Outcomes in Psychotherapy for Depression: The Role of Interpersonal Problems

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I, Tara McFarquhar confirm that the work presented in this thesis is my own. Where information has been derived from other sources, I confirm that this has been indicated in the thesis.

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ABSTRACT

Interpersonal problems are frequently the target of psychotherapeutic treatments for depression, but there is a scarcity of empirical evidence as to which, if any, particular type of interpersonal problems respond most favourably to these treatments. The scope of this thesis is to explore the relationship between interpersonal problems and outcomes in psychotherapy, in particular Dynamic Interpersonal Therapy (DIT). Specifically, its focus is the development of a new method of classifying the interpersonal focus of therapy, which could then be used as a predictor of treatment outcomes. Different types of interpersonal problems can be identified using a well-established measure, the Inventory of Interpersonal Problems (IIP), however, it cannot identify which problems actually become the specific target of treatment. DIT provides an ideal construct for this in the form of its key component: the interpersonal affective focus of treatment (IPAF). Chapter one reviews the development and use of the Inventory of Interpersonal Problems (IIP) in the context of interpersonal approaches to depression and explores how it might be most usefully employed as a basis for a new coding system for IPAFs. Chapter two is the first systematic review and meta-analysis of research into changes in interpersonal problems over the course of psychotherapeutic treatment of depression. Chapter three reports the development of the IPAF coding system. A theory-driven qualitative analysis of audio recordings of IPAFs obtained from pilot trials of DIT is presented, using the IIP as a predetermined analytic framework. In chapter four, the reliability and validity of this typology is further investigated. Chapter five is a study of the relationship between interpersonal problems (measured with both the IIP and the IPAF typology) and treatment outcomes in DIT. Lastly, chapter six provides a summary of findings and a discussion of limitations and directions for future research.

IMPACT STATEMENT

There are several elements of this thesis which are intended to be beneficial within and outside of academia. Within academia, it has both contributed to research on the role of interpersonal problems in depression and drawn together existing research findings. The purpose of chapter one is to provide clearer explanations of the versions and scoring of the IIP, one of the most used measures of interpersonal functioning in psychology, which are many and come from multiple sources. This thesis identified evidence of misreporting and under-reporting of the IIP in research studies, likely due to the need to review not just the manual but also many other papers in order to gain a full understanding of its scope. This chapter could assist researchers in swiftly selecting an appropriate version for their particular needs, understand its limitations and how it compares to other versions and translations. Prior to the paper which arose from the research conducted as part of chapter two, there was no systematic review of changes in interpersonal problems over the course of treatment for depression, or meta-analyses which might indicate the expected effect sizes. This chapter provides convincing peer-reviewed evidence that interpersonal problems will improve following psychotherapy with a medium to large effect size, and that improvement is greater for psychodynamic therapies than for CBT. By encouraging more researchers to employ the IIP as part of a battery of outcome measures, more empirical evidence as to the role of interpersonal problems will lead us to clearer conclusions.

Given the incidence of depression and its rising global burden, the NHS and clinical commissioning groups are under pressure to apply limited resources with maximum efficiency. Evidence as to whom is most likely to benefit from psychotherapy is important, both in terms of costs and to the patients' quality of life. A benchmark of the expected reduction in IIP scores over treatment demonstrates the effectiveness of psychotherapy in providing relief from interpersonal problems and could be useful in making comparisons between different psychotherapeutic interventions. The IPAF typology provides a novel method by which to classify the problems patients present with to treatment with DIT. It is hoped that with some further research, this will be useful to clinicians and patients in helping them decide if the presenting problems are likely to be particularly suited to DIT and also which kinds might prove more problematic. Contrary to what is often assumed about patients with a hostile interpersonal style, findings from chapter five indicate that DIT may be more effective for these types of problems than more submissive ones. These findings might be effectively incorporated into the DIT practitioner training delivered to clinicians and on-going supervision.

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LIST OF ABBREVIATIONS

A-CT	Acute-Phase Cognitive Therapy
BASIS-24	Behavior and Symptom Identification Scale
BDI-II	Beck Depression Inventory-II
BRT	Brief Relational Therapy
BSI	Brief Symptom Inventory
CAT	Cognitive Analytic Therapy
CBASP	Cognitive Behavioural Analysis System of Psychotherapy
CBT	Cognitive Behavioural Therapy
CBGT	Cognitive Behavioural Group therapy
CCT	Client Centred Therapy
C-CT	Continuation-Phase Cognitive Therapy
CSIP	Circumplex Scales of Interpersonal Problems
CT	Cognitive Therapy
DIT	Dynamic Interpersonal Therapy
DOM	IIP-C Dominance Dimension
EBCT	Exposure-Based Cognitive Therapy
EFT	Emotion Focused Therapy
FD	Friendly-Dominant
FS	Friendly-Submissive
HADS	Hospital Anxiety and Depression Scale
HD	Hostile-Dominant
HRSD	Hamilton Rating Scale for Depression
HS	Hostile-Submissive
IDS-C	Inventory of Depressive Symptomatology-Clinician Rated
IPAF	Interpersonal Affective Focus
IPT	Interpersonal Therapy
ISTDP	Intensive Short Term Dynamic Program
LIT	Low Intensity Treatment
LOV	IIP-C Love Dimension (Affiliation)
LTPP	Long-Term Psychodynamic Psychotherapy
MHI	Mental Health Index
OQ-45	Outcome Questionnaire
PA	Psychoanalysis
PCT	Person Centred Therapy
PET	Process Experiential Therapy
PIT	Psychodynamic-Interpersonal Therapy
PD	Psychodynamic Psychotherapy
PP	Psychoanalytic Psychotherapy
SCL-90-R	Symptom Checklist-90-Revised
SET	Supportive–Expressive Dynamic Psychotherapy
SFT	Solution Focussed Therapy
SP	Supportive Therapy
STPP	Short-Term Psychodynamic Psychotherapy
TX	Treatment

CHAPTER 1

The Use of the IIP in the Context of the Interpersonal Problems Approach to Personality Theory and Assessment

1.1 CHAPTER OVERVIEW

The thesis begins with a review of the purpose and applications of the IIP in its context as the dominant measure of interpersonal problems in the treatment of depression. Following on from this, a consideration is made of how it could be most informative in the development of the classification system for the interpersonal focus of treatment (IPAF) in Dynamic Interpersonal Therapy (DIT). Subsequent chapters will be informed by this review, in particular chapters three and five. The subscales are of particularly importance in forming the basis of the thematic analysis undertaken in chapter three to classify IPAFs. Identifying which of the pre-treatment IIP constructs might predict response (the subject of chapter five) will also rest on a comprehensive understanding of its scoring. This chapter seeks to explain the rationale of the inventory in the context of the interpersonal model, chart its development, and pulls together the IIP manual's scoring method with additional interpretations of the IIP circumplex reported in the literature. The different versions of the IIP are detailed and their use is evaluated. Finally, the various interpretations of the IIP circumplex are examined in detail to determine which of these features might be most useful in the project as a whole.

1.2 INTRODUCTION

The rationale for treating interpersonal problems in DIT is rooted in three theoretical models: attachment theory, object-relations theory and interpersonal theory (Lemma, Target et al. 2011). Attachment theorists emphasise the importance of an individual's relationship with their earliest caregiver for their own view of themselves: the availability and predictability of the caregiver is key to feelings of security (Bowlby 1960). If the caregiver is unavailable or rejecting, this becomes internalised in the individual and the feelings of helplessness in regards to having healthy relationships render them more vulnerable to depression. Object-relations theory proposes that a failure to form successful early relationships with caregivers (the "self-object" relationship first experienced with the mother) will lead to further interpersonal

problems in adulthood (Kernberg 1976). The interpersonal tradition rests on the assertion that behaviour is a function of the individual's interaction with their social environment and its early development can be attributed to the work of Harry Stack Sullivan in the 1940s and 1950s, who argued that intimacy with another person was the principal source of life satisfaction (Sullivan 1953a). A Neo-Freudian theorist, Sullivan considered all human interaction to be motivated by one of two needs: security (the feeling of being loved and safe to form intimate, on-going bonds with others) and self-esteem (the feeling of self-worth and being worthy of respect from others). He believed that personality can be understood only within the context of interpersonal relationships and that its development arose as a system for managing interpersonal anxiety: at any stage of development, anxiety can interfere with satisfying intimacy and inhibit healthy development (Sullivan 1953b).

The first empirical investigation of Sullivan's theory was undertaken by the Kaiser Group (Freedman, Ossorio et al. 1951; Laforge, Leary et al. 1954; Leary 1957) at the University of California in the 1950s and resulted in the interpersonal circumplex. Following observations of group psychotherapy, sixteen categories of behaviour were proposed, arranged in a circle along two orthogonal dimensions, each falling at a point along the two axes of dominance-submission (what Sullivan referred to as self-esteem) and love-hate (what Sullivan referred to as security) (Leary 1957). In an interpersonal circle, each behaviour is considered to be a specific combination of the two dimensions. Behaviours situated close to each other on the circle are more alike, both conceptually and statistically, and those further away are unrelated (90 degrees of separation) or in fact opposites (180º of separation) (Fournier, Moskowitz et al. 2011). The further an individual's behaviour moves away from the centre of the circumplex towards the outside, the more extreme it is seen to be. Each subscale score is weighted by its scale's position on the circle for that category using vector arithmetic (Gurtman 2004). Confirmation of this structure has been made by several factor-analytic studies (e.g. Lorr and McNair 1963; Wiggins 1979). Many other theorists have also proffered a 'bipolar' representation of interpersonal dimensions, with the dominance-submission pole being variously described as agency, self-definition, achievement, autonomy or introjective and the love-hate pole as relatedness, communion, affiliation, intimacy, anaclitic or surrender (Luyten and Blatt 2013). Notably the 'Big Five' factors of personality include the interpersonal factors agreeableness and extraversion (John 1990), which also correspond to these poles.

