THE UNIVERSITY *of* EDINBURGH

This thesis has been submitted in fulfilment of the requirements for a postgraduate degree (e.g. PhD, MPhil, DClinPsychol) at the University of Edinburgh. Please note the following terms and conditions of use:

- This work is protected by copyright and other intellectual property rights, which are retained by the thesis author, unless otherwise stated.
- A copy can be downloaded for personal non-commercial research or study, without prior permission or charge.
- This thesis cannot be reproduced or quoted extensively from without first obtaining permission in writing from the author.
- The content must not be changed in any way or sold commercially in any format or medium without the formal permission of the author.
- When referring to this work, full bibliographic details including the author, title, awarding institution and date of the thesis must be given.

Perfectionism and Acceptance: Perspective Taking and Implicit Beliefs

Rachel Lowdon

DOCTORATE IN CLINICAL PSYCHOLOGY

THE UNIVERSITY OF EDINBURGH

August 2011

Declaration

This thesis has been composed by myself,
the work contained herein is my own
and it has not been submitted for any other degree
or professional qualification except as specified.

Rachel Lowdon

August 2011

Acknowledgements

Firstly I would like to thank all the people who very kindly gave up their time to take part in this research, it couldn't have happened without you! I would also like to thank my academic and clinical supervisors David Gillanders and Massimo Tarsia for the invaluable advice and encouragement they gave at every stage of the research process. Also, to Dermot Barnes-Holmes I offer my gratitude for his consultancy regarding the IRAP task. Special thanks go to my family for their endless patience and support; and to my gorgeous nephew James who helps keep the world in perspective. Finally, to my brilliant friends I say thank you for all the happiness, inspiration, love, tea and cake you've given me over the past five years – it's meant the world to me.

CONTENTS

Total Word Count – 25,179

GLOSSARY

A-Other	- Other-Acceptance (Implicit)
A-Self	- Self-Acceptance (Implicit)
AOS	- Acceptance of Others Scale
AOS-R	- Acceptance of Others Scale – Rescaled
AOS-R-T	- Acceptance of Others Scale – Rescaled (Transformed)
D-IRAP	- Transformed Implicit Relational Assessment Procedure Scores
GHQ	- General Health Questionnaire (12-Item Version)
GHQ-T	- General Health Questionnaire (Transformed)
IAT	- Implicit Association Test
IRAP	- Implicit Relational Assessment Procedure
M	- Mean
MPS	- Multidimensional Perfectionism Scale (Hewitt & Flett)
MPS-Other	- Other-Oriented Perfectionism (Explicit)
MPS-Self	- Self-Oriented Perfectionism (Explicit)
P-Other	- Other-Perfectionism (Implicit)
P-Self	- Self-Perfectionism (Implicit)
REBT	- Rational Emotive Behaviour Therapy
RFT	- Relational Frame Theory
SD	- Standard Deviation
USAQ	- Unconditional Self-Acceptance Questionnaire
USAQ-T	- Unconditional Self-Acceptance Questionnaire (Transformed)

Abstract

This research examines associations between perfectionism and acceptance for the self and towards others, alongside their link with psychological health. Reported beliefs are compared with underlying implicit beliefs, as measured by response latencies on the Implicit Relational Assessment Procedure (IRAP; Barnes-Holmes *et al*., 2006). Ninety-nine native English-language speaking university students completed measures of self-oriented and other-oriented perfectionism, unconditional self-acceptance, acceptance of others and general health; together with the IRAP computer task. Self-perfectionism scores were observed to be significantly higher than other-perfectionism scores on both explicit and implicit measures. Acceptance of others was significantly higher than self-acceptance on explicit measures; however the two were non-significantly different as recorded by the IRAP. This suggests that participants may have under-reported self-acceptance levels or over-reported their acceptance of others. Possible reasons for this are explored. In addition, all explicit measures demonstrated *no* significant associations with implicit findings; meaning that participants' responses to the assessment tasks appeared to be driven by different processes. Low levels of explicit self-acceptance were the biggest predictor of psychological distress. As such, this research provides further support for the move towards acceptance-based strategies in the treatment of clinical perfectionism.

CHAPTER ONE

Perfectionism: Clinical Aspects and Theories

'Have no fear of perfection:
you'll never reach it'

(Salvador Dali)

1.1. General Introduction

Psychological research continues to highlight the role of personality factors in the field of mental health and psychopathology. Perfectionism is one factor that is frequently associated with a range of difficulties including depression (Hewitt & Flett, 1991a), anxiety (Antony *et al*., 1998), suicidal ideation (Dean *et al*., 1996), eating disorder (Fairburn, 1997), personality disorder (Hewitt & Flett, 1991) and social phobia (Heimberg *et al*., 1995). Although Hamacheck (1978) proposed that some aspects of perfectionism might be adaptive – promoting excellence and motivating an individual to achieve personal goals; the majority of existing research presents perfectionism as a complex but *negative* attribute (Blatt, 1995; Frost *et al*., 1990).

Frost and colleagues (1990) define perfectionism as a demand for the highest standard of excellence, combined with overly critical evaluations of performance. Its adverse effects have been emphasised both in terms of *immediate* negative outcome (feelings of failure, guilt, shame, low self-esteem) and with respect to *chronic* unhappiness and future vulnerability to more severe distress (Hamachek, 1978). Not only is perfectionism itself

difficult to treat, but it has also been proven to impede the effectiveness of treatment interventions for other psychological disorders (Blatt *et al.*, 1998). The role of perfectionism is therefore a key issue in the field of mental health.

Several definitions of perfectionism have been generated over the years and it is now understood as a multidimensional construct (Frost *et al*., 1990; Hewitt & Flett, 1991). Hewitt and Flett (1991) proposed three specific dimensions of perfectionism; *self-oriented* (perfectionistic demands towards the self), *other-oriented* (perfectionistic demands towards others) and *socially-prescribed* (perceived perfectionistic demands from others towards the self) components, each of which they believed contribute towards *general* perfectionist behaviour. This is thought to involve the setting of excessively high goals for achievement in various areas of life, relating not only to actions but also to individual thoughts and feelings (Flett & Hewitt, 2002).

During the last decade, a small number of studies have examined the associations between perfectionism and the concept of acceptance (e.g. Flett *et al*., 2003; Scott, 2007). Acceptance is also proposed to consist of several dimensions, of which *self-acceptance* refers to an individual's satisfaction or happiness with himself (Shepard, 1979). Results suggest that dimensions of perfectionism are associated with lower levels of self-acceptance (Ellis, 2002; Flett *et al*., 2002); and the latter has been named as a 'buffer' between perfectionism and depression (Scott, 2007). Thus, high levels of self-acceptance are thought to protect an individual from the often counterproductive and dysfunctional effects of perfectionism, promoting what some consider a 'healthy' form

of perfectionism (Hamacheck, 1978). Self-acceptance involves self-understanding, a realistic awareness of both positive and negative attributes and an individual feeling they are of 'unique worth' (English & English, 1958). It is thought to be necessary for good mental health and in the clinical setting self-acceptance is often considered essential for 'change' to occur (Ellis, 1962). This can be achieved by encouraging an individual to stop criticising themselves and trying to solve perceived 'defects' by beginning to tolerate and accept the self as *imperfect* in some parts. As such, perfectionism and self-acceptance may be important components in understanding and overcoming mental health difficulties.

A further dimension of acceptance has been identified as *acceptance of others*. This is thought to reflect an individuals' love, approval and respect for others whether or not their behaviour, thoughts and feelings are appropriate, intelligent or 'correct' (Ellis, 1977). Currently, no existing literature has examined the links between acceptance of others and dimensions of perfectionism; however self-acceptance and acceptance of others have been explored as related factors themselves. Kelly (1955) states it is impossible to have a construct to evaluate others without using the same construct to evaluate the self, and a considerable amount of research supports a *positive* relation between favourableness of self-evaluation and evaluation of others (e.g. Fey, 1957; Sheerer, 1949; Phillips, 1951). However, in a study using an implicit measure of self-esteem, Karpinski (2004) reports that in general the 'self' was *contrasted* with the 'other'; so that when the other was 'positive', fewer positive self-associations were made, and when the other was 'negative', fewer negative associations with the self were

made. As such, the associations between self and other are somewhat unclear when implicit and explicit findings are compared.

The majority of existing perfectionism research uses *explicit* self-report questionnaires to gather data and as such, findings may be susceptible to bias. Observer ratings have been used to examine the validity of these existing self-report measures (e.g. Hewitt & Flett, 1991a); however the *implicit* measurement of perfectionism has never been attempted. Such implicit examination would seem particularly relevant in the domain of perfectionism, as the social impact of revealing perfectionistic tendencies could be somewhat detrimental. Indeed, other-oriented perfectionism is alleged to be an important aspect in maladjustment and has frequently been associated with other-directed blame, lack of trust, social hostility and punitive tendencies towards others (Hunter & O'Connor, 2003). Therefore, as social beings who seek to form close relationships with others, it may be that the full extent of an individuals' other-oriented perfectionism and lack of acceptance of others can not be entirely acknowledged consciously.

In addition, it could be speculated that the impossibility of achieving 'perfection' and the potential detrimental impact of being overly self-perfectionistic, are increasingly becoming common knowledge. Thus, a highly perfectionistic individual may be unable to explicitly present themselves as such, because doing so could be seen as acknowledging an imperfection; as they possess a quality that frequently proves itself to be a hindrance. Given this speculation, the comparison between implicit and explicit measures of perfectionism and acceptance for both 'self' and 'other' could potentially

have a large impact on current understanding of these constructs, which will now be explored in further detail.

1.2. Perfectionism: Definition and Clinical Aspects

The body of evidence regarding perfectionism has grown extensively over recent decades (Flett & Hewitt, 2002; Lundh *et al.*, 2008; Stoeber *et al.*, 2008). However, this has generated several conceptualisations of the personality construct and to date, researchers have been unable to agree on a single comprehensive definition.

Early investigators such as Adler (1956) and Horney (1950) conceptualised perfectionism as a specific 'neurotic' reaction to underlying feelings of inferiority and insecurity; and Pacht (1984) defined it as 'the belief that a perfect state exists that one should always try to attain' (p.386). The common element between these early approaches appeared to be the setting of excessively high standards for personal performance; with a dysfunctional attitude and irrational beliefs as the key factors driving perfectionistic behaviour (Burns, 1980). This cognitive approach underlies the majority of one-dimensional theories regarding perfectionism, although all differ slightly in their wording.

Following on from these initial investigations, Hamachek (1978) was the first to suggest that some aspects of perfectionism might in fact be *adaptive*. He proposed that perfectionism be conceptualised in terms of 'normal' and 'neurotic' aspects; overcoming the frequent bias towards dysfunction in the world of psychology. He suggested

'normal' perfectionism involved striving for reasonable and realistic standards, which resulted in an increased sense of personal satisfaction and self-esteem. On the other hand 'neurotic' perfectionism was defined as the striving for excessively high standards, which he believed was generated by a fear of failure and the desire to avoid letting others down. Whilst these distinctions can be queried with regards to whether Hamachek's definition of 'normal' perfectionism simply describes *conscientiousness*; his conceptualisation prompted other researchers to begin investigating what it is that makes perfectionism functional for some individuals and dysfunctional for others.

Slade and Owens (1998) subsequently defined perfectionism in terms of 'positive' and 'negative' components and suggested distinguishing between the two in terms of *reinforcement*. They described 'positive' perfectionism as perfectionistic behaviour that is positively reinforced (e.g. by achievement, or feedback from others) and involves being *actively* engaged in striving to achieve. 'Negative' perfectionism on the other hand was conceptualised as behaviour that is negatively reinforced, meaning it is driven by an individual wishing to avoid an unpleasant or punishing outcome. On reflection, the distinction between these two forms of perfectionism may not be as clear as the authors suggest, as it seems possible for an individual to be both actively engaged in the desire to achieve, alongside *simultaneously* motivated by the wish to avoid a negative outcome. For example, an individual who stays late at work may be motivated by the goal of completing a task perfectly; and at the same time, wish to avoid feelings of anxiety or inadequacy if the task is left incomplete. As such, it may be difficult to assess whether this is 'positive' or 'negative' perfectionism in operation. Furthermore, this definition

could be said to miss the more intricate details of the perfectionism construct, particularly those involving an interpersonal perspective.

As such, the conceptualisation of perfectionism has evolved from that of an exclusively cognitive orientation into one incorporating behavioural, motivational and interpersonal elements. Two independent teams of researchers simultaneously proposed a *multi*-dimensional approach to perfectionism, reflecting both personal and interpersonal aspects of the construct (Frost *et al.*, 1990; Hewitt & Flett, 1991). The first of these was Frost and his colleagues (1990) who hypothesised that perfectionism was composed of six distinct dimensions. They suggested four of these dimensions were directed towards the self (concern over mistakes, doubts about actions, high personal standards and organisation) and two reflected perceived interpersonal demands (high parental expectations and parental criticism). They associated such high standards with a fear of failure, which they believed motivated many of the components.

Hewitt and Flett (1991) were the second team to propose that although perfectionism for the self is an essential element in the construct, interpersonal perfectionism components also exist that impact significantly on an individual's psychological health. They hypothesised that perfectionism comprises three specific dimensions; self-oriented, other-oriented and socially prescribed components, each of which they believed to be a vital factor in *general* perfectionist behaviour (Hewitt & Flett, 1991). There is a large amount of overlap between these two multidimensional approaches; however as Hewitt

and Flett's model generates 'self' and 'other' perfectionism scores it was used in the present research. This model will now be outlined in further detail.

1.2.1. Self-Oriented Perfectionism

Hewitt and Flett (1991) propose that self-oriented perfectionism manifests itself in several ways, all of which involve irrational beliefs equating perfection for the self with self-worth. Individuals often set unrealistic personal standards ('ideal self') and constantly strive to attain these levels of perfection. They also engage in all-or-nothing thinking, whereby if *total* success is not achieved, the outcome is seen as a complete failure. As targets are often so far out of an individual's reach, they are rarely met and selective attention to the void between 'ideal self' and 'actual self' heightens failure experiences; as do overly severe self-evaluations and self-criticism. On the rare occasion a self-oriented perfectionist does achieve a goal, it is often accompanied by a lack of satisfaction as the individual was 'expecting' such a result (Hamachek, 1978). Despite constant failure experiences, individuals continue to set exacting standards and as such, self-oriented perfectionism is often associated with low self-regard and feelings of worthlessness, which may lead to depression and psychological distress (Higgins *et al*., 1986; Hewitt & Dyck, 1986).

Links have been made between self-oriented perfectionism and conscientiousness (Hill *et al*., 1997). However, Flett and Hewitt (2002) suggest that self-oriented perfectionism is a more *extreme* form of conscientiousness that goes well beyond the realm covered by the latter personality trait.

1.2.2. Other-Oriented Perfectionism

The second proposed perfectionism dimension involves interpersonal standards of perfection, focusing on an individual's beliefs and expectations about the capabilities of others (Hewitt & Flett, 1991). The other-oriented perfectionists' behaviour is essentially the same as self-oriented perfectionism; however perfectionistic behaviour is directed outward. Thus, other-oriented perfectionists set unrealistic standards for significant others, critically evaluate their performance and place major importance on their being perfect. Although this dimension is an important aspect of maladjustment, often leading to other-directed blame, lack of trust and social hostility; research demonstrates it is rarely associated with depression, which may be attributable to a decrease in focus on the self (Hollender, 1965; Hunter & O'Connor, 2003).

1.2.3. Socially-Prescribed Perfectionism

The final dimension defined by Hewitt and Flett (1991) involves the perception that others expect perfection from oneself. This socially-prescribed perfectionism again involves the same behaviours as self-oriented perfectionism; however the standards of perfection are attributed to others. In this case, an individual believes (correctly or otherwise) that significant others impose excessive and uncontrollable standards upon them, evaluate them critically and place pressure on them to be perfect (Hewitt & Flett, 1991). Due to the perceived inability to please others and the uncontrollable nature of perfectionist standards, negative emotions such as anxiety, depression and hopelessness are common among socially prescribed perfectionists (Chang & Rand, 2000; Hewitt *et al*., 1996; O'Connor & O'Connor, 2003). This perfectionism dimension is thought to be

the most consistent predictor of many forms of psychological distress and has also been linked to relapse after treatment (Hooley & Teasdale, 1989).

Socially-prescribed perfectionism has additionally shown significant positive correlations with neuroticism; defined as a tense, emotionally labile and insecure personality (Costa *et al*., 1992). However, research demonstrates that neuroticism does not predict longitudinal increases in this perfectionism dimension (Stoeber *et al.*, 2009). As such, trait neuroticism is thought to play little (if any) role in the *development* of socially-prescribed perfectionism.

Hewitt and Flett (1991) and Frost and his colleagues (1990) both developed scales to measure their proposed dimensions of perfectionism and a number of studies have used both of these measures concurrently in order to gain a better understanding of the overlap between the two approaches. This research has led to some interesting findings, suggesting the presence of several unique factors in each questionnaire, alongside a large degree of overlap between the two scales. It is this overlap that further prompted authors' attempts to define the 'core' factors that together make up the concept of perfectionism.

Frost and colleagues (1993) suggested the two critical factors were 'positive strivings' (generated from self-oriented, other-oriented, high personal standards and organisation dimensions) and 'maladaptive evaluation concerns' (generated from socially-prescribed, concern over mistakes, parental criticism, high parental expectations and doubts about

actions dimensions). Similarly, Dunkley and colleagues (2000) proposed that 'personal standards perfectionism' (self-oriented and high personal standards dimensions) and 'evaluative concerns perfectionism' (socially-prescribed, concern over mistakes and doubts about actions dimensions) were the two vital factors. Finally, in 2007 Scott proposed these different factors all broadly summarised the perfectionistic *striving* to attain high standards and an *evaluation* of the outcome of that effort.

Despite the lack of consensus regarding the 'core' components, an implicit assumption made by authors in the field appears to be that perfectionism tends to be more 'extreme' and causes difficulty when it involves standards an individual sets for a wide range of life domains (e.g. workplace achievements, appearance and interpersonal relationships). Flett and Hewitt (2002) point out that perhaps the defining feature in relation to adaptive versus maladaptive perfectionism may well involve this 'limited' versus 'global' factor; however this assumption has not yet been investigated empirically. Mitchelson and Burns (1998) have compared the *differences* between reported perfectionism in the home and the work setting, although not in an accumulative manner. They discovered that levels of perfectionism, as recorded by an adapted version of Hewitt and Flett's Multidimensional Perfectionism Scale (MPS), were significantly higher in a *work* setting than at home. Perhaps this involves the social nature of the work environment where individuals often work as part of a team, are managed or supervised by others and their performance is evaluated regularly. Thus, there is a greater benchmark for measuring performance and perhaps a greater perceived negative consequence of failure than in the home setting.

Whilst the lack of consensus regarding the 'core' factors of perfectionism may indeed result from an absence of research investigating the *limited* versus *global* elements of perfectionism; it may also be attributable to the numerous ways in which perfectionism is thought to develop, which will now be discussed further.

1.3. Developmental Origins of Perfectionism

Despite the increasing number of studies examining perfectionism and seeking to define it as a personality construct; only a small number have focused on the particular *origins* of perfectionism for individuals (e.g. Andersson & Perris, 2000; Flynn *et al*., 2001; Slaney & Ashby, 1996). As such, there are several theoretical accounts regarding its origin which are yet to be backed up by empirical evidence. These involve both individual personality factors, alongside a number of environmental and interpersonal factors. Given the range of potential factors involved in the development of perfectionism, it is likely that for different individuals different factors will apply. This could explain the *variety* that can be observed in the literature conceptualising perfectionism, as the interaction between factors places the perfectionism emphasis in a slightly different place each time. These factors will now be explored in turn.

1.3.1. Environmental Influences

Several theories suggest the family environment and an individual's childhood developmental experiences have a large role to play in the development of perfectionistic tendencies (Blatt, 1995; Hamachek, 1978; Sorotzkin, 1998). In particular parental setting of high standards and expectations for the child, which frequently

co-occur with absent, inconsistent or conditional parental approval. Barrow and Moore (1983) suggest this may lead to perfectionist attitudes, behaviours and thinking in the child; such that they attempt to elicit parental approval by being 'perfect' and simultaneously internalise the high standards and expectations set by the parental figure, for their own behaviour. One population frequently engaging in this pattern of parenting is depressed mothers, who often have high standards and expectations of their child's behaviour and low levels of reward, warmth and acceptance (Cole & Rehm, 1986).

This theory stems from Rogers' (1951) work on 'conditions of worth' and can lead to a child developing chronic feelings of helplessness and hopelessness, if they are consistently unable to meet the high expectations set by their parents. This conditional sense of self-worth can leave individuals feeling distressed and helpless when receiving negative feedback from others (Flett & Hewitt, 2002). Hollender (1965) suggested perfectionistic tendencies thus arise as a way of 'covering up' perceived flaws and inadequacies; meaning individuals frequently feel unable or reluctant to give up perfectionism, as it is the only means by which they feel acceptable (Frost *et al.*, 1995).

Conversely, a neglected child may experience an absence of their parental figures setting *any* expectations or standards for their behaviour and Hamachek (1978) suggests this can be just as problematic. In these circumstances, children can develop their own guidelines and high standards for their behaviour, to cope with the experience of parental neglect and to gain a sense of certainty in the world. However, this specific link

between neglect and perfectionism has not been empirically investigated and therefore requires further clarification.

A further environmental factor influencing the development of perfectionism involves social learning theory. Bandura (1986) demonstrated that in-line with idealisation of their parental figures, children frequently imitate the standards they observe their parents following. This can involve both self-oriented and other-oriented standards of perfection. For example, if a mother only gives herself positive reinforcement when she meets a particularly high standard, her child is likely to imitate this pattern of reward and will not feel satisfied if achieving anything less than the high standard (Bandura & Kupers, 1964). Conversely, the children of parents with relatively lower standards who congratulate themselves for meeting these lower level achievements, are also likely to imitate their parents and present with reduced perfectionistic tendencies. Furthermore, the children of parents with high other-evaluative tendencies are more likely to mimic this behaviour, receive reinforcement for it from their parents and thus become highly evaluative and perfectionistic towards others themselves.

The social learning theory regarding perfectionism has been inadvertently tested by researchers examining both parent and child levels of perfectionism (Chang, 2000; Vieth & Trull, 1999). Frost, Lahart and Rosenblate (1991) demonstrated a significant association between mother and daughter levels of perfectionism; however a lack of association was observed between fathers and daughters. This fits with psychoanalytically proposed same-sex ‘identification’; thought to be the earliest

expression of an emotional tie with another person (Freud, 1921). This typically involves little girls identifying with their mothers and little boys identifying with their fathers and incorporating this 'model' into their own internal world. Thus 'modelling' and imitation which is reinforced, appear to offer a reasonable explanation for the developmental origins of perfectionism.

Flett and Hewitt (2002) additionally outline the 'social reaction model' and 'anxious rearing model' as two further potential environmental influences on perfectionism development. The social reaction model involves extreme levels of environmental hostility and proposes that children who are exposed to abusive and chaotic early environments involving 'physical [and/or sexual] abuse, psychological maltreatment including love withdrawal and exposure to shame; or a chaotic family environment' (p.93) frequently respond by adopting perfectionism as a method of survival (Flett & Hewitt, 2002). This would tie in with attempts to *avoid* abuse and establish predictability and control in a hostile environment. Flett and Hewitt (2002) report that survivors of trauma within a chaotic setting often present with high other-oriented perfectionism as adults, due to the wish to compensate for experiences of actual or perceived maltreatment in early life. This leads to high expectations regarding the care and support they currently expect to receive and can mean they are demanding of others in order to get their needs met.

The anxious rearing model proposes that perfectionism may develop from exposure to anxious parents who are concerned about making mistakes and the negative

consequences of doing so (Flett & Hewitt, 2002). This can lead to parents being overprotective and engendering a sense of 'danger' in the child of the potential emotional and physical consequences of imperfection. Thus, the child attempts to avoid the anticipated 'threat' of making a mistake (including negative evaluation by others) and adopts both cognitive and behavioural perfectionistic tendencies. A study by Flett, Sherry and Hewitt (2001) demonstrated a significant association between anxious parenting and socially prescribed perfectionism, but not self-oriented or other-oriented domains. This could fit with the theory that anxious parents expect a lot from their children in order to gain some reassurance or 'feedback' that they are doing a good job. These high standards might ultimately leave the child with a sense that others expect them to be perfect.

The theories outlined above all tend to focus on parental influence as the key environmental factor related to the development of perfectionism. However, it is also important to acknowledge the impact of significant others (including peers, teachers and the wider family), alongside the cultural and societal pressures influencing development. One important peer-related impact on perfectionism is that of bullying; particularly during the stage of adolescence in which individuals have elevated levels of self-consciousness (Flett & Hewitt, 2002). At this time social evaluations and acceptance by peers becomes immensely important and socially prescribed perfectionism pressures can increase. Bullying can impact on an individual's sense of self and they may adopt perfectionism as a strategy to overcome low self-esteem; alongside becoming overly sensitive to perceived negative evaluations by others and striving to 'fit in'.

An example of cultural and societal pressures influencing perfectionism development includes cultures that place a large emphasis on physical shape and size as a sign of beauty, with the notion that the 'perfect' body exists and a sense that the thinner an individual is, the more attractive and valued they are (Dorian & Garfinkel, 1999). This 'ideal' body image places huge pressures on children growing up, particularly young girls who read magazines in which celebrities are criticized and evaluated based on their physical shape and size. Individuals may internalise this evaluation and adopt it for themselves, developing unhealthy cognitions and behaviours. Thus, cultural and societal pressures can also play a significant role in the development of perfectionism.

1.3.2. Individual Influences

As outlined above, early theorists such as Adler (1956) and Horney (1950) conceptualised perfectionism as the child's 'neurotic' reaction to underlying feelings of inferiority and insecurity. Whilst undoubtedly the environment in which an individual is raised has an impact on these feelings, Adler and Horney appeared to be suggesting it is how an individual *responds* to their environment that determines whether perfectionism is adopted or not. They believed this response was influenced by a child's temperament and individual personality. For example, thinking about attributional style; if an individual grows up in a punitive and demanding environment they would need to *internalise* these pressures in order to become a self-oriented perfectionist. However, the individual may also *externalise* these pressures and develop high levels of other-oriented perfectionism depending on their personal style (Flett & Hewitt, 2002).

