, Pearson's correlation coefficient was used, with Spearman's correlation coefficient being used otherwise. In relation to *desirable* types of self-consistency ($YY_{desirable}$ and $NN_{undesirable}$ indices), significant negative relationships were found between $NN_{undesirable}$ scores and both depression and anxiety symptom scores. No significant relationships were found between $YY_{desirable}$ scores and anxiety scores or depression scores.

In relation to *undesirable* types of self-consistency ($YY_{undesirable}$ and $NN_{desirable}$), significant positive relationships were found between $YY_{undesirable}$ scores and both depression and anxiety symptom scores. No significant relationships were found between $NN_{desirable}$ scores and depression symptoms or anxiety symptoms.

In sum, when examining undesirable characteristics these results show that for both desirable and undesirable types of self-consistency, participants from both cultural groups showed significant relationships with well-being. Specifically, consistently denying undesirable characteristics ($NN_{undesirable}$; i.e., a desirable type of consistency) was associated with lower levels of depression and anxiety symptoms. Consistently confirming undesirable characteristics ($YY_{undesirable}$; i.e., an undesirable type of consistency) was associated with higher levels of depression and anxiety symptoms.

3.2.5.4 Research question 1d. It was hypothesised that associations between overall self-consistency and well-being would differ significantly cross-culturally, with associations being significantly stronger for British participants compared to East Asian participants.

In relation to anxiety symptoms, a significant relationship was found between greater self-consistency (mean BSCC scores) and lower anxiety symptoms for British participants, but no significant relationship was found for East Asian participants (research question 1b). However, when converting these coefficients into z scores and examining the value of z_{obs} it was found that the correlation coefficient for British participants (r_s = -.13, $p < .05$) was not significantly different (z_{obs} = .67, *ns*) to the correlation coefficient for East Asian participants (r_s = -.06, *ns*). In relation to the association between overall self-consistency and depression symptoms, the correlation coefficient for British participants (r_s = -.16, $p < .05$) was also not significantly different (z_{obs} = -.30, *ns*) to the coefficient for East Asian participants (r = -.19, $p < .05$). Therefore, these findings do not support the hypothesis, that relationships would be significantly stronger for British participants compared to East Asian participants.

The predictions were unclear in relation to relationships between desirable or undesirable types of consistency and well-being. In relation to both desirable types of consistency ($YY_{desirable}$ and $NN_{undesirable}$) and undesirable types of consistency ($NN_{desirable}$ and $YY_{undesirable}$), comparisons of the correlation coefficients for relationships with depression and anxiety symptoms showed that none of the coefficients were significantly different between British and East Asian participants ($-1.96 < z_{obs'} < 1.96$, all *p*'s *ns*).

These findings suggest that relationships between self-consistency (overall and to desirable or undesirable types) and well-being (depression and anxiety symptoms) do not differ significantly between British and East Asian participants.

3.2.6 Summary of Study 1a results.

3.2.6.1 Research question 1a summary. How do self-concept consistency and desirability differ cross-culturally? British participants showed significantly higher levels of overall self-consistency compared to East Asian participants. In relation to both desirable types of consistency, British participants also showed significantly higher levels of self-consistency compared to East Asian participants. In relation to both undesirable types of consistency, East Asian participants showed significantly higher levels of self-consistency compared to British participants.

3.2.6.2 Research question 1b summary. How do cross-cultural differences in self-consistency affect well-being? British participants showed significant associations between greater levels of overall self-consistency and greater well-being (i.e., lower levels of depression and anxiety symptoms). In relation to East Asian participants, a significant relationship was found between higher levels of overall self-consistency and lower levels of depression symptoms. No significant association was found for East Asian participants in relation to anxiety symptoms.

3.2.6.3 Research question 1c summary. How does desirability impact on the cross-cultural associations between self-consistency and well-being? In relation to desirable types of self-consistency, British and East Asian participants showed significant relationships between greater $NN_{undesirable}$ scores (i.e., consistently denying undesirable characteristics) and lower levels of depression and anxiety symptoms. However, no significant relationships were found for either cultural group in relation to $YY_{desirable}$ scores (i.e., consistently endorsing desirable characteristics). In relation to undesirable types of consistency, British and East Asian participants both showed significant relationships between greater $YY_{undesirable}$ scores (i.e., consistently endorsing undesirable characteristics) and higher levels of depression and

anxiety symptoms. However, no significant relationships were found for either cultural group in relation to $NN_{desirable}$ scores (i.e., consistently denying desirable characteristics).

3.2.6.4 Research question 1d summary. How do these potential associations (research questions 1b and 1c) compare cross-culturally? When comparing the significant relationships found in relation to research questions 1b and 1c, none of the correlation coefficients were found to be significantly different between cultural groups.

3.3 Study 1b: Exploring Relationships between Self-consistency and Posttraumatic Psychological Adjustment

3.3.1 Study participants. Data analyses for Study 1b only included data for those participants from Study 1a who had experienced a traumatic event. A total of 124 participants (out of 294 participants who took part in Study 1a) met the inclusion criteria for Study 1b. Out of the 172 British participants from Study 1a, 83 (48.3%) participants had experienced a traumatic event and therefore met the inclusion criteria for Study 1b. Out of the 122 East Asian participants from Study 1a, 41 (33.6%) participants had experienced a traumatic event and therefore met the inclusion criteria for Study 1b. Participants in the East Asian group who took part in Study 1b defined their ethnicity more specifically as Chinese (n = 18), East Asian (n = 6), Japanese (n = 6), Malaysian (n = 4), Malaysian Chinese (n = 3), Korean (n = 1), Taiwanese (n = 1), Thai (n = 1) and Vietnamese (n = 1).

Table 3 shows that there were no significant differences between the two cultural groups (British and East Asian) in gender distribution, $\chi^2(1, N = 124) = 0.11$, *ns*, or in relation to age, $U = 1394$, *ns*. As expected, participants in the British group reported having lived in the UK for significantly more time (Mdn = 25) than participants in the East Asian group (Mdn = 1.5), $U = .00$, $p < .001$. Also as expected, the British group showed significantly better self-reported English language ability levels (Mdn = 10) compared to the

East Asian group (*Mdn* = 8), *U* = 675.50, $p < .001$. No significant difference was found between cultural groups in relation to level of education, χ^2 (2, *N* = 124) = 0.64, *ns*.

No significant difference was found in relation to levels of trauma-centred identity between British participants (*M* = 51.93, *SD* = 18.77) and East Asian participants (*M* = 51.27, *SD* = 20.64), *t* (122) = .18, *p* = .78 (*ns*), *d* = .03. Also, in relation to PTSD symptoms (PDS scores), no significant difference was found between British participants (*M* = .10.71, *SD* = .10.15) and East Asian participants (*M* = 10.02, *SD* = 11.66), *t* (121) = 1.00, *p* = .32 (*ns*), *d* = .18.

Table 3

Demographic, posttraumatic psychological adjustment and self-consistency data by cultural group.

	British $n = 83$	East Asian $n = 41$
Age range, years (mean, SD)	18 – 64 (30.13, 13.65)	18 – 45 (23.34, 4.82)
Gender n (%)		
Male	20 (24.10)	11 (26.80)
Female	63 (75.90)	30 (73.20)
UK residency (years)	29.68 (13.86)	1.92 (1.46)
English language ability [a]	9.22 (1.06)	7.44 (1.85)
Posttraumatic psychological adjustment		
CES total score	51.93 (18.77)	51.27 (20.64)
PDS total score	10.71 (10.15)	10.02 (11.66)
Self-consistency (mean BSCC)	.513 (.22)	.423 (.27)
Desirable types of self-consistency		
$YY_{desirable}$	35.45 (9.22)	28.80 (10.22)
$NN_{undesirable}$	36.65 (12.59)	33.05 (12.93)
Undesirable types of self-consistency		
$YY_{undesirable}$	8.59 (7.02)	11.17 (8.14)
$NN_{desirable}$	10.07 (5.90)	12.56 (7.35)

Note. Mean (standard deviation) data unless otherwise stated.

[a] Based on participant self-assessment.

3.3.2 Treatment of data. Data were screened as outlined in Study 1a. In relation to self-consistency data (mean BSCC, $YY_{desirable}$, $NN_{undesirable}$, $YY_{undesirable}$ and $NN_{desirable}$) no

outliers were removed. In relation to posttraumatic psychological adjustment data (PDS and CES scores), one outlier was removed for a British participant in relation to PDS scores.

3.3.3 Assumptions for parametric tests.

3.3.3.1 Posttraumatic psychological adjustment variables. Homogeneity of variances was established between cultural groups for both PDS and CES data using Levene's test. Examination of the Kolmogorov-Smirnov statistic showed that the CES data for both cultural groups were normally distributed. As PDS data was not normally distributed for both cultural groups, log transformations were performed. As the PDS data included values of zero, a constant ($X_i + 1$) was added to all data before the log transformation was performed (Field, 2005, p. 80). Examination of the Kolmogorov-Smirnov statistic for the log transformed PDS data showed that data for both cultural groups were normally distributed. Therefore, parametric tests were used when analysing posttraumatic psychological adjustment data using the untransformed CES data and log transformed PDS data.

3.3.3.2 Self-consistency indices. Levene's test showed that variances across cultural groups were equal for mean BSCC scores (overall self-consistency), as well as for indices of self-consistency in relation to desirable types of consistency ($YY_{desirable}$ and $NN_{undesirable}$) and undesirable types of consistency ($YY_{undesirable}$ and $NN_{desirable}$). Examination of the Kolmogorov-Smirnov statistic showed that the data for both cultural groups were normally distributed in relation to overall self-consistency scores (mean BSCC) and also in relation to scores for desirable types of self-consistency ($YY_{desirable}$ and $NN_{undesirable}$). In relation to scores for undesirable types of self-consistency ($YY_{undesirable}$ and $NN_{desirable}$) for British participants, $NN_{desirable}$ data were found to be normally distributed and $YY_{undesirable}$ data were found to be not normally distributed. However, a square root transformation resulted in $YY_{undesirable}$ scores being normally distributed also. For East Asian participants, $YY_{undesirable}$ data were found to be normally distributed and $NN_{desirable}$ data were found to be not normally

distributed. A square root transformation resulted in $NN_{desirable}$ data being normally distributed also. As all data were normally distributed (either untransformed or transformed) it was possible to use parametric tests when analysing self-consistency data in Study 1b.