This series of similar models are recognised as the ‘two polarities’ model (Blatt and Shichman 1983; Blatt and Blass 1990; Blatt and Blass 1996; Blatt 2006; Blatt 2008) which proposes that there are two basic dimensions of personality: interpersonal relatedness and self-definition. The models hypothesize that personality develops along these two dimensions of relating to others and sense of self, with most normal individuals placing slightly more weight on one dimension than the other. Psychopathology may occur in individuals who are too preoccupied with one dimension to the neglect of the other (Blatt and Blass 1990; Blatt 2004; Blatt 2006; Blatt 2008). Excessive preoccupation with relating to others at the expense of developing a sense of self can be termed ‘relational’ or ‘anaclitic’ disorders and include undifferentiated schizophrenia, borderline personality disorder, dependent personality disorder and histronic personality disorder. When depressed, these individuals primarily suffer from feelings of abandonment and/or rejection. Self-definitional or introjective disorders describe a preoccupation with protecting the self at the expense of relating to others and include paranoid schizophrenia, self-critical borderline personality disorder, paranoid personality disorder, obsessive compulsive personality disorder, narcissistic personality disorder and self-critical depression (Blatt, Zuroff et al. 2010).

Measures of interpersonal relations and behaviours began to be developed in the 1950s, following on from the development of the interpersonal circle. They included the Interpersonal Check List (ICL) (LaForge and Suczek 1955); the Interpersonal Behaviour Inventory (IBI) (Lorr and McNair 1965); the interpersonal sensitivity scale of the Hopkins Symptom Checklist which later became the Symptom Checklist 90 Revised (SCL-90-R) (Derogatis and Melisaratos 1983); the Impact Message Inventory (IMI) (Kiesler and Schmidt 1993); the Interpersonal Adjective Scales (IAS) (Wiggins 1995), the Outcome Questionnaire (OQ.45-IR) (Lambert, Hansen et al. 1996); the Patient Performance Rating Form (PPRF) (McCullough 2000) and the Interactive Test of Interpersonal Behaviour (ITIB) (Klein, Kensche et al. 2016). However, there remained a need for a self-report measure of specifically interpersonal problems that could be easily administered.

The IIP (Horowitz, Rosenberg et al. 1988), underpinned by the two polarities model of psychopathology, was developed to measure interpersonal problems specifically (as distinct from non-interpersonal problems, such as difficulty sleeping or eating and intrusive thoughts) and the amount of distress they caused. Horowitz’s interpretation of the interpersonal model proposes that maladaptive interpersonal problems grow

from an attempt to maintain a psychological tie to an earlier caregiver. Even if the interaction is psychologically painful to the individual, there is a defensive drive to repeat it to avoid anxiety and protect self-image (Horowitz 1996). Noting that interpersonal complaints were often the first issues to be raised in therapy (Horowitz, Sampson et al. 1978), he emphasised that treatment should focus on identifying and clarifying them and helping the client to experiment with other ways of behaving. The IIP rests on the assumption that all behaviours are reciprocally influenced and invite a reaction. Behaviours on the dominance-submission axis are reciprocal and on the love-hate axis behaviours are similar, resulting in hostile-dominant behaviour soliciting a hostile-submissive reaction and friendly dominant behaviour soliciting a friendly submissive reaction. Interpersonal problems arise when an individual becomes locked into a pattern of repeated unwanted and frustrating interpersonal interactions (Horowitz, Dryer et al. 1997). The therapist attempts to unlock this 'vicious circle', firstly in the context of the therapeutic relationship and later outside of treatment (Horowitz 1996). This approach is compatible with the key concept of DIT, the IPAF: a formulation of recurrent self-other representation with a defence function, which causes psychic pain and that becomes the central focus in DIT (see chapter three).

Essentially the IIP can be viewed at three levels (Gurtman 2004). At the highest level, a person's interpersonal problems can be seen along the two axes: affiliation and dominance. Next, the subscales can be considered to isolate a more specific group of problems (see table I). Finally individual items can be considered in isolation ("item-centric analysis" (Gurtman and Pincus 2003), or indeed considered in clusters outside of their scales which may be useful for analysis, e.g. certain items may be predictive of therapeutic alliance (Gurtman 2004).

The IIP can be used to evaluate individuals before and after treatment and was designed with five clinical needs in mind: (i) to establish norms of frequency and severity of interpersonal problems; (ii) to help determine who may respond to treatment based on their interpersonal problems as some problems are more difficult to treat than others; (iii) to identify the interventions associated with improvement on particular problems; (iv) to differentiate between distress due to interpersonal problems and distress due to other problems, as these differing types of problems may change in different ways over treatment and (v) to better understand the relationship between a person's current interpersonal problems and other aspects of interpersonal functioning, such as attachment history. Norms are available for the IIP-

64 and IIP-32 based on a national standardized sample of 800 U.S residents aged 18-89 (Horowitz, Alden et al. 2000). This thesis contributes to the understanding of Items ii and iii which are still proving elusive, more than three decades later.

It is now a widespread tool in outcome studies of psychotherapy and has been translated into several different languages. There are, however, several different versions, some updated by the original authors and some by different authors, and a lack of clarity as to how to select the most appropriate version. For instance, the IIP manual (Horowitz, Alden et al. 2000) only details the IIP32 and IIP64; it does not provide guidance as to when the IIP-127 might be useful. While all the versions draw their items from the original IIP-127, there is variation in the way they construct their subscales and the items they have selected. Additionally, there is some ambiguity regarding scoring the measure. A glance at the numerous research papers reporting the use of the IIP reveals several scoring methods and also the same method being given different names. The manual's instructions as to how to score the measure for a specific purpose, be it a research trial or clinical work with an individual client, seems to be fairly limited. Although the leading authors in IIP research have made reference as to how to select a version and score it in other papers (e.g. Hughes and Barkham 2005), details regarding all the translated versions and scoring methods seem to be lacking. A comprehensive understanding of the scoring procedures and interpretation of the IIP will be vital in this study of the interpersonal approach to depression, not least in interpreting the data drawn from the REDIT trial (see chapter three). The following sections will consist of a careful examination of how the IIP was developed, its versions and its scoring. An evaluation of the use of each version will be included.

1.3 IIP: APPROACHES AND VERSIONS

The IIP has generally been approached in two different ways: the original factor approach (Horowitz, Rosenberg et al. 1988; Barkham, Hardy et al. 1994) and the later circumplex approach (Alden, Wiggins et al. 1990), based on Leary's (1957) interpersonal circle. The development of the IIP began with a study of a single female patient's therapeutic progress over a period of 100 hours in psychoanalysis (Horowitz, Sampson et al. 1978), in which a specific list of interpersonal complaints were identified that began "I can't….(do something)" and "I have to… (do something)." This method was extended to a sample of 28 patients about to commence psychotherapy at the Stanford Psychiatric Clinic and the major clusters of problem behaviours were identified by independent observers watching videotapes of the interviews (Horowitz

1979). Interpersonal problems were separated from other types of problems by 14 naïve judges with agreement required by at least 13 of the 14 judges. A preliminary version of the IIP developed with a student sample of 224 at Stanford University revealed good internal consistency and stability over a two month period (Horowitz, French et al. 1980; Horowitz, Weckler et al. 1983). Finally, the IIP-127 was produced with the items divided into two categories comprising the most frequently expressed complaints prior to treatment: "It is hard for me to…" and "these are the things I do too much…" (Horowitz, Rosenberg et al. 1988). A five point Likert scale is used to score the measure, ranging from zero (not distressed at all by this problem) to four (extremely distressed by this problem). Multi-dimensional scaling and a principal component analysis with a varimax rotation yielded two interpersonal dimensions: affiliation and dominance and six scales (see table II) with high internal consistency and high re-test reliability of 0.98 in a sample of 103 patients on a 10 week waitlist for treatment (mean self-rating over all items) (Horowitz 1979; Horowitz, Rosenberg et al. 1988). The parallels between this early stage of the IIP development and the DIT approach are notable: the target of both is to identify presenting symptoms and how they relate to relationship patterns. Horowitz et al's focus on participants' own reports of complaints is consistent with DIT's aim of encouraging individuals to reflect on their own state of mind and also with what underpins the IPAF: "a particular representation of self-in-relation-to-other that characterizes the patient's interpersonal style and that leads to difficulties in his relationships because it organises interpersonal behaviour" (Lemma, Target et al. 2011, p68).

There followed an attempt to correct some of the methodological failings of Horowitz et al's 1988 study with a larger UK sample of 250 patients referred for psychotherapy for depression. A more equal gender balance (Horowitz et al's sample were 86% female) and statistical testing for the number of factors to extract in the PCA were adopted (Barkham, Hardy et al. 1994; Barkham, Hardy et al. 1996). Barkham et al argued that Horowitz et al's study had arbitrarily set the eigenvalue of >3, which could lead to too few factors being extracted. Using an automated SCREE test, they determined that either 5 or 11 factors would produce the best factor solution and their PCA with varimax rotation revealed 8 clear factors accounting for 46.5% of the variance. Only two of these factors replicated Horowitz et al's: Hard to be assertive and Hard to be Sociable. To address concerns about a common complaints factor, they carried out a PCA using firstly the ipsatized IIP items and then ipsatized scales (see scoring section below for further discussion of ipsatizing). A PCA of the ipsatized scales with autoscree resulted in four bipolar factors accounting for 70% of the

variance, indicating that patients presenting for psychotherapy reported problems in the areas of assertiveness, socialising, independence and nurturance. Barkham et al argued that by under-extracting factors and failing to test for factor structure at the second time point, Horowitz et al's scale structuring had been arrived at prematurely. Barkham, Hardy et al (1996) produced the IIP-32, a shorter factor version of the IIP-127, by including items which loaded most highly on their factors. They successfully replicated an eight factor structure in a new sample of 166 patients referred for psychological treatment (no better target was found in 5000 random permutations). Acceptable fidelity to the original IIP-127 version was indicated by a difference of <.10 in the alpha co-efficients of the scales in the IIP127 and IIP-32. Use of this version should, however, be with the knowledge that the subscale items are different from the other shorter versions.

Despite the strengths of this version of the IIP-32, it was not widely adopted. A search on PsycInfo conducted in May 2020 gives only 64 citations of the article detailing its structure. Possibly its decline was due to the increasing popularity of the circumplex versions of the IIP which were published shortly after in 2000 including a 64 item and a shorter, 32 item version. Several of the 64 papers mis-referenced the IIP version they have used, attributing Horowitz, Alden et al's (2000) 32 item version to Barkham, Hardy et al (1994, 1996). Others cited both versions but failed to specify which they used. If the subscale scores are not reported, it remains unclear how many more have confused the two versions, highlighting the previous point about the lack of clarity in the use of the IIP (Horowitz, Alden et al. 2000).