Furthermore, introversion versus extroversion and openness to socialisation are additionally thought to impact on perfectionism development (Kochanska, 1997). Individuals who are more open to socialisation are thought to internalise parental and societal values and develop a need for approval by others, alongside the desire to avoid negative appraisal; thus heightening perfectionistic tendencies. Flett and Hewitt (2002) additionally hypothesised that perfectionists are more likely to present with emotional, persistent and fearful temperaments. They proposed the elevated level of sensitivity this might create would make individuals more aware of the impact of rewards and punishments and thus increasingly concerned about mistakes and failures.

In the process of setting what might be regarded as excessively high standards, an individual must also have some sense that they are capable of meeting those standards, as it seems unlikely they would wilfully set themselves up to fail. Thus an individual's *perception* of their abilities and competencies and indeed their *actual* skills, are likely to play a role in the development of perfectionistic tendencies (Locke, 1996). Flett and Hewitt (2002) suggest it therefore follows that an individual will be 'most likely to strive for personal goals of perfectionism in areas that involve feelings of competence and foster the sense that perfection is possible' (p.111). However, it also appears possible that individuals who feel competent about their abilities in certain areas of life might naturally assume this competency will carry over into areas not yet encountered. Thus, personal standards might be set in relation to new challenges that are indeed unachievable and feelings of distress may subsequently occur. Perhaps this detail might

help determine 'healthy' from 'unhealthy' perfectionists who could have a tendency to *generalise* their perfectionistic standards beyond the realm of their capability.

1.4. Summary and Integration

A degree of consensus exists when defining perfectionism in that authors generally highlight 'unrealistic personal standards' and 'maladaptive evaluation concerns' as the central factors of the concept; although language differences exist in their descriptions (Flett & Hewitt, 2002; Frost *et al*., 1993; Scott, 2007). Unrealistic personal standards include perfection-striving and setting excessively high goals for achievement in various areas of life and in relation to thoughts, actions and feelings. For example, individuals may place unrealistic demands on themselves to never feel stressed or distressed, believing this signifies a failure in coping with life and a sign that they are imperfect or flawed. It is the meaning behind imperfection that appears to represent maladaptive evaluation concerns, which could be described as the *drivers* behind high standards. This meaning is the impact on an individual's self-worth and evaluations include; fear of failure, excessive concern over mistakes, overly severe self-evaluations and self-criticism for anything less than 'perfect'. Thus the drivers keep the striving behaviours going as a means of increasing an individual's self-worth, enabling them to avoid the distress associated with facing perceived flaws.

Perceived flaws can develop during early developmental experiences and through interactions with significant others in the ways outlined above (e.g. Bandura, 1986; Chang, 2000; Hamachek, 1978). Environmental experiences can be significantly

different for various individuals but can result in the same perfectionistic behaviours, given the similar impact on self-worth and self-acceptance that experiences appear to have. In addition, temperament and individual personality are also thought to play a role in the development of perfectionist striving and driving behaviours (Flett & Hewitt, 2002; Kochanska, 1997).

The interpersonal element of perfectionism described by Hewitt and Flett (1991) and its *expression* is also recognised as important and is thought to depend largely on individual temperament and early environmental experiences. Attributional style, social learning and individual personality factors (including introversion and extroversion) are all thought to affect the origin and direction of perfectionistic behaviour. Hewitt and Flett's (1991) multidimensional conceptualisation of perfectionism is the clearest in attempting to assess where striving and driving behaviours originate and where they are directed, in terms of towards self or towards others.

Finally, self-oriented and other-oriented perfectionism have been widely reported as significantly positively correlated, with high levels of one dimension existing alongside high levels of the other. In addition, mean *self*-oriented scores are consistently higher than *other*-oriented scores (e.g. Chang, 2006; Flett *et al*., 2003; Scott, 2007); suggesting that distance from the 'self' might lessen perfectionistic tendencies. However, the statistical significance of this difference between 'self' and 'other' scores is not typically reported.

CHAPTER TWO

Acceptance: Clinical Aspects and Theories

'Happiness can exist only
in acceptance'

(George Orwell)

2.1. Acceptance: Definition and Clinical Aspects

Over the past century, researchers have increasingly focused on the construct of *acceptance* and its relation to psychological health (e.g. Berger, 1952; Hall, 1918; Hayes, 2004); however only in recent decades has it been investigated alongside perfectionism (Flett *et al*., 2003). High levels of self-acceptance have been demonstrated to protect an individual from the dysfunctional impact of perfectionism (Hamacheck, 1978). As such, it is important to understand the key features of this construct further.

Early investigations (Adler, 1926; Horney, 1937; Rogers, 1940) led to the identification of two specific dimensions of acceptance; *self-acceptance* and the *acceptance of others* and these were thought to reflect an 'awareness of both the positive and negative aspects of the self and others, while maintaining an attitude of positive regard' (Williams & Lynn, 2010, p.6). Furthermore, the focus of acceptance in 'third-wave' cognitive behavioural interventions such as Acceptance and Commitment Therapy (ACT; Hayes *et al*., 1999) and Dialectical Behaviour Therapy (DBT; Linehan, 1993) tends to be *experiential* acceptance. This involves non-attachment, non-judgement and embracing of internal thoughts, emotions and sensations without trying to control them.

Researchers in the field have consistently demonstrated that a lack of acceptance, whatever the form, is associated with internal conflict, distress and psychopathology (Ferenczi, 1926). This finding has been demonstrated in individuals with eating disorders (Wilson, 1996), anxiety disorders (Borkovec *et al*., 2004) and depression (Dobson *et al*., 2008; Chamberlain & Haaga, 2001), alongside other presentations. Furthermore, Carl Rogers (1944) was among the first to identify acceptance as a means of 'self-actualisation' and an important factor in terms of therapeutic change. Hayes (1994) expanded this to suggest that 'when one gives up on trying to be different, one becomes…immediately different in a very profound way' (p.20). Therefore a lack of acceptance is clearly thought to have a significant role to play in the presence and maintenance of psychological distress.

The development of scales by which to measure levels of acceptance led to further attempts to define the construct's dimensions; namely self-acceptance and the acceptance of others. These will now be discussed in further detail below.

2.1.1. Self-Acceptance

In Berger's (1952) work exploring the factors that contribute towards self-acceptance, he expanded Sheerer's (1949) research to define a self-accepting individual as outlined in Table 2.1. This gives a general sense of the factors involved in self-acceptance which appear to be an appreciation of individual strengths and weaknesses; valuing of 'self' irrespective of thoughts, feelings, failures or achievements and independent of opinions expressed by others. This 'unconditional' self-acceptance is one of the key principles of

Ellis' (1977) Rational Emotive Behaviour Therapy (REBT) and Chamberlain and Haaga (2001) developed the Unconditional Self Acceptance Questionnaire (USAQ) to measure the construct more accurately. This sense of 'intrinsic worth' is not affected by high standards set by the self or others (Dryden, 1998); therefore it appears possible to have perfectionistic tendencies and avoid distress, if unconditional self acceptance is high.

TABLE 2.1: Factors Representing the Self-Accepting Individual (from Berger, 1952)

The Self-Accepting Person:
1. Relies primarily upon internalised values and standards rather than on external pressure as a guide for his behaviour.
2. Has faith in his capacity to cope with life.
3. Assumes responsibility for and accepts the consequences of his own behaviour.
4. Accepts praise or criticism from others objectively.
5. Does not attempt to deny or distort any feelings, motives, limitations, abilities or favourable qualities which he sees in himself, but rather accepts all without self-condemnation.
6. Considers himself a person of worth on an equal plane with other persons.
7. Does not expect others to reject him whether he gives them any reason to reject him or not.
8. Does not regard himself as totally different from others, "queer", or generally abnormal in his reactions.
9. Is not shy or self-conscious.

A handful of authors have queried the overlap between self-acceptance and self-esteem and as such, have conducted research to investigate the concepts further (Chamberlain & Haaga, 2001; London, 1997; MacInnes, 2006). Findings suggest there may be a close relation between the two concepts; however differences appear to involve *general* versus *specific* thoughts and feelings. Chamberlain and Haaga (2001) suggest an individual

rating their worth based on measures of self-esteem depends on positive ratings in order to feel good about themselves, with negative ratings affecting the degree of self-worth recorded. However with measures of self-acceptance, an individual is able to record both positive and negative feelings regarding the self and still come out with a score reflecting high self-worth if unconditional self-acceptance is high. As such, self-esteem is thought to be more variable and related to specific tasks and outcomes; whereas self-acceptance is more general and stable, although both define one's feelings towards the self (MacInnes, 2006).

2.1.2. Acceptance of Others

The second factor thought to make up the construct of 'acceptance' according to REBT is the unconditional acceptance of others. Scott (2007) suggested this was similar to Rogers' theory of unconditional positive regard; reflecting love, approval and respect for others whether or not their behaviour, thoughts and feelings are appropriate, intelligent or 'correct' (Ellis, 1977). Berger's (1952) definition of the factors contributing towards an individual's acceptance of others are outlined in Table 2.2. He used these definitions to develop a scale measuring both 'self' and 'other' acceptance, which he named the Expressed Acceptance of Self and Others Scale (Berger, 1952). Another key scale developed around this time was the Acceptance of Self and Others Scale (Fey, 1954). These scales both demonstrated good reliability and validity (Fey, 1955; Omwake, 1954) and were widely used to investigate the interaction and correlation between self-acceptance and acceptance of others. Findings from these studies will now be reviewed.

TABLE 2.2: Factors Representing the Other-Accepting Individual (from Berger, 1952)

The Person Who is Accepting of Others:
1. Does not reject, hate or pass judgement against other persons when their behaviour or standards seem to him to be contradictory to his own.
2. Does not attempt to dominate others.
3. Does not attempt to assume responsibility for others.
4. Does not deny the worth of others or their equality as persons with him. This does not imply equality in regard to specific achievements. He feels neither above nor below the people he meets.
5. Shows a desire to serve others.
6. Takes an active interest in others and shows a desire to create mutually satisfactory relations with them.
7. In attempting to advance his own welfare, he is careful not to infringe on the rights of others.

2.2. Self-Acceptance and Acceptance of Others

Sheerer (1949) was amongst the first to investigate individuals' attitudes towards the self and others, by observing statements made during recorded counselling sessions. He discovered a 'definite and substantial correlation' between attitudes of respect and acceptance for the self and for other people. Although the study was limited by a small sample size and the subjective nature of observations, it did pave the way for more rigorous research exploring the two constructs. Rogers (1951) additionally proposed that an individual's self-acceptance is significantly *positively* correlated with their acceptance of others and several authors have since demonstrated comparable findings (Fey, 1954; Suinn, 1961; Williams, 1962).

In developing the Expressed Acceptance of Self and Others Scale, Berger (1952) concluded that greater confidence could now be held that 'expressed self-acceptance is positively correlated with expressed acceptance of others' (p.781). However; as correlations between these two factors ranged from .36 to .69, the relationship also appears to have a degree of unpredictability despite the associations.

Fey (1954) suggested that whilst attitudes regarding the self and other people tended to 'vary together', individuals existed who were an exception to this rule. In examining these significant differences further, he discovered that individuals with low self-acceptance and high acceptance of others tended to direct blame and punishment towards the 'self' and put themselves down. Discrepancies in the opposite direction, where individuals expressed high self-acceptance and low acceptance of others, highlighted a tendency to direct blame and punishment towards others and engage in large amounts of projection. Interestingly, Fey (1954) also revealed that these participants reported greater resistance to the idea of individual psychotherapy.

Fey followed this research by looking at acceptance of self and others in relation to acceptance *by* others (1955). He used questionnaires measuring self-acceptance, acceptance of others and perceived acceptability *to* others. A sample of 58 third-year medical students were recruited and following questionnaire completion the students were asked to 'list the five of your classmates whom you like best – just as persons' (Fey, 1955, p.274). This generated an 'actual acceptance' score, which was then compared with completed measures. Fey discovered that individuals with high self-

acceptance and low acceptance of others scores additionally tended to perceive themselves as acceptable to others, but in reality received low 'actual acceptance' scores from others. As in his previous study, Fey suggested these individuals likely communicate to other persons their attitude of superiority and intolerance, resulting in their own rejection due to being experienced as ego-threatening.

In contrast, individuals with low self-acceptance and high other-acceptance were generally well liked. Fey hypothesised this might result from such individuals being experienced as less interpersonally threatening and therefore perceived as more amenable to others. He reported that the 20 *most* accepted individuals in his research had significantly lower discrepancies between self-acceptance and other-acceptance scores. However, he then stated that individuals with high self-acceptance and high acceptance of others scores (what he termed the 'prototypic well adjusted person', p.275) were *not* best liked, explaining that 'such a person may not appear to 'need' friendship, or to repay it' (Fey, 1955, p.275). His reports are therefore somewhat confusing as these individuals surely fall under his definition of persons with a low discrepancy between these scores. It appears he must be suggesting that low discrepancies; unless they fall towards the top of the scale, mean that individuals are better liked. This matter is unfortunately not addressed and Fey concludes by stating 'the basic task in any event remains that of measuring genuine feelings' (p.276). The study is important in this respect, as it provides further evidence as to why individuals might distort their actual beliefs; to increase their popularity with others and avoid rejection.

Suinn (1961) further investigated the relationship between self-acceptance and acceptance of others, proposing that by identifying *named* others ('father' and 'teacher'), it might be possible to predict correlations between 'self' and 'other' based on degrees of *similarity*. He recruited 82 male high school seniors and used a card sorting task to generate self-acceptance, father-acceptance and teacher-acceptance scores by correlating 'perceived' card sorts with 'ideal' card sorts. Results indicated that self-acceptance scores were correlated with father-acceptance (r = .32, p < .005) and teacher-acceptance (r = .25, p < .02). Further, as the degree of perceived *similarity* between self and father/teacher increased, the *discrepancy* between self-acceptance and father/teacher-acceptance scores significantly decreased. Correlations were -.24 (p = .05) for self-father comparisons and -.34 (p = .002) for self-teacher comparisons, indicating that 'perceived similarity significantly influences the generalisation of self-acceptance responses' (p.40). However; non-significant results were gained when 'degree of involvement' was compared with generalisation. This may have occurred because Suinn assumed participants were more involved with their fathers than with their teachers, which might not have been the case. Alternatively, it could be that perceived *similarity* influences the degree to which self-acceptance and acceptance of others scores are correlated; however level of *involvement* with the significant other does not.

Finally, Zelen (1954) used the Bonney Sociometric Assessment (Bonney, 1943), the Feelings of Personal Worth subscale of the California Test of Personality (Clark *et al.*, 1953) and the Who-Are-You? technique (Bugental & Zelen, 1950), to assess peer status, acceptance of others and self-acceptance in a sample of sixth-grade children. He found

that self-acceptance demonstrated significant correlations with acceptance *by* others, but not with acceptance *of* others. However, this finding may result from the young age of the participants studied. Suinn (1961) reports that the younger the sample, the lower the correlations found between self and other acceptance. As such, this contrasts with the significant correlations observed in older age research groups (e.g. Fey, 1954; Williams, 1962).

It therefore could be that something resembling a 'critical point' in development might occur, following which an individual's self-concept may become more stable. Before this point, 'self' and 'other' acceptance appear to be somewhat unrelated; however once this point has been reached, an individual's self-acceptance and their acceptance of others become more significantly related. Exceptions to this rule exist and factors such as perceived *similarity* between self and others may affect the evaluations made. Suinn (1961) suggests that the greater the similarity, the more accepting an individual is of others. Given these findings, it could be said that the 'self' becomes the reference point from which perceptions and attitudes towards others originate. Indeed, Sullivan (1947) first suggested; if an individual's relation with themselves is largely critical, this will promote unfavourable and derogatory evaluations of other people. This would therefore also explain the significant correlation between self-oriented and other-oriented perfectionism dimensions, as discussed in Chapter 1.

Despite this degree of clarity, the precise factors influencing variation in the degree of correlation between self-acceptance and acceptance of others remains unknown. It may

be that interactions occur with additional personality constructs which influence the results gained and as such, exploring the relationship between acceptance and perfectionism in further detail may prove useful.

2.3. Acceptance and Perfectionism

Given the important role that self-acceptance is thought to play in 'protecting' perfectionistic individuals from distress; only a handful of studies have explored the specific interaction in detail (Flett *et al*., 2003; Lundh, 2004; Scott, 2007). As yet, acceptance of *others* has not been studied alongside perfectionism; however clinical observations of perfectionists historically suggested their *self*-acceptance was somewhat 'conditional' depending on whether specific targets and standards were met (Flett *et al*., 2003). This association between low levels of unconditional self-acceptance and high levels of perfectionism led authors to wonder which factor might be affecting the other and several authors have investigated this further.

Flett and colleagues (2003) used a student sample to demonstrate that unconditional self-acceptance, as measured by the USAQ (Chamberlain & Haaga, 2001), was significantly negatively associated with all three perfectionism dimensions, as measured by the MPS (Hewitt & Flett, 1991). In addition, they reported that unconditional self-acceptance mediated the relationship between socially prescribed perfectionism and depression (Z = 2.13, p = .03) but not the two other perfectionism dimensions. However, they demonstrated that other-oriented perfectionism was associated *indirectly* with depression; meaning it was associated with low unconditional self-acceptance, which

was then associated with depression. This study was limited in that Flett and colleagues did not explore associations utilising perfectionism as the potential mediator and simply assumed self-acceptance as the mediating factor.

In contrast, Horney (1950) and Hollender's (1965) conceptualisation of perfectionism as a means by which insecure individuals can consider themselves acceptable, suggests that perfectionism is 'adopted' as a way to overcome underlying low self-acceptance. As such, this model proposes perfectionism as the mediating factor between low self-acceptance and depression. Scott (2007) investigated this relationship further in an effort to determine whether perfectionism or unconditional self-acceptance had a mediating or moderating influence in associations with depression. His study included 134 non-clinical participants who completed the MPS (Hewitt & Flett, 1991), the Perfectionism Questionnaire (Rhéaume *et al.*, 1995), the USAQ (Chamberlain & Haaga, 2001) and the Center for Epidemiological Studies Depression Inventory (Radloff, 1977). Scott firstly demonstrated that unconditional self-acceptance and *all* measures of perfectionism were significantly associated with each other and also with depression. He then used path analysis to determine the mediating effects of perfectionism and unconditional self-acceptance and explored the relative 'drop' in the path directly between the predictor and depression in order to determine the greater mediator. He identified the 'drop' (indicating the degree of mediation) as being larger when unconditional self-acceptance was the mediator and perfectionism the predictor (47.5% and 46.5% drop) as opposed to when perfectionism was the mediator and unconditional self-acceptance the predictor (17.6% and 23.5% drop). Thus, he concluded that whilst both perfectionism and

unconditional self-acceptance appeared to have mediating properties, unconditional self-acceptance was the more effective mediator. His study consisted of a large number of females (N = 104) in comparison to males (N = 30) and based findings purely on self-report measures; however Scott was able to demonstrate that perfectionism was likely to be the 'core construct' which subsequently impacted on levels of unconditional self-acceptance. This led Scott to propose that the *development* of perfectionism differs from its *operation* and he hypothesised that his study and others like it had measured the current 'operation' of perfectionism; thus explaining perfectionism as the factor influencing self-acceptance.

If this were accurate, perfectionistic tendencies (P) might thus *develop* as a means to overcome low self-acceptance (SA) and poor self-worth that arises during childhood (Section 1.3). As such, individuals might strive for perfection and set high standards to try to prove their worth and gain acceptance from self and others (low SA → high P). In cases where this does not occur, or an individual experiences 'failure'; self-acceptance may become reinforced as contingent on performance and individuals might strive harder to prove their worth and escape feelings of distress. This reflects the *operational* nature of perfectionism; 'perfection' is rarely attained, yet an individual is caught in striving to achieve it and as a result, self-acceptance may diminish further (high P → low SA). At this stage the negative impact of perfectionism has a greater influence on self-acceptance than vice versa, although its developmental function may still persist. This reflects Scott's (2007) finding that both perfectionism and unconditional self-acceptance can serve as mediators in relation to depression; however unconditional self-

acceptance is more effective. As Scott suggests, this theory is somewhat 'speculative' and further research would help to clarify its validity; however it appears to draw existing research together in a way that indicates it might prove useful.

2.4. Summary and Integration

Empirical evidence suggests that unconditional self-acceptance is important in moderating the relationship between perfectionism and distress (Scott, 2007). As such, it is believed the counterproductive and dysfunctional effects of perfectionism can be reduced if self-acceptance is also high. However, the majority of existing research demonstrates that dimensions of perfectionism are generally associated with lower levels of self-acceptance (Ellis, 2002; Flett *et al*., 2002); meaning a 'contingent' sense of self-worth is likely to be a core feature of perfectionism. Whether this stems from a developmental approach, where perfectionism is adopted as a means to overcome low self-acceptance; or an operational approach, where striving behaviours and maladaptive self-evaluations lower self-acceptance given that perfection is rarely attainable, is difficult to ascertain. Both approaches have generated a level of support and Scott (2007) suggests that perhaps both are plausible at different stages in the lifecycle, if the development of perfectionism differs from its present operation.

Furthermore, the relationship between self-acceptance and acceptance of others appears to be somewhat complicated. According to published findings, the two constructs are significantly positively correlated the majority of the time (e.g. Berger, 1952; Fey, 1954; Suinn, 1961); however exceptions to this rule do exist. Individuals have reported scores

reflecting high self-acceptance and low acceptance of others and vice-versa. These significant differences could be explained by the extent of adversity an individual experiences in early life; meaning that severe abuse or neglect might lead to an increasingly fragmented sense of 'self' and 'other' developing. Where internal working models become fragmented it can be difficult for individuals to fully integrate their experiences, due to difficulties with reflecting and mentalising capacities (Crittenden, 1992); thus significant differences in self-acceptance and acceptance of others scores may result.

Further explanations for this difference may lie with attribution theory, if the impact on self-worth and the worth of others depends on whether events and feelings are internalised or externalised and to what extent (Weiner, 1992). Significant levels of externalisation might thus lead to significant differences between 'self' and 'other' scores. In addition, the degree of difference between perceived self and perceived other may explain the varied findings, in that larger differences could mean larger discrepancies between self and other acceptance scores (Suinn, 1961). Finally, it is possible an individual with low self-acceptance could learn to become highly accepting of others as a means of overcoming their low self-worth. In this way, being highly accepting of others might make an individual more amenable to others, increasing popularity, decreasing rejection and allowing individuals to feel temporarily more acceptable to themselves. These theories all provide potential explanations for the significant differences observed between reported levels of self-acceptance and acceptance of others. However, in spite of these differences the majority of research

does demonstrate significant positive correlations between the two dimensions; and individual acceptance of others scores are generally higher than self-acceptance scores.

As Fey (1955) astutely concluded, the important factor in understanding differences between self and other dimensions of both acceptance and perfectionism ‘remains that of measuring genuine feelings’ and as such, the measurement of implicit beliefs will now be explored.

CHAPTER THREE

The Measurement of Implicit Beliefs

'The fact a person denies that he is theorising
is no reason for taking him at his word
and failing to investigate what implicit theory
is involved in his statements'

(Talcott Parsons)

3.1. Introduction

In the literature reviewed so far, the differences between reported beliefs for self and others in terms of perfectionism and acceptance are at times unclear. Self-acceptance is *generally* positively correlated with acceptance of others; however research has also demonstrated exceptions to this rule (Fey, 1954). Furthermore, whilst self and other-oriented perfectionism are generally significantly correlated; the degree of correlation varies and indeed the interaction of other-oriented perfectionism with depression generates somewhat inconsistent results. At times it is associated with *higher* levels of depression (Hewitt *et al*., 1998; Scott, 2007); whereas other studies report its association with *lower* levels of depression (Chang & Sanna, 2001); and yet further studies indicate the lack of *any* significant association with depression (Flett at al., 1996). These mixed results could be interpreted in numerous ways, one of which might query the honesty of respondents in reporting their underlying beliefs regarding perfectionism.

The implicit measurement of perfectionism and acceptance has not yet been attempted, although the related concept of self-esteem has been explored implicitly. Karpinski

(2004) discovered that in general the self was *contrasted* with the other; so that when the other was 'positive', fewer positive self-associations were made, and when the other was 'negative', fewer negative associations with the self were made. As such, an implicit understanding of perfectionism and acceptance for self and others may prove useful in attempting to explain the observed differences that exist utilising explicit measures.

3.2. Implicit Beliefs

In recent decades, cognitive scientists have become increasingly interested in understanding preconscious processes in a robust and scientific manner. Thus, the evidence-base regarding what lies *outside* of conscious awareness and control has grown significantly. Wegner (2002) highlighted the limited control that individuals actually possess over their own thoughts; and other researchers have similarly demonstrated the fragility of human introspection (Nisbett & Wilson, 1977). Furthermore, questionnaires that rely solely on self-reported attitudes and beliefs necessarily assume that individuals are motivated to report their internal states honestly; an assumption that has been unsupported by several authors (Greenwald & Banaji, 1995; Nisbett & Wilson, 1977).

These insights have increased efforts amongst researchers in the field to develop a suitable 'tool' by which implicit cognitions can be measured, thus bypassing the need for both accurate introspection and adequate honesty. As a result, several tasks have been developed including the evaluative priming technique (Fazio *et al.*, 1986), the Implicit Association Test (Greenwald *et al.*, 1998), the Extrinsic Affective Simon Task (De Houwer, 2003) and the Implicit Relational Assessment Procedure (Barnes-Holmes

et al., 2006). These tasks all require judgements to be made about a range of presented stimuli and rely on response-latencies to determine individuals' underlying beliefs and attitudes (Albarracin *et al*., 2005). A brief overview of these procedures will now follow.

The evaluative priming technique (Fazio *et al*., 1986) involves participants first being presented with an 'attitude prime' (e.g. spinach) and then a 'target word' that changes across trials (e.g. pleasant, awful, etc.). Their task is to decide whether the meaning of the target word represents 'good' or 'bad' by pressing the relevant response key. The technique aims to determine whether an *evaluation* is made in relation to the attitude prime. Thus, if response latency for positive adjectives (e.g. pleasant) is faster than for negative adjectives (e.g. awful), this is thought to indicate a positive evaluation of the attitude prime (e.g. spinach). If response latency is faster for negative adjectives, then a negative evaluation regarding the 'prime' is thought to have been made (Albarracin *et al*., 2005).