3.3.4 Descriptive data. Descriptive data are presented in Table 3.

3.3.5 Research question testing.

3.3.5.1 Research question 2a. The predictions for relationships between self-consistency (overall and desirable or undesirable types of consistency) and post-traumatic psychological adjustment (level of trauma-centred identity and PTSD symptoms) were unclear, with different theories and ideas suggesting different relationships. Table 4 shows the findings in relation to this research question. The significance criteria used when examining relationships between overall self-consistency and posttraumatic adjustment was .05. However, as four correlation coefficients were calculated for each cultural group for each measure of posttraumatic psychological adjustment, in relation to consistency to desirable or undesirable characteristics, the Bonferroni correction was applied to determine significance levels (α = .0125).

In relation to British participants, only one significant relationship was found between self-consistency and posttraumatic psychological adjustment. Higher $YY_{undesirable}$ scores (i.e., consistently endorsing undesirable characteristics) were found to be significantly associated with higher PDS scores (greater PTSD symptoms) for British participants (see Table 4). Table 4 shows that all other relationships were not found to be significant. Table 4 shows that in relation to East Asian participants no significant relationships were found. However, various correlations were approaching significance, particularly in relation to undesirable characteristics (endorsing and denying undesirable characteristics) as highlighted in Table 4.

Table 4

Correlations (Pearson's r) between self-consistency (overall and desirable / undesirable types of consistency) and posttraumatic psychological adjustment by cultural group.

	British		East Asian	
	PDS scores	CES scores	PDS scores	CES scores
Overall self-consistency (mean BSCC)	.010	.124	.030	-.142
Desirable types of consistency				
$YY_{desirable}$	-.002	-.016	.038	-.174
$NN_{undesirable}$	-.255^{+}	.015	-.254	-.324^{+}
Undesirable types of consistency				
$YY_{undesirable}$	.374 [a]*	.116 [a]	.316^{+}	.371^{+}
$NN_{desirable}$	.155	.104	.037 [a]	.078[a]

[a] Square root transformed self-consistency data used. * $p < .0125$ (two-tailed). $^{+}$ $p < .05$ (two-tailed).

3.3.5.2 Research question 2b. As significant associations were not found between any indices of self-consistency and both PDS and CES scores, it was not necessary to conduct a mediation analysis to examine whether trauma-centred identity played a mediating role in any relationships between self-consistency and PTSD symptoms.

3.3.6 Summary of Study 1b results.

3.3.6.1 Research question 2a summary. How do cross-cultural differences in self-consistency and desirability affect posttraumatic psychological adjustment (level of trauma-centred identity and PTSD symptoms)? With regards to British participants, only one significant relationship was found between indices of self-consistency and posttraumatic psychological adjustment. Higher $YY_{undesirable}$ scores (i.e., consistently endorsing undesirable characteristics) were found to be significantly associated with higher PDS scores (greater

PTSD symptoms) for British participants. No other significant relationships were found in relation to this research question for either cultural group. However, various correlations were approaching significance for both cultural groups in relation to undesirable characteristics (endorsing and denying undesirable characteristics).

3.3.6.2 Research question 2b summary. If associations are found for research question 2a, does trauma-centred identity play a mediating role in the relationship between self-consistency (or potentially desirable / undesirable types of consistency) and PTSD symptoms? It was not possible to explore the findings in relation to this research question, as no significant relationships were found between any indices of self-consistency and both PDS and CES scores.

4 Discussion

4.1 Overview

Depression, anxiety and PTSD are universal disorders that impact significantly on individuals and societies (Greenberg et al., 1999; Johnson et al., 1992; Kessler, 2000b). Various aspects of the self, particularly the structure and content of the self-concept, have been proposed as having important influences on psychological processes (e.g., Baumeister, 1999a; Markus & Kitayama, 1991), which are fundamental when conceptualising psychological well-being and disorders (e.g., Campbell et al., 2003; Donahue et al., 1993; Jobson, 2009; Sheldon et al., 1997). Although a consistent self-concept has often been linked to well-being (e.g., Lecky, 1945; Maslow, 1954; Rogers, 1951), cross-cultural research has challenged this idea (e.g., Suh, 2002). Specifically, self-consistency has been found to be emphasised and more important to well-being in individualistic cultures when compared to collectivistic cultures (Suh, 2002). Furthermore, research considering the influence of self-concept *content*, specifically desirability, in addition to self-concept *structure* (i.e., self-consistency), has recently challenged the assumed simplicity of the relationship between self-concept and psychological well-being (Locke, 2006).

In relation to PTSD, it has been suggested that trauma may lead to disruptions in autobiographical memory (e.g., Brewin et al., 1996; Brewin et al., 2010; Conway, 2005; Conway & Pleydell-Pearce, 2000; Ehlers & Clark, 2000). A central relationship exists between autobiographical memory and the self whereby autobiographical memory is central to the development, expression and maintenance of the self and in turn the self is central to the encoding, storage and retrieval of autobiographical memory (Conway, 2005; Rathbone et al., 2008). Additionally, in several prominent PTSD models the self plays an essential role in the development, maintenance and treatment of PTSD. For instance, some theories put forward that the desire for self-consistency leads to self-concept change following trauma,

resulting in a trauma-centred identity (Berntsen & Rubin, 2006, 2007; Conway, 2005). Cross-cultural studies (Jobson & O'Kearney, 2006, 2008) have started to question, however, the universality of such PTSD theories when taking into account cross-cultural differences in the self.

This thesis, therefore, aimed to investigate how cross-cultural differences in self-consistency (i.e., *structure*) and desirability (i.e., *content*) influence the relationship between self-concept and well-being. This chapter will first summarise the results of this study in relation to current research. Strengths and limitations of the current study will then be evaluated. Finally, the theoretical and clinical implications of this study will be discussed, followed by a consideration of future research directions and a summary of the conclusions.

4.2 Summary of Findings

British (n = 172) and East Asian (n = 122) participants took part in the first part of this study (Study 1a). Of these participants, 124 participants (83 British and 41 East Asian) had experienced a traumatic event and therefore met the inclusion criteria for the second part of the study (Study 1b). The main research questions and hypotheses for each part of the study will now be discussed in relation to the findings.

4.2.1 Study 1a.

4.2.1.1 Research question 1a. Cross-cultural psychological theories, supported by empirical work, have put forward cultural differences in the self (e.g., Kitayama et al., 1997; Triandis, 1989), resulting in differences in self-concept (e.g., Markus & Kitayama, 1991, 1994, 2010; Suh, 2002). In relation to self-concept *structure*, the literature (e.g., Suh, 2002) has shown that individuals from individualistic cultures show significantly higher levels of self-consistency across situations compared to individuals from collectivistic cultures. While a significant body of literature has demonstrated the importance of self-concept *structure* in terms of well-being, Locke (2006) recently highlighted the importance of also considering

self-concept *content*. He found important self-consistency (*structure*) differences in relation to whether self-concept characteristics were desirable or undesirable (*content*). However, he investigated this only in an individualistic cultural group. This is important to consider cross-culturally as research has found cross-cultural differences in relation to self-concept *content* (e.g Heine & Lehman, 1999; Lynch, La Guardia, & Ryan, 2009). Therefore, the aim of research question 1a was to investigate potential cross-cultural differences in both self-concept *structure* (i.e., consistency) and *content* (i.e., desirability). It was hypothesised that British participants would show significantly greater self-consistency across situations compared to East Asian participants. It was unclear how British and East Asian participants would compare when looking at self-consistency to desirable and undesirable characteristics.

In the current study it was found that as hypothesised British participants showed significantly higher overall levels of self-consistency compared to East Asian participants. Also, for desirable types of self-consistency (consistently endorsing desirable characteristics and consistently denying undesirable characteristics), British participants showed significantly higher levels of self-consistency compared to East Asian participants. However, in regards to undesirable types of self-consistency (consistently endorsing undesirable characteristics and consistently denying desirable characteristics), East Asian participants showed significantly higher levels of self-consistency compared to British participants. These findings highlight the importance of considering both structure and content as when considering overall self-consistency the findings were consistent with previous studies (Suh, 2002). However, when breaking this down into desirable and undesirable types of self-consistency the results were more complex. For desirable types of self-consistency the results were similar but for undesirable types of self-consistency, contrary to past findings East Asian participants actually showed higher consistency compared to British participants.

4.2.1.2 Research question 1b. Traditionally, a consistent self-concept has been linked to well-being, and thus inconsistency has been associated with maladjustment (Lecky, 1945; Rogers, 1951). Previous research in individualistic cultures has consistently supported this; positive relationships have continuously been found between self-consistency and various measures of well-being (Block, 1961; Campbell et al., 2003; Donahue et al., 1993; Sheldon et al., 1997). More recently, cross-cultural research has challenged this assumption, finding weaker relationships between self-consistency and well-being for individuals from collectivistic cultures when compared to individuals from individualistic cultures (Suh, 2000, 2002). Therefore, it was hypothesised that higher self-consistency would be associated with greater well-being for British participants. Conversely, it was predicted that self-consistency would be less related with well-being for East Asian participants.

In support of this, British participants showed significant relationships between greater overall self-consistency and higher levels of well-being, in relation to lower levels of both depression and anxiety symptoms. This finding was consistent with previous research (Block, 1961; Campbell et al., 2003; Donahue et al., 1993; Sheldon et al., 1997). In the current study East Asian participants showed a significant relationship between greater overall self-consistency and higher levels of well-being in relation to depression symptoms, similar to British participants. Therefore these findings did not provide support for the hypothesis. East Asian participants did not show any significant relationship in relation to anxiety symptoms. The findings in relation to anxiety symptoms could provide partial support for the hypothesis, as a smaller number of significant relationships were found for East Asian participants in relation to well-being (depression and anxiety symptoms) compared to British participants.

4.2.1.3 Research question 1c. Previous research using participants from an individualistic culture (Locke, 2006) found that although overall self-consistency was

positively correlated with well-being, when broken down, consistency to desirable characteristics was positively correlated with well-being but consistency to undesirable characteristics was not, suggesting that both self-concept *structure* and *content* must be considered when exploring how self-consistency and well-being are associated. Thus, it was hypothesised that for British participants greater self-consistency to desirable characteristics would be associated with greater well-being, and greater consistency to undesirable characteristics would not be associated with greater well-being. As this had not been investigated cross-culturally, the predictions were unclear for East Asian participants.