There is one other short factor version of the IIP, the early 26 item IIP (Maling, Gurtman et al. 1995), based on a factor analysis completed prior to IIP-127 publication. It is comprised of the top three to five loading items from each of the six IIP-127 subscales and consists of three subscales: control, detached and self-effacing. Correlations between the three orthogonal factors revealed by the PCA and the scale scores were high (r=.92 in both the patient and control groups), indicating that the scales were a good representation of the item structure of the IIP-26. There were strong correlations between its subscales and that of the IIP-127; control was most highly correlated with 'hard to be submissive' and 'too controlling' (r=.73), detached with 'hard to be intimate' and 'hard to be social' (r=.83) and self-effacing with 'hard to be assertive' and 'too responsible' (r=.84). However, the IIP-26 appears only to have been used in one other study (conducted by its own authors), most likely due to the decline in use of the factor versions.

A criticism levied at the factor approach is that it fails to inform about the inter-relationship between the scales, resulting only in a list of unrelated factors. The circumplex models of the IIP redress this, providing a conceptual framework for mapping how interpersonal problems relate to one another. By using factor loadings on the two interpersonal dimensions as co-ordinates, the items can be plotted and used to determine the angle of the item from the x-axis (Horowitz, Alden et al. 2000). The development of the 64 item IIP-C (Alden, Wiggins et al. 1990), guided by the interpersonal circumplex model of interpersonal behaviour (Wiggins 1979; Wiggins and Broughton 1985), was constructed by selecting the eight ipsatized items that maximised the multiple correlation with each octant identified by a PCA of the IIP127. Following this 'visual-inspection' method, the circumplex structure of the IIP-C was confirmed using Browne's (1992) criterion (Pincus, Gurtman et al. 1998) and a battery of five exploratory tests (Acton and Revelle 2002). Table I describes the characteristics of high scorers in each of the octants which will be a consideration in the qualitative analysis undertaken in chapter three.

Table I: Characteristics of High Scorers in the IIP-C Octants

Octant	**Characteristics of high scorers**
Domineering (PA)	problems related to controlling, manipulating, aggressing toward, and trying to change others.
Vindictive (BC)	problems related to distrust and suspicion of others and an inability to care about others' needs and happiness.
Cold (DE)	inability to express affection toward and to feel love for another person, difficulty making long-term commitments to others, and an inability to be generous to, get along with, and forgive others.
Socially Avoidant (FG)	anxious and embarrassed in the presence of others and have difficulty initiating social interactions, expressing feelings and socializing with others.
Non-assertive (HI)	difficulty making their needs known to others, discomfort in authoritative roles, and an inability to be firm with and assertive toward others.

Exploitable QK)	Difficulty feeling and expressing anger for fear of offending others. They describe themselves as gullible and readily taken advantage of by others.
Overly Nurturant (LM)	try too hard to please others and are too generous, trusting, caring, and permissive in dealing with others.
Intrusive (NO)	inappropriately self-disclosing, attention seeking, and find it difficult to spend time alone.

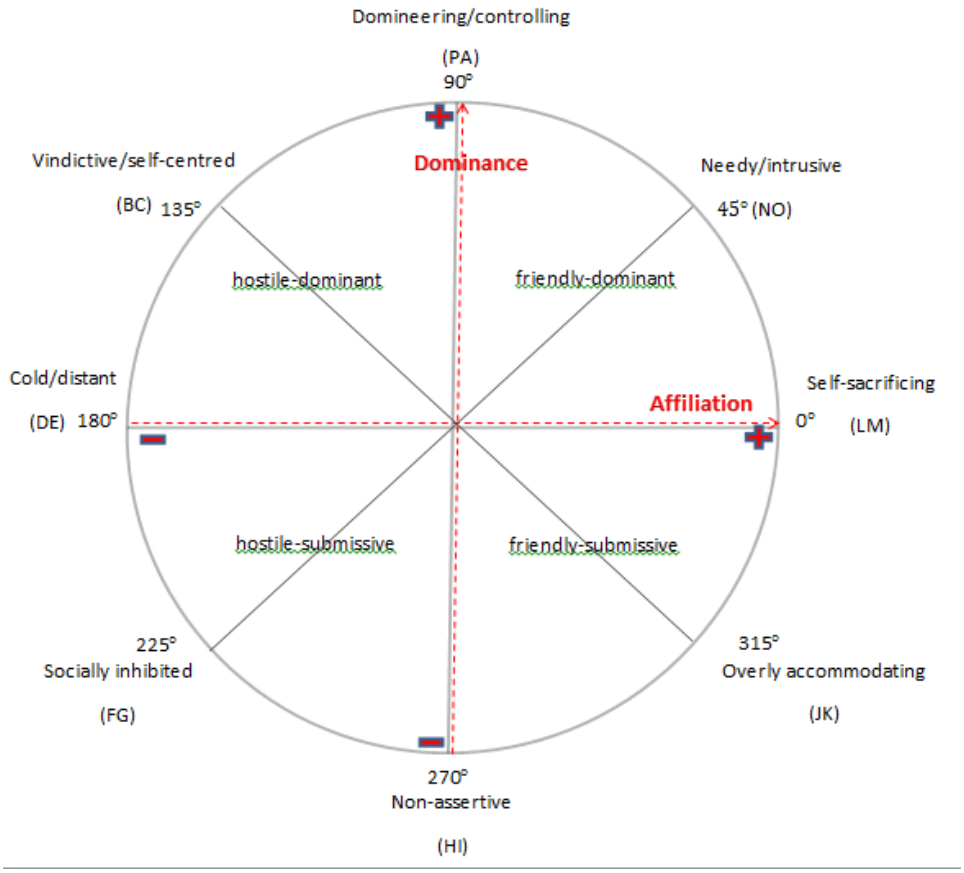
(From Alden, Wiggins et al. 1990, pp.528)

Modifications were made to the IIP-C, including renaming the octant scales for a more accurate description of the items they contained and producing new normative data and it was replaced by the IIP-64 (Horowitz, Alden et al. 2000). Comprised of the same 64 statements of frequently reported interpersonal problems used in the IIP-C, it can be used to determine a person's interpersonal distress relative to a standardized US sample. The items are rated on a five-point Likert scale ranging from *not at all* to *extremely* and there are eight scales representing eight domains of interpersonal functioning (see table II). Despite the use of different ipsatizing methods in the development of the IIP-C and the IIP-64, the factor loadings were very similar and the subscales contain the same items in each scale, making them easily comparable. This 64 item version has been the one most frequently adopted by researchers. Since the manual was published in 2000, it has become more popular than the 127 item version (see chapter two, table V for a breakdown of the versions used in published outcome studies of interpersonal problems in depression) with the exception of follow-up studies in which the IIP127 was used in the original data prior to 2000 and where a translation of the IIP127 was used.

Figure I illustrates the IIP-64 circumplex (the IIP-C octant names are shown in brackets). The degrees indicate the equally spaced locations of the octants at 45º intervals along the axes of dominance and affiliation and the four quadrants which each describe a particular combination of the underlying dimension are shown: hostile-dominant, friendly-dominant, hostile-submissive and friendly-submissive. As an alternative to the circumplex, individuals' octant scores have also been plotted on a rectangular, co-ordinated system with the scales along the x-axis and the standardized scores along the y-axis resulting in a cosine curve (Gurtman and Balakrishnan 1998). There are theoretical hypotheses regarding the relationship

between an individual's circumplex pattern and the outcomes of psychotherapy, for example, if a therapist is friendly-dominant, it might be expected that a client with a friendly-submissive interpersonal style would benefit more than one with a hostile-dominant style (Tracey 1993). There is some evidence to suggest that problems of hostile-dominance are indeed more difficult to treat with psychotherapy that problems of friendly-submissiveness (e.g. Malan 1976; Horowitz, Rosenberg et al. 1993; Strauss and Hess 1993; Davies-Osterkamp, Strauss et al. 1996). The case for a relationship between pre-treatment IIP scores and treatment outcome is examined in more detail in chapter two as a premise to chapter five which specifically investigates the relationship between baseline IIP and outcome in trials of DIT. The aim will be to identify what types of interpersonal problems might be most suited to treatment with DIT.

Figure I: Interpersonal Problem Circumplex



Adapted from Alden, Wiggins et al (1990) and Gurtman (1996)

There are three shorter circumplex versions of the IIP-C developed for use with large samples and where time is limited. A shorter version is recommended for use when only the mean level of interpersonal disturbance is being investigated and for locating an individual's location in the circumplex. If subscale scores are required, the IIP-64 is preferable due to the greater number of items in each. The IIP-40 (Riding & Cartwright 1999) is included for the purposes of producing an all-inclusive list, however it has not been reported in further studies and attracted criticism for its method of subscale construction and a lack of validity (Startup 2000). The IIP-SC (Soldz, Budman et al. 1995) is a 32 item circumplex version based on the IIP-C (Alden, Wiggins et al. 1990). It was produced by identifying the four items in each octant with the highest correlation with the whole scale. Acceptable circumplex properties were indicated based on the correlations between the four item subscales and the eight item subscales of the IIP-C being greater than r = .9 and all octant scales being within 25º of the expected IIP-C location in a sample of 355 out-patients undergoing psychotherapy. Good internal consistency was also found when the results were replicated with a sample of patients with personality disorder.

A second version has since been produced, the IIP-32 (Horowitz, Alden et al. 2000) based on a stratified community sample and selecting the four items on each scale of their IIP-64 with the highest item-total correlations. The items in the scales socially-inhibited, non-assertive and intrusive/needy are the same as the IIP-SC, but the other scales contain one or two different items. Of the two, the more recent IIP-32 seems preferable, due to its manualised form which includes norms.

During the 1990s and early 2000s, a number of niche versions of the IIP emerged with their own specific focus. These included the IIP-AS for attachment styles (Hardy and Barkham 1994) and IIP-PD (Pilkonis, Kim et al. 1996), IIP-PD25 (Kim, Pilkonis et al. 1997) and the IIP48 (Gude, Moum et al. 2000) for personality disorders. Despite their theoretical usefulness in helping to distinguish insecure attachment, between personality disorders and no personality disorder, and between personality disorder subtypes, none of them caught on to any notable extent and citations are scant (six, 41, four and six respectively in April 2020). With so many IIP versions already available and the relatively modest use of the IIP as part of research batteries, its unsurprising that the more specialist versions tend to be overlooked despite their value.