Livingston and Brewer (2002) suggested the nature of the priming stimulus has a large impact on what is captured by the procedure and the *generalisability* of the attitude prime. For example, individuals primed with African-American faces during a procedure to assess racial stereotypes had faster response latencies for negative adjectives when 'prototypical' faces were presented, in contrast to when less prototypical faces were presented (Livingston & Brewer, 2002). Indeed, when participants were instructed only to attend to the *race* of the faces presented, the difference in response latencies based on variations in facial features disappeared. This research highlighted the difficulty in

knowing whether a *specific* prime can fully capture an individual's evaluation of the wider category represented by the prime. Thus, the evaluative priming technique appears somewhat unsophisticated when attempting to gauge the precise features of a prime that an individual is responding to.

The Implicit Association Test (IAT; Greenwald *et al.*, 1998) also seeks to measure implicit attitudes by determining underlying automatic evaluations; however it goes about this in a slightly different way. Its main assumption is that 'associations [between concepts] can be revealed by mapping two discrimination tasks alternately onto a single pair of responses' (Greenwald *et al*., 1998, p.1469). Participants are required to press a response key (left or right), which has previously been assigned to a category of discrimination, for example; 'flower', 'insect', 'pleasant' or 'unpleasant' (Greenwald *et al*., 1998). Greenwald and colleagues demonstrated that when one key represented 'flower' and 'pleasant' and another key 'insect' and 'unpleasant' (associated categories), reaction times were faster when words corresponding to these categories were presented (e.g. 'rose', 'bee', 'happy', 'rotten'). Conversely, when one key represented 'flower' and 'unpleasant' and the other key 'insect' and 'pleasant' (less associated categories), reaction times were longer. This research demonstrated that for most people flowers are positive and insects are negative; hence the difference in reaction times. This procedure has been used to expose a range of implicit attitudes based on the association between categories of words, such as race (Greenwald *et al*., 2002), gender (Greenwald *et al*., 2003) and age stereotypes (Hummert *et al*., 2002).

The IAT has displayed adequate internal consistency, with reported scores ranging from .7 to .9 (Greenwald & Nosek, 2001; Schmukle & Egloff, 2004) and satisfactory test-retest reliability (Egloff *et al*., 2005); both of which can be difficult to achieve for implicit measures. However, as a tool for accessing implicit beliefs, the focus of the IAT on *associations* between concepts has been criticised by several researchers (De Houwer, 2002; de Jong *et al*., 2001). They claim that factors more complex than simple 'associations' are involved in understanding human beliefs and cognitions. For example in Greenwald's research above, the difference in reaction times could theoretically mean that individuals find *both* flowers and insects pleasant; but that flowers are preferred over insects. Thus, the particular *relation* (or 'direction' of association) between concepts cannot be determined by the IAT (De Houwer, 2002).

Critics also report that conditional beliefs (such as 'if I can't do things perfectly then I'm a complete failure') involve a range of specific associations and a range of concepts that the IAT is unlikely to be able to capture (de Jong *et al*., 2001). As such, the IAT is described as only providing '*indirect* evidence' for the existence of certain beliefs. (Barnes-Holmes *et al*., 2006). Finally as De Houwer (2001) points out, the IAT does not have a cognitive model to explain performance on the task.

A team of researchers thus attempted to address these deficits and produce an implicit measure that was theoretically grounded and able to assess complex beliefs by measuring *relations* between stimuli and events (Barnes-Holmes *et al*., 2000). They initially used their knowledge regarding Relational Frame Theory (RFT) to develop the

Relational Evaluation Procedure; before Barnes-Holmes and a separate set of colleagues (2006) adapted this to form the Implicit Relational Assessment Procedure (IRAP). Given the reported superiority of the IRAP as an implicit measure, it was adopted to assess perfectionism and acceptance beliefs in the present research. As such, a brief overview of RFT will now follow in order to understand the basis for the IRAP procedure further.

3.3. Relational Frame Theory

Relational Frame Theory (Hayes *et al*., 2001) was proposed to understand the role of *language* in the control and regulation of behaviour. It is based on behavioural principles and provides a framework for capturing how language is learnt through interactions with the environment. Its main concept is 'arbitrarily applied derived relational responding' (Blackledge, 2003) and this will now be described further.

3.3.1. Relational Responding

RFT proposes that stimulus *relations* are a key feature of human learning and that sophisticated language and cognitive abilities mean such relations are frequently complex. Stimuli include cognitions, emotions, behaviours, physiological sensations, semantics, environments and objects. Any *one* learning experience is thus 'framed' by a range of elements and the relation between these elements can subsequently influence behaviour in a different context. This occurs as the activation of one element from the initial framing experience means that other elements are also 'triggered', given the particular *relations* framing learning in the first instance (Blackledge, 2003). RFT suggests that relations between stimuli are based on frames of *coordination*, *comparison*,

opposition, *distinction* and *hierarchy* (Hayes *et al*., 2001). For example, the situation depicted in Figure 3.1 is a proposed relational network that might explain the factors contributing towards perfectionistic striving in the work setting.

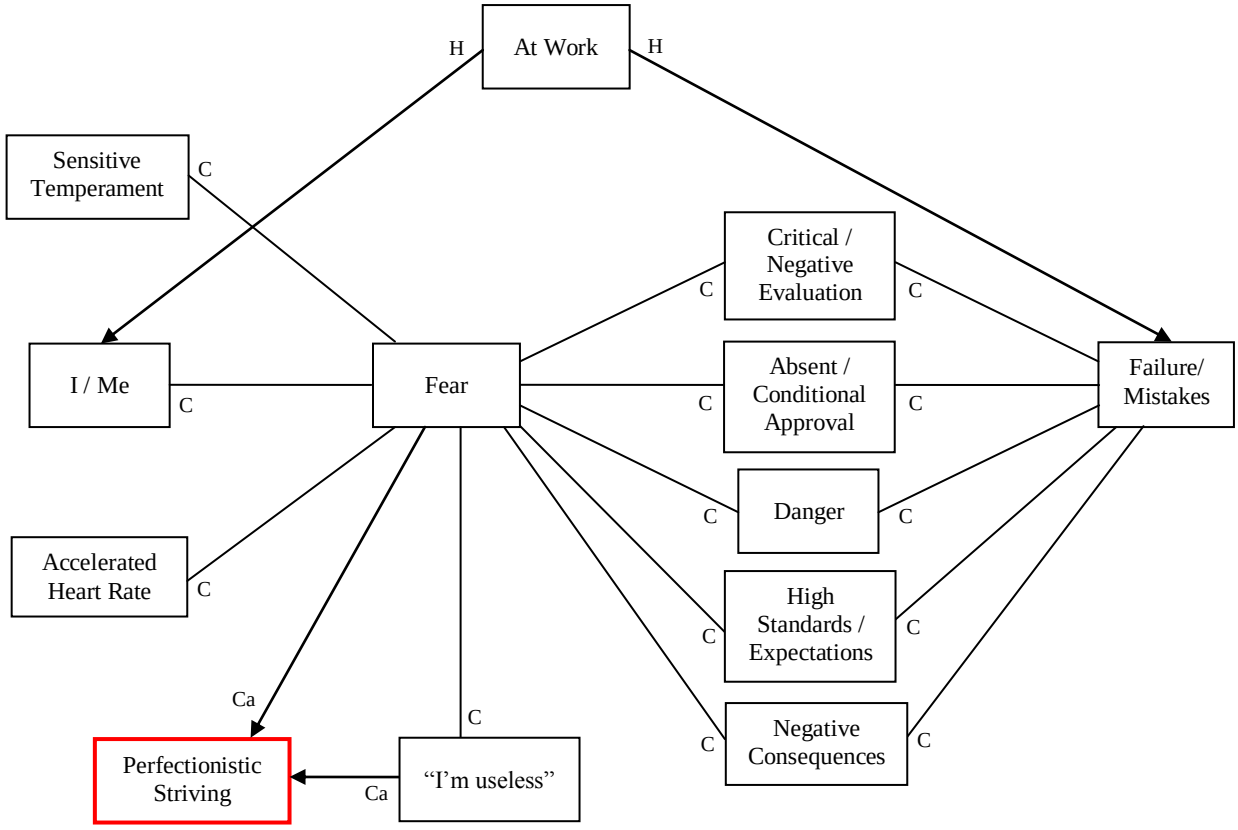


FIGURE 3.1: Proposed Network to Explain the Factors Relating to Perfectionistic Striving (H = Hierarchy, C = Coordination, Ca = Causation)

This depicts an individual who uses perfectionistic striving as a means to overcome the fear of failing or making a mistake at work. The individual's early environment may have been one in which they received a large amount of criticism and 'negative evaluation' from parental figures, alongside 'absent or conditional approval' when 'high

standards' were met. The presence of these three factors could be theorised to form the basis for low or conditional self-acceptance. In addition, the relation between failure and mistakes as 'dangerous' and things to be afraid of might occur if a range of 'negative consequences', such as physical abuse, took place during childhood. In the diagram above, the relations of hierarchy, coordination, and causation framing these early learning experiences meant that stimulus 'functions' became related. These relations (e.g. failure is dangerous) were then reinforced over time during different learning experiences. The relation of *coordination* depicts rough equivalence between the five stimuli and both 'fear' and 'failure/mistakes'. This demonstrates how an individual at work in the present day might feel afraid and strive for perfection when 'high standards' are set, even if 'failure' would not actually result in 'negative consequences', for example. The presence of the 'high standards' stimuli thus carries the *function* of the other stimuli due to previous relational framing (Blackledge, 2003).

However, it is also possible that an individual has never experienced personal failure *directly* and the transfer of stimulus function between fear and failure/mistakes has occurred through other framing experiences. This could include observing negative consequences for another person and feeling afraid; hearing stories about negative consequences for others, alongside parental views of self or others when mistakes have been made. As discussed in Chapter 1, it is also possible that an overprotective parent who is afraid of failure/mistakes might engender a sense of fear in an individual that intolerable outcomes will occur if mistakes are made. Thus an individual can develop a fear of failure and making mistakes *indirectly*, which can lead just as strongly over time

to the generation of perfectionistic tendencies. Furthermore, transfer of stimulus function can take place when framing relates elements that have never been directly or *indirectly* encountered by anybody before. Blackledge (2003) defines all these examples as '*derived* relational responding', which is the presence of a response in the absence of directly reinforced learning.

Stimulus relations are additionally proposed to be *bi-directional*; meaning that the transfer of stimulus function can occur both before and after a learning event has occurred. For example, the framing of failure and mistakes with fear can occur either before or after the 'failure' takes place. According to RFT, this 'mutual entailment' is attributable to human language and sets us aside from other animals who are thought to only have the capacity for unidirectional relating (Catania, 1998).

In RFT, stimulus relations are also thought to be organised in terms of aspects of equivalence (Blackledge, 2003). This is when the qualities and functions of a stimulus are related; for example 'high standards' is equivalent to being 'demanding' in the right context. Furthermore, 'I/me' might be related to 'others' if the properties defining both individuals are regarded as equivalent or similar. Thus 'others are useless' might also be present in the framing example in Figure 3.1 and perfectionistic striving may be directed towards others. Equivalence relations also take place when individuals learn that a spoken word, for example "failure", is the same as the written word FAILURE, which is the same as actual failure and also a picture of 'failure'. These relations of equivalence are all made without the specific direct connections being trained, given the 'framing'

that takes place (Barnes-Holmes *et al.*, 2004). For example, a child might first learn that the meaning of the spoken word "failure" and a picture of 'failure' share the equivalent stimulus properties. If they then learn how to spell FAILURE, framing of this learning with the spoken word would also transfer the aspects of the written word onto a *picture* of 'failure', given the earlier 'equivalence' framing that took place.

Derived relational responding also includes 'more than' and 'less than' stimulus relations. At this level of complexity the relational framing is thought to be controlled by 'more' and 'less' contextual cues rather than the formal properties of an object (Barnes & Roche, 1996). For example, if an individual is described as someone's 'little brother' despite being several inches taller in physical size, it can be deduced that the person doing the describing is the *elder* sibling. This comparison goes beyond the boundary of physicality (a formal/non-arbitrary property) and involves a *derived* relation. As such, it is termed '*arbitrarily applied* derived relational responding'; the key concept of RFT (Blackledge, 2003).

Finally, according to RFT, the *hierarchical* relationships in Figure 3.1 signify that the individual ('I/me') is within the 'work' setting and thus correspondingly the work setting contains the individual. Furthermore, the failure or mistake is within the work setting and as such, fear and perfectionistic striving may only exist in this context and not elsewhere. Within this framing, 'fear' and thoughts such as "I'm useless" become the antecedents to increasing 'perfectionistic striving'. Alternative behaviours, including avoidance of work, might also occur if an individual wishes to avoid the risk of feeling

useless given the 'high expectations' in the work setting. This could be particularly relevant for those with mental health difficulties whose symptoms, such as poor concentration, might lead to the occurrence of mistakes and thus heighten fear levels. Earlier framing experiences would activate negative thoughts, such as 'I'm useless', which may then result in absence from work if this seems to be the only way of escaping such thoughts.

This arbitrarily applied derived relational responding, as outlined by RFT is thought to be 'an ongoing way of responding to stimuli as they are presented' (Blackledge, 2003, p.429). As such, 'framing' is thought to occur continuously throughout an individual's life and is hypothesised to be 'a function of their extensive learning history and stimulation in the present environment' (Blackledge, 2003, p.429). Authors suggest that RFT processes are directly observable in terms of subsequent behaviour; and empirical research has consistently supported its principles (Barnes-Holmes *et al*., 2001; Clayton, 1995; Hayes *et al*., 2001). Thus, it appears to be an adequate theory to explain the role of language in the control and regulation of behaviour.

3.4. The Implicit Relational Assessment Procedure

Following the development of RFT, its theoretical grounding led to the generation of the Implicit Relational Assessment Procedure (IRAP; Barnes-Holmes *et al*., 2006) as a more robust tool for measuring implicit beliefs. In addition, its ability to measure specific *relations* between stimuli suggests it is a more accurate measure of beliefs than earlier tasks that measure only general *associations*.

The IRAP is similar to the IAT in terms of utilising response-key options to various onscreen presentations; however screen setup is slightly different so that specific relations (e.g. same as, different, hierarchical, temporal, spatial, etc.) *between* the stimuli can be recorded. Twenty-four screen presentations or 'trials' make up one block of the IRAP, which in total consists of two *practice* blocks and six *test* blocks. In each trial, participants are presented with a 'sample' stimulus at the top of the screen (e.g. 'pleasant' or 'unpleasant'), a 'target' stimulus in the middle, reflecting words from each of the sample stimulus categories (e.g. 'love' or 'abuse') and two relational response options at the bottom of the screen (e.g. 'similar' and 'opposite'). For example, in Barnes-Holmes and colleagues 2006 study, screen presentations appeared as displayed in Figure 3.2 below.

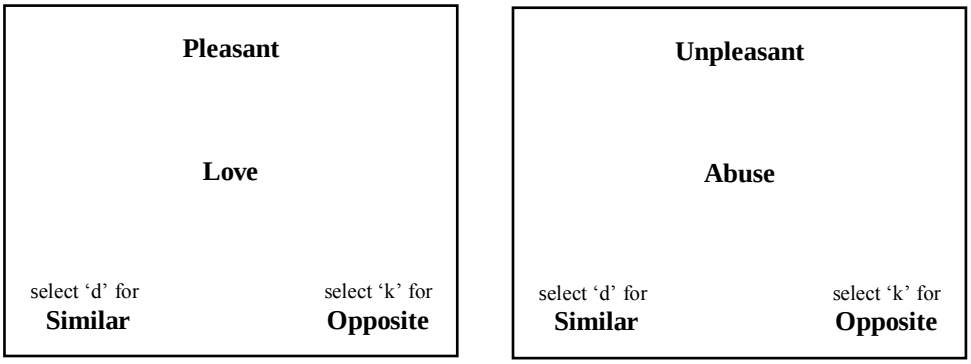


Figure 3.2: Sample Screen Presentations from the IRAP
(Barnes-Holmes *et al*., 2006)

Participants were instructed to respond in a 'consistent' or 'inconsistent' manner depending on which test block they were in. As such, it was possible to give a correct or an incorrect response. During *consistent* blocks, participants were required to respond as

though the target stimulus was consistent with the sample stimulus, in order to progress on to the following screen. For example, in Figure 3.2 participants pressed the 'similar' key meaning that pleasant and love were similar to each other. In *inconsistent* blocks, responses inconsistent with the sample stimulus (and typically individuals' beliefs) were required; so in Figure 3.2 the 'opposite' key was pressed meaning that pleasant and love were opposite to each other. All four words remained onscreen until the correct key was pressed and a gap of 400ms separated trials. If an *incorrect* response was given, for example a participant in an inconsistent block pressed the 'similar' key in Figure 3.2, a red 'X' appeared on the screen below the target word. Participants were then required to press the alternative response key to give the correct response, before they could progress on to the next trial.

Twelve target words were used, six 'pleasant' and six 'unpleasant' words. The order of sample and target stimulus presentations was randomised across trials with the limitation that each target word appeared twice, once in the presence of 'pleasant' and once with 'unpleasant'. Likewise, the 'similar' and 'opposite' response keys shifted randomly between the left and right positions on screen (Barnes-Holmes *et al*., 2006). Finally, test blocks alternated in the order of consistent-inconsistent, or inconsistent-consistent depending on whether participants were allocated to 'consistent-relations-first' or 'inconsistent-relations-first' test groups.

Response latencies were recorded and Barnes-Holmes and colleagues (2006) were able to demonstrate these were significantly shorter for consistent as opposed to inconsistent

trials; thus demonstrating the IRAP was a suitable tool for measuring spontaneous and automatic evaluations of stimuli. The same procedure has also demonstrated significant effects with more socially sensitive attitudes, such as ageism (Cullen *et al*., 2009), sexual preferences of offenders (Dawson *et al*., 2009), racial stereotyping (Barnes-Holmes *et al*., 2010), self-esteem in prisoners (Vahey *et al*., 2009) and attitudes to autism (Barnes-Holmes *et al*., 2006); thus the evidence base for its use is growing. Furthermore, findings are increasingly interesting when beliefs reported in explicit measures contrast with those identified during the IRAP procedure.

The RFT explanation of the IRAP effect has recently been described as the Relational Evaluation and Coherence (REC) model (Barnes-Holmes *et al*., 2010) and this accounts for the difference in response times across consistent and inconsistent trials. The IRAP procedure is thought to produce an 'immediate relational response' based on stimuli presented onscreen. Thus in trials where the required response is consistent with an individual's immediate relational response, reaction times are faster. However in trials where the required response contrasts with an individual's immediate relational response, reaction times are longer as it takes an increased length of time to 'override' the immediate response and press the correct key.

Thus implicit beliefs as measured by the IRAP rely on participants responding as quickly as possible to trials and a red 'too slow' warning has recently been added to the IRAP procedure (Barnes-Holmes *et al*., 2010). This pops up onscreen beneath the target word when 2000ms have passed, encouraging the participant to respond within this time

limit. When individuals have longer to think about their response; such as when completing self-report measures, their 'elaborated relational responding' means socially acceptable and carefully considered responses are given. As such, this explains the difference that is frequently observed between an individual's implicit and explicit recording of beliefs (Barnes-Holmes *et al*., 2010).

3.5. Summary and Integration

The implicit measurement of perfectionism and acceptance may be important in further understanding these constructs, given the variation that exists within the literature reviewed thus far. The IRAP task is considered the most appropriate tool for this purpose, due to its grounding in a theoretical model (RFT) and its ability to measure specific *relations* between stimuli and not just associations (Barnes-Holmes *et al*., 2006). As perfectionism and acceptance have not yet been investigated implicitly, the present research is largely exploratory in its anticipated findings. However, understandings generated so far mean that a number of predictions can be made regarding interactions between the implicit and explicit measurement of these constructs.

Given that humans are fundamentally social beings who seek to form close relationships with others, it may be that those high in other-oriented perfectionism, or low in acceptance of others (based on previous learning experiences), might suppress these beliefs or fail to acknowledge them consciously if they wish to interact with others. Research outlined above suggests the social impact of revealing other-oriented perfectionistic tendencies can be somewhat detrimental; therefore individuals may

consciously or unconsciously cover up these beliefs in attempt to appear more amenable to others. As such, differences between implicit and explicit scores may be observed.

In terms of self-oriented perfectionism, it could be speculated that the impossibility of achieving 'perfection' and the detrimental impact of having unrealistic personal standards is increasingly becoming common knowledge. Thus, a highly self-perfectionistic individual might be unwilling to explicitly present themselves as such, because doing so could be seen as acknowledging an imperfection; possessing a quality that frequently proves itself to be a hindrance. Once again, this may lead to observable differences between implicit and explicit measures.

Reported self-acceptance is a similar matter. It could be said that under-reporting beliefs regarding favourable evaluation of the self demonstrates non-acceptance of a personality feature; therefore *truly* self-accepting individuals may not carry this out. However, taking the common example of individuals stating "not to be big-headed, but…", it appears that down-playing self-accepting beliefs is common practice. This might be particularly true for cultures valuing modesty and humility and again suggests it is a mechanism employed, consciously or otherwise, to increase one's favourableness in the eyes of others. As such, it is believed differences may exist between implicit and explicit measurement of this construct.

3.6. Hypotheses

In accordance with the literature reviewed above, several hypotheses were made relating to the factors under investigation in the current study. It was hypothesised that:

1. Scores will be higher for self-oriented perfectionism than for other-oriented perfectionism on both explicit and implicit measures.
2. Scores will be higher for acceptance of others than for self-acceptance on both explicit and implicit measures.
3. Self-oriented perfectionism will be negatively correlated with self-acceptance on explicit measures.
4. Perfectionism for others will be negatively correlated with acceptance of others on explicit measures.
5. Implicit scores for self-oriented perfectionism, other-oriented perfectionism, self-acceptance and acceptance of others will *not* be associated with explicit scores.

Furthermore, secondary aims of the research included:

1. Relationships between perfectionism and acceptance for self and others on implicit measures will be explored.
2. Relationships between perfectionism, acceptance and general health will be explored for both explicit and implicit measures.

CHAPTER FOUR

Method

'Art and science have their
meeting point in method'

(Edward G. Bulwer-Lytton)

4.1. Research Design

The research design involved a descriptive cross-sectional factorial design (2 x 2 x 2) consisting of three within-subjects variables. These were personality construct (2: perfectionism, acceptance), perspective taken (2: self, other) and method of measurement (2: explicit, implicit). The dependent variables were response latencies in the IRAP task (implicit data) and recorded scores from the four self-report measures (explicit data). All parts of the study were quantitative in design. For the hypotheses outlined above, a-priori power analyses (Cohen, 1992; Pezzullo, 2010) illustrated that for a repeated measures t-test (within groups) design where α = .05; a sample size of N = 35 was required to have 80% power to detect a medium effect size (d = .50). Whereas for correlation matrix analyses where α = .05, a sample size of N = 85 was necessary to detect a moderate effect or larger (r = .30). As such, in order to ensure adequate power for all hypotheses, the sample size required for this research was N = 85.

4.2. Participants

Ethical approval was gained from the University of Edinburgh's Clinical Psychology Research Ethics Committee (see Appendix A) and subsequently students enrolled in

courses at the university during the study period of October 2010 to June 2011, were recruited. As the study was largely exploratory in design, university students were an ideal population from which to gather initial data. In addition, many students have reported evaluative pressures as a prominent aspect of the university experience (Vredenburg *et al*., 1993); therefore the constructs investigated may have been particularly pertinent for this population.

The sample consisted of 99 native English-language speaking students (56 females and 43 males), with a mean age of 25.46 (*SD* = 6.84). Participants were approached via school administrators who forwarded an email to all undergraduate and postgraduate students in the schools of Philosophy, Psychology and Language Sciences (PPLS), Economics, Informatics, Biological Sciences and Geosciences. Other schools were contacted within the College of Humanities and Social Science and the College of Science and Engineering; however they either did not reply or would not permit an email to be sent to their students. The forwarded email contained a brief overview of the study alongside an attachment of the participant information sheet (see Appendix B) and asked students who wished to participate to email the lead researcher at the address given. Individuals with significant uncorrected visual or motor impairment and those who were *non*-native English-language speakers were excluded from the study due to the requirements of the implicit task. A suitable time for all appropriate volunteers to participate was then arranged.

4.3. Potential Ethical Issues

Informed consent was gained before participants completed the research procedure and individuals were advised they could withdraw from the study at any time without having to give a reason (see Appendix C). Participants were encouraged to take at least 24 hours to decide whether or not to take part and indeed the next available research slot was frequently two weeks in advance; therefore adequate time was allowed for participants to withdraw from the study if desired.

The questionnaires used in this study were designed to measure specific personality features and access personal information, including individual's relationships with others and their particular feelings and beliefs. The potential negative effects of prompting participants to think about such aspects of themselves were managed by ensuring adequate de-briefing took place following research completion. Any detrimental impact of the research was assessed and a handful of individuals who revealed previous or current mental health difficulties (including stress, depression and an eating disorder), were reminded about external sources of support and encouraged to access them if necessary.

All data gathered during the research process remained confidential and limits to confidentiality in terms of risk to self or others were made clear in the participant information sheet. All data collected throughout the study was anonymised and coded with unique identifiers. It was kept secure at all times and additionally, data stored electronically was password protected.

4.4. Measures

Explicit Measures

Multidimensional Perfectionism Scale (MPS; Hewitt & Flett, 1991). The MPS is a 45-item self-report inventory designed to assess Perfectionism across three dimensions of 15 items each. Dimensions include self-oriented perfectionism (MPS-Self; e.g. 'It is very important that I am perfect in everything I attempt'), other-oriented perfectionism (MPS-Other; e.g. 'Everything that others do must be of top-notch quality'), and socially prescribed perfectionism (e.g. 'The people around me expect me to succeed at everything I do'). The latter dimension was omitted from analysis in the present investigation as it was not considered relevant. Respondents rate the extent of their agreement with each item on a seven-point likert scale ranging from 1 (disagree) to 7 (agree). This questionnaire does not have a total perfectionism score, however higher scores on each subscale represent greater levels of perfectionism within a dimension. The MPS is a well-established measure that has been used on a range of clinical and non-clinical samples, demonstrating good reliability and validity (e.g. Frost *et al.*, 1993; Hall *et al.*, 2009; Hewitt & Flett, 1991). In the present study Cronbach's alpha was .93 and .86 for SOP and OOP correspondingly.