With regards to desirable types of consistency, British and East Asian participants showed significant relationships between greater self-consistency and higher levels of well-being (depression and anxiety) in relation to consistently denying undesirable characteristics but no significant relationships were found in relation to consistently endorsing desirable characteristics. With regards to undesirable types of consistency, British and East Asian participants showed significant relationships between greater self-consistency and lower levels of well-being in relation to consistently endorsing undesirable characteristics but no significant relationships were found in relation to consistently denying desirable characteristics. These findings, somewhat similar to Locke's (2006) specific findings, show that for both desirable and undesirable types of self-consistency, when examining undesirable characteristics specifically (either consistently endorsing or denying undesirable characteristics), significant relationships were found with well-being for both cultural groups. This suggests that consistency in relation to undesirable characteristics has a greater influence on well-being compared to consistency in relation to desirable characteristics.

These findings provide partial support for the hypothesis, showing that for desirable types of self-consistency, greater consistency is associated with greater well-being, but only in relation to denying undesirable characteristics and not for endorsing desirable

characteristics. Also supporting the hypothesis, the findings showed that for undesirable types of self-consistency, greater consistency was not associated with greater well-being, however it was also found that consistently endorsing undesirable characteristics was actually associated with lower levels of well-being. Furthermore, these findings were shown across both cultural groups. Overall, the findings support the idea that both self-concept *structure* and *content* are important in the relationship between self-consistency and well-being.

4.2.1.4 Research question 1d. Previous research found significant cross-cultural differences in the relationship between overall self-consistency and well-being (e.g., Suh, 2002), with associations being stronger for individuals from individualistic cultures compared to individuals from collectivistic cultures. Therefore, it was hypothesised that relationships found in relation to research question 1b would differ significantly cross-culturally, with associations between overall self-consistency and well-being being significantly stronger for British participants compared to East Asian participants. Whilst previous research explored the influence of desirability (i.e., *content*) on the relationship between self-consistency (i.e., *structure*) and well-being in an individualistic culture (Locke, 2006), this had not been investigated cross-culturally. Therefore, predictions were less clear with regards to how relationships found in relation to research question 1c would differ cross-culturally.

With regards to relationships associated with both research questions 1b and 1c, no significant cross-cultural differences were found. Thus the current study did not find evidence to support the hypothesis that associations between overall self-consistency and well-being would be significantly stronger for British participants. These findings show that whilst some differences were found, relationships between self-consistency (overall and to desirable or undesirable types) and well-being (depression and anxiety symptoms) do not differ significantly between British and East Asian participants.

4.2.2 Study 1b.

4.2.2.1 Research question 2a. Psychological theories of PTSD have put forward ideas about the relationship between self-consistency and posttraumatic psychological adjustment (level of trauma-centred identity and PTSD symptoms). For instance, it has been proposed that the desire for self-consistency drives self-change following trauma, potentially leading to a trauma-centred identity and greater symptoms of PTSD (Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000). It has also been proposed that maladaptive processing outcomes of trauma memories, leading to PTSD symptoms, are more likely if larger discrepancies exist between traumatic events and pre-existing self-beliefs (Brewin et al., 1996; Brewin et al., 2010). Predictions in relation to this research question were unclear. It could have been hypothesised based on the theoretical background that participants with higher levels of self-consistency (i.e., British) would show greater trauma-centred identity, and subsequently higher PTSD symptoms. However, if PTSD is understood similarly to well-being, it could have been hypothesised that greater consistency would have been associated with lower PTSD symptoms. Hypotheses relating to East Asian participants and with regards to the impact of desirability were also unclear.

For British participants, only one significant relationship was found between self-consistency and posttraumatic psychological adjustment, with higher consistency in relation to endorsing undesirable characteristics being significantly associated with greater PTSD symptoms. All other relationships tested were not found to be significant, and no significant relationships were found for East Asian participants. However, various correlations in relation to undesirable characteristics (endorsing and denying undesirable characteristics) and posttraumatic psychological adjustment were approaching significance for both cultural groups.

4.2.2.2 Research question 2b. Some psychological theories of PTSD have proposed that the desire for self-consistency drives self-change following trauma, potentially leading to a trauma-centred identity and greater symptoms of PTSD (Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000). Therefore, research question 2b aimed to explore this potential relationship further, if associations were found for research question 2a. Specifically, research question 2b aimed to investigate whether trauma-centred identity plays a mediating role in the relationship between self-consistency (or potentially self-consistency to desirable / undesirable self-characteristics) and PTSD symptoms.

It was not possible to explore the findings in relation to this research question, as no significant relationships were found between any indices of self-consistency and both trauma-centred identity and PTSD symptoms (research question 2a).

4.3 Study Strengths and Limitations

4.3.1 Design and procedure. This quantitative study used a cross-sectional between-groups design to explore relationships between self-consistency and well-being, including posttraumatic psychological adjustment. The design had several strengths. First, the study explored areas that had not previously been investigated, for instance considering the impact of self-concept *content* (i.e., desirability) as well as *structure* (i.e., self-consistency) from a cross-cultural perspective. Therefore, this exploratory study contributes important information to an essential yet limited research area. A further strength is that the cultural groups used for comparison in the study were in line with distinctions and categorisations in existing cross-cultural literature (Hofstede, 1983; Markus & Kitayama, 1991). The cross-sectional design, utilising an online questionnaire-based survey, enabled individuals to participate in the study anonymously at a time and place convenient for them, aiming to promote participation and reduce the likelihood of a social conformity bias (Asch, 1951), which has been found in various cultures, including East Asian cultures (Kondo, Saito,

Deguchi, Hirayama, & Acar, 2010). This was particularly important as participants were providing potentially sensitive and personal information. Furthermore, the online design enabled wide advertising and distribution, promoting participation further whilst also potentially increasing ecological validity.

There were also several limitations associated with the study design. The cross-sectional design, in which participants completed measures at only one time point, prevented the assessment of change over time, which possibly influences symptom presentation (e.g., Rothbaum, Foa, Riggs, Murdock, & Walsh, 1992). Moreover, it is possible that other factors may have influenced participants' responses at any particular time point, such as stress, life events, environment and testing conditions. Using a between-groups design, it was difficult to test for and ensure homogeneity between groups, with other unaccounted factors possibly differing between groups, such as socioeconomic status. Another limitation of the study relates to the reliance on self-report measures. Whilst aiding anonymity and recruitment, self-report measures have been criticised for possibly introducing biases relating to social desirability, such as the over-endorsement of positive items (Logan, Claar, & Scharff, 2008). However, as stated above, the online procedure may have minimised this impact. A further limitation is that the delivery order of measures could have affected the results, with context effects being commonly highlighted in the personality and social psychology literature, suggesting that previous questions provide a context for future questions and respondents interpret and answer questions in reference to this context (Council, 1993; Schwarz, 1999). Therefore it would be useful for further research to use random ordering or counter-balancing of questionnaires to reduce this potential bias.

4.3.2 Sample. An important strength of this study was that a large sample size was obtained for Study 1a, in line with the aimed sample size based on the *a priori* power analysis. The inclusion and exclusion criteria used was also a strength, as the ethnicity

criteria, such as requiring that East Asian participants had not lived in the UK for five years or more, increased the likelihood that the different groups reflected individualistic (British) and collectivistic (East Asian) cultures accurately. Furthermore, the use of an East Asian group, consisting of participants from various different countries that reflect collectivistic cultures, is a strength of the study, reflecting the wide variety of nationalities and cultures presenting to the modern NHS (ONS, 2005), therefore increasing ecological validity of the study.

However, there were also limitations in relation to the sample. For example, the inclusion criteria could have been stricter, to further ensure that the participants reflected cultural categories accurately. For example, although East Asian participants were required to have lived in the UK for less than five years, it is possible that some participants may have lived in other western countries, such as the United States, prior to this, potentially being less representative of a collectivistic culture than assumed. Also, the categorisation into two distinct cultural groups does not account for mixed heritage and other cultural complexities, with categorisations based on Hofstede's (1980) distinctions being criticised as assuming cultural homogeneity (e.g., Nasif, Al-Daeaj, Ebrahimi, & Thibodeaux, 1991) and also as not reflecting more recent global changes (Jones, 2007). Moreover, the wider categorisation of the East Asian group, comprising of participants with various different nationalities possibly meant that this group was less culturally homogenous compared to the British group. In view of these limitations, future research could utilise wider and more varied measures of culture, rather than only relying on such categorisations.

Furthermore, as this study was carried out in a western cultural environment, being advertised on a university campus, it is likely that a large number of participants in the East Asian group were international students, who may possess specific group characteristics. For example, due to higher fees for international students, it is possible that this group is

characterised by high levels of education and socioeconomic status within their country of origin, as well as good resilience (Jobson & O'Kearney, 2006), which may have impacted on findings. It is also possible that due to spending some time in the UK, these participants may be more aware of western norms, possibly influencing their survey responses. Another possible limitation of the current study is that culture may have impacted on language and task understanding, as all measures were presented in English and not translated. The greater numbers of East Asian individuals not completing the questionnaires compared to British individuals may reflect this limitation. Although it was not practical for the current study, it would be interesting for future research to recruit participants from within their countries of origin and to use translated measures.

Another limitation of the current study is the smaller than planned sample size for East Asian participants in Study 1b. Based on the *a priori* power calculation, the aim was to recruit 67 participants from each cultural group into Study 1b, however it was only possible to recruit 41 East Asian participants. It is possible that power was compromised for this part of the study, potentially impacting on the non-significant findings, particularly in relation to the correlations that were approaching significance in Study 1b. A further limitation is that this exploratory study used a non-clinical sample, which may limit the representativeness of participants to clinical samples, potentially limiting the generalisability of the findings (e.g., Patel, Doku & Tennakoon, 2003). Therefore, future research should build on the findings of the current study by using a larger and possibly clinical sample.