Table II: Summary of IIP Versions

Version	Approach	Items	No. of scales	No. of items per scale	Scales	Evaluation
IIP-127 (Horowitz, Rosenberg et al. 1988)	Factor	127	6	10-21, +44 not included in any subscale	Hard to be assertive Hard to be social Hard to be intimate Hard to be submissive Too controlling Too responsible	No longer commonly used. No circumplex scales. Useful for item-centric analysis where particular items may be of clinical interest.
IIP-26 (Maling, Gurtman et al. 1995)	Factor	26	3	7 10 9	Control Detached Self-Effacing	Only reported in one research study by its authors since its development. Subscales not comparable to other versions.
IIP-32 (Barkham, Hardy et al. 1996)	Factor	32	8	4	Hard to be assertive Hard to be sociable Hard to be supportive Hard to be involved Too aggressive Too open Too caring Too dependent	Used less frequently than the more popular circumplex versions. Not easily comparable as scales and items are different to the IIP-32 (2000) and the IIP-SC (1995).

IIP-C (Alden, Wiggins et al. 1990)	Circumplex	64	8	8	PA Domineering BC Vindictive DE Cold FG Socially avoidant HI non-assertive JK exploitable LM overly nurturant NO intrusive	Superseded by the IIP-64. The scale items match IIP-64, making it an easily comparable measure.
IIP-SC (Soldz, Budman et al. 1995)	Circumplex	32	8	4	PA Domineering BC Vindictive DE Cold FG Socially avoidant HI non-assertive JK exploitable LM overly nurturant NO intrusive	Rarely used since the development of the IIP-32 (2000). Care should be taken in comparing subscales: items do not match the IIP-32 (2000).

IIP-40 (Riding and Cartwright 1999)	Circumplex	40	8	5	Lower neutral Lower close Neutral close Upper close Upper neutral Upper distant Neutral distant Lower distant	Criticised for insufficiently detailed report of the statistical analysis, lack of construct validity and a small sample. No further citing in the literature.
IIP-64 (Horowitz, Alden et al. 2000)	Circumplex	64	8	8	1. Domineering/controlling 2. Vindictive/self-centred 3. Cold/distant 4. Socially inhibited 5. non-assertive 6. overly accommodating 7. self-sacrificing 8. intrusive/needy	Recommended where both total score and subscale scores are of interest. Scale items match IIP-C. Norms available.

IIP-32 (Horowitz, Alden et al. 2000)	Circumplex	32	8	4	1. Domineering/controlling 2. Vindictive/self-centred 3. Cold/distant 4. Socially inhibited 5. non-assertive 6. overly accommodating 7. self-sacrificing 8. intrusive/needy	Recommended when a shorter version is required due to time constrains and when both total score and subscale scores are of interest. Norms available.

Papers detailing the translated versions are listed in Table III and include German, Norwegian, Swedish, Dutch, Spanish, Italian, Persian and Mandarin.

According to the IIP license distributer, Finnish, French, Greek, Korean, Malay, Polish and Slovenian translations are also available, with a caveat that some are partial translations and typically do not have validation data (Mindgarden.com). A literature search conducted in April 2020 could not identify any papers containing the details of these translations.

The Turkish, Thai, Spanish, Dutch and German translations are of the most up-to-date manualised version by Horowitz, Alden et al (2000), with the exception of the IIP-12. Very little research could be identified regarding this German version, which is reported as "a 12-item short-version of the Inventory of Interpersonal Problems (IIP; Horowitz, Rosenberg, Baer, Ureño, & Villaseñor, 1988)" (a factor version). Confusingly, it has also been described as a circumplex version (Lutz, Prinz et al, 2020). The Danish, Swedish and Norwegian translations are of the IIP-C (Alden, Wiggins et al. 1990), which poses little problem as the scale items are identical to the manualised IIP-64. The Persian version (Besharat 2006) seems to be a 60 item inventory developed from the IIP-127, but there is very limited detail reported in English. Curiously, the recent Mandarin translation (Wu, Roche et al. 2015) is of the superseded IIP-SC (Soldz, Budman et al. 1995), making subscale comparison with the manualised IIP-32 difficult due to the different items. The Italian version (Clementel-Jones, Azzone et al. 1996) is of the IIP-127 (Horowitz, Rosenberg et al. 1988) and seems to be the most problematic. The authors found weak agreement on scales with English versions (Horowitz, Rosenberg et al. 1988; Alden, Wiggins et al. 1990; Barkham, Hardy et al. 1994) and conducted their own factor analysis, revealing 10 first order factors and four second order factors. They concluded that there was instability of factor structure in the IIP, due to the shifting of smaller subgroups within factors with a high number of positive loadings, likely due to sample characteristics. However, their inability to identify a factor structure comparable to other IIP versions seems to be fairly unusual- subscales reported in other versions (see table II) were more similar. The reasons for such a strong anomaly in this study are unclear; perhaps there was something unusual about the sample (e.g. very low elevation in this non-clinical sample) or the translation. A literature search only revealed one additional paper citing the use of the Italian version (Bressi, Porcellana et al. 2010).

Table III: Translations of the IIP

Version	Translated from	Approach	Items	No. of scales	No. of items per scale	Scales	Evaluation
TURKISH IIP-32 (Akyunus and Gencoz 2016)	IIP-32 (Horowitz, Alden et al. 2000)	Circumplex	32	8	4	1. Domineering/controlling 2. Vindictive/self-centred 3. Cold/distant 4. Socially inhibited 5. non-assertive 6. overly accommodating 7. self-sacrificing 8. intrusive/needy	Translation of most up-to-date IIP-32 (2000).
MANDARIN CHINESE IIP-SC (Wu, Roche et al. 2015)	IIP-SC (Soldz, Budman et al. 1995)	Circumplex	32	8	4	PA Domineering BC Vindictive DE Cold FG Socially avoidant HI non-assertive JK exploitable LM overly nurturant NO intrusive	Translation of the IIP-SC. The scale items do not match the IIP-32 (2000).

THAI IIP-32 IIP-64 (Wongpakaran, Wongpakaran et al. 2012)	IIP-32 IIP-64 (Horowitz, Alden et al. 2000)	Circumplex	64 32	8 8	8 4	1. Domineering/controlling 2. Vindictive/self-centred 3. Cold/distant 4. Socially inhibited 5. non-assertive 6. overly accommodating 7. self-sacrificing 8. intrusive/needy	Translation of most up-to-date IIP-32/64 (2000).
SPANISH IIP-32 IIP64 (Salazar, Marti et al. 2010)	IIP-32 IIP-64 (Horowitz, Alden et al. 2000)	Circumplex	64 32	8 8	8 4	1. Domineering/controlling 2. Vindictive/self-centred 3. Cold/distant 4. Socially inhibited 5. non-assertive 6. overly accommodating 7. self-sacrificing 8. intrusive/needy	Translation of most up-to-date IIP-32/64 (2000).
DUTCH IIP-32 IIP-64 (Vanheule, Desmet et al. 2006)	IIP-32 IIP-64 (Horowitz, Alden et al. 2000)	Circumplex	64 32	8 8	8 4	1. Domineering/controlling 2. Vindictive/self-centred 3. Cold/distant 4. Socially inhibited 5. non-assertive 6. overly accommodating	Translation of most up-to-date IIP-32/64 (2000).

						7. self-sacrificing 8. intrusive/needy	
DANISH IIP-C (Poulsen and Ivanouw 2006)	IIP-C (Alden, Wiggins et al. 1990)	Circumplex	64	8	8	PA Domineering BC Vindictive DE Cold FG Socially avoidant HI non-assertive JK exploitable LM overly nurturant NO intrusive	Translation of the superseded IIP-C (1990). Scale items do match IIP-64 (2000).
PERSIAN IIP-60 (Besharat 2006)	IIP-127 (Horowitz, Rosenberg et al. 1988)	Factor	60	6	unknown	unknown	Translation of the IIP-127 (1988). Authors produced their own subscales; comparability with other versions is unknown.
GERMAN IIP-D (Horowitz, Strauss et al. 2000)	IIP-64 (Horowitz, Alden et al. 2000)	Circumplex	64	8	8	1. Domineering/controlling 2. Vindictive/self-centred 3. Cold/distant	Translation of most up-to-date IIP-64 (2000). Scale items do match IIP-C (1990).

						4. Socially inhibited 5. non-assertive 6. overly accommodating 7. self-sacrificing 8. intrusive/needy	
IIP-32 (Thomas, Brahler et al. 2011)	IIP-32 (Horowitz, Alden et al. 2000)	Circumplex	32	8	4		
IIP-12 (Lutz, Tholen et al. 2006)	IIP-127 (Horowitz, Rosenberg et al. 1988)	unknown	12	4	3		English translation of article not available. Reported as a 12 item version of the IIP-127 (1998) by Lutz, Prinz, et al (2020), but also describe it as a circumplex measure.
SWEDISH (Weinryb, Gustavsson et al. 1996)	IIP-C (Alden, Wiggins et al. 1990)	Circumplex	64	8	8	PA Domineering BC Vindictive DE Cold FG Socially avoidant	Translation of the superseded IIP-C (1990). Scale items do match IIP-64 (2000).

						HI non-assertive JK exploitable LM overly nurturant NO intrusive	
ITALIAN (Clementel-Jones, Azzone et al. 1996)	IIP-127 (Horowitz, Rosenberg et al. 1988)	Factor	127	10	26 8 8 9 8 9 9	Non-sociable (3 subgroups: due to egocentricity/ lack of initiative/ lack of commitment) Fragility (2 subgroups: due to suggestibility/ reluctance to take charge) Intimacy Lack of assertiveness Ambivalence and sexual problems Empathy and Guilt Egocentricity Openness	Translation of the IIP-127 (1988). Authors produced their own subscales but little comparability with other versions.

					6 6 6	Aggressiveness Difficulties with authority	
NORWEGIAN IIP-C (Stiles and Hoglend 1994)	IIP-C (Alden, Wiggins et al. 1990)	Circumplex	64	8	8	PA Domineering BC Vindictive DE Cold FG Socially avoidant HI non-assertive JK exploitable LM overly nurturant NO intrusive	Translation of the superseded IIP-C (1990). Scale items do match IIP-64 (2000).