Unconditional Self-Acceptance Questionnaire (USAQ; Chamberlain & Haaga, 2001). The USAQ is a 20-item self-report measure designed to assess various aspects of unconditional self-acceptance, a concept developed in rational-emotive behaviour therapy (Chamberlain & Haaga, 2001). It includes items such as 'Being bad at certain things makes me value myself less' and 'I feel I am a valuable person even when others

disapprove of me' (see Appendix D). Individuals rate the extent of their agreement with each item on a seven-point likert scale ranging from 1 (almost always untrue) to 7 (almost always true). The scale has 11 reverse-scored items and has demonstrated good psychometric properties (α = .72; Chamberlain & Haaga, 2001). In the current study, Cronbach's alpha was .72.

Acceptance of Others Scale (AOS; Fey, 1955). The AOS scale is a 20-item self-report questionnaire designed to assess individuals' levels of other-acceptance (Fey, 1955). It includes items such as 'I can enjoy being with people whose values are very different from mine' and 'People are too self-centred' (see Appendix E). Individuals rate their agreement with each item on a five-point likert scale ranging from 1 (almost always true) to 5 (very rarely true). The scale has five reverse-scored items and scaled scores range from 20 (low acceptance of others) to 100 (high acceptance of others). The AOS has good internal consistency (α = .90; Fey, 1955) and Cronbach's alpha in this study was .86.

General Health Questionnaire - 12 item version (GHQ; Goldberg, 1978). The GHQ is a 12-item self-report questionnaire that assesses the severity of mental health difficulty over the past few weeks. It includes items such as 'Have you recently been able to concentrate on whatever you're doing?' and 'Have you recently been losing confidence in yourself?' Individuals rate their agreement with each item on a four-point scale of severity (e.g. 'not at all' to 'much more than usual'). The scale has six reverse-scored items and a higher total score indicates greater psychological distress and poorer general

health. The GHQ has been widely validated and found to have good psychometric properties (Hankins, 2008). In this sample, internal consistency was very good (Cronbach's alpha = .86).

Implicit Measures

Implicit Relational Assessment Procedure (IRAP; Barnes-Holmes *et al*., 2006). The IRAP is a computer-based means of measuring unreported and 'automatic' beliefs (see Section 3.4 above). Participants are asked to respond quickly and accurately to confirm or deny a specific belief or attitude, based on the relation between the stimulus presented (e.g. 'To Self' + 'Critical' = 'Yes' or 'No'?). The IRAP differs from other implicit measures in that it directs participants to respond in a particular way according to 'expected' relations for a block of trials, rather than requesting responses based on individuals' own beliefs. The speed of response then enables participants' beliefs to be identified, as responding should be faster when an individual is prompted to respond in a way that is actually *consistent* with their own beliefs. IRAP effects have been demonstrated across various psychological phenomena, including attitudes to homosexuality (Cullen & Barnes-Holmes, 2008), meat-eating (Barnes-Holmes *et al*., 2010a) and sexual offending (Dawson *et al*., 2009). A small amount of evidence currently exists supporting the IRAP's validity as a tool for measuring clinically relevant variables (Vahey *et al*., 2009). In this study, participants completed two 'practice' blocks and six 'test' blocks of the IRAP task; each containing 24 trials. The setup of screen presentations during both practice and test blocks can be viewed in Figure 4.1 overleaf. The task was somewhat complex and involved a change of perspective. Participants

were required to respond during 'consistent' blocks in a way that *confirmed* self-perfectionist and other-accepting tendencies and *denied* self-accepting and other-perfectionist tendencies. Consistent blocks alternated with 'inconsistent' blocks in which the perspective changed and required responding was reversed (self-accepting and other-perfectionist tendencies *confirmed* and self-perfectionist and other-accepting tendencies *denied*). Thus, during each block participants were required to respond in a way that was either generally perfectionistic towards themselves and accepting towards others; or generally accepting towards themselves and perfectionistic towards others (see Appendix H for participant instructions).

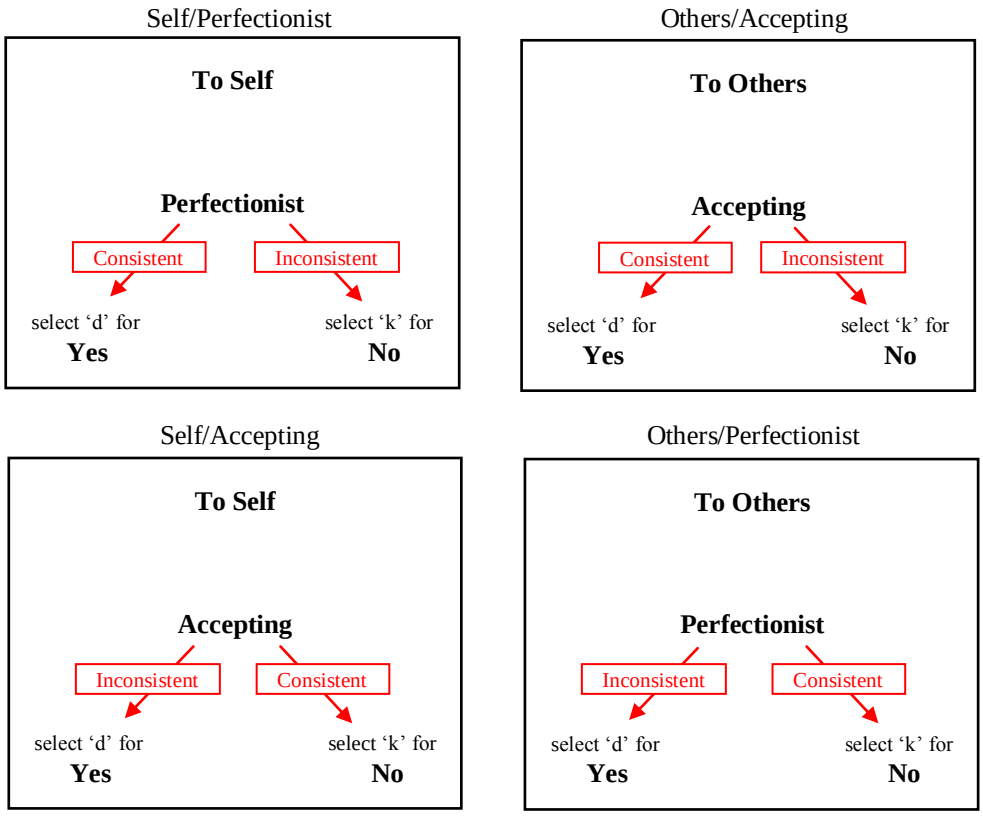


FIGURE 4.1: Examples of the Four Trial Types Used in the IRAP (Details in red did not appear onscreen and are for explanatory purposes only)

The order of sample (to self/to others) and target (perfectionist/accepting etc.) stimulus presentations was randomised across trials with the limitation that each target word appeared twice, once in the presence of 'to self' and once with 'to others'. In this study the position of 'yes' and 'no' response keys was *fixed* as displayed in Figure 4.1. This decision was made as during piloting of the IRAP task it became too complicated for participants when response keys also shifted position between trials. Campbell and colleagues (in press) investigated screen presentations in the IRAP and discovered that holding response options static actually *increased* the IRAP effect, although non-significantly. They concluded that randomising the order of sample and target stimuli presented was the critical factor; therefore it was decided response-key positions would be fixed in the current study.

4.5. Procedure

The initial stage of the research procedure involved determining the words that were used in the IRAP task and this was completed via an online survey. A list of words with similar meanings (synonyms) to 'perfectionist' and 'accepting' was generated by viewing online dictionaries and thesauruses. A total of 12 synonyms each for 'perfectionist' and 'accepting' were identified and these were listed in two separate questions of an online survey (see Appendix F). For each question, respondents were asked to rank the words in order from 1 to 12 according to how closely they resembled their understanding of the target word. The survey was sent to the researcher's email contacts list and was then cascaded via these individuals' contact lists. Sixty-five responses were gathered and this generated the top five words for each factor,

which were then used in the IRAP task, alongside the target words. These words can be seen in Table 4.1 below.

TABLE 4.1: Top Five 'Perfectionist' and 'Accepting' Synonyms as Ranked During a Survey

Rank	'Perfectionist'	'Accepting'
1	Meticulous	Tolerant
2	Exacting	Forgiving
3	Demanding	Compassionate
4	Idealistic	Patient
5	Pedantic	Respectful

During the second stage of the research, participants arrived at their allocated research time and were again given the opportunity to read the participant information sheet and sign the consent form. They then completed a sheet asking several brief demographic questions (see Appendix G), alongside the four questionnaires outlined above and the IRAP computer task. Prior to completing the IRAP, participants were presented with a screen of instructions outlining the task (see Appendix H) and were prompted to think *generally* about 'others' and not focus their thoughts on any one person. Participants completed the two practice blocks as many times as necessary until they achieved the required 80% accuracy and 2000ms response speed to move on to the test blocks. They were given four attempts to reach these criteria (eight practice blocks in total) and if unable to do so, they were thanked, debriefed and their data was discarded.

The order of both questionnaire completion and IRAP presentation (consistent-first vs. inconsistent-first) was counterbalanced across participants to overcome any potential effects of presentation bias on the research findings. The eight different counterbalancing orders can be seen in further detail in Appendix I. Following completion of the implicit and explicit measures, participants were debriefed thoroughly, were given the opportunity to ask questions regarding the research and were thanked for their contribution.

CHAPTER FIVE

Results

'However beautiful the strategy, you should occasionally look at the results'

(Winston Churchill)

5.1. Data Transformation and Exploratory Analyses

Of the initial 99 participants, five were unable to achieve the required accuracy and response latency on the IRAP to advance past the practice blocks (see Figure 5.1). Of those who did, 37 failed to maintain at least 75% accuracy during test-block trials and consequently their implicit data was discarded. However, questionnaire responses from these individuals were still included in *explicit* analyses; thus 99 sets of participant data made up the 'complete' dataset. In addition, 57 sets of participant data (the '75% accuracy' dataset) were used to examine *implicit* results and to compare implicit and explicit data. This dataset included 33 females and 24 males and the mean age was 25.40 (*SD* = 7.12).

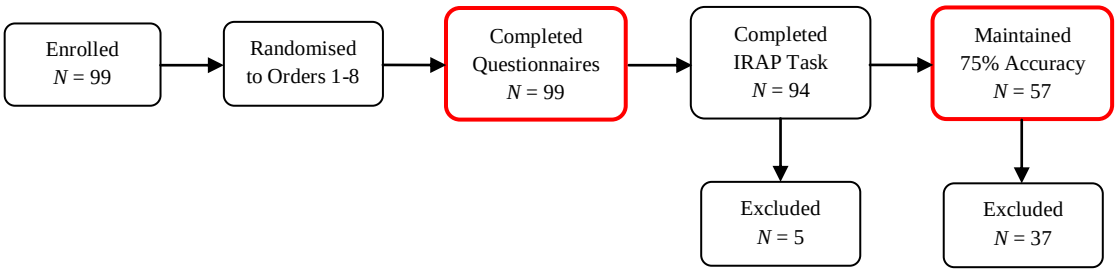


FIGURE 5.1: Flowchart Detailing the 'Complete' and '75% Accuracy' Datasets

Response latencies from the implicit task were transformed into '*D*-IRAP' scores by the IRAP programme, using the method outlined in Table 5.1. The four trial types in this study were self-perfectionist (P-Self), other-perfectionist (P-Other), self-accepting (A-Self) and other-accepting (A-Other). Converting raw data into *D*-IRAP scores allowed individual factors to be controlled, such as age and cognitive ability, which otherwise might have affected response latencies (Greenwald *et al.*, 2003).

TABLE 5.1: Steps Involved in Calculating *D*-IRAP Scores (from Barnes-Holmes *et al.*, 2010)

To Calculate *D*-IRAP Scores:
1. Only response latency data from test blocks are used.
2. Latencies above 10,000 ms are eliminated from the data set.
3. All data for participants are removed if they produce response latencies less than 300ms on more than 10% of test block trials.
4. 12 standard deviations for the four trial types are computed: four for the response latencies from test blocks 1 and 2, four from test blocks 3 and 4, and four from test blocks 5 and 6.
5. 24 mean latencies for the four trial types in each test block are calculated.
6. Difference scores are calculated for each of the four trial types, for each pair of test blocks, by subtracting the mean latency of the consistent block from the mean latency of the corresponding inconsistent block.
7. Each difference score is divided by its corresponding standard deviation from step 4, yielding 12 *D*-IRAP scores, one score for each trial type, for each pair of test blocks.
8. Four overall trial type *D*-IRAP scores are calculated by averaging the scores for each trial type across the three pairs of test blocks.

As the Acceptance of Others Scale (AOS; Fey, 1955) measured responses on a 5-point likert scale and the Unconditional Self-Acceptance Questionnaire (USAQ; Chamberlain & Haaga, 2001) used a 7-point likert scale; the AOS was transformed into a 7-point

scale (see Appendix J), so the two measures could be compared. Rescaled scores were then correlated with original scores, which demonstrated a successful transformation. As such, rescaled AOS scores (AOS-R) were used in all subsequent analyses. Descriptive statistics including the mean, median, standard deviation and range were calculated for each measure and are displayed in Table 5.2. Data was then analysed to determine whether assumptions regarding normality were met in order to use parametric tests. Normality was initially assessed by looking at histograms and boxplots of total scores for all measures; and examining differences between mean and median scores.

TABLE 5.2: Descriptive Statistics for All Measures (Total Scores)

Measure	Dataset	*N*	Mean	Median	*SD*	Range
MPS-Self	**Complete**	99	65.4	66	17.4	22 – 101
	75% Acc.	57	65.5	65	17	32 – 101
MPS-Other	**Complete**	99	52.1	51	12.9	17 – 89
	75% Acc.	57	52.5	53	13.7	17 – 89
USAQ	**Complete**	99	67.9	70	10.2	32 – 86
	75% Acc.	57	69.5	70	9.5	41 – 86
AOS-R	**Complete**	99	90.8	92	15.7	54.5 – 126.5
	75% Acc.	57	91	87.5	15.9	54.5 – 126.5
GHQ	**Complete**	99	11.3	11	5.1	3 – 24
	75% Acc.	57	11.5	11	4.8	4 – 23
P-Self	**75% Acc.**	57	.193	.197	.387	-.523 – .838
P-Other	**75% Acc.**	57	-.034	-.087	.351	-.656 – .688
A-Self	**75% Acc.**	57	-.024	-.065	.354	-1.18 – .601
A-Other	**75% Acc.**	57	.027	.052	.312	-.724 – .612

Note. MPS-Self = Self-Oriented Perfectionism [Explicit]; MPS-Other = Other-Oriented Perfectionism [Explicit]; USAQ = Unconditional Self-Acceptance Questionnaire [Explicit]; AOS-R = Acceptance of Others Scale - Rescaled [Explicit]; GHQ = General Health Questionnaire; P-Self = Self-Perfectionism [Implicit]; P-Other = Other-Perfectionism [Implicit]; A-Self = Self-Acceptance [Implicit]; and A-Other = Other-Acceptance [Implicit].

Secondly, skewness and kurtosis of distribution for each dependent variable were converted into *Z*-scores (Field, 2009, p.139) and analysed further. The '75% accuracy' dataset was observed to be normally distributed for both implicit and explicit measures ($Z < 1.96$); however the 'complete' dataset for explicit measures showed significantly skewed distribution for the USAQ ($Z = -3.05$) and the GHQ ($Z = 2.7$). As such, Kolmogrov-Smirnov's goodness-of-fit test was used to explore normality further. This test confirmed significantly skewed distribution for the USAQ ($D(99) = .11$, $p = .009$) and GHQ ($D(99) = .12$, $p = .001$), violating the assumption of normality. Furthermore AOS-R was highlighted as significantly non-normally distributed according to this test ($D(99) = .096$, $p = .026$).

As the USAQ and AOS-R were analysed in a paired samples t-test, the *difference* between these measures was subsequently examined for normality (Weaver, 2011). This difference score was found to be normally distributed (see Appendix K) and as such, data transformation was not necessary during paired samples t-test analysis. For all other analyses, square root transformations were applied to the USAQ (USAQ-T), GHQ (GHQ-T) and AOS-R (AOS-R-T). These were successful at dealing with the deviations from normality for these variables. In addition, homogeneity of variance and sphericity were assessed where applicable using Levene's test and Mauchly's test respectively. These tests revealed non-significant results and as such, parametric statistical analyses were used throughout.

Individuals came forward to participate from a range of schools within the University of Edinburgh and the course in which they were enrolled was recorded. Figure 5.2 outlines the spread of participants across courses. The 'other' category contained a range of subjects including; computer science, ancient history, economics, politics, international relations, business studies, artificial intelligence, geography and informatics.

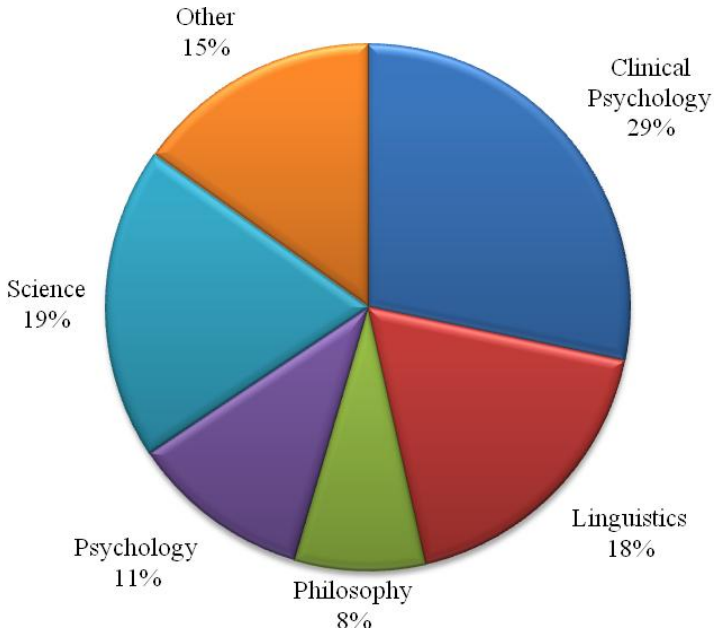


FIGURE 5.2: University Course Studied by Participants

The influence of course studied and all other independent variables on outcome data was then explored. Linear regression was used to examine age; an independent-samples t-test for participant sex; and one-way ANOVA's for order of research completion and course studied. The interaction of these factors with *all* dependent variables was explored for both the 'complete' and '75% accuracy' datasets. Results for the 'complete' dataset

indicated a linear relationship existed between AOS-R-T and age, with 4% of the variance in AOS-R-T scores being accounted for by age ($t(97) = 2.29$, $F(1, 97) = 5.26$, $p = .024$, $f^2 = .054$). Furthermore, AOS-R-T scores were significantly different when participant sex was the predictor variable ($t(97) = 3.04$, $p = .003$, $d = .61$), with mean female scores ($M = 9.7$, $SD = .75$) being higher than mean male scores ($M = 9.2$, $SD = .84$). Course studied significantly influenced USAQ-T ($F(5, 93) = 2.6$, $p = .03$) and AOS-R-T ($F(5, 93) = 9.3$, $p < .001$) scores. However, it was believed the unequal sample sizes, alongside the uneven male-female split across subjects, may account for the significant differences observed. Post-hoc analyses, taking unequal sample sizes into account, revealed *no* significant differences in USAQ-T scores across subject areas ($p > .05$). However, significant differences in AOS-R-T scores were observed between clinical psychology and all other subject areas, with mean differences on Hochberg's GT2 test ranging from .78 to 1.38 ($p < .05$). Therefore, participants enrolled in the clinical psychology course reported significantly higher acceptance of others than participants in other subject areas.

Crosstabs were used to further examine the interaction between participant sex and course studied, results of which can be seen in Figure 5.3. As the 'expected' count was less than five in three cells, philosophy and psychology scores were collapsed into one variable and Pearson's chi-square test was performed. The value of the chi-square statistic was highly significant ($X^2(4) = 43.87$, $p < .001$, $w = .67$[1]), indicating that participant sex had a significant effect on course studied. As such, it was unclear

[1] The effect size w is defined as the square root of X^2 divided by N (Cohen, 1988).
Cohen suggests that w values of 0.1, 0.3 and 0.5 represent small, medium and large effect sizes respectively.

whether the impact of course on AOS-R-T scores was primarily a result of discrepancies between participant sex and so both were controlled for in subsequent analyses.

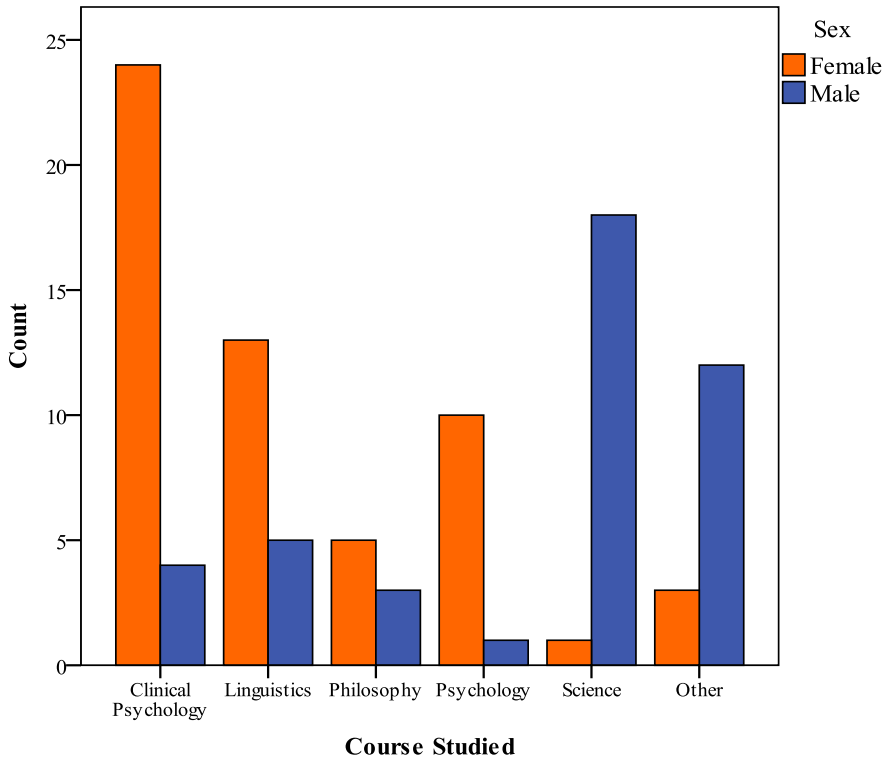


FIGURE 5.3: The Male-Female Split Across Course Studied

The impact of course studied on participant age was also explored, as despite the study including postgraduate students from all subject areas, clinical psychology was the only purely postgraduate sample (see Appendix L). The impact of age on AOS-R-T scores was therefore investigated using partial correlations, controlling for the effect of course studied. It became clear the two variables were no longer significantly correlated when the impact of course studied was removed (r = .104, p = .31) and as such, age was not controlled for in subsequent analyses.

In the '75% accuracy' dataset a linear relationship was observed between GHQ-T and age, with 5% of the variance in GHQ-T scores being accounted for by age ($t(56) = 2.03$, $F(1, 55) = 4.12$, $p = .047$, $f^2 = .075$). However once again, partial correlations controlling for the impact of course studied meant the interaction of age *alone* became non-significant ($r = .257$, $p = .056$). In addition, a significant difference in AOS-R scores was observed between individuals studying different courses ($F(5, 51) = 3.93$, $p = .004$); however small sample sizes across groups in this test means the finding should be interpreted with caution.

Order of research completion demonstrated no significant effect on dependent variables with one-way ANOVA's and as such, the variable was collapsed into two new categories for analysis with an independent samples t-test. These categories were implicit-first (IRAP) and explicit-first (questionnaires); however once again no significant differences were observed for either the 'complete' or '75% accuracy' datasets. Order of research completion therefore had a non-significant impact on outcome data. In summary, participant sex and course studied were the only variables demonstrating main effects on AOS-R-T scores and as such, were controlled for in all analyses involving this variable. No other variables were controlled for.

5.2. Hypotheses Testing

Hypothesis 1: *Scores will be higher for self-oriented perfectionism than for other-oriented perfectionism on both explicit and implicit measures.*

Dependent samples t-tests were used to examine this hypothesis and for the explicit measures, mean MPS-Self scores (M = 65.4, SE = 1.75) were observed to be significantly higher than mean MPS-Other scores (M = 52.1, SE = 1.3); demonstrating that on average participants were significantly more perfectionistic towards themselves than towards others ($t(98) = 9.4$, $p < .001$, $d = .88$). Scores on the IRAP task generated similar findings ($t(56) = 3.2$, $p = .002$, $d = .61$); participants responded significantly more quickly when they had to confirm perfectionistic beliefs for themselves (P-Self; M = .193, SE = .051), than when they had to confirm perfectionistic beliefs for others (P-Other; M = -.034, SE = .046). Thus, Hypothesis 1 was supported for both explicit and implicit measures.

In addition, MPS-Self and MPS-Other scores demonstrated significant association with each other (r = .599, $p < .001$), meaning that if an individual was highly self-perfectionistic they were also more likely to be more perfectionistic towards others. However the IRAP task did not reflect these results, as P-Self was not significantly associated with P-Other (r = -.048, p = .73).

Hypothesis 2: *Scores will be higher for acceptance of others than for self-acceptance on both explicit and implicit measures.*

This hypothesis was also examined with dependent samples t-tests and for the explicit measures, mean AOS-R scores (M = 90.8, SE = 1.57) were observed to be significantly higher than mean USAQ scores (M = 67.9, SE = 1.03); demonstrating that on average participants were significantly more accepting of others than they were of themselves

($t(98) = 15.2$, $p < .001$, $d = 1.77$). A repeated measures ANCOVA was then run to determine the impact of course studied and participant sex on the variance between acceptance scores. There was a significant main effect for USAQ versus AOS-R scores, again suggesting that people were more accepting of others than they were of themselves ($F(1, 96) = 138.63$, $p < .001$, $r = .59$). Furthermore, course studied was found to have a significant impact on the variance between AOS-R and USAQ scores ($F(1, 96) = 13.4$, $p < .001$, $r = .12$); suggesting that the effect was stronger for some courses than others. This interaction can be seen in Figure 5.4 below. No interaction effect was observed for participant sex ($F(1, 96) = .22$, $p = .641$, $r = .002$).