4.3.3 Measures. An important strength of this study was that all measures used have been shown to have good psychometric properties in relation to reliability and validity (e.g., Berntsen & Rubin, 2006; Derogatis et al., 1974; Foa et al., 1993a; McReynolds et al., 2000), and have also been used cross-culturally (e.g., Berntsen & Rubin, 2006; Garcia, 2005; Jobson, 2011). Furthermore, reliability of measures was shown to be good in the current

study. Also, compared to some previous studies in this area (e.g., Suh, 2002), the current study used measures of depression and anxiety rather than more subjective constructs of well-being, potentially being more clinically relevant. A further strength of this study was that a pilot study was conducted, to ensure that the characteristics used in the self-consistency measure were viewed as similarly desirable or undesirable for both cultural groups. As discussed in section 1.4, the use of the BSCC as a measure simply of the structure of the self-concept has been criticised, as it has been argued that it cannot be distinguished from self-concept content (Locke, 2006). Therefore, a further strength of the study is that the measures used took into consideration both self-concept structure and content.

Whilst the well-being measures used in this study may have been more clinically relevant, a limitation is that further measures of well-being could have been used. It might have been particularly useful to use well-being measures that have been used in previous studies, such as the Satisfaction With Life Scale (SWLS; Diener, Emmons, Larsen, & Griffin, 1985), as this could have allowed for more direct comparisons with previous findings. Also, while the current study used more clinically relevant measures, assessing levels of depression, anxiety and PTSD, it did not consider whether participants met diagnostic criteria or cut-off levels, which may be interesting for future research to explore. Furthermore, as autobiographical memory plays such an important role in psychological theories of PTSD and has such a fundamental relationship with the self, it might have been useful to include some measures of autobiographical memory as well. Furthermore, whilst the PDS has been shown to be a reliable and valid measure, there have been recent debates concerning the broader definition of trauma that is currently used, for example in the PDS, with criticisms arising (McNally, 2003). For instance it is argued that reactions to a highly traumatic event such as war combat or rape might be very different to reactions to a vicarious experience of a family member's trauma. Another limitation of this study relates to the fact that western

measures were used, with Markus & Kitayama (1991) questioning, "can psychologists readily assume that when an American and a Japanese use the word embarrass it indicates a similar emotional experience?" (p.248). As suggested in the previous section, future research using translated measures may help to overcome this limitation.

4.4 Theoretical Implications

4.4.1 Study 1a. Cross-cultural theories put forward that culture influences the values and behaviour of individuals along various dimensions, including the individualism-collectivism dimension (Hofstede, 1980, 1983). These cultural influences have been found to result in cross-cultural differences in the self (Triandis, 1989) and also in the way that individuals view themselves and the relationship between themselves and others (Markus & Kitayama, 1991, 1994, 2010). Important differences have been proposed between an independent self-construal, which is characteristic of people from individualistic cultures, and an interdependent self-construal, which is characteristic of people from collectivistic cultures. Specifically, individualistic cultures (typically western cultures) perceive ties between individuals to be loose with people predominantly looking after their own interests. In contrast, in collectivistic cultures (such as Asian cultures) ties between individuals are tight with people looking after the interests of their in-group (Markus & Kitayama, 1991, 1994, 2010). The collective-constructionist theory of the self (Kitayama et al., 1997) suggests that these differences are developed and maintained by three interlocking factors, which fundamentally differ cross-culturally; philosophical traditions, social practices and individual psychological processes. An independent self-construal views individuals as separate and striving to discover and express unique attributes, whereas an interdependent construal focuses on the connectedness of humans, striving to maintain interdependence and seeing themselves as part of encompassing social relationships. Concordant with this theoretical background, cross-cultural researchers hypothesise that different expressions of the self may

influence an individual's level of self-consistency across situations and roles, with research supporting this (e.g., Cross et al. 2003; Suh, 2002); participants from individualistic cultures have been found to show significantly greater levels of self-consistency compared to participants from collectivistic cultures. Study 1a of the current study provides further support for this theoretical framework; British participants showed significantly higher levels of overall self-consistency across situations when compared to East Asian participants.

More recently, the theory and research relating to self-consistency has been somewhat challenged. Locke (2006) explored whether self-concept *content* (i.e., desirability) influences self-concept *structure* in an individualistic culture. He compartmentalised overall self-consistency into desirable types of consistency (i.e., consistently endorsing desirable characteristics and consistently denying undesirable characteristics) and undesirable types of consistency (i.e., consistently endorsing undesirable characteristics and consistently denying desirable characteristics). He found that overall self-consistency was positively correlated with desirable types of consistency but not with undesirable types. This suggests that for people from individualistic cultures, overall self-consistency may actually reflect consistency to desirable types of characteristics. However, this had not been explored cross-culturally. This is of particular importance to examine given other cross-cultural research has highlighted potentially important cultural differences in relation to self-concept *content* as well as *structure* (Heine & Lehman, 1999; Heine, Lehman, & Markus, 1999; Kitayama et al., 1997). Of particular interest is the idea that self-enhancement may be more common for people from individualistic cultures, whereas self-deprecation may be more common for people from collectivistic cultures (Heine et al., 1999). It is also of interest that people from individualistic cultures believe they would experience a greater increase in self-esteem to positive situations than decrease in self-esteem to negative situations, whilst the opposite has been found for people from collectivistic cultures (Kitayama et al., 1997). These ideas

suggest that *content*, as well as *structure*, may also be important when exploring relationships between self-consistency and well-being for individuals from collectivistic cultures.

Study 1a provided interesting further information to this area by supporting Locke's (2006) idea that *content* (i.e., desirability) and *structure* are important when considering self-consistency, whilst also extending this idea cross-culturally. The current study found that British participants showed greater self-consistency compared to East Asian participants in relation to overall self-consistency and desirable types of self-consistency but not in relation to undesirable types of self-consistency. This potentially supports Locke's (2006) findings that what has been traditionally referred to as overall self-consistency for participants from an individualistic culture may actually refer to desirable types of consistency. However, the current study found that East Asian participants showed greater self-consistency compared to British participants for undesirable types of consistency. This contradicts past research that suggests self-consistency is more emphasised and valued in individualistic cultures (e.g., English & Chen, 2011; Suh, 2002), as it demonstrates that when content is considered this may not be the case. The findings could suggest that for participants from collectivistic cultures overall self-consistency reflects more undesirable types of consistency, and self-consistency to undesirable characteristics may be emphasised when compared to participants from individualistic cultures. The findings of the current study are concordant with the evidence that North Americans (i.e., individualistic culture) are more likely to describe themselves as having desirable characteristics compared to Japanese people (i.e., collectivistic culture), and that Japanese people show more self-critical orientations compared to North Americans (Heine et al., 1999). Overall, the findings support the theoretical background proposing that self-concept *content* can influence self-concept *structure*. Moreover, the findings suggest that cross-cultural self-consistency differences are more

complex than previously suggested, putting forward the idea that cross-cultural self-concept differences may exist in relation to both *content* and *structure*.

Traditionally, it was theorised that self-consistency is associated with well-being (Lecky, 1945; Maslow, 1954; Rogers, 1951), with various studies supporting this notion (Block, 1961; Campbell et al., 2003; Donahue et al., 1993; Sheldon et al., 1997). Theories of well-being relating to specific psychological disorders such as depression and anxiety also incorporate the self as playing an important role. For instance, Beck's (1976) cognitive theory of emotional disorders highlights the influence of negative beliefs and thoughts in relation to the self (i.e., self-concept content). Also, self-complexity theory (Linville, 1985, 1987) proposes that a highly differentiated self-concept (i.e., self-concept structure) acts as a protective buffer against the depressive impact of stressful, negative life events. However, as cross-cultural theories put forward cultural differences in the self (Heine et al., 1999; Hofstede, 1980, 1983; Kitayama et al., 1997; Markus & Kitayama, 1991, 1994, 2010; Triandis, 1989) and empirical studies found cross-cultural self-consistency differences (Suh, 2002), the relationship between self-consistency and well-being began to be considered in more detail from a cross-cultural perspective. It was found that participants from individualistic cultures showed stronger relationships between self-consistency and well-being compared to participants from collectivistic cultures (e.g., Suh, 2002). It was also found that participants from individualistic cultures had stronger beliefs about the importance of self-consistency (Kashima et al., 1992).

Findings from Study 1a of the current study provide further information in relation to the cross-cultural theoretical framework. Significant correlations were found for British participants between greater self-consistency and lower levels of both depression and anxiety symptoms, whilst a significant correlation for East Asian participants was only found in relation to depression symptoms. However, the relationships did not differ significantly

cross-culturally. The findings for British participants support longstanding theoretical ideas and research findings (e.g., Lecky, 1945; Maslow, 1954; Rogers, 1951). In relation to anxiety symptoms, the finding of a lack of significant relationship for East Asian participants may provide support for the idea that self-consistency is less important and has less of an influence on well-being in individuals from collectivistic cultures compared to people from individualistic cultures (Kashima et al., 1992). As self-consistency has been shown to be more important to people from individualistic cultures (Kashima et al., 1992), it is possible that due to the greater level of expectation to be consistent, a lack of self-consistency in those from individualistic cultures may result in higher levels of anxiety when an individual is not as consistent across situations compared to peers from the same culture. Conversely, as self-consistency is less important for individuals from collectivistic cultures, lower levels of self-consistency may not result in such high levels of anxiety as less importance and expectations are placed on consistency. However, it is unclear why a significant relationship was found between self-consistency and depression symptoms in East Asian participants. Further research is needed to explore this.

Challenging the theory and research associating overall self-consistency and well-being, Locke (2006) compared the consistency hypothesis (that self-consistency predicts well-being) with the desirability hypothesis (that self-consistency predicts well-being because it relates to consistency to desirable characteristics) in an individualistic culture. He found that whilst overall self-consistency was positively correlated with well-being, when broken down the results were more complex. Locke found no significant relationships between consistently denying desirable characteristics and well-being, whilst significant relationships were found between consistently endorsing undesirable characteristics and both lower self-esteem and greater levels of physical symptoms. Strong relationships were also found between consistently endorsing desirable characteristics and higher self-esteem, and also

between consistently denying undesirable characteristics and both higher self-esteem and lower levels of physical symptoms. Locke concluded that the results for undesirable characteristics supported the desirability hypothesis, whereas the results for desirable characteristics were less conclusive.