1.4 SCORING THE IIP

Detailed instructions for administering and scoring the current versions of IIP64 and IIP32 are available in the IIP Manual (along with U.S. norms) (Horowitz, Alden et al. 2000); figure II provides a summary of the different scoring options. Total scoring will give an indication of the overall level of interpersonal distress the individual is reporting, whereas subscale scoring indicates interpersonal problems in specific areas. The total raw score is calculated by either summing the subscale raw scores or the raw item scores, except in the case of the IIP-127, which must be scored by summing raw items as it contains items not included in any subscale. More commonly, IIP scores are reported as the mean (sometimes referred to as global) score of either the total or subscale score: the raw score divided by the number of items. The global sum 'distress' score can be calculated by summing or averaging an individual's subscale scores (Horowitz, Strauss et al. 2000). This seems to be more frequently employed with the German version of the IIP (IIP-D) (Schauenburg, Kuda et al. 2000; Leichsenring, Biskup et al. 2005; Schneider, Tiemann et al. 2015). The standard T score is useful for comparing an individual or group with a normative sample stratified to match the U.S census (Horowitz, Alden et al. 2000) and can be calculated for the total level of interpersonal distress or the subscales.

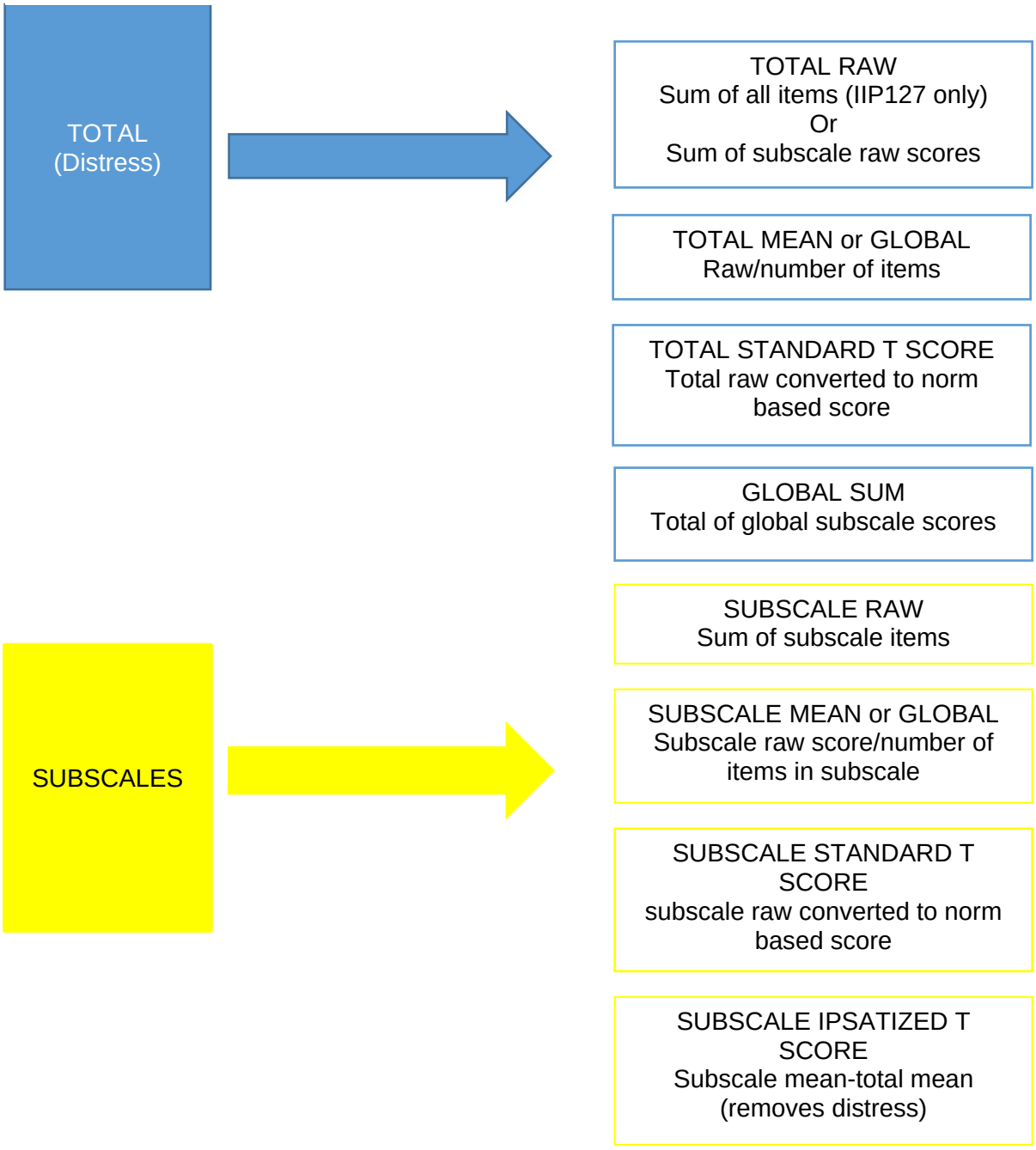
An insight into the relative distress in each octant compared to the overall level of distress can be obtained by calculating the ipsatized T score: the mean subscale score minus the mean total score. This accounts for the individual's general tendency to report distress by expressing their response as a deviation from their mean response across all items. By adjusting for the overall level of distress, the relative salience of the particular interpersonal difficulty can be determined. Ipsatized scores can then be plotted on the circumplex scale based on the two primary interpersonal factors: affiliation and dominance. When considering the subscales, the general distress factor can either be retained by using the raw scores or removed by ipsatizing the scores (Holtforth, Lutz et al. 2006). There has been debate as to whether the distress factor represents a response-style 'complaint factor' or a more general and perhaps the best measure of interpersonal mal-adjustment (Wiggins and Pincus 1989; Gurtman and Balakrishnan 1998). By ipsatizing IIP scores to better interpret the circumplex, the distress factor is treated as a nuisance effect. This is problematic for those who believe it should be evaluated rather than ignored (e.g.Tracey, Rounds et al. 1996). The 'response-style' school of thought (e.g. Edwards, Edwards et al. 1988) considers it a nuisance factor and unrelated to content of the measure: it merely

reflects an individual's response bias and will vary according to their personal tendency to give an answer which they think is desirable to the researcher. The opposing side (e.g. McCrae and Costa 1983) consider its elimination a threat to the validity of the measure. In one of the few studies to investigate the relationship between IIP general distress and personality and response measures, general distress was found not only to be a clear third factor (along with dominance and affiliation), but also to correlate with self-report measures of neuroticism and global psychiatric symptom severity. In a sample of 105 undergraduates, Tracey, Rounds et al. (1996) found that general distress and BSI Global Severity (GSI) correlated highly (.75) and that general distress was significantly inversely related to self-deception (denial of pathology) (-.40) and was moderately related to negative affectivity (.46) but not positive affectivity (.09). General distress has also been found to be negatively correlated with therapist-rated scales of patient adjustment (r=-.34 to .16) (Gurtman and Balakrishnan 1998). This provides support for the interpretation of the general factor as a measure of how distressing an individual finds interpersonal problems, rather than just an indicator of acquiescence. The decision whether to ipsatize the IIP data used in later chapters of this thesis was influenced by these findings and the conclusion drawn was that removing the general factor clearly present in the IIP (see chapter II) would risk eliminating potentially useful data such as interpersonal rigidity. Tracey, Rounds et al (1996) had also noted that the circumplex parameters were divergent across the general factor: lower levels of general distress were associated with less differentiation in the octant scores. Ipsatization would therefore result in the loss of this important indicator of rigidity (Hoessler 2008). Given that measures such as interpersonal rigidity are potential predictors of outcome, the value of the general factor in predicting response to DIT was considered to outweighed the benefits offered by an improvement in the circumplex properties offered by ipsatization.

If there is indeed a three factor structure to the IIP which comprises distress, affiliation and dominance as some studies have successfully demonstrated (e.g. Tracey, Rounds et al. 1996; Vittengl, Clark et al. 2003; Holtforth, Lutz et al. 2006), it will important for the analyses in later chapters to understand whether and how they might change over the course of therapy. It would seem to be a desirable outcome for interpersonal distress at least to have reduced following treatment. If the distress factor is considered to be sensitive to change during treatment for depression (a state measure) and affiliation and dominance to be enduring aspects of personality (trait measures), the IIP is an ideal measure of state vs. trait interpretation of interpersonal problems. Separating state from trait aspects of personality and relating them to

treatment outcome has been a challenge, though it has been attempted using the Schedule for Nonadaptive and Adaptive Personality (SNAP-2) (Clark, Simms et al. 2008). SNAP-2 was used to demonstrate that patients whose depression was more attributable to traits (stable processes which may be internal, environmental or a combination) and less to states (unstable processes) had poorer outcomes after acute cognitive therapy (Vittengl, Clark et al. 2014). The same research group also demonstrated that general distress, measured using the IIP, decreased over acute cognitive therapy, but love and dominance scores remained stable (Vittengl, Clark et al. 2003). Chapter two will examine the wider literature regarding the relative outcomes of therapy for state versus trait interpersonal problems in greater detail and the change in distress, love and dominance pre to post DIT will be the subject of chapter five. The relative influence of state and trait interpersonal problems on the formulation and ultimately the IPAF classification will be important to consider in chapters three and four, as the state variance may mask the trait variance when the patient is depressed. In individuals with a high level of diffuse interpersonal distress, it may be difficult to focus therapeutic treatment on one particular pattern of relating (as required by the IPAF). Attempting to do so may fail to capture the complexity of the individual's problems or focus incorrectly and consequently the outcome of treatment may be poorer than that for an individual with lower distress scores.

Figure II Scoring of the IIP



1.5 INTERPRETING THE IIP CIRCUMPLEX

Beyond the factor dimensions and the subscale scores, there are numerous other ways in which the IIP circumplex can be interpreted which may be of value for later chapters of this thesis. Table IV provides a summary of the key constructs and how they can be interpreted, both mathematically and clinically.