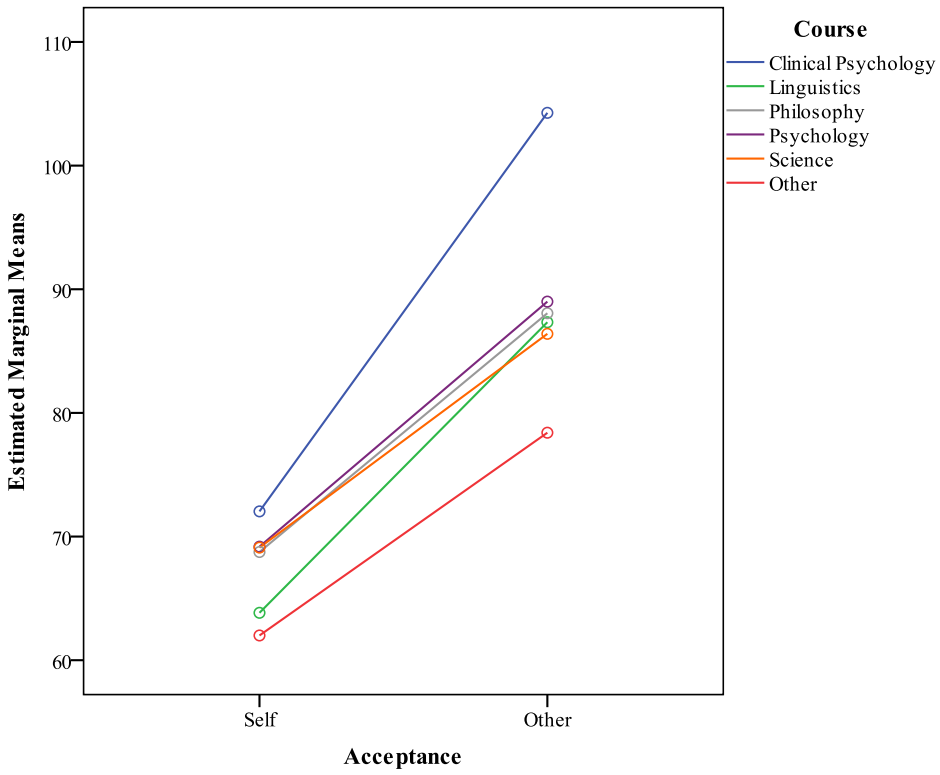


FIGURE 5.4: The Variance Between Self and Other Acceptance Scores Across Courses

Scores on the IRAP task generated somewhat different findings; a non-significant difference was observed between participant response times when confirming self-accepting and when confirming other-accepting beliefs ($t(56) = .89$, $p = .38$, $d = .16$). The effect size according to Cohen's *d* further suggests that very little difference existed between these variables and as such; on implicit measures participants were equally as accepting of others as they were of themselves. Thus, Hypothesis 2 was only partially supported.

Associations between these variables were also examined using Pearson's correlations. Partial correlations controlling for the effects of participant sex and course studied demonstrated that USAQ-T and AOS-R-T scores were significantly associated with each other ($r = .324$, $p = .001$), meaning that if an individual was highly accepting of others they were also more likely to be accepting of themselves. Once again the IRAP task did not reflect these results, as bivariate correlations revealed that A-Other was not significantly associated with A-Self ($r = .147$, $p = .27$).

Hypothesis 3: *Self-oriented perfectionism will be negatively correlated with self-acceptance on explicit measures.*

Pearson's correlations were performed (see Table 5.3) and MPS-Self was found to be significantly negatively associated with USAQ-T ($r = -.455$, $p < .001$). This suggested individuals who were highly self-perfectionistic were more likely to also be low in self-acceptance and vice-versa, providing support for Hypothesis 3.

TABLE 5.3: Correlations for Explicit Measures (with controls where relevant)

	MPS-Self	MPS-Other	USAQ-T	AOS-R-T	GHQ-T
MPS-Self	.				
MPS-Other	.599**	.			
USAQ-T	-.455**	-.382**	.		
AOS-R-T	-.338**	-.350**	.324**	.	
GHQ-T	.215*	.313**	-.471**	-.261*	.

Note. ** p < .01 (2-tailed), * p < .05 (2-tailed). MPS-Self = Self-Oriented Perfectionism; MPS-Other = Other-Oriented Perfectionism; USAQ-T = Unconditional Self-Acceptance Questionnaire [Transformed]; AOS-R-T = Acceptance of Others Scale - Rescaled [Transformed]; and GHQ = General Health Questionnaire [Transformed].

Hypothesis 4: *Perfectionism for others will be negatively correlated with acceptance of others on explicit measures.*

The association between MPS-Other and AOS-R-T was examined using partial correlations, controlling for the effects of participant sex and course studied. MPS-Other was found to be significantly negatively associated with AOS-R-T (r = -.35, p < .001), providing support for Hypothesis 4. Thus, individuals who were highly perfectionistic towards others were more likely to also be less accepting of others.

Hypothesis 5: *Implicit scores for self-oriented perfectionism, other-oriented perfectionism, self-acceptance and acceptance of others will not be associated with explicit scores.*

Pearson's correlations were performed for the '75% accuracy' dataset (see Table 5.4). These demonstrated non-significant associations between implicit and explicit measures

for self-oriented perfectionism (r = -.033, p = .81), other-oriented perfectionism (r = -.020, p = .88), self-acceptance (r = .077, p = .571) and acceptance of others (r = -.032, p = .81). Thus Hypothesis 5 was supported.

TABLE 5.4: Correlations for the 75% Accuracy Dataset

	MPS-Self	MPS-Other	USAQ	AOS-R	GHQ	P-Self	P-Other	A-Self	A-Other
MPS-Self	.								
MPS-Other	.667**	.							
USAQ	-.498**	-.490**	.						
AOS-R	-.380**	-.413**	.322*	.					
GHQ	.271*	.382**	-.481**	-.292*	.				
P-Self	-.033	-.075	.051	-.068	-.036	.			
P-Other	-.050	-.020	.132	-.024	-.064	-.048	.		
A-Self	.083	.010	.077	-.031	-.059	.456**	.274*	.	
A-Other	.061	-.060	-.112	-.032	.125	.010	-.226	.147	.

Note. ** p < .01 (2-tailed), * p < .05 (2-tailed). MPS-Self = Self-Oriented Perfectionism [Explicit]; MPS-Other = Other-Oriented Perfectionism [Explicit]; USAQ = Unconditional Self-Acceptance Questionnaire [Explicit]; AOS-R = Acceptance of Others Scale - Rescaled [Explicit]; GHQ = General Health Questionnaire; P-Self = Self-Perfectionism [Implicit]; P-Other = Other-Perfectionism [Implicit]; A-Self = Self-Acceptance [Implicit]; and A-Other = Other-Acceptance [Implicit].

5.3. Secondary Aims

Aim 1: *Relationships between perfectionism and acceptance for self and others on implicit measures will be explored.*

D-IRAP scores were examined and plotted as seen in Figure 5.5 overleaf. This outlined the speed with which participants responded to individual trials. A *positive D*-IRAP score indicated that participants pressed the 'yes' key more quickly than the 'no' key when asked to confirm or deny perfectionistic or accepting tendencies. A *negative*

D-IRAP score indicated that participants pressed the 'no' key more quickly than the 'yes' key when confirming or denying beliefs. One-sample t-tests were then run to investigate the extent to which *D*-IRAP scores differed significantly from zero. As seen in Figure 5.5, confirming self-perfectionistic tendencies produced the significantly fastest response times ($t(56) = 3.75$, $p < .001$, $d = .50$), followed by denying other-perfectionistic tendencies; although this score was not significantly different from zero ($t(56) = -.734$, $p = .47$, $d = .10$). Furthermore, individuals displayed a slight preference for denying self-accepting tendencies more quickly than they were confirmed ($t(56) = -.516$, $p = .61$, $d = .07$) and confirming acceptance of other tendenices, more quickly than they were denied ($t(56) = .662$, $p = .51$, $d = .09$); although these findings were not statistically significant.

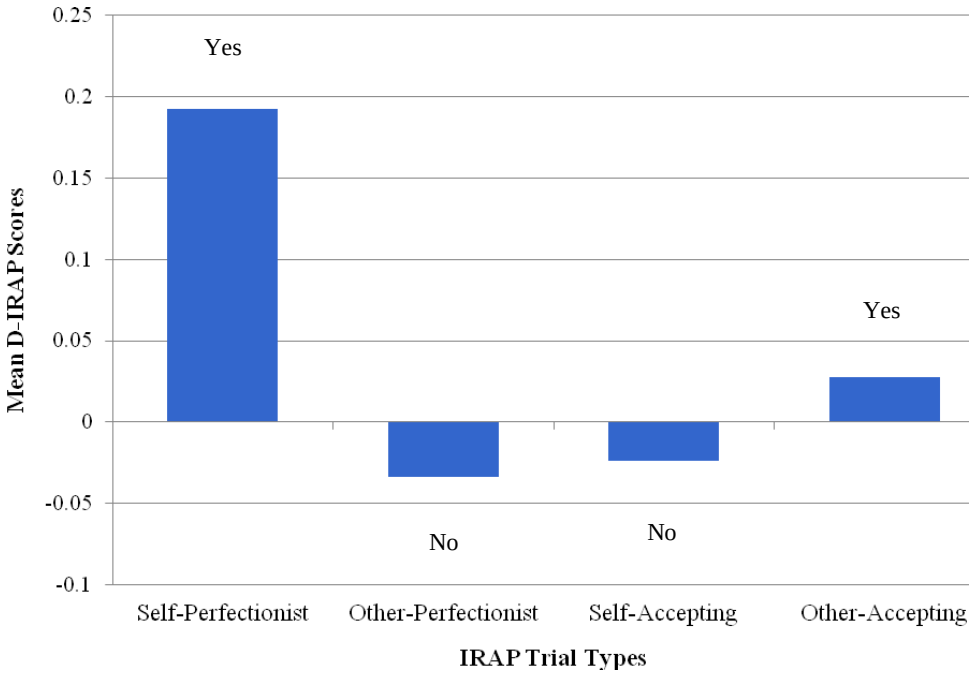


FIGURE 5.5: Mean Implicit Perfectionism and Acceptance Scores

In examining associations between the implicit results (see Table 5.4), P-Self response times were significantly positively correlated with A-Self response times (r = .456, p < .001); contrasting with the significant *negative* relation observed for explicit measures. In addition, P-Other was significantly positively correlated with A-Self response times (r = .274, p = .039). No other significant relations were observed.

Aim 2: *Relationships between perfectionism, acceptance and general health will be explored for both explicit and implicit measures.*

The '75% accuracy' dataset demonstrated no significant correlations between GHQ and P-Self, P-Other, A-Self or A-Other. As such, the 'complete' dataset was used to determine the interaction of GHQ-T with explicit measures. As outlined in Table 5.3, significant associations between GHQ-T and *all* explicit measures were observed; therefore further statistical analyses were run to explore these interactions in greater detail. MPS-Self was significantly positively correlated with GHQ-T; and linear regression analysis demonstrated that 4% of the variance in GHQ-T scores was accounted for by MPS-Self ($t(97) = 6.28$, $F(1, 97) = 4.7$, $p = .033$, $f^2 = .048$). MPS-Other and GHQ-T were also significantly positively correlated, with MPS-Other accounting for 9% of the variance in GHQ-T scores ($t(97) = 6.08$, $F(1, 97) = 10.57$, $p = .002$, $f^2 = .109$). In examining the interaction between these dimensions further, partial correlations were run controlling for the impact of MPS-Self and MPS-Other on GHQ-T scores. The significant association between MPS-Other and GHQ-T remained when MPS-Self was the covariate (r = .236, p = .019). However, the association between MPS-Self and GHQ-T disappeared when MPS-Other was controlled for (r = .036,

p = .727). This indicated that MPS-Other was the better predictor of psychological distress.

Furthermore, the significant negative correlation between USAQ-T and GHQ-T was explored and USAQ-T was shown to account for 21% of the variance in GHQ-T scores ($t(97) = 11.81$, $F(1, 97) = 27.73$, $p < .001$, $f^2 = .285$). Finally, AOS-R-T was observed to be significantly negatively correlated with GHQ-T; and multiple regression analysis, controlling for the effects of participant sex and course studied (dummy coded), demonstrated that AOS-R-T accounted for 5% of the variance in GHQ-T scores ($t(97) = -2.44$, $F(1, 97) = 5.97$, $p = .016$, $f^2 = .062$). Course studied and participant sex were found to have no significant effect on GHQ scores as main effects. As such, low self-acceptance scores were the biggest predictor of high GHQ-T scores, which signified higher levels of psychological distress.

CHAPTER SIX

Discussion

'There is no ending that
is not a beginning'

(Henrietta Szold)

6.1. Overview

The overall aim of this study was to assess the interaction of perfectionism and acceptance for self and towards other people, using both explicit and implicit measures. This was carried out by exploring several hypotheses that will now be examined in turn and explanations for these findings considered in the context of literature reviewed in Chapters 1-3.

6.2. Perfectionism

It was hypothesised that participant scores would be higher for self-oriented perfectionism than other-oriented perfectionism, in line with existing research (e.g. Chang, 2006; Flett *et al.*, 2003; Scott, 2007). For explicit measures, this hypothesis was supported and significant differences between MPS-Self and MPS-Other scores were observed, with 'self' scores significantly higher than 'other' scores. Thus, participants reported higher levels of perfectionistic striving and increased setting of excessively high achievement goals, for the *self* as opposed to for others. In addition, MPS-Self scores were significantly positively correlated with MPS-Other scores; indicating that participants high in self-oriented perfectionism were also more likely to report higher

levels of perfectionism for others. This fits the theory that 'self' is the reference point from which perceptions and attitudes towards others originate (Sullivan, 1947). Therefore if an individual's relation with themselves is largely critical and perfectionistic, this appears to promote perfectionistic evaluations of other people.

On the IRAP task, significant differences between 'self' and 'other' scores were also observed, with scores for self-perfectionism significantly higher than perfectionism for others. This was reflected by participants confirming self-perfectionistic tendencies significantly more quickly than they were denied; and denying other-perfectionistic tendencies more quickly than they were confirmed. In terms of association between implicit P-Self and P-Other scores, the two dimensions were observed to be *non*-significantly correlated. For these measures to reflect the association observed between explicit 'self' and 'other' scores, a significant *negative* relationship in terms of *D*-IRAP scores would be expected. The lack of a significant association suggests that implicit 'self' and 'other' perfectionism scores were not generally *related*. As such, an individual high in perfectionism for the self might also be high in perfectionism for others, but equally they might be low in perfectionism for others. These findings will be explored in terms of relational frame theory in Section 6.5.

Furthermore, it was hypothesised that explicit scores for self-perfectionism and other-perfectionism would *not* be associated with their implicit counterparts. This hypothesis was supported, as participant scores on explicit measures were *not* significantly related to their equivalent scores on implicit measures. For example, when MPS-Self and P-Self

scores were compared, no association was discovered. This appears to reflect that what individuals report they believe and what the IRAP task suggests they believe are unrelated; potentially fitting with theories outlined in Chapter 3 regarding 'immediate' and 'elaborated' relational responding (Barnes-Holmes *et al*., 2010). Again, this will be explored further below.

In summary, self-perfectionism scores were higher than other-perfectionism scores on both explicit and implicit measures. Significant differences between these scores were observed for both explicit and implicit measures; however only *explicit* measures demonstrated significant associations between the two dimensions. Implicit self-perfectionism and other-perfectionism were *not* significantly related. Finally, explicit self-perfectionism and other-perfectionism scores were not related to their equivalent implicit scores.

6.3. Acceptance

Preliminary exploratory analyses highlighted two potential confounding variables in terms of explicit acceptance of others scores. These were participant sex and course studied. A significant difference was observed between AOS-R-T scores and participant sex, with females reporting significantly higher acceptance of others than males. In addition, when uneven sample sizes were taken into account, individuals studying clinical psychology were found to be significantly more accepting of others than all other participants. As such, these two factors were controlled for in all analyses involving explicit acceptance of others. Interestingly, in the '75% accuracy' dataset no

covariates were observed to impact on implicit acceptance of others scores. Whilst this might be due to the reduced sample size within this group; it may also be explained by a tendency for participants who are female or studying clinical psychology to report higher acceptance of others than implicit measures suggest actually exist. Possible explanations for this will be explored in Section 6.5.

In terms of acceptance for self and others, it was hypothesised that scores would be higher for acceptance of others than for self-acceptance; in line with existing research (e.g. Berger, 1952; Fey, 1954; Suinn, 1961). For explicit measures this hypothesis was supported and significant differences between 'self' and 'other' acceptance scores were observed, with AOS-R scores significantly higher than USAQ scores. Furthermore, AOS-R-T scores were significantly positively correlated with USQAQ-T scores; indicating that participants high in other-acceptance were also more likely to report higher levels of self-acceptance. This would again fit with the theory of 'self' as the reference point from which perceptions and attitudes towards others originate (Sullivan, 1947); thus the two dimensions are significantly associated.

However, on the IRAP computer task no significant differences were observed between participant response times for self-accepting and other-accepting beliefs. A small tendency for individuals to deny self-acceptance more quickly than it was confirmed and confirm acceptance of others more quickly than it was denied was observed; however these tendencies were not statistically significant. The contrast between implicit and explicit observations appears to suggest that what individuals report they believe in

terms of 'self' and 'other' and what the IRAP task records as their beliefs, are somewhat dissimilar. This would fit with theories regarding 'immediate' and 'elaborated' relational responding (Barnes-Holmes *et al*., 2010). Along with the lack of significant differences between A-Self and A-Other scores, the two were also observed as *not* significantly associated with each other. This means that participants with increased acceptance of others might equally be low or high in self-acceptance. This suggests that an individual's self-accepting network of verbal relations is not strongly related to their verbal network involving acceptance of others, which again is outlined further below.

Finally, it was hypothesised that explicit and implicit scores for self-acceptance and other-acceptance would not be associated. This hypothesis was supported as participant scores on explicit measures were *not* significantly related to their equivalent scores on implicit measures. For example, when USAQ-T and A-Self were compared, no associations were found. Again, this reflects the lack of an association between what individuals report they believe and what the IRAP task records, which could be down to participants altering their beliefs in order to appear more accepting. This is explored further in Section 6.5.

In summary, other-acceptance scores were significantly higher than self-acceptance scores on explicit measures. For implicit measures the difference between self and other scores was *not* significant. In addition, only *explicit* measures demonstrated significant associations between the two dimensions. Implicit self-acceptance and other-acceptance

scores were *not* significantly related. Finally, explicit self-acceptance and other-acceptance scores were not related to their equivalent implicit scores.

6.4. Perfectionism and Acceptance

A number of hypotheses explored the interaction between perfectionism and acceptance for the self and other in further detail. Firstly, it was hypothesised that self-oriented perfectionism would be *negatively* correlated with self-acceptance on explicit measures. This hypothesis was supported, as MPS-Self was found to be significantly negatively associated with USAQ-T; suggesting that participants who were highly self-perfectionistic were more likely to also be low in self-acceptance and vice-versa. This provides further evidence to support the theory that dimensions of perfectionism are generally associated with lower levels of self-acceptance (Ellis, 2002; Flett *et al*., 2002). The origin of this association is difficult to ascertain, however as Scott (2007) proposed, both a *developmental* and an *operational* approach are possible at different stages in the lifecycle. In the former, perfectionism would be adopted as a means to overcome low self-acceptance; and in the latter, striving behaviours and maladaptive self-evaluations would lower self-acceptance, given that perfection is rarely attainable.

Secondly, it was hypothesised that perfectionism for others would be negatively associated with acceptance of others on explicit measures. This hypothesis was also supported, as MPS-Other was found to be significantly negatively associated with AOS-R-T. Thus, individuals who were highly perfectionistic towards others were more likely to also be less accepting of others and vice-versa. In theory, these tendencies might

develop alongside self-perfectionistic and self-accepting tendencies given the observations made above. For example, an *operational* origin might propose that an individual first relates the high standards they have for themselves to others, finds that others are unable to meet them and therefore becomes less accepting of other people. A *developmental* origin might involve an individual setting high standards for other people as an attempt to overcome their low acceptance of others, which is based on developmental experiences and is related to their own low self-acceptance. The idea that an individual *either* internalises *or* externalises their perfectionistic tendencies (Flett & Hewitt, 2002) was not supported, as the significant association between relating high standards to the 'self' and to 'others' suggests that *both* internalisation and externalisation occurs.

In terms of implicit perfectionism and acceptance scores, a significant positive association was observed between P-Self response times and A-Self response times; contrasting with the significant *negative* relation observed for explicit measures. This will be explained in the context of relational frame theory in the section below and suggests a significant relation between 'self' framing for both perfectionism and acceptance; thus reaction times were associated. In addition, P-Other was significantly positively correlated with A-Self; however P-Other and A-Other demonstrated no significant interaction. This suggests that where no preference between confirming or denying perfectionistic and accepting relations was observed, reaction times were associated. However; the lack of significant associations with A-Other scores, where no

significant preference was also observed, means this result could be something of a chance finding.

6.5. Findings in the Context of Relational Frame Theory

Several findings have been outlined thus far that would benefit from further explanation in terms of relational frame theory (RFT; Hayes *et al*., 2001). This section will now review these findings and provide a potential understanding of the results observed in this research. The first observation relates to 'self' and 'other' perfectionism scores, which were found to be significantly different and were also non-significantly associated; contrasting with explicit findings. This was reflected by participants confirming self-perfectionistic tendencies significantly more quickly than they were denied; denying other-perfectionistic tendencies more quickly than they were confirmed; and these two response times being non-significantly related to each other. An RFT explanation for this difference in scores and the lack of significant association is provided by thinking about 'framing' relating perfectionistic words to both 'self' and 'other' (Blackledge, 2003).

The increased speed with which 'self' and perfectionistic words (e.g. exacting, demanding, etc.) were *confirmed* indicates more established relational framing linked these elements than 'other' and perfectionistic words, as it took participants *longer* to confirm this latter relation. Exploring this further; when required to press the 'no' response key to 'self' and perfectionistic words, participants responded more slowly, as in theory they had to 'override' the reinforced network in order to *disconfirm* the relation

between the elements presented (Barnes-Holmes *et al.*, 2006). Again, thinking about the response strength of different elements via relational framing; the relation between 'other' and perfectionistic words was denied more rapidly than it was confirmed, as for the average participant, a network linking these elements was less well established. Thus, it took longer to press the 'yes' key to confirm this relation, as it was less well reinforced by previous learning experiences. In addition, aspects of *equivalence* (Blackledge, 2003) on this network allowed 'perfectionist' to be associated with words such as 'exacting', 'demanding', 'idealistic' and 'pedantic'. This was likely due to individuals' prior experience in relating these words during their learning of the English language; and their use of these words in contexts (Blackledge, 2003). Thus, the response strength between these elements of relational networking was greater than the *incongruent* elements of relating.

Furthermore, the lack of association observed between implicit measures of 'self' and 'other' perfectionism suggests that an individual's network of verbal relations for self-perfection is not strongly related to their verbal network involving perfection for others. In this manner, the properties defining 'self' and the average 'other', or their qualities and functions in relation to perfectionism, are regarded as *non*-equivalent (Blackledge, 2003). Thus the different 'frames' of elements activated are non-significantly related. This contrasts with explicit findings where a significant association between self-oriented and other-oriented perfectionism was observed. Implicit scores for perfectionism were *not* associated with their counterpart explicit scores; providing further evidence that what individuals reported and what the IRAP task measured were

apparently somewhat different. One possible explanation for this disparity would fit with theories outlined in Section 3.4 regarding 'immediate' and 'elaborated' relational responding (Barnes-Holmes *et al.*, 2010). This means that when participants were given longer to think about their responses, they were more likely to report carefully considered and socially acceptable beliefs. The IRAP taps into 'immediate' relational responding, as participants were required to respond within 2000ms of trials appearing onscreen. As such, they were unable to monitor their responses and they were based on uncensored beliefs regarding the relations presented. Alternative explanations for the disparity between explicit and implicit measures will be discussed in Section 6.8. The next question concerns reasons as to why participants would alter the levels of self and other perfectionism reported explicitly. It is unclear whether beliefs were over or under-reported on explicit measures; however it appears some consistency was employed in the responses given, in order for 'self' and 'other' beliefs to be significantly associated. As such, the process by which the MPS (Hewitt & Flett, 1991) was completed may have impacted on reported scores. It may be that perfectionistic individuals were concerned about giving the 'right' answers and thus did more checking back on their previous answers to ensure they were being consistent, before responding to the question asked. This might explain the association that was observed between explicit measures of self-oriented and other-oriented perfectionism, as this scale mixes up both dimensions on the one questionnaire (Hewitt & Flett, 1991). In addition, this likely meant that participants took longer to think about their answers and thus different elements appeared in their relational frame, blurring what might be considered their *actual* beliefs. It would be

interesting to note questionnaire completion times in future research, in order to determine whether this theory is supported.

The observed difference between explicit and implicit perfectionism scores may also be down to individual self-reflective capacities. As Nisbett and Wilson (1977) noted, human introspection is rather fragile; and to a certain extent it depends on an understanding of other's tendencies in relation to one's own, so that 'more' or 'less' comparisons can be made. Thus when deciding how much they agreed or disagreed with a statement, participants may have reflected on their own experiences of others; which undoubtedly might be subject to bias depending on the social networks an individual has encountered. Thus, a perfectionistic individual who believes that someone they know is *more* perfectionistic may subsequently under-report their own scores given this relational comparison. In addition, participants whose self-reflective capacity is rather limited may have under or over-reported scores; given a lack of insight regarding their actual beliefs.