The findings for Study 1a of the current study are somewhat consistent with Locke's (2006) findings, with significant relationships being found for both cultural groups between consistently denying undesirable characteristics and higher levels of well-being, and also between consistently endorsing undesirable characteristics and lower levels of well-being. No significant relationships were found in the current study in relation to desirable characteristics (consistently endorsing or denying desirable characteristics). These findings show that for both desirable and undesirable types of self-consistency, consistency specifically in relation to undesirable characteristics (either endorsing or denying undesirable characteristics) has a greater influence on well-being compared to consistency specifically in relation to desirable characteristics. No significant differences were found between the relationships for British and East Asian participants. These findings provide further pan-cultural support for the desirability hypothesis over the consistency hypothesis in relation to undesirable characteristics. Specifically, as consistently endorsing undesirable characteristics was found to be associated with lower well-being, whereas consistently denying undesirable characteristics was found to be associated with higher well-being, these findings provide support for the idea that consistency may be related to well-being only when it reflects consistency to desirable characteristics (or consistency against undesirable characteristics), supporting the desirability hypothesis over the more simplistic consistency hypothesis. Similar to Locke's (2006) conclusions, the findings for desirable characteristics were less conclusive, with no significant relationships being found. Overall, these findings highlight further the importance of self-concept *content* as well as *structure* when exploring

relationships between the self-concept and well-being. Whilst certain cross-cultural differences may exist in the relationship between overall self-consistency and well-being, it is possible that when broken down further to explore *content* as well, the findings may be more pan-cultural (similar across cultures) rather than cross-cultural.

4.4.2 Study 1b. Various psychological theories of PTSD put forward different understandings of the development and maintenance of PTSD symptoms, with some theories placing a greater importance on the self compared to others. Memory is also a central point within these theories, with the relationship between memory and the self being understood as reciprocal. In some theories PTSD is understood as arising due to disruptions in autobiographical memory following trauma, resulting in the trauma memory not being fully processed and integrated into the autobiographical memory base and into the self (Brewin et al., 1996; Brewin et al., 2010; Conway, 2005; Conway & Pleydell-Pearce, 2000; Ehlers & Clark, 2000). Conversely, PTSD symptoms may arise due to a trauma experience being too well integrated into memory and the self, resulting in it becoming a turning point in one’s life story, leading to a trauma-centred identity (Berntsen & Rubin, 2006, 2007). Self-consistency has also been put forward by some theorists as playing a key role, with the desire for consistency or coherence leading to self-concept change following trauma, resulting in a trauma-centred identity (Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000). As well as considering self-concept *structure* (i.e., self-consistency), some theories also recognise the importance of self-concept *content*, for example in relation to specific negative appraisals that may play a role in the development and maintenance of PTSD (Ehlers & Clark, 2000). However, cross-cultural differences in the self (e.g., Markus & Kitayama, 1991, 1994, 2010; Suh, 2002) are often not considered within these theories, and empirical findings have started to question the universality of them (Jobson & O’Kearney, 2006, 2008). Furthermore, these conceptualisations of PTSD do not consider the wider

influence of self-concept content, such as desirability of self-concept characteristics, as well as self-concept structure (i.e., self-consistency).

Due to these variations in theoretical models of PTSD, predictions about relationships between self-consistency (overall and desirable or undesirable types of consistency) and posttraumatic psychological adjustment (PTSD symptoms and trauma-centred identity) were unclear in the current study. Findings from Study 1b of the current study showed that only one significant relationship was found, with consistently endorsing undesirable characteristics being significantly correlated with greater PTSD symptoms for British participants. As no significant relationships were found for British participants in relation to overall self-consistency, this finding could suggest that similar to well-being findings (Study 1a) it is important to consider self-concept *content* as well as *structure*. This finding is also interesting to consider in relation to the idea relating to well-being that self-enhancement may be more common for people from individualistic cultures, as endorsing undesirable characteristics may impact negatively to a greater extent for British participants. However, as no other significant relationships were found in relation to this research question, this should be explored further in order to be able to draw any firm conclusions. It is also interesting to note that in the current study various correlations were approaching significance for both cultural groups, particularly for associations between consistency in relation to undesirable characteristics (endorsing or denying undesirable characteristics) and posttraumatic psychological adjustment.

In relation to PTSD theories, the finding that overall self-consistency was not significantly related to posttraumatic psychological adjustment provides a lack of support for some of the prominent theories (Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000) that suggest that self-consistency drives self-concept change following trauma, resulting in a trauma-centred identity. However, the finding that

consistently endorsing undesirable characteristics was significantly related to greater PTSD symptoms could suggest that similar to well-being it is necessary to break down overall self-consistency, with *content* (i.e., desirability) as well as *structure* playing an important role. This idea provides some support for PTSD theories that consider *content* as well as *structure*, such as commenting on the role of negative appraisals in PTSD (Ehlers & Clark, 2000). The relationship between consistently endorsing undesirable characteristics and greater PTSD symptoms could possibly reflect the idea that due to the desire for self-consistency, self-change occurs following a negative traumatic event, with the self-concept adapting and potentially becoming more negative or undesirable, in order to integrate this negative event into the autobiographical memory base and the self (Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000). However, theoretically, if this was the case then relationships should also be found with trauma-centred identity, which were not found in the current study.

It is interesting to note that correlations approaching significance for both cultural groups included relationships between consistently endorsing undesirable characteristics and higher levels of trauma-centred identity and PTSD symptoms, as well as relationships between consistently denying undesirable characteristics and lower levels of trauma-centred identity and PTSD symptoms. These non-significant correlations show similar relationships to those found in relation to well-being, rather than providing support for PTSD theories that suggest that following trauma the desire for overall self-consistency results in a trauma-centred identity and PTSD symptoms. It is possible that *content* as well as *structure* may also be important when considering relationships between self-concept and posttraumatic psychological adjustment. As the sample size for the second part of the current study was smaller than planned, it is possible that Study 1b was underpowered, potentially not having a large enough sample of participants who had experienced trauma to show all possible

significant relationships, especially in the East Asian sample. Therefore, it would be interesting for future research using a larger sample size to explore these findings further.

4.5 Clinical Implications

NICE guidelines recommend CBT as a prominent treatment model for depression (NICE, 2010), anxiety (NICE, 2011) and PTSD (NICE, 2005). These approaches draw on conceptualisations of well-being and psychological disorders, such as Beck's (1976) cognitive theory of emotional disorders and various cognitive-based theories of PTSD (e.g., Ehlers & Clark, 2000). CBT involves a combination of techniques designed to identify and modify maladaptive thought patterns and beliefs, which often relate to the self. CBT also aims to change behaviours that are serving to reinforce negative styles of thinking, often through exposure-based techniques. In relation to PTSD specifically, effective treatments based on cognitive and behavioural ideas (e.g., Foa, 1992; Resick & Schnicke, 1993) involve a combination of exposure and cognitive restructuring interventions, potentially focusing on autobiographical memory disturbances as well as negative thoughts and beliefs (Brewin & Holmes, 2003). However, based on different theoretical understandings of PTSD, the predominant focus of therapies broadly based on cognitive and behavioural ideas may differ. For instance, in line with dual-representation theory (Brewin et al., 1996; Brewin et al., 2010), eye-movement desensitisation and reprocessing (EMDR) is suggested, in order to facilitate associations in autobiographical memory, whilst imagery rescripting is proposed to further ensure associations and contextualisation of the trauma memory (Brewin et al., 2010). The SMS model (Conway, 2005; Conway & Pleydell-Pearce, 2000) may point to treatment strategies such as cognitive therapy focusing on adapting self-perceptions and reducing the likelihood of trauma memories being retrieved, as well as exposure therapy, potentially leading to new autobiographical memories. Overall, various studies and reviews have demonstrated the effectiveness of these approaches generally based on cognitive and

behavioural ideas in western cultures (e.g., Foa, Keane, Friedman, & Cohen, 2009; Van Etten & Taylor, 1998). However, it is recognised that our understanding of interventions in non-western populations is limited (Foa et al., 2009). As conceptualisations of the processes involved in psychological disorders, including depression, anxiety and PTSD, are central to effective therapeutic interventions, research exploring further the processes and mechanisms involved in such disorders is vitally important, particularly when considering interventions that are cross-culturally appropriate and effective. Therefore, the current study adds further information of important clinical relevance.

Whilst various theories and research studies have focused on the influence of the self in relation to both well-being and PTSD, much of the focus has been on self-concept *structure*, specifically self-consistency, rather than also considering the influence of *content*, specifically desirability. In relation to well-being, it has long been theorised (Lecky, 1945; Maslow, 1954; Rogers, 1951) and shown (Block, 1961; Campbell et al., 2003; Donahue et al., 1993; Sheldon et al., 1997) that self-consistency is associated with well-being. However, more recently, it was put forward that rather than overall self-consistency being associated with well-being, perhaps desirability also impacts on this relationship (Locke, 2006). Self-consistency has also been considered in theories of PTSD (e.g., Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000). The findings of the current study provide further evidence that both self-concept *content* and *structure* are central to understandings of well-being and PTSD, suggesting that theorised relationships between self-consistency and well-being or PTSD may be more complex than assumed. These findings may suggest that useful ideas can be drawn from models of well-being that consider self-concept content (e.g., Beck, 1976) and self-concept structure (e.g., Linville, 1985, 1987) when conceptualising and understanding well-being, particularly from a cross-cultural perspective. If the findings are robust there are potential clinical implications, providing

further information about self processes that are involved in well-being and PTSD, with the potential to help to inform clinical interventions for psychological disorders, such as depression, anxiety and PTSD. It may be important to consider both cross-cultural and pan-cultural factors relating to the self when providing interventions to individuals from different cultures. For instance, cross-cultural differences in self-consistency and desirability may impact on the way that beliefs and thoughts relating to the self are understood within a CBT framework (e.g., Beck, 1976). For example, the finding that British participants showed greater levels of desirable types of self-consistency, whilst East Asian participants showed greater levels of undesirable types of self-consistency may suggest that negative or undesirable beliefs and thoughts relating to the self can be understood in different ways for individuals from different cultural groups, possibly requiring different approaches when considering the challenging and modification of such beliefs and thoughts.

The finding that overall self-consistency was not significantly related to posttraumatic psychological adjustment provides a lack of support for some of the prominent theories (Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000), which underpin prominent models of treatment for PTSD. The finding in the current study that self-consistency may be involved in PTSD in relation to specific types of consistency and for people from particular cultures suggests that further research is needed to continue to try to understand PTSD from a cross-cultural perspective, possibly adapting and tailoring interventions to fit with cross-cultural differences in self processes. Whilst the threat to conceptual self model (Jobson, 2009) incorporates cross-cultural differences in self-consistency into an understanding of PTSD, proposing that changes to identity and the self following trauma depend on the need for self-consistency, which is culturally variable, the findings of the current study suggest that further research into this area is necessary, in order to inform culturally-appropriate interventions. For instance, it may be important to

incorporate a cross-cultural understanding in relation to self-concept content as well as structure into PTSD models and treatment approaches.