Table IV: Circumplex Interpretation

Construct	Mathematical descriptor	Clinical meaning
Elevation[a]	Mean level of the profile (mean of all scores)	Overall mean distress across all scales
Angular displacement[a]	The highest peak in the profile (angle at which curve reaches its highest point)	Predominant theme of mal-adjustment
Amplitude[a]	Vector length of the profile (difference between highest point of the curve and the curve's mean)	Rigidity of interpersonal problems
Goodness of fit[a]	Degree to which profile conforms to a sinusoidal curve	How easily the profile can be interpreted and characterized, how consistent it is
Flux[b]	Variability (SD) about the mean score on one particular dimension of the profile	Extent to which an individual varies around the mean level of a particular interpersonal behaviour across social situations
Pulse[b]	Variability (SD) about the mean extremity (vector length scores) on the profile	Extent to which there is variability in the intensity of behaviour
Spin[b]	Variability (SD) about the mean angular co-ordinate in the profile	Extent to which types of interpersonal problems vary

[a] guidelines for interpreting these terms from (Gurtman and Balakrishnan 1998); [b]guidelines from (Moskowitz and Zuroff 2004); SD, standard deviation.

Elevation is the mean level of distress an individual reports across the IIP subscales. As noted in the previous section, it will be an important consideration in the prediction of DIT outcome if it is assumed to represent a changeable 'state' which may be modified by therapy. Prior to the research conducted for chapter two, it's relationship with therapeutic outcome was still very unclear: while Vittengl, Clark et al (2003) found elevation decreased over the course of cognitive therapy, other studies found that it was weakly to moderately negatively correlated with clinical outcome in psychodynamic psychotherapy (e.g. Gurtman 1996; Gurtman and Balakrishnan 1998; Ruiz, Pincus et al. 2004). High levels of

interpersonal distress have also been found in both those who deteriorated and those who improved with group cognitive therapy (Mohr, Beutler et al. 1990). A full examination of the research reported to date regarding the change in elevation over the course of psychotherapy is reported in the following chapter.

Angular displacement, also referred to as the peak shift or vector angle, indicates the 'typology' of the profile (Leary 1957), i.e. the domain in which the individual's interpersonal problems mainly lie. The mid-point of each octant equally spaced at 45° intervals describes a location in degrees which corresponds to a particular problematic area for the individual. For example, an angular displacement of 45° indicates that their interpersonal problems are characterised by inappropriate self-disclosure, intrusiveness, attention seeking or difficulty spending time alone; an angle of 315° would represent problems such as difficulty feeling or expressing anger, gullibility and a tendency to be taken advantage of (Gurtman and Balakrishnan 1998). There is an obvious parallel here with the DIT perspective. The IPAF also encompasses the key problematic features of the individual's interpersonal relationships, which makes the IIP angular displacement particularly relevant to this thesis. If it is also a mathematical representation of the IPAF, it could be used to validate the IPAF classifications in chapter four. As an indicator of the nature of pre-treatment interpersonal problems, it may also be a predictor of DIT outcome in chapter five.

Amplitude, or vector length, indicates the variability in subscale scores: a score of 0 would indicate the same scores on each subscale and a high score a notable peak and trough. According to interpersonal theory, a particularly peaked profile is indicative of a rigid and inflexible interpersonal style- interpersonal interactions don't vary much from a limited section of the circumplex (Leary 1957). Again, this IIP construct is relevant to the following chapters: might amplitude vary between IPAF types and can it be used as a predictor of DIT response? Individuals with very rigid interpersonal styles might be considered to be more difficult to treat. The theory of epistemic trust- trust that an individual (in this case the patient) places in another (the therapist) to allow a process of social leaning (e.g. Fonagy and Allison 2014) states that patients with a high level of epistemic mistrust may find it more difficult relax their vigilance, making them 'rigid' and hard to reach in treatment (Fonagy, Luyten et al. 2015). Empirical evidence for this is still at an early stage and the predictive value of amplitude on therapy outcome is as yet unclear. Some studies have found that any relationship is no longer significant when elevation is controlled for (e.g. Gurtman and Balakrishnan 1998), another found high amplitude was still associated with reduced improvement in therapy after the elevation effects were partialed out (Ruiz, Pincus et al. 2004). Nevertheless, its inclusion as a measure in the following chapters will be relevant to an investigation of outcomes.

Goodness-of-fit describes the complexity of the profile and the extent to which it can be considered consistent. A good fit means the profile can be interpreted, a poor one that the pattern cannot be characterized, which may be indicative of an individual's inconsistency (Gurtman and Balakrishnan 1998). An inconsistent profile suggests a conflicting and vacillating style thought to be maladaptive and associated with personality disorder (Kiesler 1996). Similarly, flux refers to the amount an individual varies their interpersonal behaviour from the mean on any one specific dimension across social interactions (Moskowitz and Zuroff 2004). For example, an individual with high flux on the affiliation pole may behave agreeably in one situation and be difficult in another; an individual with low flux would tend to show little variability from their mean level of friendliness regardless of the situation. The relationship between these constructs and the IPAF is an interesting one: goodness-of-fit maybe related to the ease with which IPAFs can be categorised- if an interpersonal pattern cannot be determined on the circumplex, it may also be difficult to determine the key features of the IPAF. It might be expected that individuals with low flux would have clearer repetitive patterns of relating. If the focus of the IPAF is well defined, the effectiveness of DIT should in theory be improved. Chapter four will include a detailed examination of those IPAFs which were difficult to classify.

Taken together, elevation, angular displacement and amplitude are sometimes referred to as the structural summary method (Gurtman and Balakrishnan 1998). An individual's IIP profile can be represented as a combination of these three parameters. It also provides a goodness of fit index ranging from 0 to 1 which reflects the extent to which the profile fits the prototypical sinusoidal curve along an xy axis.

Pulse is the amount of variation in overall extremity of behaviour. It represents the extent to which behaviours vary between their distance from the centre of the interpersonal circle, i.e. how much an individual fluctuates from more extreme to less extreme interpersonal behaviours across events (Moskowitz, Russell et al. 2009). Low pulse indicates an individual who continually experiences a similar intensity of feeling (be it high, medium or low), high pulse demonstrates more strong and frequent fluctuations between low and high intensity feelings (Kuppens, Van Mechelen et al. 2007). As above, more fluctuation between the intensity of feelings may be associated with less clearly defined IPAFs- if there is no distinct, repetitive pattern of relating, the IPAF will be more difficult to classify.

Interpersonal spin is the extent to which an individual's interpersonal behaviours are dispersed around the circumplex: high spin suggests extensive variation in behaviour and low spin a tendency to repeat similar behaviours over time and across situations (Moskowitz and Zuroff 2004). While some spin is adaptive and should be expected in the interpersonal circumplex of a normal individual (too little would suggest psychopathology),

a lot of spin suggests disorganised interactions with rapid shifting of behaviour consistent with borderline personality disorder (Russell, Moskowitz et al. 2007). A study of co-workers in various occupations indicated that high spin was consistently associated with less close social relationships and co-workers avoided individuals with high spin, even when they were well acquainted, due to the negative affect they felt in the interaction (Côté, Moskowitz et al. 2012). Similar to flux, patients with higher spin might theoretically be expected to exhibit more chaotic patterns of relating which are difficult to define, leading to poorer outcomes.

1.6 CONCLUSIONS

The aim of this chapter has been to provide an overview of the IIP: its development, versions and scoring, with the intention of using it to inform a study of the outcomes of DIT. It is apparent that the DIT model and the theory behind the IIP have much in common, both assuming that interpersonal problems result from an individual finding themselves trapped in unwanted and frustrating interactions which become reciprocal, and both aiming to identify presenting symptoms and how they relate to these relationship patterns.

The IIP is a unique measure in that it targets interpersonal problems rather than interpersonal behaviours. The circumplex version now dominates the literature and the earlier factor approaches seem to have fallen out of favour. It is formed of eight scales loading onto two factors, affiliation and dominance and can be used to gain an insight into the relative salience of an individual's interpersonal problems. With regards to selecting a version, the IIP used will depend on the nature of the study. Hughes & Barkham (2005) recommend that four points are considered. Firstly, the version selected should match the theoretical assumptions of the study, for example circumplex models would be best suited to the IIP-C. Secondly, the version should match the target group, e.g. if the participants are part of a study of personality disorder, the IIP-PD should be considered. Thirdly, the version should match the clinical or research focus; for example a study conducted within primary care may require a shorter version. Finally, there should be an examination of quality control through the evaluation of the versions psychometric testing. The IIP-64 (Horowitz, Alden et al. 2000) might be recommended where a total score and subscale scores are required and the IIP-32 (Horowitz, Strauss et al. 2000) when a measure of mean disturbance only will suffice or when time is limited. The IIP-127 (Horowitz, Rosenberg et al. 1988) is very seldom used now since the introduction of the manualised 64 and 32 item versions were published in 2000, but it could be considered when an item-centric analysis is of interest. The most frequently used translation is the German IIP-D (Horowitz, Strauss et al. 2000) which is statistically comparable with the IIP-64, however

caution should be taken when using the other translations as they are of less frequently used versions. Future translations of the IIP-32 and IIP-64 would be desirable.

The manual describes scoring and additionally, researchers will note the frequent use of the mean global scoring method for IIP total in the literature. The use of standard T scores and ipsatizing for subscale scores should be considered where relevant. There are theoretical reasons why particular interpretations of the IIP-C would be useful in understanding the outcome data for the REDIT trial later in this project. Angular displacement could be an ideal construct to examine the validity of the IPAF classification system; baseline amplitude, goodness of fit, flux, pulse, spin may contribute to an understanding of why some patients had better outcomes after DIT. Clarifying the relationship between elevation and outcomes in DIT will also be an important part of the project as a whole.

CHAPTER 2

Interpersonal Problems in Intervention Studies for the Treatment of Depression: An Updated Systematic Review and Meta-Analysis

2.1 CHAPTER OVERVIEW

Chapter two investigates the extent to which interpersonal problems change over the course of psychotherapy. As reported in chapter one, interpersonal problems are frequently described by patients suffering from depression, but prior to this thesis, there has been little attempt to consolidate the results of studies reporting changes in interpersonal problems following psychotherapy. Consequently, a broader picture of study results was unclear and it was difficult to drawn meaningful conclusions about the nature of change. This chapter builds upon and updates the work done for a paper written as part of this thesis (McFarquhar, Luyten et al. 2018) in an attempt to produce a concise report of the empirical evidence for interpersonal change over psychotherapy. A further 160 citations were reviewed beyond the 675 reviewed in the original paper, covering the period 2016 to 2020. This indicated a notable increase in the number of depression studies including the IIP as a measure in recent years. Limited to treatment specifically for depression, the chapter comprises a systematic review of studies and meta-analysis reporting change in the Inventory of Interpersonal Problems (IIP) pre to post treatment with any modality of psychotherapy.