Finally, whether or not perfectionism is a quality *valued* by participants, or their peers, may have skewed the scores they reported. Given that humans are social beings who seek to form connections with others to avoid isolation (Cacioppo & Patrick, 2008), it could be that participants under or over-reported beliefs in order to increase their acceptability to others. For many individuals, perfectionism for the self can be a positive thing as it shows an individual cares about something and will work hard to get things right (Blankstein & Dunkley, 2002). Whether this be raising a child, or tiling a

bathroom; the ‘finished’ product might mean individuals are regarded more highly by others for their abilities. Conversely, experiences where an individual receives negative feedback for “trying too hard” might mean they attempt to hide their perfectionistic tendencies. This is particularly true during the school years when social evaluations and acceptance by peers becomes immensely important (Parker & Gottman, 1989). Perfectionistic individuals may stand out as high achievers, which could lead to envy from their peers. In order to avoid the derogatory labels that accompany being singled out (e.g. “swot”), individuals may thus attempt to hide their desire for perfection in order to reconnect with others. Furthermore as young adults, free-spiritedness and flexibility might be regarded as more desirable than rigidity and competitiveness; thus perfectionism may again be hidden. The standards an individual has for the ‘self’ may also be perceived as the standards they possess for others and so in order to appear more amenable to others, perfectionistic tendencies may be covered up. These reasons could explain the difference in scores reported by participants and those recorded by the IRAP.

Regarding self-acceptance and the acceptance of others; scores were significantly different for explicit measures, with reported acceptance of others significantly higher than reported self-acceptance. However for implicit measures, no significant differences were observed between response times for A-Self and for A-Other. This suggests that participants were equally as accepting of themselves as they were of others. In RFT terms, this indicates that a network relating ‘self’ and accepting words (e.g. tolerant, forgiving, patient, etc.) is not any more established than a network relating ‘other’ and accepting words. As when required to confirm or deny relations; the ‘yes’ and ‘no’

response keys were pressed at very similar rates. Thus, 'yes' was not pressed more quickly (which would indicate highly reinforced relational responding); and 'no' was not pressed more slowly (which would indicate the 'overriding' of an established relational response) and vice-versa.

In terms of implicit relations, A-Self was *not* significantly associated with A-Other, contrasting with explicit findings. According to RFT, this suggests that the average participant's network of self-accepting verbal relations is not strongly related to their verbal network involving acceptance of others (Hayes *et al*., 2001). Thus 'self' and 'other' in relation to accepting words were not highly associated. Furthermore, acceptance for self and for others on explicit measures was *not* significantly related to the equivalent score on implicit measures, providing evidence in support of Hypothesis 5. This again draws attention to the observed difference between what participants reported as their beliefs and what the IRAP task recorded; fitting with theories regarding 'immediate' and 'elaborated' relational responding (Barnes-Holmes *et al*., 2006). Possible reasons for this difference will now be explored in relation to acceptance of self and others.

One potential explanation for the difference in explicit and implicit findings might be that individuals reported more acceptance of others than the IRAP task suggests actually exists. This was first noted in relation to the significant difference between the interaction of covariates with the explicit and implicit data. Namely, participant sex and course studied were highlighted as potential confounding variables for AOS-R-T scores;

and female participants, along with those studying clinical psychology, were identified as reporting greater levels of acceptance of others. Whilst appearing to be more accepting of others has been highlighted as a strategy to overcome low self-acceptance (Fey, 1955); females and clinical psychology students in this study did *not* present with lower self-acceptance levels. Thus another explanation must be sought to account for differences between implicit and explicit findings. As touched on in Chapter 2, increased acceptance of others may be a way of promoting *sociability* via acceptance *by* others. This aid to sociability could be particularly important for females who are generally thought of as more sociable than males; something Baron-Cohen (2003) attributes to the female brain predominately being 'hard-wired' for empathy. As such, appearing more accepting of others (whether a conscious or subconscious strategy) may enable females to form friendships with others who value their openness and warmth.

Furthermore, an extension of this sociability explanation may be the factor enabling clinical psychology students to form successful relationships with their patients. These patients are individuals who have frequently experienced significant interpersonal adversity and a lack of acceptance by others, given their early developmental environments (Flett & Hewitt, 2002). Thus, clinical psychology trainees who appear highly accepting of others might be viewed as more understanding, supportive and trustworthy by their patients. This in turn means patients may feel more able to share their underlying vulnerabilities and 'core pain', which they might otherwise feel unable to do. It is the identification of this pain and the often unhelpful defences employed to prevent it surfacing that represents the focus of change for a number of psychotherapy

models. Indeed, Rogers (1951) believed this 'unconditional positive regard' was essential for any therapeutic relationship and without it, personal growth for patients was almost impossible. As such, differences between 'immediate' and 'elaborated' relational responding may exist for clinical psychology students, given their own developmental experiences. However, as long as their delayed and considered responding reflects this increased acceptance of others; this essentially is the requisite of a therapist. Indeed, individuals completing the clinical psychology programme receive explicit training and support in developing their ability to accept others and keep an open mind; therefore these relational responses are well established. This 'sociability' and 'rapport' theory may therefore help to explain the elevated levels of acceptance of others reported by female participants and those studying clinical psychology.

Potential reasons for under or over-reporting self-acceptance beliefs may again involve sociability. Participants who were low in self-acceptance may have over-reported their beliefs in order to present themselves as more attractive to others, believing that confidence is appealing to others (Robinson *et al*., 1995). Conversely, individuals may have under-reported their beliefs, given that society tends to value modesty and humility as opposed to arrogance (Leary, 1996). Therefore participants who were actually high in self-acceptance may have consciously or subconsciously chosen to appear less accepting as a mechanism to draw people in.

When looking at the implicit relationship between perfectionism and acceptance scores, a significant *positive* association was observed between P-Self response times and A-

Self response times. As outlined above, this suggests the response strength of relational elements when 'self' is the perspective taken might be similar for both perfectionism and acceptance. Thus, it took a similar amount of time for participants to respond to 'self' and 'perfectionist' relations, as it did to respond to 'self' and 'accepting' relations. This contrasts with the significant *negative* correlation observed between explicit self-perfectionism and self-acceptance scores; and again may be explained by the under or over-reporting of beliefs.

6.6. Perfectionism, Acceptance and General Health

Secondary aims of the research included exploring the interaction between general health and perfectionism and acceptance for the self and others. Significant correlations were observed between all explicit measures and general health. MPS-Self and MPS-Other were significantly positively correlated with GHQ-T; suggesting that increases in perfectionism for the self or others meant participants' general health was likely to decrease (higher scores indicate more distress). In terms of these scores predicting variation in GHQ-T, other-oriented perfectionism was observed to predict 9% of the variation, whereas self-oriented perfectionism predicted only 4%. This finding contrasts with the majority of research in which self-oriented and other-oriented perfectionism display similar levels of association with psychological distress, with MPS-Self just slightly the better predictor (e.g. Flett *et al*., 2003; Scott, 2007, etc.). Indeed, several authors (Hollender, 1965; Hunter & O'Connor, 2003) suggest other-oriented perfectionism is *rarely* associated with depression, putting this down to a decreased focus on the self. Possible reasons for this difference might include the association

between 'self' and 'other' explicit measures of perfectionism, with self-oriented perfectionism typically higher than other-oriented scores. As such, it may not have been the interaction of MPS-Other alone that predicted depression; but that participants reporting higher levels of this dimension were also likely to present with even higher levels of MPS-Self and this combination may account for the increasingly significant association observed. Whereas MPS-Self on its own generally indicated lower levels of MPS-Other; levels that were perhaps too low to add to the interaction with GHQ. This interaction was subsequently explored and other-oriented perfectionism remained significantly positively associated with GHQ-T when self-oriented perfectionism was controlled for. However; MPS-Self became non-significantly correlated with GHQ-T when MPS-Other was added as a covariate. Thus, the idea that interactions between the dimensions of perfectionism led to other-oriented perfectionism being the better predictor of psychological distress, was not supported. As such, it appears that individuals in this study presenting with higher levels of self-oriented perfectionism did not regard it as a negative attribute and instead considered it an adaptive trait. Other-oriented perfectionism was the greater predictor of psychological distress and this finding was perhaps due to the increased impact of this dimension on social relations (Flett & Hewitt, 2002).

Lower levels of self-acceptance were found to be the biggest predictor of psychological distress, accounting for 21% of the variation in GHQ-T scores. In addition, acceptance of others was significantly *negatively* associated with GHQ-T; accounting for 5% of the variance in scores when course studied and participant sex were controlled for.

Thus, acceptance for the self had a much larger impact on general health than perfectionism for the self. Again, this fits with existing research highlighting the importance of self-acceptance in the field of mental health and psychological distress (e.g. Dobson *et al*., 2008; Chamberlain & Haaga, 2001; Wilson, 1996). Self-acceptance was not examined as a mediator of psychological distress in this study, however findings indicate that increasing self-acceptance is likely to significantly reduce levels of distress.

For the IRAP task, no significant associations were observed between GHQ-T and implicit measures of perfectionism and acceptance. This fits with findings thus far highlighting a lack of association between *all* explicit measures and scores on the IRAP task. This is potentially explained by the idea that the 'framing' an individual carries, based on their previous learning experiences, has no *direct* influence on their current behaviour and subsequent thoughts and feelings. The important factor might be the extent to which an individual translates this framing into behaviour and what impact this then has on their lives. Although if this were the case, it might be expected that some correlation would be observed between the 'framing' (measured by the implicit task) and the resulting behaviours (captured by explicit measures). Perhaps the degree to which different individuals allow automatic responding to influence their lives varies hugely and as such, no association is apparent. For some participants a general lack of insight might mean their ability to self-monitor feelings and emotions, as captured by the GHQ, is affected. Thus, they might be high in self-oriented perfectionism, report low levels of the construct and additionally report low levels of distress. The next individual might be low in self-oriented perfectionism, report low levels of the construct and also

low levels of distress. Finally, a third individual might be low in self-oriented perfectionism, report high levels of the construct and high levels of distress. Thus, the relation between explicit reporting and GHQ is consistent; however the relation between implicit measures and GHQ is somewhat unpredictable.

In the above example, the latter individual's explicit responding might be influenced by their higher level of psychological distress. Thus, participants whose current psychological health was poor might have been more likely to rate themselves 'harshly' by over-reporting perfectionism scores, if they regarded this as a negative quality. This could be particularly true for reported levels of other-oriented perfectionism, which demonstrated greater association with depression than self-oriented perfectionism. As such, individuals high in psychological distress may have over-reported how harsh they were on others, given the distorting influence of distress on their thoughts and beliefs (Frijda *et al*., 2000). Conversely other individuals may have behaved differently, which potentially accounts for the lack of an association observed between all implicit measures and GHQ-T scores.

6.7. Clinical Implications

The findings observed in this research have potentially important implications in the field of mental health. For many years, therapeutic techniques centred around attempting to reduce individuals' perfectionistic standards and beliefs in order to overcome psychological distress. This 'change' strategy frequently resulted in poor outcomes, as it was incredibly difficult for perfectionistic individuals to 'give up' their perfectionism,

due to it being the only means by which they felt acceptable (Frost *et al*., 1995). However, in recent decades the idea that self-acceptance can act as a mediator between perfectionism and distress relations has subtly changed the focus of therapy (Gilbert, 2010; Hayes *et al*., 1999). Thus, promoting self-acceptance is now believed to be the key to overcoming psychological distress; and the therapeutic relationship is frequently considered the means by which an individual can learn to be self-accepting, given the model of acceptance *by* others they receive. This change in focus was supported by explicit findings in the current research, as low levels of self-acceptance were identified as the biggest predictor of psychological distress. This new slant is also thought to be more acceptable to patients, as it involves adding something *new* to their repertoire rather than attempting to change what already exists. This is particularly important for perfectionists who might view the need for 'change' as an indication that they are imperfect to begin with (Flett & Hewitt, 2002). Thus, increasing self-acceptance may in turn reduce perfectionistic striving as patients no longer rely so completely on this for feelings of self-worth.

The lack of association between explicit and implicit levels of perfectionism and acceptance in this study also highlights the disparity that could exist between reported beliefs and 'underlying' beliefs in the therapeutic setting. Whether explicit beliefs are under or over-reported is not clear; however this could affect the approach taken during therapy. In cases where distress is experienced due to the *under*-reporting of self-perfectionistic or *over*-reporting of self-accepting tendencies; the task might be to help individuals improve their capacity for self-reflection and 'mentalization' (Fonagy *et al*.,

2002), in order to develop an integrated sense of self. These techniques may also improve empathy and allow interpersonal relating to improve. In addition, the *over*-reporting of acceptance of others may cause difficulties for individuals if they constantly subjugate their own needs in order to accept and meet the needs of others (Young *et al*., 2003). Thus, the task of therapy might be to limit other-accepting and 'pleasing' tendencies in order for individuals to meet their own needs, whilst promoting acceptance of this new 'self' relational framing.

In terms of forming a therapeutic relationship; as touched on above, individuals with poor self-acceptance who have a history of receiving very little acceptance from others, may be more wary at the beginning of therapy. This could be down to the impact of 'framing' on the belief that they will once again be judged and evaluated in this new setting; thus their wariness is a means of self-protection. Such individuals tend to use more *avoidant* defences (e.g. repression, withdrawal and denial) in coping with psychological conflict and distress (Blatt & Zuroff, 2002) and may subsequently end up dropping out of therapy. However, it could be said these are the individuals who would benefit most from therapeutic input, as their ability to form healthy relationships in other contexts of their life is no doubt also impaired.

Implicit findings in this research may also draw into question the ability of *one-off* 'perspective taking' techniques to promote change in cognitive therapy (Beck, 1976). Self-accepting networks of verbal relations were observed as *not* strongly related to networks involving the acceptance of others. Thus, when patients in a clinical setting are

asked “what would you say to a friend who felt this way?” this could activate ‘other’ relating elements which are somewhat different from the relating elements activated when ‘self’ framing occurs. This technique would need to be used repeatedly and explored fully each time, in order for elements relating to the ‘other’ to become strengthened in relation to the ‘self’.

In terms of the lack of association between explicit and implicit acceptance of others scores, the current research also provides important information for clinical psychology teaching programmes. Findings indicate there is a need for trainees to learn how to sit with their ‘immediate’ relational responses to patients and not allow these to drive their subsequent behaviour. This demonstrates the value of *experiential* work during the course of training in allowing individuals to develop their empathic ‘elaborated’ responding; thus improving their rapport with patients.

6.8. Limitations

This study makes an important contribution to the literature exploring the relationship between perfectionism and acceptance for self and towards others, as the constructs up until this point have not been explored implicitly. However, when interpreting the findings it is important to acknowledge some of the limitations regarding this novel approach. In terms of the IRAP task, the numbers of participants unable to maintain at least 75% accuracy during test blocks was rather large. Five individuals were unable to progress on to the test blocks and of those that did, 37 sets of data had to be discarded due to the accuracy of responses falling below 75%. This represents 42% of the sample

that were unable to complete the IRAP task and as such it is important to explore potential reasons for this.

Barnes-Holmes and colleagues (2006) recommend participants maintain an 80% accuracy level throughout test blocks; although researchers have also been known to drop this level to 70% (Vahey *et al.*, 2009). In consultation with the author of the software (Barnes-Holmes, 2010), it was decided the accuracy level would be held at 75%, in order to include as many datasets as possible whilst upholding the reliability and validity of the task. However, this still resulted in a larger number of participants being removed from the sample than most studies report. It therefore appears the IRAP task in the present research was rather complex and one reason for this might be the selection of words entered into the software. Words such as 'pedantic' and 'meticulous' were potentially not commonly recognised by participants, or at least were perhaps not encountered frequently enough for reinforced learning to take place. This may have affected the immediate relational responding required during the task; and in order to meet latency constraints, the accuracy of participant responses might have suffered. Words typically used in IRAP research include 'good' and 'bad', which are more common in the English language and as such, may be processed more quickly in terms of activating relational responding. Perhaps the complexity of words entered into the IRAP software required greater processing in order to activate the relevant relating networks, which was not possible in the 2000ms time limit. As such, this may not only explain why a large number of participants were unable to maintain response accuracy on the task, but it also calls into question the validity of results gained when this

accuracy level *was* maintained. It could be that extraneous variables such as IQ or processing speed allowed participants success with this task and perhaps the IRAP as a true measure of relational responding was subsequently affected.

Furthermore, participant debriefing highlighted the fact that 'idealistic' was frequently interpreted as a 'positive' word and thus incorrectly grouped with the *accepting* list. This confusion adds to the theory that perhaps extra time was required to process the meaning of the complex words used in this task. As such, the 2000ms response latency required during practice and test blocks should perhaps be adjusted for more complex stimuli preparations. In addition, changes could have been made to the initial stage of word selection for the IRAP, as some analysis of response latencies at this point may have altered the final shortlist of words chosen.

Another factor potentially limiting the findings reported thus far is the use of an *unspecified* 'other'. Karpinski (2004) investigated the role of the other in measuring self-esteem using the Implicit Association Test (IAT) and found that a specified close 'other' changed not only the degree of positive other-associations, but also affected positive self-associations made. So that a close other (e.g. a best friend) was more positive than an unspecified other; and furthermore, the use of a close other meant that 'self' and 'positive' responses were slower. Thus, the object of comparison affected the self-associations that were made. This research was indentified prior to the current IRAP task being set up; however it was decided that in terms of perfectionism, individuals could be more perfectionistic for those close to them and perhaps more accepting of individuals

they have no relation with, given the extent to which they are affected by the actions of the 'other'. Although, Suinn (1961) does suggest that the greater the *similarity*, the more accepting an individual is of others. Furthermore, the 'other' in explicit questionnaires was unspecified and in order to match this approach, it was decided to use a 'general' other in the IRAP task. Participants were directed in the initial instructions to think *generally* about others and not about one person in particular, in attempt to overcome the influence of an identified 'positive' or 'negative' other. However, it is not possible to know what impact this had on the final results and further research exploring the influence of a 'close', 'unspecified', 'positive' and 'negative' other would assist in identifying this as a potential variable confounding findings on the IRAP.

In terms of the concepts under investigation, their potential impact on IRAP task performance may affect the interpretation of the results gained. For example, self-oriented perfectionists are known to engage in more all-or-nothing thinking and have a tendency to over-generalise failure, meaning that minor events are often perceived and responded to as though they are major stressors (Hewitt & Flett, 1993). Thus, when a red 'X' appeared onscreen following an incorrect response, participants who were more perfectionistic may have been unable to let this go and it could have affected performance on the rest of the block; explaining the accuracy levels observed. Conversely, it might be that individuals who were low in perfectionism or high in self-acceptance did not possess the motivation required to complete the complex task successfully. Either way, the '75% accuracy' dataset may have consisted of a participant sample that was to some degree biased.

In addition, being presented with perfectionist-type words might have induced performance anxiety regarding the task for both perfectionistic and non-perfectionistic individuals. Mednick (1957) demonstrated that anxiety is likely to *increase* the degree of stimulus generalisation, meaning that an individual regards both the 'self' and 'other' as similar. In RFT terms, this could mean that anxiety causes an individual to become stuck in a 'self' relational frame and it might be difficult to incorporate new elements and form new frames, in the presence of anxiety. Thus the 'self' becomes the centre of all relations presented and this could explain the lack of significant results on the IRAP when 'other' relations appeared onscreen. Anxiety could mean that 'self' was first activated during screen presentations and thus response times were insignificant in confirming or denying 'other' relations, as *both* responses required extra time for 'other' framing to be incorporated. Thus performance anxiety, particularly given the complexity of the task, may have affected the results gained. These observations may limit the interpretation of findings from an implicit perspective and it could therefore be that explicit results more accurately reflect an individual's underlying beliefs.

Limitations in the explicit data include the uneven male-female split across course studied. It may be that significant differences between male and female acceptance of others scores was primarily explained by the course participants studied. The majority of female participants were studying clinical psychology, linguistics and psychology courses and the majority of males studied science and 'other' courses. A more equal split between males and females across each course would have allowed the true impact of participant sex to be explored further. Indeed, it may be that certain personality 'types'

study particular courses, or equally that the course an individual studies has an impact on their personality; in that perfectionism and acceptance are valued to greater or lesser degrees. Therefore separating out the impact of course studied and participant sex would allow more clarity regarding differences in acceptance of others scores.

Finally, as this research was exploratory in design a student sample was used to initially examine the hypotheses. Findings are therefore limited in terms of their generalisability to wider populations. The sample consisted of undergraduate and postgraduate students, covering a wide age range; however further research with a clinical population is necessary before the implications discussed in Section 6.7 can be supported.

6.9. Conclusions and Future Directions

This research examined associations between perfectionism and acceptance both for the self and towards others; and their link with psychological health. Reported beliefs were compared with implicit beliefs and findings were largely consistent with the experimental hypotheses presented. Medium to large effects were observed for all hypotheses. On explicit measures, higher levels of self-oriented perfectionism were significantly associated with lower levels of self-acceptance. The latter construct was also found to be the biggest predictor of psychological distress. This provides further support for the move towards acceptance-based strategies in the treatment of clinical perfectionism, rather than directly targeting excessively high standards. The significant difference observed between explicit self-acceptance and acceptance of others was not supported by the IRAP task; suggesting that participants either under-reported self-

acceptance levels or over-reported their acceptance of others. Possible reasons for this were discussed. In addition, all explicit measures demonstrated no significant association with implicit findings. Limitations of the IRAP were thus explored; however, given that a significant pattern of responding was observed on this task, it is unlikely that findings are purely attributable to chance. Participant responses on explicit measures are also likely to reflect 'perceived' self, given the significant patterns observed. As such, it appears that individuals' responses to these assessment tasks were driven by different processes.

Suinn (1961) reported that on measures of 'self' and 'other' acceptance; the younger the sample, the lower the correlation between the two perspectives. This contrasted with the significant correlations observed in all older age groups at the time (e.g. Fey, 1954; Williams, 1962). It could therefore be that these contrasting findings are explained by individuals' developing ability to *inhibit* immediate relational responding and instead form carefully considered responses, based on societal values and increasing levels of empathy. Indeed, in relation to the under-reporting of self-acceptance, Bennett and Yeeles (1990) provided a tentative indication that the ability to recognise the value of *modesty* emerges at approximately 8 years of age. As such, it is perhaps possible for an individual to possess two alternative responses to the same stimulus. Both responses could be considered equally 'accurate' as one might reflect developmental experience and the other current adaptive functioning. It therefore appears to be the extent to which an individual allows relational responding to influence their behaviour that provides an indication of their beliefs at a particular moment in time.

The findings reported here provide a number of directions for future research. Firstly, as highlighted, in order to better understand the clinical implications of this research, the hypotheses might be explored in further investigations with a clinical participant sample. Secondly, the 'specific' versus 'generalised' theory of perfectionism (Flett & Hewitt, 2002) could potentially have affected relational responding on the IRAP task. It may be that an individual is perfectionistic in some areas of their life and yet does not have the same standards in others. Specifying the *context* in which an individual's perfectionistic tendencies are present (e.g. at work or at home) during the IRAP task may therefore prove interesting; and might help to clarify further the results observed. Finally, as previously outlined, further research exploring the influence of a close, unspecified, positive and negative 'other' would assist in identifying whether the unspecified 'other' used in this research was a variable that confounded findings on the IRAP.

REFERENCES

Adler, A. (1926). *The Neurotic Constitution*. New York: Dodd Mead.

Adler, A. (1956). The neurotic disposition. In: Flett, G.L. & Hewitt, P.L. (2002) *Perfectionism: Theory, Research and Treatment.* Washington DC: American Psychological Society.

Albarracin, D., Johnson, B.T. & Zanna, M.P. (2005). *The Handbook of Attitudes*. Mahwah, NJ: Lawrence Erlbaum Associates.

Andersson, P. & Perris, C. (2000). Attachment styles and dysfunctional assumptions in adults. *Clinical Psychology and Psychotherapy, 7*, 47-53.

Antony, M.M., Purdon, C.L., Huta, V. & Swinson, R.P. (1998). Dimensions of perfectionism across the anxiety disorders. *Behaviour Research and Therapy, 36,* 1143-1154.

Bandura, A. (1986). *Social Foundations of Thought and Action: A Social Cognitive Theory*. Englewood Cliffs, NJ: Prentice Hall.

Bandura, A. & Kupers, C.J. (1964). Transmission of patterns of self-reinforcement through modelling. *Journal of Abnormal and Social Psychology, 69,* 1-9.

Barnes, D. & Roche, B. (1996). Relational frame theory and stimulus equivalence are fundamentally different: A reply to Saunders. *The Psychological Record, 46,* 489-508.

Barnes-Holmes, D. (2010). Personal email correspondence regarding accuracy levels in the Implicit Relational Assessment Procedure.

Barnes-Holmes, Y. Barnes-Holmes, D., McHugh, L. & Hayes, S.C. (2004). Relational Frame Theory: Some implications for understanding and treating human psychopathology. *International Journal of Psychology and Psychological Therapy, 4*(2), 355-375.

Barnes-Holmes, D., Barnes-Holmes, Y., Power, P., Hayden, E., Milne, R. & Stewart, I. (2006). Do you really know what you believe? Developing the Implicit Relational Assessment Procedure (IRAP) as a direct measure of implicit beliefs. *The Irish Psychologist, 32,* 169-177.

Barnes-Holmes, Y., Barnes-Holmes, D., Roche, B., Healy, O., Lyddy, F., Cullinan, V. & Hayes, S.C. (2001). In: S.C. Hayes, D. Barnes-Holmes, & B. Roche (2001). *Relational frame theory: A post-Skinnerian account of human language and cognition.* New York: Plenum Press.

Barnes-Holmes, D., Barnes-Holmes, Y., Stewart, I. & Boles, S. (2010). A sketch of the Implicit Relational Assessment Procedure (IRAP) and the Relational Elaboration and Coherence (REC) model. *The Psychological Record, 60,* 527-542.

Barnes-Holmes, D., Healy, O. & Hayes, S.C. (2000). Relational frame theory and the relational evaluation procedure: Approaching human language as derived relational responding. In: J.C. Leslie & D.E. Blackman (Eds.). *Experimental and applied analyses of human behaviour* (pp. 149-180). Reno, NV: Context Press.

Barnes-Holmes, D., Murtagh, L., Barnes-Holmes, Y. & Stewart, I. (2010a). Using the Implicit Association Test and the Implicit Relational Assessment Procedure to measure attitudes toward meat and vegetables in vegetarians and meat-eaters. *The Psychological Record, 60,* 287-306.

Baron-Cohen, S. (2003). *The Essential Difference: Men, Women and the Extreme Male Brain*. England: Allen Lane / Penguin Books.

Barrow, J.C. & Moore, C.A. (1983). Group interventions with perfectionistic thinking. *Personnel and Guidance Journal, 61*, 612-615.