4.6 Future Research

The current study highlighted the need for further research in several areas, as discussed throughout this chapter. These points will now be summarised.

As the current study provided interesting findings regarding the influence of cross-cultural differences in self-concept *content* as well as *structure* on well-being, it would be beneficial for future research to explore this further, for example through using additional measures and constructs of well-being. As the findings were not conclusive in relation to posttraumatic psychological adjustment, future research into this area, which addresses various methodological limitations, would be beneficial to gain further clarification in this area. Furthermore, due to the reciprocal relationship between autobiographical memory and the self, future research should also include measures relating to autobiographical memory of trauma.

A number of methodological issues are identified for future research to address. Research using a larger sample size, and therefore greater power, would be useful, particularly in relation to Study 1b investigating posttraumatic psychological adjustment. As some of the findings for Study 1b were approaching significance, it is possible that a larger sample size would help to clarify the strength of relationships between the self-concept (structure and content) and posttraumatic psychological adjustment. Future research using samples from within different countries, and possibly using further measures of culture, would be helpful in drawing more conclusive ideas about cross-cultural differences. The effect in the current study of language and task understanding could have influenced results, therefore future research would also be wise to use translated measures. Also, counter-balancing the measures used would help to reduce any potential bias in future research. As

clinical concepts of well-being were being investigated in the current study, it might also be interesting for further research to investigate this area with a clinical sample.

Whilst the design of the current study allowed for robust statistical analysis to be performed, it would be interesting for further research to be conducted using qualitative methods, such as semi-structured interviews, to add further more detailed information to the preliminary findings of the current study. For example, qualitative methods might enhance the richness and depth of information in relation to the concepts of culture, the self and well-being (including posttraumatic psychological adjustment).

4.7 Conclusions

The self has always been, and continues to be, of significant psychological and philosophical interest. Many theories have been put forward regarding relationships between the self-concept, particularly self-consistency, and well-being (e.g., Gergen, 1971; Lecky, 1945; Rogers, 1951), including depression, anxiety and posttraumatic psychological adjustment (e.g., Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000; Linville, 1985, 1987). For instance, self-consistency has been assumed to be essential for psychological well-being (e.g., Lecky, 1945; Rogers, 1951). In relation to PTSD, it has been suggested that the desire for self-consistency drives self-concept change following trauma, leading to a trauma-centred identity (Berntsen & Rubin, 2006, 2007; Conway, 2005; Conway & Pleydell-Pearce, 2000). Also, much research has been conducted investigating these ideas empirically in western cultures (e.g., Block, 1961; Donahue et al., 1993; Sheldon et al., 1997). More recently, however, cross-cultural theory and research has started to challenge some of the longstanding ideas, with cross-cultural differences in the self between individualistic and collectivistic cultures, including in relation to self-consistency, being proposed as influencing relationships between the self and well-being (e.g., Jobson & O’Kearney, 2006, 2008; Suh, 2002). Specifically, it has been found that individuals from

collectivistic cultures are less self-consistent across situations compared to individuals from individualistic cultures (Suh, 2002). Furthermore, self-consistency has been found to be less important to well-being for individuals from collectivistic cultures (Suh, 2002). Also, ideas have been put forward suggesting that self-concept *content* (i.e., desirability) as well as *structure* (i.e., self-consistency) plays a role (e.g., Locke, 2006).

The current study set out to explore the influence of cross-cultural differences in self-consistency and desirability on well-being (Study 1a) and posttraumatic psychological adjustment (Study 1b). Based on the theoretical and empirical background, it was predicted that levels of self-consistency would differ cross-culturally and that this may impact on relationships between the self and well-being, including posttraumatic psychological adjustment. However, it was less clear how desirability would play a role. The findings showed that British participants only showed higher levels of self-consistency in relation to overall self-consistency and *desirable* types of consistency compared to East Asian participants. In contrast, East Asian participants appeared to show greater levels of self-consistency in relation to *undesirable* types of consistency compared to British participants. Greater overall levels of self-consistency were found to be related to lower levels of depression for both British and East Asian participants and were also found to be related to lower levels of anxiety for British participants. These relationships did not differ significantly cross-culturally. When exploring the role of desirability, participants from both cultural groups showed relationships with well-being only when examining undesirable characteristics. When exploring posttraumatic psychological adjustment (Study 1b), only one significant relationship was found between indices of self-consistency and posttraumatic psychological adjustment. For British participants, greater consistency in relation to endorsing undesirable characteristics was found to be significantly associated with greater PTSD symptoms. However, various correlations in relation to undesirable characteristics

(endorsing and denying undesirable characteristics) and posttraumatic psychological adjustment were approaching significance for both cultural groups.

In relation to well-being, it was concluded that whilst cross-cultural differences in overall self-consistency may be important in considering the relationship between the self and well-being, when considering consistency in terms of desirable and undesirable types, it may be more important to consider pan-cultural impacts. Specifically, consistency in relation to undesirable characteristics may have a detrimental impact on well-being regardless of cultural group. In relation to posttraumatic psychological adjustment, while the study provided some evidence that similar to well-being, consistency in relation to undesirable characteristics may have an important influence on posttraumatic psychological adjustment, further research using a larger sample size is required to make firm conclusions.

Overall, this study provides further evidence of the importance of considering theories of well-being and PTSD from a cross-cultural perspective, showing that important cross-cultural and pan-cultural factors may play varying roles in relationships between the self and well-being. Future research investigating these ideas further is of great clinical importance given the universality and impact of disorders such as depression, anxiety and PTSD. As models and intervention approaches for psychological disorders still tend to be based predominantly on western theory and research, this study supports the need for further cross-cultural research in this area in order to guide clinicians working with individuals from non-western cultures.

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Appendices

Table of Contents for Appendices

Appendix A Recruitment Poster

Appendix B Situation-Specific Self-Description Task

Appendix C Characteristics List

Appendix D Hopkins Symptom Checklist (HSCL-25)

Appendix E Posttraumatic Diagnostic Scale (PDS)

Appendix F Centrality of Events Scale (CES)

Appendix G Demographic questionnaire

Appendix H Ethics committee correspondence (3 letters)

Appendix I Information sheet

Appendix J Consent form

Appendix A: Recruitment Poster

Doctoral Programme in Clinical Psychology

Interested in taking part in a psychology study?

A Study exploring the relationships between culture, the self and wellbeing:

The study looks at relationships between culture, the self and wellbeing (including wellbeing following trauma). The study will involve answering some online questionnaires, which look at the self and relationships, mood and wellbeing. If you have experienced a traumatic event (such as assault, car accident, natural disaster etc.) you will also be asked to answer some questions about how the trauma affected your identity and wellbeing. Taking part will take 15 to 25 minutes.

Who can take part?

We are looking for the following people to take part:

- People who identify their ethnicity as British and were born in the UK (about 141 people).
- People who identify their ethnicity as East Asian and have been living in the UK for less than 5 years (about 141 people).

You do not need to have experienced a traumatic event to take part in the study.

All participants will have the opportunity to enter a prize draw to win one of four £25 Amazon vouchers.

If you are interested in taking part please visit:
https://www.surveymonkey.com/s/culture_self

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Appendix B: Situation-Specific Self-Description Task

INSTRUCTIONS

When answering the following questions, please indicate whether or not each characteristic describes how you tend to be in various relationship contexts:

1. Do you tend to be ‘cultured’ in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

2. Do you tend to be ‘down to earth’ in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

3. Do you tend to be ‘snobbish’ in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

4. Do you tend to be ‘coarse’ in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

5. Do you tend to be ‘self-disciplined’ in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

6. Do you tend to be ‘uninhibited’ in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

7. Do you tend to be ‘rigid in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

8. Do you tend to be 'unstable' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

9. Do you tend to be 'outspoken' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

10. Do you tend to be 'modest' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

11. Do you tend to be 'boastful' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

12. Do you tend to be 'withdrawn' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

13. Do you tend to be 'tactful' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

14. Do you tend to be 'straightforward' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

15. Do you tend to be 'vague' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

16. Do you tend to be 'abrupt' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

17. Do you tend to be 'spirited' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

18. Do you tend to be 'stable' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

19. Do you tend to be 'temperamental' in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

20. Do you tend to be ‘unemotional’ in the following relationship contexts?

With a male I know well	YES	NO
With a female I know well	YES	NO
With a male I do not know well	YES	NO
With a female I do not know well	YES	NO

Appendix C: Characteristics List

Five Factor Model dimension	Desirable characteristics	Undesirable characteristics
Openness	Cultured Down to earth	Snobbish Coarse
Conscientiousness	Self-disciplined Uninhibited	Rigid Unstable
Extraversion	Outspoken Modest	Boastful Withdrawn
Agreeableness	Tactful Straightforward	Vague Abrupt
Neuroticism	Spirited Stable	Temperamental Unemotional

Appendix D: Hopkins Symptom Checklist (HSCL-25)

INSTRUCTIONS

Listed below are some symptoms or problems that people sometimes have. Please read each one carefully and decide how much the symptom bothered or distressed you in the last week, including today. Place a check in the appropriate column.

PART 1 Anxiety Symptoms	Not at all	A Little	Quite a bit	Extremely
1. Suddenly scared for no reason.				
2. Feeling Fearful				
3. Faintness, dizziness or weakness				
4. Nervousness or shakiness inside				
5. Heart pounding or racing				
6. Trembling				
7. Feeling tense or keyed up				
8. Headaches				
9. Spells of terror or panic				
10. Feeling restless can’t sit still				

PART 2 Depression Symptoms	Not at all	A Little	Quite a bit	Extremely
11. Feeling low in energy, slowed down				
12. Blaming yourself for things				
13. Crying easily				
14. Loss of sexual interest or pleasure				
15. Poor appetite				
16. Difficulty falling asleep, staying asleep				
17. Feeling hopeless about future				
18. Feeling blue				
19. Feeling lonely				
20. Thoughts of ending your life				
21. Feeling of being trapped or caught				
22. Worrying too much about things				
23. Feeling no interest in things				
24. Feeling everything is an effort				
25. Feelings of worthlessness				

Appendix E: Posttraumatic Diagnostic Scale (PDS)

INSTRUCTIONS

PART 1.