An electronic search was conducted in PsycInfo, PubMed and Limo to identify journal articles reporting studies of individual, adult treatment for depression with psychotherapy which reported IIP outcome scores. Thirty-eight studies (48 articles) met the inclusion criteria, of which 17 studies (21 articles) were included in a meta-analysis investigating changes in IIP total scores pre to post brief psychotherapy. Reasons for exclusion from the MA were the proportion of patients with a diagnosis of depression was too low (n=22), IIP means and SDs not reported/unobtainable (n=3) and long term therapy (n=2). A moderate effect size (g=0.62, 95% CI=0.48-0.76) was found for improvement in IIP scores after brief treatment. A subgroup analysis indicated that improvement was greater for psychodynamic therapies (g=0.44) than for CBT (g=0.28). Results also showed a small (non-significant) ES for IIP scores post treatment to follow-up, g=0.06, 95% CI=-0.09-0.21, suggesting sleeper effects were not strongly indicated for the IIP following psychotherapy. The frequency of inclusion of the IIP in RCTs of psychotherapeutic treatment for

depression appears to be increasing but remains low. The predictive qualities of the IIP dimensions, quadrants and subscales are so infrequently reported that conclusions were difficult to draw, although there is some evidence to suggest higher interpersonal distress and amplitude are associated with poorer outcomes. Dominance may be more amenable to change than affiliation, however the subscales on the affiliative side of the circumplex often improve more than those on the hostile side.

2.2 INTRODUCTION

Chapter one provided an overview of the use, development and scoring of the IIP, a commonly used measure of interpersonal problems. The IIP is one of a number of outcome measures used in the DIT trials from which later data in this thesis will be drawn. Like the DIT model, the IIP assumes that interpersonal problems arise when people become trapped in relationship patterns which invite negative reactions from others. Its underlying dimensions- affiliation and dominance- and its subscales will be adopted in later chapters to inform a classification system for the focus of DIT treatment which could be used to predict treatment response. This chapter will collate the current empirical evidence of changes in interpersonal problems following psychotherapy for depression and the relationship between baseline IIP scores or change in IIP scores and treatment outcome, through a systematic review of IIP results in psychotherapeutic studies and meta-analysis where feasible. It provides an update and extension of the systematic review and meta-analysis produced as part of this thesis (McFarquhar, Luyten et al. 2018).

According to interpersonal theories, depressive symptoms result when the basic human need to form and maintain strong and stable relationships is frustrated (Baumeister and Leary 1995). Some symptoms of depression are particularly likely to result in interpersonal distress, for example, feeling worthless or guilty may result in the individual repeatedly talking about these feeling in their social interactions or seeking excessive reassurance, setting up an interpersonal context which may result in further episodes (Hames, Hagan et al. 2013). Beginning in the 1950s, Harry Stack Sullivan, considered the father of interpersonal theory, emphasised the importance of the interpersonal context in the course of healthy personality development. He proposed that depression resulted when there was a frustration of the basic needs of security and self-esteem, that is, feeling loved and safe to bond with others and feeling a sense of self-worth (Sullivan 1940; Sullivan 1953b). In the 1970s, Peter Lewinsohn suggested that depressive symptoms were a result of social skills deficits (Lewinsohn 1974; Lewinsohn 1975). When there was a change or stressor in the individual's environment and they lacked the skills required to illicit positive reinforcement from others, depression resulted. Similarly, Segrin and Flora (1996; 2000) considered that poor social skills are a diathesis in the development of depression and

other psychosocial problems. Individuals who are not able to illicit social support from others in times of stress will become depressed. According to Coyne's interpersonal theory (Coyne 1976), relationships deteriorate when close others are repeatedly required to validate the depressed person's worth. Their depressive behaviour initially engages others, but later becomes tiresome and causes the other to display 'nongenuine reassurance'. The individual is conscious of this and experiences the other as critical and rejecting which maintains depressive feelings. On the basis of their experiences of delivering psychotherapy over a period of 20 years, Arieti and Bemporad (1978; 1980) characterised depression as a deficit in alternative ways of thinking and limitation of new experiences. They proposed that it results when there is a threatened loss of the 'dominant other' or a 'dominant goal'. Where the individual is dependent on the dominant other (initially a parent), they are reliant upon that individual for all gratification and self-esteem, who either gives or withholds rewards. The depressed individual may display clingy or passive behaviour. When the individual is dependent on the dominant goal, they will pursue a fantastical goal fanatically at the cost of all other activities. All self-esteem is derived from the achievement of the goal and the depressive personality is likely to be anti-social, arrogant and obsessive. Self-verification theory, proposed by William Swan (Swan, 1990; Swan, Hixon et al, 1990; Swan and Schroeder, 1995), states that people will prefer others who confirm their view of themselves, even if that self-view is negative. In the case of depression, the individual seeks negative feedback from others to confirm their views of themselves, which results in a mutual negative relationship with others. Similarly, Evraire and Dozois (2011) also considered individuals suffering from depression to prefer receiving self-verifying feedback, even when negative, while also requiring high levels of reassurance from others. The desire to be understood by others outweighs the desire for a positive self-image. Joiner (2000) emphasised the role of interpersonal inhibition and conflict avoidance in depression. These mechanisms, and others such as excessive reassurance seeking, negative feedback seeking and blame maintenance, may result in a loss of status, freedom or material possessions which leave the individual vulnerable to future depressive episodes. In what has come to be known as one of the 'two polarities' models of interpersonal behaviour, Sidney Blatt et al. (1990; 2004; 2006; 2008) proposed that depressive symptoms resulted from an excessive preoccupation with one of the two dimensions of personality: interpersonal relatedness, i.e. feeling abandoned or rejected by others or self-definition, i.e. protecting the self at expense of relating to others. This model interwove the domains of personality development and psychotherapy process and outcome, providing a framework for understanding personality development and treating psychopathology (Luyten and Blatt 2013).

It is clear that there is no lack of theory regarding the role of interpersonal problems in depression. It is also apparent that they are being targeted in treatments for depression. A

task force (American Psychological Association, Division-12) investigating therapeutic change concluded that effective psychotherapy for depression should specifically target interpersonal functioning (Follette and Greenberg 2006) and certainly many different modalities of psychotherapy target interpersonal problems, for example Dynamic Interpersonal Therapy (DIT), Interpersonal Therapy (IPT) and Emotion-focussed Therapy (EFT). Yet, there remains a lack of consensus as to how and whether they change following therapy, or if outcomes vary systematically by the type of interpersonal problems the patient presents with.

With regards to what is known about changes in interpersonal problems in psychotherapy, two studies have reported reductions in interpersonal problems following psychotherapy using a number of different measures as part of STPP outcome meta-analyses. A meta-analysis of six studies of adults receiving STPP for common mental disorders including depressive, anxiety and somatoform disorders (Abbass, Kisley et al. 2014) reported a significant effect of treatment on measures of interpersonal problems including the IIP, the interpersonal relationships subscale of Lambert's Outcome Questionnaire OQ-45.2 (Lambert 1991) and the interpersonal relations subscale of a scale designed to rate phobic disorders (Alstrom, Nordlund et al. 1983). Small/medium effect sizes were reported using a fixed effect model (N=265, mean number of sessions=15, range=4-40, SMD -0.42, 95% CI -0.67 to -0.17 at short term follow up). Significant effects increased in the long term follow up (N=85, 3 studies, SMD -0.49, 95% CI -0.92 to -0.05). Driessen, Hegelmaier et al. (2015) also investigated improvements in three measures of interpersonal functioning, including the IIP and subscales of the OQ-45-IR and the Social Adjustment Scale (SAS). In individual treatment, they reported a large pre to post treatment mean pooled effect size (d=0.73, 95% CI 0.50–0.97) for improvement in interpersonal problems in a meta-analysis of 14 studies of STPP. Mean pooled effect sizes for interpersonal problems improvement was non-significant between post treatment and follow up within six months (three studies, d=0.31, 95% CI −0.09–0.72) and between post treatment and follow up after six months (5 studies, d=0.28, 95% CI −0.09–0.32).

It might be useful to reconsider a point touched upon in chapter one- the issue of whether the nature of interpersonal problems are considered to be relatively stable within an individual or more state dependent. Blatt's theory (2002, 2004, 2006, 2008) that an individual's underlying personality style is represented by a particular emphasis on one of two dimensions (relatedness or self-definition) proposes that psychotherapy should bring about a more balanced representation. The patient is unlikely to make radical changes to their personality style but may achieve a more balanced synergistic developmental process (Blatt, Zuroff et al. 2010). If Love and Dominance are considered, like relatedness and self-definition, to be relatively stable, a change in the individual's position on the IIP

circumplex may not be the most notable effect of treatment. On the other hand, if interpersonal problems are considered to be related to symptoms of depression, they might be expected to reduced following treatment. It may be the case that the underlying dimensions of the IIP, the key problem areas of the circumplex, may not alter very significantly, however, the level of distress associated with the problems may reduce. Studies have shown this to be the case, for instance, general interpersonal distress decreased significantly following cognitive therapy, but there was no change in Love and Dominance scores or the mean IIP-C angle (Vittengl, Clark et al. 2003; Crits-Christoph, Gibbons et al. 2005; Renner, Jarrett et al. 2012). In summary, following psychotherapy, Love and Dominance may be expected to remain fairly consistent relative to one another, but distress/elevation would be reduced. This chapter will provide a summary of the empirical evidence to date regarding the IIP total score, the underlying dimension scores and subscale scores.