Beck, A.T. (1976). *Cognitive Therapy and the Emotional Disorders*. Oxford, England: International Universities Press.

Bennett, M. & Yeeles, C. (1990). Children's understanding of showing off. *Journal of Social Psychology, 130,* 591-596.

Berger, E. (1952). The relation between expressed acceptance of self and expressed acceptance of others. *Journal of Abnormal and Social Psychology, 47*, 778-882.

Blackledge, J.T. (2003). An introduction to relational frame theory: Basics and applications. *The Behaviour Analyst Today, 3*(4), 421-433.

Blankstein, K.R. & Dunkley, D.M. (2002). Evaluative Concerns, Self-Critical, and Personal Standards Perfectionism: A Structural Equation Modeling Strategy. In: Flett, G.L. & Hewitt, P.L. (Eds.), *Perfectionism: Theory, Research and Treatment.* (pp. 285-315). Washington DC: American Psychological Society.

Blatt, S.J. (1995). The destructiveness of perfectionism: Implications for the treatment of depression. *American Psychologist, 50*, 1003-1020.

Blatt, S.J. & Zuroff, D.C. (2002). Perfectionism in the Therapeutic Process. In: Flett, G.L. & Hewitt, P.L. (Eds.) *Perfectionism: Theory, Research and Treatment.* Washington DC: American Psychological Society.

Blatt, S.J., Zuroff, D.C., Bondi, C.M., Sanislow, C.A. & Pilkonis, P.A. (1998). When and how perfectionism impedes the brief treatment of depression: Further analyses of the National Institute of Mental Health Treatment of Depression Collaborative Research Program. *Journal of Consulting and Clinical Psychology, 66*, 423-428.

Bonney, M.E. (1943). The constancy of sociometric scores and their relationship to teacher judgments of social-success and to personality self-ratings. *Sociometry, 6*(4), 409-424.

Borkovec, T.D., Alcaine, O. & Behar, E. (2004). Avoidance theory of worry and generalised anxiety disorder. In: R.G. Heimberg, C.L. Turk & D.S. Mennin (Eds.), *Generalised Anxiety Disorder: Advances in Research and Practice* (pp. 78-108). New York: Guilford Press.

Bugental, J.F.D. & Zelen, S.L. (1950). Investigations into the self-concept: The W-A-Y technique. *Journal of Personality, 18*, 483-498.

Bulwer-Lytton, E.G. (n.d.). Retrieved June 26, 2011, from BrainyQuote.com website: http://www.brainyquote.com/quotes/quotes/e/edwardgbu108889.html.

Burns, D. (1980). The perfectionist's script for self-defeat. *Psychology Today*, November, 34-51.

Cacioppo, J.T. & Patrick, W. (2008). *Loneliness: Human Nature and the Need for Social Connection*. New York: W.W. Norton & Co.

Campbell, C., Barnes-Holmes, Y., Barnes-Holmes, D. & Stewart, I. (in press). Exploring screen presentations in the Implicit Relational Assessment Procedure (IRAP).

Catania, A.C. (1998). *Learning* (4th Edition). Upper Saddle River, NJ: Prentice-Hall.

Chamberlain, J.M. & Haaga, D.A.F. (2001). Unconditional self-acceptance and psychological health. *Journal of Rational-Emotive & Cognitive Behaviour Therapy, 19* (3), 163-176.

Chang, E.C. (2000). Perfectionism as a predictor of positive and negative psychological outcomes: Examining a mediational model in younger and older adults. *Journal of Counseling Psychology, 47,* 18-26.

Chang, E.C. (2006). Perfectionism and dimensions of psychological well-being in a college student sample: A test of a stress-mediation model. *Journal of Social and Clinical Psychology, 25*(9), 1001-1022.

Chang, E.C. & Rand, K.L. (2000). Perfectionism as a predictor of subsequent adjustment: Evidence for a specific diathesis-stress mechanism among college students. *Journal of Counselling Psychology, 47,* 129-137.

Chang, E.C. & Sanna, L.J. (2001). Negative attributional style as a moderator of the link between perfectionism and depressive symptoms: Preliminary evidence for an integrative model. *Journal of Counseling Psychology, 48*, 490–495.

Churchill, W. (n.d.). BrainyQuote.com. Retrieved June 26, 2011, from BrainyQuote.com website: http://www.brainyquote.com/quotes/quotes/w/winstonchu135256.html.

Clark, W., Tiegs, E. & Thorpe, L. (1953). California test of personality: Form AA, Intermediate. Los Angeles: California Test Bureau.

Clayton, T.M. (1995). *Changing organisational culture through relational framing*. Master's thesis available from the library of the University of Nevada, Reno.

Cohen, J. (1988). *Statistical Power Analysis for the Behavioural Sciences* (2nd ed.) Hillsdale, New Jersey: Lawrence Erlbaum Associates, Inc.

Cohen, J. (1992). A power primer. *Psychological Bulletin, 112*(1), 155-159.

Cole, D.A. & Rehm, L.P. (1986). Family interaction patterns and childhood depression. *Journal of Abnormal Child Psychology, 14,* 297-314.

Costa, P.T., Jr., & McCrae, R.R. (1992). *Revised NEO Personality Inventory (NEO PI-R) and NEO Five-Factor Inventory (NEO-FFI).* Odessa, FL: Psychological Assessment Resources.

Crittenden, P.M. (1992). Quality of attachment in the preschool years. *Development and Psychopathology, 4,* 209-241.

Cullen, C. & Barnes-Holmes, D. (2008). Implicit pride and prejudice: A heterosexual phenomenon? In: T.G. Morrison & M.A. Morrison (Eds.), *Modern Prejudice* (pp. 195-223). New York: Nova Science.

Cullen, C., Barnes-Holmes, D., Barnes-Holmes, Y. & Stewart, I. (2009). The Implicit Relational Assessment Procedure (IRAP) and the malleability of ageist attitudes. *The Psychological Record, 59,* 591-620.

Dali, S. (n.d.). BrainyQuote.com. Retrieved June 22, 2011, from BrainyQuote.com website: http://www.brainyquote.com/quotes/quotes/s/salvadorda161820.html.

Dawson, D.L., Barnes-Holmes, D. Gresswell, D.M., Hart, A.J.P. & Gore, N.J. (2009). Assessing the implicit beliefs of sexual offenders using the Implicit Relational Assessment Procedure: A first study. *Sexual Abuse: A Journal of Research and Treatment, 21*, 57-75.

Dean, P.J., Range, L.M. & Goggin, W.C. (1996). The escape theory of suicide in college students: Testing a model that includes perfectionism. In: Hunter, E.C. & O'Connor, R.C. (2003). Hopelessness and future thinking in parasuicide: The role of perfectionism. *British Journal of Clinical Psychology, 42*, 355-365.

De Houwer, J. (2001). A structural and process analysis of the implicit association test. *Journal of Experimental Social Psychology, 37*, 443-451.

De Houwer, J. (2002). The Implicit Association Test as a tool for studying dysfunctional associations in psychopathology: Strengths and limitations. *Journal of Behaviour Therapy and Experimental Psychiatry, 33*, 115-133.

De Houwer, J. (2003). A structural analysis of indirect measures of attitudes. In: J. Musch & K.C. Klauer (Eds.) *The Psychology of Evaluation: Affective Processes in Cognition and Emotion* (pp. 219-244). Mahwah, NJ: Erlbaum.

de Jong, P., Pasman, W., Kindt, M. & van den Hout, M.A. (2001). A reaction time paradigm to assess (implicit) complaint-specific dysfunctional beliefs. *Behaviour Research and Therapy, 39*, 101-113.

Dobson, K.S., Hollon, S.D., Dimidjian, S., Schmaling, K.B., Kohlenberg, R.J., Gallop, R.J. et al. (2008). Randomised trial of behavioural activation, cognitive therapy and antidepressant medication in the prevention of relapse and recurrence in major depression. *Journal of Consulting and Clinical Psychology, 76*(3), 468-477.

Dorian, B.J. & Garfinkel, P.E. (1999). The contributions of epidemiologic studies to the etiology and treatment of the eating disorders. *Psychiatric Annals, 29*, 187-192.

Dryden, W. (1998). *Developing Self-Acceptance: A Brief, Educational, Small Group Approach*. Hoboken, NJ: Wiley.

Dunkley, D.M., Blankstein, K.R., Halsall, J., Williams, M. & Winkworth, G. (2000). The relation between perfectionism and distress: Hassles, coping and perceived social support as mediators and moderators. *Journal of Counselling Psychology, 47*, 437-453.

Egloff, B., Schwerdtfeger, A. & Schmukle, S. C. (2005). Temporal stability of the Implicit Association Test-Anxiety. *Journal of Personality Assessment, 84*, 82-88.

Ellis, A. (1962). *Reason and Emotion in Psychotherapy*. New York: Lyle Stuart.

Ellis, A. (1977). Psychotherapy and the value of a human being. In: Ellis, A. & Greiger, R. (Eds.) *Handbook of Rational-Emotive Therapy* (pp. 99-112). New York: Springer.

Ellis, A. (2002). The role of irrational beliefs in perfectionism. In: Flett, G.L. & Hewitt, P.L. (Eds.) *Perfectionism: Theory, Research and Treatment* (pp. 217-230). Washington DC: American Psychological Society.

English, H.B. & English, A.C. (1958). *A Comprehensive Dictionary of Psychological and Psychoanalytical Terms: A Guide to Usage.* Oxford, England: Longmans, Green.

Fairburn, C.G. (1997). Interpersonal psychotherapy for bulimia nervosa. In: Garner, D.M. & Garfinkel, P.E. (Eds.), *Handbook of Treatment for Eating Disorders* (2nd ed., pp. 278-294). New York: Guilford Press.

Fazio, R.H., Sanbonmatsu, D.M., Powell, M.C. & Kardes, F.R. (1986). On the automatic activation of attitudes. *Journal of Personality and Social Psychology, 50,* 229-238.

Ferenczi, S. (1926). The problem of acceptance of unpleasant ideas: Advances in knowledge of the sense of reality. *International Journal of Psycho-Analysis, 7*, 312-323.

Fey, W.F. (1954). Acceptance of self and others and its relation to therapy-readiness. *Journal of Clinical Psychology, 10*(3), 269-271.

Fey, W.F. (1955). Acceptance of others and its relation to acceptance of self and others: A revaluation. *Journal of Abnormal and Social Psychology, 50*, 274-276.

Fey, W. (1957). Correlates of certain subjective attitudes toward self and other. *Journal of Clinical Psychology, 13,* 44-49.

Field, A. (2009). *Discovering Statistics using SPSS* (3rd ed.). London: Sage.

Flett, G.L., Davis, R.A. & Hewitt, P.L. (2003). Dimensions of perfectionism, unconditional self-acceptance and depression. *Journal of Rational-Emotive & Cognitive-Behaviour Therapy, 21*(2), 119-138.

Flett, G.L. & Hewitt, P.L. (2002). *Perfectionism: Theory, Research and Treatment.* Washington DC: American Psychological Society.

Flett, G.L., Hewitt, P.L., Blankstein, K.R., Solnik, M. & Van Brunschot, M. (1996). Perfectionism, social problem solving ability and psychological distress. *Journal of Rational-Emotive and Cognitive Behaviour Therapy, 14*, 245-274.

Flett, G.L., Hewitt, P.L., Oliver, J.M. & Macdonald, S. (2002). Perfectionism in children and their parents: A developmental analysis. In: Flett, G.L. & Hewitt, P.L. (Eds.), *Perfectionism: Theory, research and treatment* (pp. 89-132). Washington DC: American Psychological Society.

Flett, G.L., Sherry, S.B. & Hewitt, P.L. (2001). *Perfectionism, parental punitiveness, and anxious parental rearing*. In: Flett, G.L. & Hewitt, P.L. (2002). *Perfectionism: Theory, research and treatment.* Washington DC: American Psychological Society.

Flynn, C.A., Hewitt, P.L., Flett, G.L. & Caelian, C. (2001). *The development of perfectionism: Parental behaviour and cultural influences*. In: Flett, G.L. & Hewitt, P.L. (2002). *Perfectionism: Theory, research and treatment.* Washington DC: American Psychological Society.

Fonagy, P., Gergely, G., Jurist, E.L. & Target, M. (2002). *Affect Regulation, Mentalization and the Development of the Self*. New York: Other Press.

Freud, S. (1921). *Group Psychology and the Analysis of the Ego*. In: J. Strachey (Ed.) *The Standard Edition of the Complete Psychological Works of Sigmund Freud*, 18 (pp. 65-143). London: The Hogarth Press and the Institute of Psycho-Analysis.

Frijda, N.H., Manstead, A.S.R. & Bem, S. (2000). *Emotions and Beliefs: How Feelings Influence Thoughts*. Cambridge, UK: University Press.

Frost, R.O., Heimberg, R.G., Holt, C.S., Mattia, J.L. & Neubauer, A.L. (1993). A comparison of two measures of perfectionism. *Personality and Individual Differences, 14*, 119-126.

Frost, R.O., Lahart, C. & Rosenblate, R. (1991). The development of perfectionism: A study of daughters and their parents. *Cognitive Therapy and Research, 15*, 469-489.

Frost, R.O., Marten, P., Lahart, C. & Rosenblate, R. (1990). The dimensions of perfectionism. *Cognitive Therapy and Research, 14*, 449-468.

Frost, R.O., Turcotte, T.A., Heimberg, R.G., Mattia, J.I., Holt, C.S. & Hope, D.A. (1995). Reactions to mistakes among subjects high and low in perfectionistic concern over mistakes. *Cognitive Therapy and Research, 19*, 195-205.

Gilbert, P. (2010). *The Compassionate Mind: How to use Compassion to Develop Happiness, Self-acceptance and Well-being.* UK: Constable & Robinson Ltd.

Goldberg, D.P. (1978). *Manual of the General Health Questionnaire*. Windsor, England: NFER Publishing.

Greenwald, A.G. & Banaji, M.R. (1995). Implicit social cognition: Attitudes, self-esteem and stereotypes. *Psychological Review, 102,* 4-27.

Greenwald, A.G., Banaji, M.R., Rudman, L.A., Farnham, S.D., Nosek, B.A. & Mellot, D.S. (2002). A unified theory of implicit attitudes, stereotypes, self-esteem and self-concept. *Psychological Review, 109*, 3-25.

Greenwald, A.G., McGhee, D.E. & Schwartz, J.K.L. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology, 74*, 1464-1480.

Greenwald, A.G. & Nosek, B.A. (2001). Health of the Implicit Association Test at age 3. *Zeitschrift für Experimentelle Psychologie, 48,* 85-93.

Greenwald, A.G., Nosek, B.A. & Banaji, M.R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology, 85*, 197-216.

Hall, G.S. (1918). Morale in war and after. *Psychological Bulletin, 15*(11), 361-426.

Hall, H.K., Hill, A.P., Appleton, P.R. & Kozub, S.A. (2009). The mediating influence of unconditional self-acceptance and labile self-esteem on the relationship between multidimensional perfectionism and exercise dependence. *Psychology of Sport and Exercise, 10*, 35-44.

Hamacheck, D.E. (1978). Psychodynamics of normal and neurotic perfectionism. *Psychology, 15*, 27-33.

Hankins, M. (2008). The reliability of the twelve-item General Health Questionnaire (GHQ-12) under realistic assumptions. *BMC Public Health, 8*, 355-361.

Hayes, S.C. (1994). Content, context and the types of psychological acceptance. In: S.C. Hayes, N.S. Jacobson, V.M. Follete & M.J. Dougher (Eds.), *Acceptance and change: Content and context in psychotherapy* (pp. 13-32). Reno, NV: Context Press.

Hayes, S.C. (2004). Acceptance and Commitment Therapy, relational frame theory and the third wave of behavioural and cognitive therapies. *Behaviour Therapy, 35*(4), 639-665.

Hayes, S.C., Barnes-Holmes, D. & Roche, B. (2001). *Relational Frame Theory: A Post-Skinnerian Account of Human Language and Cognition.* New York: Plenum Press.

Hayes, S.C., Strosahl, K.D. & Wilson, K.G. (1999). *Acceptance and Commitment Therapy: An Experiential Approach to Behaviour Change*. New York: Guilford Press.

Heimberg, R.G., Juster, H.R., Hope, D.A. & Mattia, J.I. (1995). Cognitive-behavioral group treatment: Description, case presentation and empirical support. In: M. B. Stein (Ed.), *Social Phobia: Clinical and Research Perspectives* (pp. 293-321). Washington, DC: American Psychiatric Press.

Hewitt, P.L. & Dyck, D.G. (1986). Perfectionism, stress and vulnerability to depression. *Cognitive Therapy and Research, 10,* 137-142.

Hewitt, P.L. & Flett, G.L. (1991). Perfectionism in the self and social contexts: Conceptualisation, assessment and association with psychopathology. *Journal of Personality and Social Psychology, 60,* 456-470.

Hewitt, P.L. & Flett, G.L. (1991a). Dimensions of perfectionism in unipolar depression. *Journal of Abnormal Psychology, 100,* 98-101.

Hewitt, P.L. & Flett, G.L. (1993). Dimensions of perfectionism, daily stress and depression: A test of the specific vulnerability issue. *Journal of Abnormal Psychology, 102,* 58-65.

Hewitt, P.L., Flett, G.L. & Ediger, E. (1996). Perfectionism and depression: Longitudinal assessment of a specific vulnerability hypothesis. *Journal of Abnormal Psychology, 105,* 276-280.

Hewitt, P.L., Flett, G.L., Norton, G.R. & Flynn, C.A. (1998). Dimensions of perfectionism and chronic symptoms of unipolar and bipolar depression. *Canadian Journal of Behavioural Science, 30*, 234-242.

Higgins, E.T., Bond, R., Klein, R. & Strauman, T.J. (1986). Self-discrepancies and emotional vulnerability: How magnitude, accessibility and type of discrepancy influence affect. *Journal of Personality and Social Psychology, 41*, 1-15.

Hill, R.W., McIntire, K. & Bacharach, V.R. (1997). Perfectionism and the big five factors. *Journal of Social Behaviour and Personality, 12*, 257-270.

Hollender, M.H. (1965). Perfectionism. *Comprehensive Psychiatry, 6*, 94-103.

Hooley, J.M. & Teasdale, J.D. (1989). Predictors of relapse in unipolar depressives: Expressed emotion, marital distress and perceived criticism. *Journal of Abnormal Psychology, 98*, 229-235.

Horney, K. (1937). *The Neurotic Personality of Our Time*. New York: Norton.

Horney, K. (1950). *Neurosis and Human Growth*. New York: Delacorte.

Hummert, M.L., Garstka, T.A., O'Brien, L.T, Greenwald, A.G. & Mellott, D.S. (2002). Using the Implicit Association Test to Measure Age Differences in Implicit Social Cognitions. *Psychology and Aging, 17*(3), 482-495.

Hunter, E.C. & O'Connor, R.C. (2003). Hopelessness and future thinking in parasuicide: The role of perfectionism. *British Journal of Clinical Psychology, 42*, 355-365.

Karpinski, A. (2004). Measuring self-esteem using the implicit association test: The role of the other. *Personality and Social Psychology Bulletin, 30*(1), 22-34.

Kelly, G. (1955). *The Psychology of Personal Constructs*. New York: Norton.

Kochanska, G. (1997). Multiple pathways to conscience for children with different temperaments: From toddlerhood to age 5. *Developmental Psychology, 33*, 228-240.

Leary, M. (1996). *Self-presentation: Impression Management and Interpersonal Behavior*. Madison, WI: Brown & Benchmark Publishers.

Linehan, M.M. (1993). *Skills Training Manual for Treating Borderline Personality Disorder*. New York: Guilford.

Livingston, R.W. & Brewer, M.B. (2002). What are we really priming?: Cue-based versus category-based processing of facial stimuli. *Journal of Personality and Social Psychology, 82*, 5–18.

Locke, E.A. (1996). Motivation through conscious goal setting. *Applied and Preventive Psychology, 5*, 117-124.

London, T. (1997). The case against self-esteem: Alternative philosophies toward self that would raise the probability of pleasurable and productive living. *Journal of Rational Emotive & Cognitive-Behaviour Therapy, 15*, 19-29.

Lundh, L-G. (2004). Perfectionism and acceptance. *Journal of Rational-Emotive & Cognitive Behaviour Therapy, 22*(4), 255-269.

Lundh, L-G., Saboonchi, F. & Wangby, M. (2008). The role of personal standards in clinically significant perfectionism: A person-oriented approach to the study of patterns of perfectionism. *Cognitive Therapy and Research, 32*, 333-350.

MacInnes, D.L. (2006). Self-esteem and self-acceptance: An examination into their relationship and their effect on psychological health. *Journal of Psychiatric and Mental Health Nursing, 13*(5), 483-489.

Mednick, S.A. (1957). Generalization as a function of manifest anxiety and adaptation to psychological experiments. *Journal of Consulting Psychology, 21*(6), 491-494.

Mitchelson, J. & Burns, L.R. (1998). Career mothers and perfectionism: Stress at work and at home. *Personality and Individual Differences, 25*, 477-485.

Nisbett, R.E. & Wilson, T.D. (1977). Telling more than we can know: Verbal reports on mental processes. *Psychological Review, 84*, 231-259.

Nosek, B. & Banaji, M.R. (2001). The go/no-go association task. *Social Cognition, 19*, 625-666.

O'Connor, R.C. & O'Connor, D.B. (2003). Predicting hopelessness and psychological distress: The role of perfectionism and coping. *Journal of Counselling Psychology, 50*, 362-372.

Omwake, K.T. (1954). The relation between acceptance of self and acceptance of others shown by three personality inventories. *Journal of Consulting Psychology, 18*, 443-446.

Orwell, G. (n.d.). BrainyQuote.com. Retrieved June 22, 2011, from BrainyQuote.com website: http://www.brainyquote.com/quotes/quotes/g/georgeorwe119587.html.

Pacht, A.R. (1984). Reflections on perfection. *American Psychologist, 39*, 386-390.

Parker, J. & Gottman, J. (1989). Social and emotional development in a relational context: Friendship interaction from early childhood to adolescence. In T. Berndt & G. Ladd (Eds.), *Peer Relationships in Child Development* (pp. 95-131). New York: John Wiley & Sons, Inc.

Parsons, T. (1949). *The Structure of Social Action: A Study in Social Theory with Special Reference to a Group of Recent European Writers. Volume 1*. New York: The Free Press.

Pezzullo, J.C. (2010). Interactive statistics pages website: www.statpages.org.

Phillips, E.L. (1951). Attitudes toward the self and others: A brief questionnaire report. *Journal of Consulting Psychology, 15*, 79-81.

Radloff, L.S. (1977). The CES-D Scale: A self-report measure depression scale for research in the general population. *Applied Psychological Measurement, 1*, 385-401.

Rhéaume, J., Freeston, M.H. & Ladouceur, R. (1995). Functional and dysfunctional perfectionism: Construct validity of a new instrument. *Communication presented at the 15th Annual Convention of the WCBCT, Copenhagen, July 1995*.

Robinson, M., Johnson, J. & Shields, S. (1995). On the advantages of modesty: the benefits of a balanced self-presentation. *Communication Research, 22*, 575-591.

Rogers, C.R. (1940). The processes of therapy. *Journal of Consulting Psychology, 4*(5), 161-164.

Rogers, C.R. (1944). The development of insight in a counseling relationship. *Journal of Consulting Psychology, 8*(6), 331-341.

Rogers, C.R. (1951). *Client-Centered Therapy: Its Current Practice, Implications and Theory*. Boston: Houghton-Mifflin.

Scott, J. (2007). The effect of perfectionism and unconditional self-acceptance on depression. *Journal of Rational-Emotive & Cognitive-Behaviour Therapy, 25*(1), 35-64.

Schmukle, S. C. & Egloff, B. (2004). Does the Implicit Association Test for assessing anxiety measure trait and state variance? *European Journal of Personality, 18,* 483-494.

Sheerer, E.T. (1949). An analysis of the relationship between acceptance of and respect for self and acceptance and respect for others in ten counselling cases. *Journal of Consulting Psychology, 13*, 169-175.

Shepard, L.A. (1979). Self-acceptance: The evaluative component of the self-concept construct. *American Educational Research Journal, 16*(2), 139-160.

Slade, P.D. & Owens, R.G. (1998). A dual process model of perfectionism based on reinforcement theory. *Behaviour Modification, 22,* 372-390.

Slaney, R.B. & Ashby, J.S. (1996). Perfectionists: Study of a criterion group. *Journal of Counselling and Development, 74,* 393-398.

Sorotzkin, B. (1998). Understanding and treating perfectionism in religious adolescents. *Psychotherapy, 35,* 87-95.

Stoeber, J., Kempe, T. & Keogh, E.J. (2008). Facets of self-oriented and socially-prescribed perfectionism and feelings of pride, shame and guilt following success and failure. *Personality and Individual Differences, 44,* 1506-1516.

Stoeber, J., Otto, K. & Dalbert, C. (2009). Perfectionism and the Big Five: Conscientiousness predicts longitudinal increases in self-oriented perfectionism. *Personality and Individual Differences, 47,* 363-368.

Suinn, R.M. (1961). The relationship between self-acceptance and acceptance of others: A learning theory analysis. *Journal of Abnormal and Social Psychology, 63*(1), 37-42.

Sullivan, H.S. (1947). *Conceptions of Modern Psychiatry*. Washington DC: William Alanson White Psychiatric Foundation.

Szold, H. (n.d.). BrainyQuote.com. Retrieved June 26, 2011, from BrainyQuote.com website: http://www.brainyquote.com/quotes/quotes/h/henriettas326382.html.

Vahey, N.A., Barnes-Holmes, D., Barnes-Holmes, Y. & Stewart, I. (2009). A first test of the Implicit Relational Assessment Procedure as a measure of self-esteem: Irish prisoner groups and university students. *The Psychological Record, 59*, 371-388.

Vieth, A.Z. & Trull, T.J. (1999). Family patterns of perfectionism: An examination of college students and their parents. *Journal of Personality Assessment, 72*, 49-67.

Vredenburg, K., Flett, G.L. & Krames, L. (1993). Analogue versus clinical depression: A critical reappraisal. *Psychological Bulletin, 113,* 327-344.