Many people have lived through or witnessed a very stressful and traumatic event at some point in their lives. Below is a list of traumatic events. Put a tick in the box next to ALL of the events that have happened to you or that you have witnessed.

(1) □ Serious accident, fire, or explosion (for example, an industrial, farm, car, plane, or boating accident)

(2) □ Natural disaster (for example, cyclone, flood, tornado, hurricane, flood, or major earthquake)

(3) □ Non-sexual assault by a family member or someone you know (for example, being mugged, physically attacked, shot, stabbed, or held at gunpoint)

(4) □ Non-sexual assault by a stranger (for example, being mugged, physically attacked, shot, stabbed, or held at gunpoint)

(5) □ Sexual assault by a family member or someone you know (for example, rape or attempted rape)

(6) □ Sexual assault by a stranger (for example, rape or attempted rape)

(7) □ Military combat or war zone

(8) □ Sexual contact when you were younger than 18 with someone who was 5 or more years older than you (for example, contact with genitals, breasts)

(9) □ Imprisonment (for example, prison inmate, prisoner of war, hostage)

(10) □ Torture

(11) □ Life threatening illness

(12) □ Other traumatic event

(13) If you marked item 12, specify the traumatic event below.

____

____

____

PART 2.

(14) If you marked more than one traumatic event in Part 1, put a tick in the box below next to the event that bothers you the most. If you only marked one traumatic event in Part 1, mark the same one below.

□ Accident

□ Disaster

□ Non-sexual assault by a family member or someone you know

□ Non-sexual assault by a stranger

□ Sexual assault by a family member or someone you know

□ Sexual assault by a stranger

□ Combat

□ Sexual contact when you were younger than 18 with someone who was 5 or more years older

□ Imprisonment

□ Torture

□ Life threatening illness

□ Other

In the lines below, briefly describe the traumatic event you marked above.

____

____

____

Below are several questions about the traumatic event you just described above.

(15) How long ago did the traumatic event happen? (circle ONE)

1 Less than 1 month

2 1 to 3 months

3 3 to 6 months

4 6 months to 3 years

5 3 to 5 years

6 More than 5 years

For the following questions, circle Yes or No.

During this traumatic event:

(16) Were you physically injured? YES NO

(17) Was someone else physically injured? YES NO

(18) Did you think your life was in danger? YES NO

(19) Did you think someone else's life was in danger?

YES NO

(20) Did you feel helpless? YES NO

(21) Did you feel terrified? YES NO

PART 3.

Below is a list of problems that people sometimes have after experiencing a traumatic event. Read each one carefully and circle the number (0-3) that best describes how often that problem has bothered you IN THE PAST MONTH. Rate each problem with respect to the traumatic event you described in Item 14.

0 Not at all or only one time

1 Once a week or less/once in a while

2 2 to 4 times a week/half the time

3 5 or more times a week/almost always

(22)	Having upsetting thoughts or images about the traumatic event that came into your head when you didn't want them to	0	1	2	3
(23)	Having bad dreams or nightmares about the traumatic event	0	1	2	3
(24)	Reliving the traumatic event, acting or feeling as if it was happening again	0	1	2	3
(25)	Feeling emotionally upset when you were reminded of the traumatic event (for example, feeling scared,	0	1	2	3

	angry, sad, guilty, etc.)				
(26)	Experiencing physical reactions when you were reminded of the traumatic event (for example, breaking out in a sweat, heart beating fast)	0	1	2	3
(27)	Trying not to think about, talk about, or have feelings about the traumatic event	0	1	2	3
(28)	Trying to avoid activities, people, or places that remind you of the traumatic event	0	1	2	3
(29)	Not being able to remember an important part of the traumatic event	0	1	2	3
(30)	Having much less interest or participating much less often in important activities	0	1	2	3
(31)	Feeling distant or cut off from people around you	0	1	2	3
(32)	Feeling emotionally numb (for example, being unable to cry or unable to have loving feelings)	0	1	2	3
(33)	Feeling as if your future plans or hopes will not come true(for example, you will not have a career, marriage, children, or a long life)	0	1	2	3
(34)	Having trouble falling or staying asleep	0	1	2	3
(35)	Feeling irritable or having fits of anger	0	1	2	3
(36)	Having trouble concentrating (for example, drifting in and out of conversation, losing track of a story on television, forgetting what you read)	0	1	2	3
(37)	Being overly alert (for example, checking to see who is around you, being uncomfortable with your	0	1	2	3

back to the door, etc.)

(38) Being jumpy or easily startled (for example, when someone walks up behind you) 0 1 2 3

(39) How long have you been experiencing the problems that you reported above? (circle ONE)

1 Less than 1 month

2 1 to 3 months

3 More than 3 months

(40) How long after the traumatic event did these problems begin? circle ONE)

1 Less than 6 months

2 6 or more months

PART 4.

Indicate below if the problems you rate in Part 3 have interfered with any of the following areas in your life DURING THE PAST MONTH. Circle YES or NO.

(41) Work	YES	NO
(42) Household chores and duties	YES	NO
(43) Relationships with friends	YES	NO
(44) Fun and leisure activities	YES	NO
(45) Schoolwork	YES	NO
(46) Relationships with your family	YES	NO
(47) Sex life	YES	NO

(48) General satisfaction with life YES NO

(49) Overall level of functioning in all areas of your life

YES NO

Appendix F: Centrality of Events Scale (CES)

INSTRUCTIONS

Please think back upon the most stressful or traumatic event in your life and answer the following questions in an honest and sincere way, by circling a number from 1 to 5.

1. This event has become a reference point for the way I understand new experiences.

1 2 3 4 5

Totally disagree **Totally agree**

2. I automatically see connections and similarities between this event and experiences in my present life.

1 2 3 4 5

Totally disagree **Totally agree**

3. I feel that this event has become part of my identity.

1 2 3 4 5

Totally disagree **Totally agree**

4. This event can be seen as a symbol or mark of important themes in my life.

1 2 3 4 5

Totally disagree **Totally agree**

5. This event is making my life different from the life of most other people.

1 2 3 4 5

Totally disagree **Totally agree**

6. This event has become a reference point for the way I understand myself and the world.

1 2 3 4 5

Totally disagree **Totally agree**

7. I believe that people who haven't experienced this type of event think differently than I do.

1 2 3 4 5

Totally disagree **Totally agree**

8. This event tells a lot about who I am.

1 2 3 4 5

Totally disagree **Totally agree**

9. I often see connections and similarities between this event and my current relationship with other people.

1 2 3 4 5

Totally disagree **Totally agree**

10. I feel that this event has become a central part of my life story.

1 2 3 4 5

Totally disagree **Totally agree**

11. I believe that people who haven't experienced this type of event, have a different way of looking upon themselves than I have.

1 2 3 4 5

Totally disagree **Totally agree**

12. This event has coloured the way I think and feel about other experiences

1 2 3 4 5

Totally disagree **Totally agree**

13. This event has become a reference point for the way I look upon my future.

1 2 3 4 5

Totally disagree **Totally agree**

14. If I were to weave a carpet of my life, this event would be in the middle with threads going out to many other experiences.

1 2 3 4 5

Totally disagree **Totally agree**

15. My life story can be divided into two main chapters: one is before and one is after this event happened.

1 2 3 4 5

Totally disagree **Totally agree**

16. This event permanently changed my life

1 2 3 4 5

Totally disagree **Totally agree**

17. I often think about the effects this event will have on my future.

1 2 3 4 5

Totally disagree **Totally agree**

18. This event was a turning point in my life.

1 2 3 4 5

Totally disagree **Totally agree**

19. If this event had not happened to me, I would be a different person today.

1 2 3 4 5

Totally disagree **Totally agree**

20. When I reflect upon my future, I often think back to this event.

1	2	3	4	5
Totally disagree				**Totally agree**

Appendix G: Demographic Questionnaire

INSTRUCTIONS

Please complete the following information:

Gender (please tick): MALE ☐

FEMALE ☐

Age: ____________ years old.

What is your ethnicity? ____________________________________

How long have you been living in the UK? ___________________ years.

Level of Education (please tick): UNDERGRADUATE ☐

POSTGRADUATE ☐

OTHER ☐

(Please specify: ________________________)

How would you rate your written English skills? (please tick)

1	2	3	4	5	6	7	8	9	10
☐	☐	☐	☐	☐	☐	☐	☐	☐	☐

Very Poor Moderately Good Extremely Good

Appendix H: Ethics Committee Correspondence (3 letters)

Faculty of Medicine and Health Sciences Research Ethics Committee

Emily Gage
Doctoral Programme in Clinical Psychology
Room 2.30, Elizabeth Fry Building
University of East Anglia
Norwich
NR4 7TJ

Research & Enterprise Services
REN West (SCI)
University of East Anglia
Norwich
NR4 7TJ

Email: fmh.ethics@uea.ac.uk
Direct Dial: +44 (0) 1603 59 1556

Web: http://www.uea.ac.uk

12th July 2012

Dear Emily

Investigating the influence of cross-cultural differences in self-consistency and desirability on wellbeing and posttraumatic psychological adjustment

Our Ref: 2011/2012-49

The submission of your research proposal was discussed at the Faculty Research Ethics Committee meeting on 28th June 2012.

The Committee have a number of concerns which they would like you to consider and address accordingly:

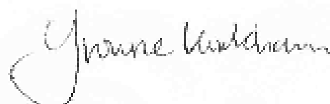
1. It was suggested that you should consider having a lay title or at least you should amend it to a less technical version.
2. The Participant Information Sheet (PIS) is too long and complex, especially for those participants who do not speak English as their first language. Please shorten the PIS and also simplify the language so that you achieve a balance between the length and the quality of the information supplied.
3. Serious consideration must be given to what might constitute a traumatic event for the Chinese participants. Therefore, a specific provision must be inserted in the PIS to guide the participants in case they find themselves in a state of distress and they wish to seek help or assistance with this. It was suggested that you request the Chinese Society's advice in relation to where this help could be sought by the distressed participants.
4. As an overarching point, given the cross cultural nature of your study, you must ensure that all the documentation of your project is culturally sensitive. Please discuss this with your supervisor in further detail.

Please resubmit your application when you have resolved/clarified the above issues. I require a complete application including documentation confirming that you have complied with the Committee's suggestions. I have emailed you a copy of the letter and the Committee have requested that you detail the changes below the relevant point on the text in this letter and also include your amendments as a tracked change within your application/proposal.

The deadline for the next meeting held on 26th July is Friday 13th July. The following deadline is 14th September for the meeting on 27th September. There is no Committee meeting in August. If you would like to resubmit your proposal for the July meeting, there may be a possibility of an extension of 1-2 working days. Please call Denisa Clinciu on 01603 591 566 if you have further enquiries.

As your project does not have ethics approval until the above issues have been resolved, I want to remind you that you should not be undertaking your research project until you have ethics approval by the Faculty Research Ethics Committee. Planning on the project or literature based elements can still take place but not the research involving the above ethical issues. This is to ensure that you and your research are insured by the University and that your research is undertaken within the University's 'Guidelines on Good Practice in Research' approved by the Senate in July 2004.

Yours sincerely,



Yvonne Kirkham
Project Officer

Faculty of Medicine and Health Sciences Research Ethics Committee

Research & Enterprise Services
REN West (SCI)
University of East Anglia
Norwich
NR4 7TJ

Email: fmh.ethics@uea.ac.uk
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Emily Gage
Doctoral Programme in Clinical Psychology
Room 2.30, Elizabeth Fry Building
University of East Anglia
Norwich
NR4 7TJ

24th August 2012

Dear Emily

Exploring the relationships between culture, the self and wellbeing

Our Ref: 2011/2012-54

The resubmission of your research proposal was discussed at the Faculty Research Ethics Committee meeting on Thursday 26th July 2012.

The Committee were happy to approve your application in principle but have the following concerns which they would like you to address and amend accordingly:

1. Ensure that you obtain gatekeeper consent prior to recruiting participants and that you supply a copy of the consent to the Committee.

2. Change part of section 3 on the Participant Information Sheet (PIS) as follows: '(...) and then if you choose to go forward to the questionnaires, you will be showing that you are happy to take part' to '(...) and if you complete the questionnaires and submit them, then you will be consenting to take part'.

3. Part 10 of the PIS is too generic. Please specify more details in relation to the complaints procedure – i.e. provide contact names, telephone numbers and / or email addresses for yourself, your supervisor and for the Associate Dean for Research in the Faculty of Medicine.

Please write to me once you have resolved/clarified the above issues. I require documentation confirming that you have complied with the Committee's suggestions. The Committee have requested that you detail the changes below the relevant point on the text in this letter and also include your amendments as a tracked change within your application/proposal. The revisions to your application can be considered by Chair's action rather than go to a committee meeting, which means that the above documentation can be resubmitted at any time. Please could you send your revisions to me as an attachment in an email as this will speed up the decision making process.

As your project does not have ethics approval until the above issues have been resolved, I want to remind you that you should not be undertaking your research project until you have ethical approval by the Faculty Research Ethics Committee. Planning on the project or literature based elements can still take place but not the research involving the above ethical issues. This is to ensure that you and your research are insured by the University and that your research is undertaken within the University's 'Guidelines on Good Practice in Research' approved by the Senate in July 2004.

Yours sincerely

Yvonne Kirkham
pp. Project Officer

Faculty of Medicine and Health Sciences Research Ethics Committee

Emily Gage
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Email: fmh.ethics@uea.ac.uk

Web: www.uea.ac.uk/researchandenterprise

19th September 2012

Dear Emily

Exploring the relationships between culture, the self and wellbeing
Reference: 2011/2012-54

The amendments to the resubmission of your above proposal have been considered by the Chair of the Faculty Research Ethics Committee and we can confirm that your proposal has been approved.

Please could you ensure that any further amendments to either the protocol or documents submitted are notified to us in advance and also that any adverse events which occur during your project are reported to the Committee. Please could you also arrange to send us a report once your project is completed.

The Committee would like to wish you good luck with your project

Yours sincerely

Yvonne Kirkham
Project Officer

Appendix I: Information Sheet

Chief Investigator: Emily Gage
Trainee Clinical Psychologist
email: emily.gage@uea.ac.uk

Research supervisor: Dr Laura Jobson
Clinical Lecturer
email: l.jobson@uea.ac.uk
phone: 01603 591158

Faculty of Medicine and Health Sciences
University of East Anglia, Norwich, NR4 7TJ

Participant Information Sheet:
Exploring the relationships between culture, the self and wellbeing.

We would like to invite you to take part in a research study. Before you please read this information carefully and take time to decide whether or not you want to take part.

1. Why is the study being carried out?
The study looks at the relationships between culture, the self and wellbeing (including wellbeing following trauma). The study is being carried out by a Trainee Clinical Psychologist, Emily Gage, as part of the Doctoral Programme in Clinical Psychology. The study is being supervised by Dr Laura Jobson, a Clinical Lecturer, University of East Anglia.

2. Who is being asked to take part?
We are looking for people who identify their ethnicity as British and were born in the UK (about 141 people) and people who identify their ethnicity as East Asian and have been living in the UK for less than five years (about 141 people) to take part. Participants must be able to answer questions in English.

3. Do I have to take part?
No, it is voluntary. Please use this information sheet to help you to decide whether or not to take part. If you would like to take part, you will be asked to read a consent form and if you complete the questionnaires and submit them, then you will be consenting to take part.

4. What will happen if I take part?
The study is divided into two parts. If you agree to participate, Part 1 of the study will ask you to answer some on-line questionnaires about the self and relationships, mood and wellbeing, and questions about age, gender, ethnicity and education. If you have experienced a distressing traumatic event (such as assault, car accident, accident, natural disaster, serious illness etc.), you will be asked to proceed to Part 2. It is your choice whether you go onto Part 2. In Part 2 you will be asked a few questions about how the trauma has affected youridentity and wellbeing. The whole study will take 15-25 minutes to complete. After answering the questions you will be given information about how to enter the prize draw, to win one of four £25 Amazon vouchers.

5. Can I stop taking part if I change my mind?
You can change your mind about taking part at any point whilst answering the questions, without telling anyone why and without any consequences. If you stop answering the questions before the end your information will not be used in the research. After you have completed all of the questions and submitted your answers you will not be able to remove the information you have given, as it will not have your name on it so it will be impossible to identify your information.

6. Will my information be anonymous and kept confidential?
Yes. We will follow ethical and legal guidance, such as the Data Protection Act. All information will be anonymous and treated as confidential. We will not ask you for any personal identifying details in the questionnaire. Paper copies of the on-line questionnaires will be printed out and kept in a locked drawer. We will enter information into the computer and data will be stored on an encrypted password-protected memory stick. Your answers will then be deleted from the online provider (Survey Monkey). Survey Monkey strives to ensure that information is secure. All information will be stored in a locked cabinet at the University of East Anglia for five years after the study has been finished. If you wish to enter the voluntary prize draw, you will be asked to email the researcher separately, to make sure that none of your answers to the questions can be linked to your name. After prize draw winners have been randomly chosen and informed, the list of names and email addresses will be destroyed.

7. What will happen to the results of the study?
The anonymous information will be used for the researcher's thesis. It may also be used to write articles for publication and conference presentations. If you would like details about the results of the study you may email the researcher, who will provide this information by email when it is available. Your name and email address will not be able to be linked to the questionnaires and will be destroyed after you have been sent information about the results.

8. What are the possible disadvantages or risks of taking part?

It is not expected that there will be any risks or disadvantages from taking part. Although Part 2 does ask questions about a previous traumatic experience, it has been shown that trauma research does not put participants at greater risk than other types of psychological research, and that trauma research can be a positive experience. However, if you do feel distressed you may stop answering the questions, and we suggest that you should contact your GP or support services such as the Samaritans (08457 909090) or the East Asian Mental Health Association (CMHA), which provides a range of support services for East Asian people living in the UK (0845 122 8660). You may also contact the researcher (Trainee Clinical Psychologist) or research supervisor (Clinical Psychologist).

9. What are the possible benefits of taking part?
It is hoped that the research will add to our understanding of how culture influences wellbeing. This is very important because our understanding and treatment of many psychological difficulties has been developed in the UK and USA. However, many people

who experience such difficulties are not from Western cultural backgrounds. Therefore, there is a need to further our cross-cultural understanding and treatment of such problems.

10. Complaints
If you have concerns about the study please contact the researcher or supervisor, using the following details**:**

Chief investigator:	Emily Gage (Trainee Clinical Psychologist) Email: emily.gage@uea.ac.uk
Research supervisor:	Dr. Laura Jobson (Clinical Lecturer) Email: l.jobson@uea.ac.uk Phone: 01603 591158

If you remain unsatisfied and wish to complain formally you can do this by contacting the Associate Dean for Research in the Faculty of Medicine and Health Sciences, University of East Anglia, using the following details:

Associated Dean for Research:	Professor Ruth Hancock Email: r.hancock@uea.ac.uk Phone: 01603 591107 or 01603 593602

11. Has this study been approved?
This study has been reviewed and approved by the Faculty of Medicine and Health Sciences Research Ethics Committee at the University of East Anglia.

12. Further information
If there is anything that is not clear, or if you would like more information, please contact the Chief Investigator or Research Supervisor.

We wish to thank you for taking time to read this information sheet.

Appendix J: Consent Form

PARTICIPANT CONSENT FORM

Title of the project:

A study exploring how cross-cultural differences in the self-concept affect wellbeing and posttraumatic psychological adjustment.

Chief Investigator: Emily Gage
Trainee Clinical Psychologist
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Please read each statement.

1. I have read the Participant Information Sheet. I understand what the study will involve, and all of my questions have been answered to my satisfaction.
2. I understand that I am free to stop completing the questionnaires and withdraw from the research for any reason and without prejudice.
3. I understand that I will complete questionnaires and that all of the information I provide will be anonymous.
4. I have been informed that the confidentiality of the information I provide will be safeguarded, with all information being stored securely and anonymously.
5. I understand that I am free to ask any questions at any time before and during the study, and have the contact details of the researcher and research supervisor should I wish to discuss any aspect of the study.
6. I agree to take part in the above research.

If you agree with each statement and would like to give consent to participate in the study, please click to go to the next page and commence the questionnaires. By clicking forward to the next page you are giving informed consent to participate in this research study.