Weaver, B. (2011). Hypothesis testing using z- and t-tests. Downloaded from: http://www.angelfire.com/wv/bwhomedir/notes/z_and_t_tests.pdf.

Wegner, D.M. (2002). *The Illusion of Conscious Will.* Cambridge, MA: Bradford Books.

Weiner, B. (1992). *Human Motivation: Metaphors, Theories and Research*. Newbury Park, CA: Sage Publications.

Williams, J.E. (1962). Acceptance by others and its relationship to acceptance of self and others: A repeat of Fey's study. *The Journal of Abnormal and Social Psychology, 65*(6), 438-442.

Williams, J.C. & Lynn, S.J. (2010). Acceptance: An historical and conceptual review. *Imagination, Cognition, & Personality, 30*, 5-56.

Wilson, G.T. (1996). Acceptance and change in the treatment of eating disorders and obesity. *Behaviour Therapy, 27*(3), 417-439.

Young, J.E., Klosko, J.S. & Weishaar, M. (2003). *Schema Therapy: A Practitioner's Guide.* New York: Guilford Publications.

Zelen, S. (1954). Acceptance and acceptability: An examination of social reciprocity. *Journal of Consulting Psychology*, *18*, 316.

APPENDICES

Appendix A – University of Edinburgh Ethical Approval

Appendix B – Participant Information Sheet

Appendix C – Participant Consent Form

Appendix D – Unconditional Self-Acceptance Questionnaire (USAQ)

Appendix E – Acceptance of Others Scale (AOS)

Appendix F – Online Survey Questions

Appendix G – Demographic Questions Sheet

Appendix H – IRAP Instructions

Appendix I – Counterbalancing Orders

Appendix J – Transformation of the AOS

Appendix K – Distribution of AOS - USAQ Difference Scores

Appendix L – Distribution of Course Studied Across Participant Age

UNIVERSITY OF EDINBURGH / NHS (SCOTLAND) DOCTORATE IN CLINICAL PSYCHOLOGY TRAINING PROGRAMME

Thesis Ethics Proposal

Trainee: Rachel Lowdon

Proposed Title: Perfectionism and Acceptance: Perspective Taking and Implicit Beliefs

This was thought to be an interesting proposal. The following should be considered and discussed with the supervisor. There is no need for further submission.

Research

- The proposal was well written and presented but a concern was that the language would not be accessible to an informed reader and in particular terms such as 'other acceptance' might have been better defined.
- There is limited information given on all of the measures in relation to reliability or validity. Where this is available it should be provided.
- It is unclear as to why the GHQ is being used and how this relates to the research questions.

Ethics

- The consent form needs to be amended to reflect that this is a student, not clinical sample. The words "without my care or legal rights being affected" might translate as their decision to participate will have no impact on their university course?
- Does the Information sheet imply that this is a study to examine perfectionism and psychological disorder? Is there a possibility that students might be concerned as to whether this implies, or will assess, levels of psychological disorder? This possibly needs clarification.

Research Participant Information Sheet

Study title: *Perfectionism and Acceptance: Perspective Taking and Implicit Beliefs*

Invitation

This research study will further investigate the relationship between perfectionism and acceptance and you are invited to take part in it if you wish. Before making your decision, it is important to understand why the research is being done and what it would involve. Please take time to read the following information carefully and discuss it with others if you wish. Please ask if there is anything that is not clear or if you would like more information and take your time to decide whether or not you wish to take part. Thank you for reading this information sheet.

What is the purpose of the study?

Research has suggested that the personality construct of *perfectionism* can leave individuals more vulnerable to developing a range of psychological difficulties. Perfectionism is defined as a demand for the highest standard of excellence, combined with overly-critical evaluations of performance and is thought to consist of both 'self' and 'other' components. Only recently has *acceptance* been suggested as a factor that might protect individuals from the negative impact of perfectionism. The current study aims to investigate further the relationship between perfectionism and acceptance and also examine both 'self' and 'other' aspects of these constructs. It is hoped the results gained might inform the help offered to perfectionistic individuals outside of this study, who are experiencing psychological difficulty.

Finally, implicit (unspoken/unreported) beliefs have been highlighted as important in the understanding of psychological difficulty, due to the impact they have on behaviour and thinking. These are beliefs that individuals develop based on life experiences and the society in which they live. This study aims to look at both reported and unreported aspects of perfectionism and acceptance to investigate their interactions with each other. It is hoped that understanding the constructs in this extra level of detail might further increase understanding of their roles in psychological difficulty; information that again is hoped to benefit those outside of the study.

Why have I been chosen?

We are inviting students from the School of Philosophy, Psychology and Language Sciences and the School of Health in Social Science at the University of Edinburgh to take part in this study, as the first stage of investigating the above relationships. We are hoping to include 85 people in this study.

Do I have to take part?

No; you are under no obligation to take part. If you decide not to take part in the study or to withdraw, this will have no effect on your studies at the University of Edinburgh. However, if you do decide to take part, you are still free to withdraw from the study at any time without giving a reason. We would suggest that you take some time to decide whether or not to take part in this study.

What will happen to me if I take part?
If you do decide to take part, please **keep this information sheet** and please book a suitable date and time to complete the research. You will also be asked for your telephone number and email address so the lead researcher can contact you about this appointment if necessary. When you attend to complete the research you will be asked to sign a consent form and complete five short questionnaires measuring levels of perfectionism and acceptance for self and other. These forms should take approximately 30 minutes to complete.

You will then complete a computer-based task that forms the second stage of this research. This task involves pressing buttons on a computer to indicate your response to a range of questions regarding perfectionism and acceptance and it takes approximately 30 minutes to complete. As such, **the total time of your participation in this research is likely to be around 60 minutes**.

What are the possible disadvantages and risks of taking part?
Apart from the time it takes to fill in the questionnaires and complete the computer task, there are no other disadvantages or risks in taking part in this research.

What are the possible benefits of taking part?
By taking part in this research you will hopefully contribute towards increasing understanding of the relationship between perfectionism and acceptance, and how it is affected by different perspectives and unspoken beliefs. This may enable perfectionistic individuals outside of the study to overcome a range of psychological difficulties more successfully.

Will my information be kept confidential?
Yes. Any information that is collected will be stored securely, and will remain confidential. Only the lead researcher involved in the running of this study will be allowed access to the information. However, if your personal safety or that of others is thought to be 'at risk' during data collection, it may be necessary to disclose this risk to relevant parties to ensure everyone's safety. Should this happen, you will be kept involved in the information sharing process. Finally, if the study is presented or published, all identifying information will be removed so that no research participants can be identified.

What will happen to the results of the research study?
Once this study ends in August 2011, it is hoped the findings will be published in an academic journal. If you indicate on the consent form that you would like a copy of the main findings from the study, they can be sent to you after this date.

Who has reviewed the study?
This research has been ethically reviewed and approved by the University of Edinburgh Ethics Committee and assessed by the South East Scotland Research Ethics Service as not requiring further ethical review.

Who can I contact if I need further information?
If you wish to discuss further any aspect of this research please contact Rachel Lowdon at the Clinical Psychology Department, JMHT, Bonnyrigg on 0131 536 8984.

Thank you for taking the time to read this information sheet.

Rachel Lowdon - Lead Researcher

Research Participant Consent Form

Study Title: *Perfectionism and Acceptance: Perspective Taking and Implicit Beliefs*

Lead Researcher: *Rachel Lowdon, Specialist Psychological Practitioner, NHS Lothian & University of Edinburgh*

(Please circle)

- I confirm I have read and understood the attached 'Research Participant Information Sheet'.	Yes	No
- I understand that my participation is voluntary and that I can withdraw from this study at any time, without having to give a reason and without my studies at the University of Edinburgh being affected.	Yes	No
- I consent to take part in this study.	Yes	No
- I would like to receive a copy of the key findings from this study.	Yes	No

Signed _____ (participant signature) Print Name _____ (participant name) Date _____

Signed _____ (researcher signature) Print Name _____ (researcher name) Date _____

Unconditional Self-Acceptance Questionnaire

INSTRUCTIONS: Please indicate how often you feel each statement below is true or untrue *of you*. For each item, write the appropriate number (1 to 7) on the line to the left of the statement, using the following key:

Almost Always Untrue	Usually Untrue	More Often Untrue Than True	Equally Often True And Untrue	More Often True Than Untrue	Usually True	Almost Always True
1	2	3	4	5	6	7

___ 1. When someone compliments me for something, I care more about how it makes me feel about myself than about what it tells me about my strengths or abilities.
___ 2. I feel worthwhile even if I am not successful in meeting certain goals that are important to me.
___ 3. When I receive negative feedback, I take it as an opportunity to improve my behaviour or performance.
___ 4. I feel that some people have more value than others.
___ 5. Making a big mistake may be disappointing, but it doesn't change how I feel about myself overall.
___ 6. Sometimes I find myself thinking about whether I am a good or bad person.
___ 7. To feel like a worthwhile person, I must be loved by the people who are important to me.
___ 8. When I am deciding on goals for myself, trying to gain happiness is more important than trying to prove myself.
___ 9. I think that being good at many things makes someone a good person overall.
___ 10. My sense of self-worth depends a lot on how I compare with other people.
___ 11. I believe that I am worthwhile simply because I am a human being.
___ 12. When I receive negative feedback, I often find it hard to be open to what the person is saying about me.
___ 13. I set goals for myself that I hope will prove my worth.
___ 14. Being bad at certain things makes me value myself less.
___ 15. I think that people who are successful in what they do are especially worthwhile people.
___ 16. To me, praise is more important for pointing out to me what I'm good at than for making me feel valuable as a person.
___ 17. I feel I am a valuable person even when other people disapprove of me.
___ 18. I avoid comparing myself to others to decide if I am a worthwhile person.
___ 19. When I am criticized or when I fail at something, I feel worse about myself as a person.
___ 20. I don't think it's a good idea to judge my worth as a person.

Acceptance of Others Scale

by William F. Fey

Below you will find 20 statements that deal with some of your feelings and attitudes about other people. Read each statement carefully and decide how true you feel the statement to be. Pay attention to your first responses and try not to spend too long on any one statement.

	ALMOST ALWAYS TRUE	USUALLY TRUE	TRUE HALF OF THE TIME	ONLY OCCASSIONALLY TRUE	VERY RARELY TRUE
1. People are too easily led.	1	2	3	4	5
2. I like people I get to know.	1	2	3	4	5
3. People these days have pretty low moral standards.	1	2	3	4	5
4. Most people are pretty smug about themselves, never really facing their bad points.	1	2	3	4	5
5. I can be comfortable with nearly all kinds of people.	1	2	3	4	5
6. All people can talk about these days, it seems, is movies, TV, and foolishness like that.	1	2	3	4	5
7. People get ahead because of <u>who</u> they know and not because of <u>what</u> they know.	1	2	3	4	5
8. Once you start doing favours for people, they'll just walk all over you.	1	2	3	4	5
9. People are too self-centred.	1	2	3	4	5
10. People are always dissatisfied and hunting for something new.	1	2	3	4	5
11. With many people you don't know how you stand.	1	2	3	4	5
12. You've probably got to hurt someone if you're going to make something out of yourself.	1	2	3	4	5
13. People really need a strong, smart leader.	1	2	3	4	5
14. I enjoy myself most when I am alone, away from people.	1	2	3	4	5
15. I wish people would be more honest with me.	1	2	3	4	5
16. I enjoy going with a crowd.	1	2	3	4	5
17. In my experience, people are pretty stubborn and unreasonable.	1	2	3	4	5
18. I can enjoy being with people whose values are very different from mine.	1	2	3	4	5
19. Everybody tries to be nice.	1	2	3	4	5
20. The average person is not very well satisfied with himself.	1	2	3	4	5

Online Survey Questions

1. Please rank the words below in order from 1 - 12 according to how closely they resemble your understanding of the word 'perfectionist'. I.e. Give the word you believe has the most similar meaning to 'perfectionist' a score of 1. Give the word you believe has the least similar meaning a score of 12. Each number may only be used once when making your decisions. There are no right or wrong answers, so please answer as honestly as you can.

	1	2	3	4	5	6	7	8	9	10	11	12
Precisionist												
Fastidious												
Purist												
Evaluative												
Pedantic												
Exacting												
Critical												
Judgemental												
Idealist												
Meticulous												
Demanding												
Nit-Picking												

2. Please rank the words below in order from 1 - 12 according to how closely they resemble your understanding of the word 'accepting'. I.e. Give the word you believe has the most similar meaning to 'accepting' a score of 1. Give the word you believe has the least similar meaning a score of 12. Each number may only be used once when making your decisions. There are no right or wrong answers, so please answer as honestly as you can.

	1	2	3	4	5	6	7	8	9	10	11	12
Kind												
Agreeable												
Compassionate												
Respectful												
Successful												
Lenient												
Tolerant												
Approving												
Positive												
Patient												
Loving												
Forgiving												

Demographic Questions Sheet

Perfectionism and Acceptance: Perspective Taking and Implicit Beliefs

Thank you for agreeing to take part in this research. Before you begin we would like to ask you a few general questions about yourself.

What is your age? _____

What is your sex? male female

What university course are you currently enrolled in? _____

What year of study are you in? 1 2 3 4 5

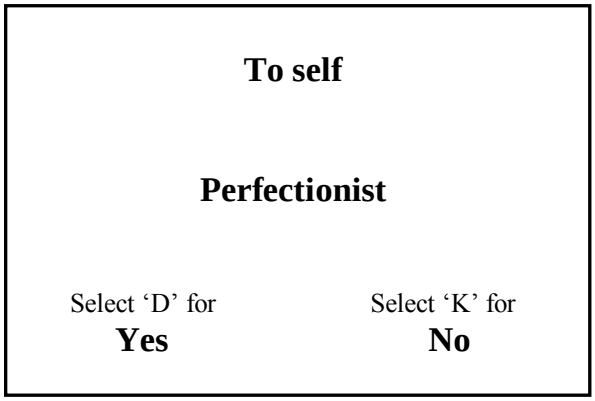
Many thanks!

IRAP INSTRUCTIONS

Shown below are examples of the four different types of task you will see repeatedly in this part of the experiment. To help you understand the tasks, each of the four examples is explained immediately underneath. Please study each example carefully and then read the explanation attached to it. Please make sure that you understand the examples before continuing with the experiment.

NOTE: During the experiment a range of words with similar meanings to those of "Perfectionist" and "Accepting" will also be presented.

Example 1

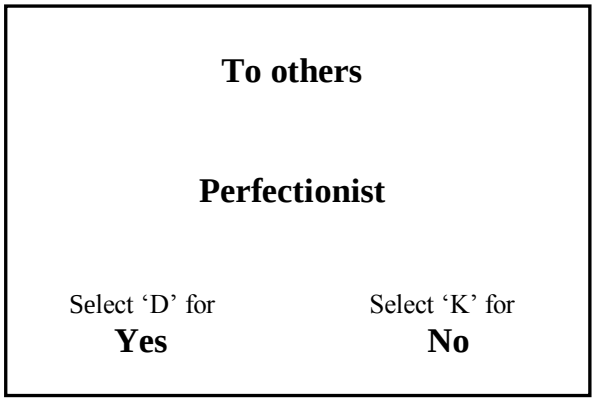


Explanation for Example 1

If you select "Yes" by pressing the 'D' key, you are stating "Yes, towards myself I am perfectionistic."

If you select "No" by pressing the 'K' key, you are stating "No, towards myself I am *not* perfectionistic."

Example 2

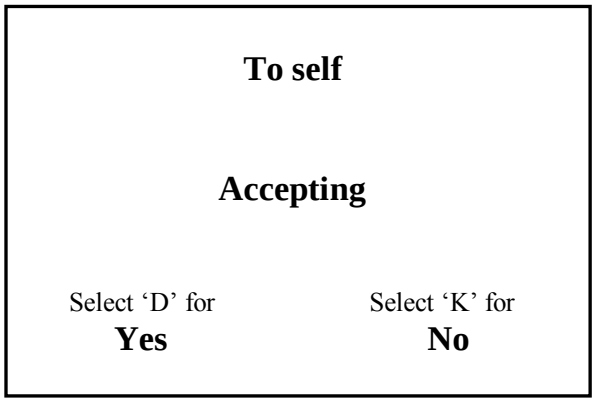


Explanation for Example 2

If you select "Yes" by pressing the 'D' key, you are stating "Yes, towards other people I am perfectionistic."

If you select "No" by pressing the 'K' key, you are stating "No, towards other people I am *not* perfectionistic."

Example 3

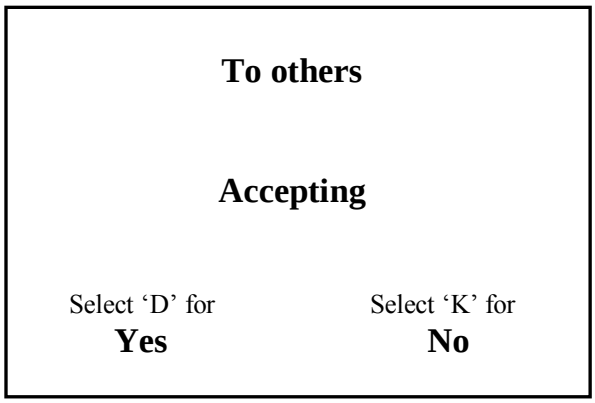


Explanation for Example 3

If you select "Yes" by pressing the 'D' key, you are stating "Yes, towards myself I am accepting."

If you select "No" by pressing the 'K' key, you are stating "No, towards myself I am *not* accepting."

Example 4



Explanation for Example 4

If you select "Yes" by pressing the 'D' key, you are stating "Yes, towards other people I am accepting."

If you select "No" by pressing the 'K' key, you are stating "No, towards other people I am *not* accepting."

FINAL INSTRUCTIONS

During the experiment you will be asked to respond as **quickly and accurately** as you can across all tasks.

IMPORTANT: It is important to understand that the way you are required to respond to the tasks is **set by the computer**. You will be presented with several tasks in a row that together make up one 'block' of the experiment. During each block you must respond in a way that is either generally **perfectionistic towards yourself and accepting towards others**; or generally **accepting towards yourself and perfectionistic towards others**. The correct way of responding will alternate between blocks. At times the correct way of responding may *agree* with what you believe and at other times it may *disagree* with what you believe. **This is part of the experiment.**

An *incorrect* response on a task is signalled by the appearance of a red 'X' in the centre of the screen. To remove the red 'X' and continue, please press the *alternative* key (to make the correct response) as **quickly** as you can.

NOTE: When the word 'others' is used in this experiment it signifies other people *generally.* You should therefore think **generally** about other people and not about one person in particular.

A practice phase of the experiment will now begin. However, if you do not understand something about these instructions or have any further questions, please talk to the researcher before clicking on the blue button.

Counterbalancing Orders

Order 1 - MPS USAQ AOS GHQ IRAP1

Order 2 - IRAP1 GHQ MPS USAQ AOS

Order 3 - USAQ AOS MPS GHQ IRAP1

Order 4 - IRAP1 GHQ USAQ AOS MPS

Order 5 - MPS USAQ AOS GHQ IRAP2

Order 6 - IRAP2 GHQ MPS USAQ AOS

Order 7 - USAQ AOS MPS GHQ IRAP2

Order 8 - IRAP2 GHQ USAQ AOS MPS

Key

MPS – Multidimensional Perfectionism Scale

USAQ – Unconditional Self Acceptance Questionnaire

AOS – Acceptance of Others Scale

GHQ – General Health Questionnaire (12 item version)

IRAP1 – Implicit Relational Assessment Procedure (consistent-first)

IRAP2 – Implicit Relational Assessment Procedure (inconsistent-first)

Transformation of the AOS

(From https://www-304.ibm.com/support/docview.wss?uid=swg21482329&wv=1)

Here is how to easily find the right linear transformation to convert one Likert scale to another. This is best done in two stages. Notice that a Likert scale is determined by its minimum, which is usually 1, and its maximum, for example 5. First, find the linear transformation so that in the new scale, the minimum is 0 and the maximum is 1. Second, find the transformation which undoes this. That is, starting with a scale with a minimum of 0 and a maximum of 1, transform it so it has whatever minimum and maximum is required.

It is easy to check that for a scale with minimum a and maximum b, the transformation X = (x - a) / (b - a) is the one we want. Just substitute a for x to see that the result is 0, and then substitute b for x to see that the result is 1. To go in the other direction, let's say we want the new minimum to be A and the new maximum to be B. The transformation we want is Y = (B - A) * X + A. Substitute 0 for X to see that the result is A, and 1 for X to see that the result is B. Now to put this all together, substitute the whole first transformation in place of X in the second: Y = (B - A) * (x - a) / (b - a) + A.

That looks just a little messy, but let's apply it to the example of a 5-point scale to be converted to a 7-point scale. Since the minimum of the 5-point scale is 1, we have a=1, b=5 in the first transformation. Similarly for the second transformation, we have A=1, B=7. Putting them together we get: (7 - 1) * (x - 1) / (5 - 1) + 1. Of course this looks a lot less scary if we do the subtractions: 6 * (x - 1) / 4 + 1. A little rearrangement gives: (6/4) * x - (6/4) + 1. A little more rearrangement and we get: 1.5 * x - 0.5. So in SPSS we just need COMPUTE x2 = 1.5 * x1 - 0.5. EXECUTE.

You can check the results on a small dataset:

x1	x2
1	1.0
2	2.5
3	4.0
4	5.5
5	7.0

In particular, notice that 1 is sent to 1, and 5 to 7.

Distribution of AOS - USAQ Difference Scores

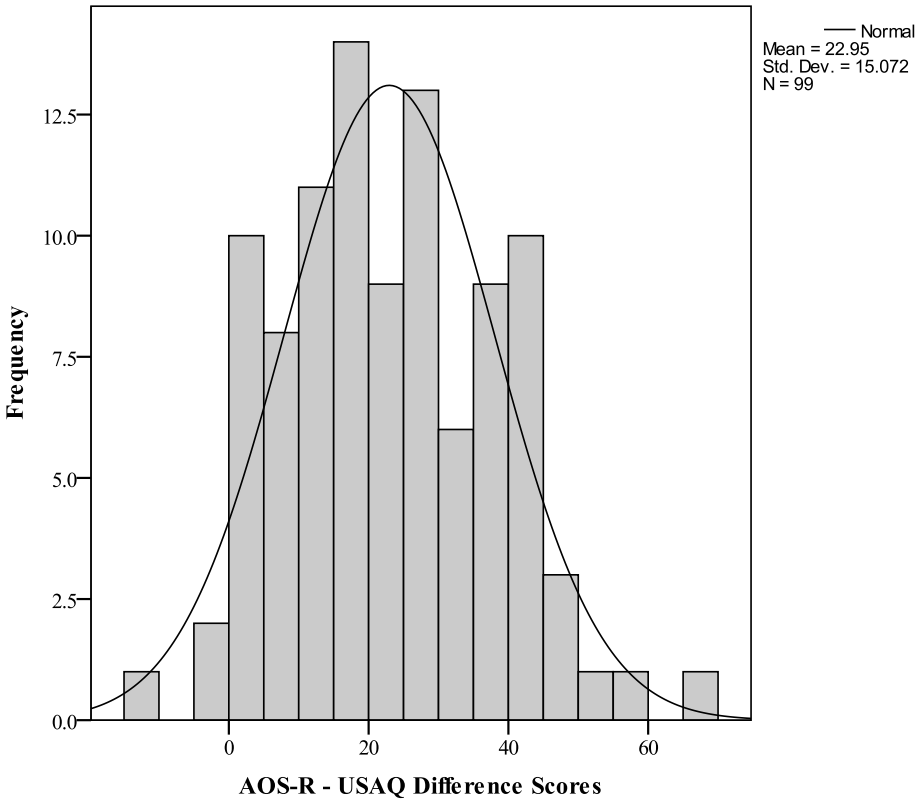


FIGURE K: Distribution of AOS-R - USAQ Difference Scores

Distribution of Course Studied Across Participant Age

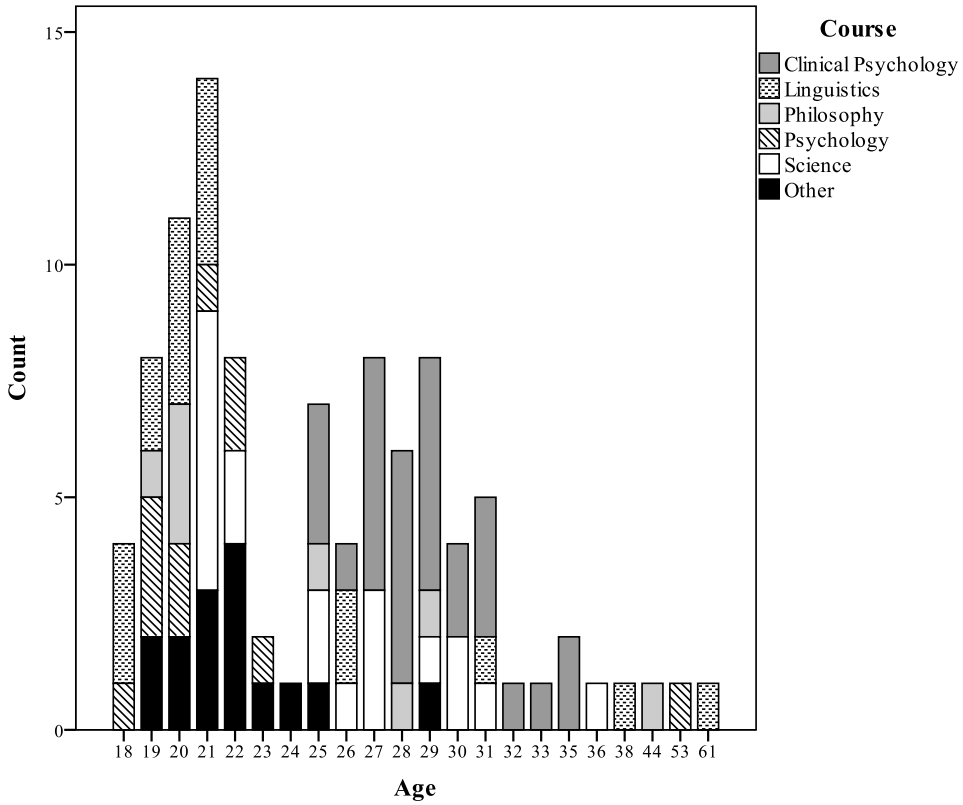


FIGURE L: Distribution of Course Studied Across Participant Age