The second aim of the chapter is to examine the evidence for an association between different types of interpersonal problems and outcomes. One might reasonably expect to find an association; non-homogeneity among patients has long been considered to affect the course and outcome of psychotherapeutic interventions. As early as the 1950s, Cronbach (1953) was drawing attention to the effect of patient characteristics on the treatment process. Indeed, the personal characteristics of the patient have been purported to account for the majority of variance in therapy outcome (Bergin and Lambert 1979; Frank 1979). One likely mediator of the relationship between interpersonal problems and outcome seems to be the therapeutic alliance. The balance of interpersonal problems with non-interpersonal problems and the effect of interpersonal problems of the therapeutic alliance have been show to affect both the course of therapy and the outcome (Gurtman 2004). Patient hostility towards the therapist has been demonstrated to be a strong predictor of poorer helping alliance (Kiesler and Watkins 1989) and poorer therapeutic outcome (e.g.Binder and Strupp 1997), whereas interpersonal problems characterised as submissive were predictive of a positive helping alliance (Muran, Segal et al. 1994). It has been proposed that patients with antisocial personality disorder often present with problems of hostile-dominance which interrupts the formation of alliance with the therapist and contributed to poorer outcomes (Gerstley, McClellan et al. 1989). Similarly, in patients with borderline personality disorder, early treatment withdrawal was associated with higher levels of pre-treatment hostility (Yeomans, Gutfreund et al. 1994; Smith, Koenigsberg et al. 1995). Conversely, patients with a more friendly-submissive interpersonal style might be expected to build a stronger therapeutic alliance and achieve better outcomes than those with a more hostile style. Better outcomes in psychotherapy have been reported in some studies for patients who have higher pre-treatment scores for affiliation (Filak, Abeles et al. 1986; Gurtman 1996; Schauenburg, Kuda et al. 2000), or lower scores for dominance

(Davies-Osterkamp, Strauss et al. 1996); but other studies found no relationship between pre-therapy scores on dominance and outcome (Filak, Abeles et al. 1986; Schauenburg, Kuda et al. 2000). This hypothesis will be examined more thoroughly in chapter five.

A small number of studies have reported a relationship between pre-therapy IIP-C quadrant classification and outcome, but they are contradictory. The majority found that patients who fall into the hostile-dominance quadrant pre-therapy have a poor outcome in psychotherapy (Horowitz, Rosenberg et al. 1993; Strauss and Hess 1993; Gurtman 1996; Borkovec, Newman et al. 2002), but friendly-dominant interpersonal problems have also been negatively associated with outcome (Borkovec, Newman et al. 2002; Puschner, Kraft et al. 2004). Patients falling into the hostile-submissive quadrant have also been shown to have the fastest improvement and friendly-dominance the slowest in psychodynamic psychotherapy (Puschner, Kraft et al. 2004). Problems with social avoidance and non-assertiveness seem to be particularly indicated for depressed patients, (Ball, Otto et al. 1994; Vittengl, Clark et al. 2003; Puschner, Kraft et al. 2004; Barrett and Barber 2007; Renner, Jarrett et al. 2012), i.e. the hostile-submissive quadrant of the IIP circumplex (see figure I) which represents difficulties in initiating social interactions, expressing feelings, making needs known to others, being authoritative and being firm with others.

If some types of interpersonal problem are more difficult to treat with psychotherapy than others, there are implications for whom should be referred for what type and length of therapy. Prior to the systematic review and meta-analysis produced as part of research done during this thesis (McFarquhar, Luyten et al. 2018), there was very little clarity as to the magnitude of effect of psychotherapy for depression on IIP scores, or the relationship between pre-treatment IIP and outcome, and relationship between IPs and therapeutic alliance. Previous investigations had produced inconsistent findings (Puschner, Kraft et al. 2004) and no other paper had attempted to systematically evaluate IIP data from a significant number of studies. This chapter will provide an update from 2016 onwards to the systematic review and meta-analysis of studies reporting IIP scores in the psychotherapeutic treatment of depression. The following data will be reported:

I) change between baseline, termination and follow-up of brief and long-term treatment in:

(i) IIP total scores (distress)

(ii) IIP-C dimensions, quadrants or subscale scores

II) relationships between therapeutic outcome and:

(i) IIP total scores (distress)

(ii) IIP-C dimensions, quadrants or subscale scores

Where there is sufficient data, meta-analyses will be performed to determine effect sizes of interest.

2.3 METHOD

2.3.1 Search Strategy

An electronic literature search was performed to retrieve as many relevant research papers as possible. The search was conducted in March 2020 for the years 1946 to 2020 within PsycInfo and Medline using the same terms as the 2018 publication (McFarquhar, Luyten et al. 2018): Inventory of interpersonal problems [title, abstract or methods] OR IIP [all fields]; AND outcome OR response OR improvement OR change [title, abstract]; AND depression OR MDD [all fields]; AND treatment [all fields]. Limo was searched with the following terms: Inventory of interpersonal problems [any field]; AND depression [any field]; AND treatment [any fields]. Reference lists were checked for any additional relevant studies and authors were approached for raw data where indicated. Journal articles reporting data on the research questions above regarding any modality of psychotherapy for depression were included.

2.3.2 Inclusion/Exclusion Criteria

Randomised and non-randomised studies of any psychotherapeutic treatment intervention for depression were included if they were published in English in a peer-review journal between 1946 and 2020 and reported IIP outcomes. Any version of the IIP was included. Only studies of psychotherapy treatment which were individual, lasted six weeks or more and involved adults over the age of 18 were included. The treatment setting could be inpatient or outpatient. Depression was required to be diagnosed by DSM or ICD and to be the main focus of treatment (psychiatric or medical comorbidities were not excluded). Brief treatment was defined as less than 12 months' duration and long-term as more than 12 months (Leichsenring, Luyten et al. 2015).

The following exclusion criteria were applied: case studies and series, dissertation abstracts, unpublished thesis, books/book chapters/book reviews and letters; samples comprising adolescent or elderly participants only; studies in which the primary focus of treatment was a disorder other than depression (e.g. eating disorder, anxiety, psychosis, personality; medication-only interventions; group therapy-only interventions; phone/internet-only interventions.

2.3.3 Research Quality

Study quality was assessed using the rating system specifically designed for the 2018 paper (McFarquhar, Luyten et al. 2018). Informed by the relevant criteria proposed by the Cochrane Collaboration (Higgins and Green 2011) and comparable to Driessen, Hegelmaier et al's (2015) scale to assess quality of studies of STPP for depression, it comprises a six-point scale. One point is allocated for each of the following items: 1. If there was more than one treatment arm, participant randomisation (single arm studies awarded 1 point), 2. 100% of sample have MDD diagnosis, 3. Manualised treatment, 4. Fully qualified therapists only (students excluded), 5. No psychotropic medication and 6. Treatment adherence check reported. A score of 0-1 was corresponded to low quality, 2-4 medium and 5-6 high.

2.3.4 Meta-Analysis

The minimum number of treatment arms to undertake a meta-analysis was set at six (studies could be randomised or non-randomised) and means and SDs had to be reported in the original paper or obtained from the authors. For subgroup analysis, the minimum number of studies in each group was set at three. All IIP scoring methods were included (see figure II, chapter one). Where studies included participants with diagnoses other than depression, a cut off was set at 70% of the sample to have a diagnosis of MDD, MDE-single or recurrent, double depression or affective disorder, in order to make the sample as homogenous as possible. Studies where the percentage diagnosed with depression was <70% or where the diagnosis was not made with DSM or ICD were excluded. Separate meta-analysis were planned for brief and long-term treatment. With the expectation of more studies being included than in the previous analysis, a series of meta-analyses were planned to obtain effect sizes for the following:

i) pre to post treatment IIP total scores for brief psychotherapy
ii) pre to post treatment IIP total scores for long term psychotherapy
iii) post to follow up treatment IIP total scores for brief psychotherapy
iv) post to follow up treatment IIP total scores for long term psychotherapy
v) pre to post treatment IIP subscale scores for brief psychotherapy
vi) pre to post treatment IIP subscale scores for long term psychotherapy

Potential subgroup analyses were:

i) IIP total change scores for active psychotherapy vs TAU/placebo

ii) IIP total change scores for psychodynamic therapies vs CBT, as these were the treatments most often reported on in existing studies.

As before, the overall mean ES were calculated, weighted by the sample size of the individual studies. Effect sizes were converted to Hedges' g, due to the tendency of Cohen's d to overestimate ESs in small samples (Borenstein, Hedges et al. 2009). REVMAN program was used to calculate the pooled mean ESs using a random-effects model which assumes heterogeneity of the included studies (Borenstein, Hedges et al. 2009). The random effects model treats studies included as a sample of a population of studies, as opposed to replications of each other, allowing both the random error within studies and the real variations of ES from one study to the next to be accounted for. Accordingly, the results are more conservative, with broader 95% confidence intervals.

The chi-square was used to test for heterogeneity: a low P value provides evidence of heterogeneity. The I^2 statistic was also used to calculate the degree of heterogeneity in percentages, 0% indicating no observed heterogeneity; 25% low; 50% moderate and 75% high heterogeneity (Higgins, Thompson et al. 2003).

2.4 RESULTS

2.4.1 Study Selection

A flow chart of the process of selecting studies for the systematic review is shown in figure III. The electronic search yielded 835 potential articles for inclusion, a further 160 than the previous report. PsycInfo yielded 559 papers, Medline 99 and Limo 160. Eleven papers were found by other search methods e.g. reference checks. Of the 835, 158 were found to be duplicates and 510 were excluded following a review of the title and abstract. A full text review was conducted for 167 articles, resulting in 48 articles to be included. This compared to 32 articles included in the original paper.

Table V details the 38 studies included in the systematic review (the results of 10 studies were reported across more than one article)- 10 more than the previous report. Articles reporting data from the same study are grouped together in the same row of the table.
Table VI shows the studies meeting the criteria for meta-analysis. Of the planned series, only meta-analysis (i) pre to post treatment IIP total scores for brief psychotherapy and (iii) post to follow up treatment IIP total scores for brief psychotherapy had the required number of studies (≥6). Subgroup analysis (ii) IIP total change scores for psychodynamic therapies vs CBT, was conducted. Authors of studies meeting criteria for inclusion in the pre-post

and post-follow up MA but which did not report means and SDs were requested to provide these: 7 of 10 responded and provided this data.

2.4.2 Study Quality

Of the studies included in the systematic review, 11/38 were rated as ‘high quality’ (28.9%), 13/38 as ‘medium quality’ (34.2%) and 14/38 as ‘low quality’ (36.8%). 25/30 (65.8%) of the studies were randomised or single arm treatment, 12/38 (31.6%) had a diagnosis of MDD for the full sample, 16/38 (41.1%) adopted a manualised treatment, 11/38 (28.8%) excluded psychotropic medication, 23/38 (60.5%) excluded trainee therapists and 39.5% reported an adherence check of the treatment.

Figure III: Flow Chart of Study Inclusion

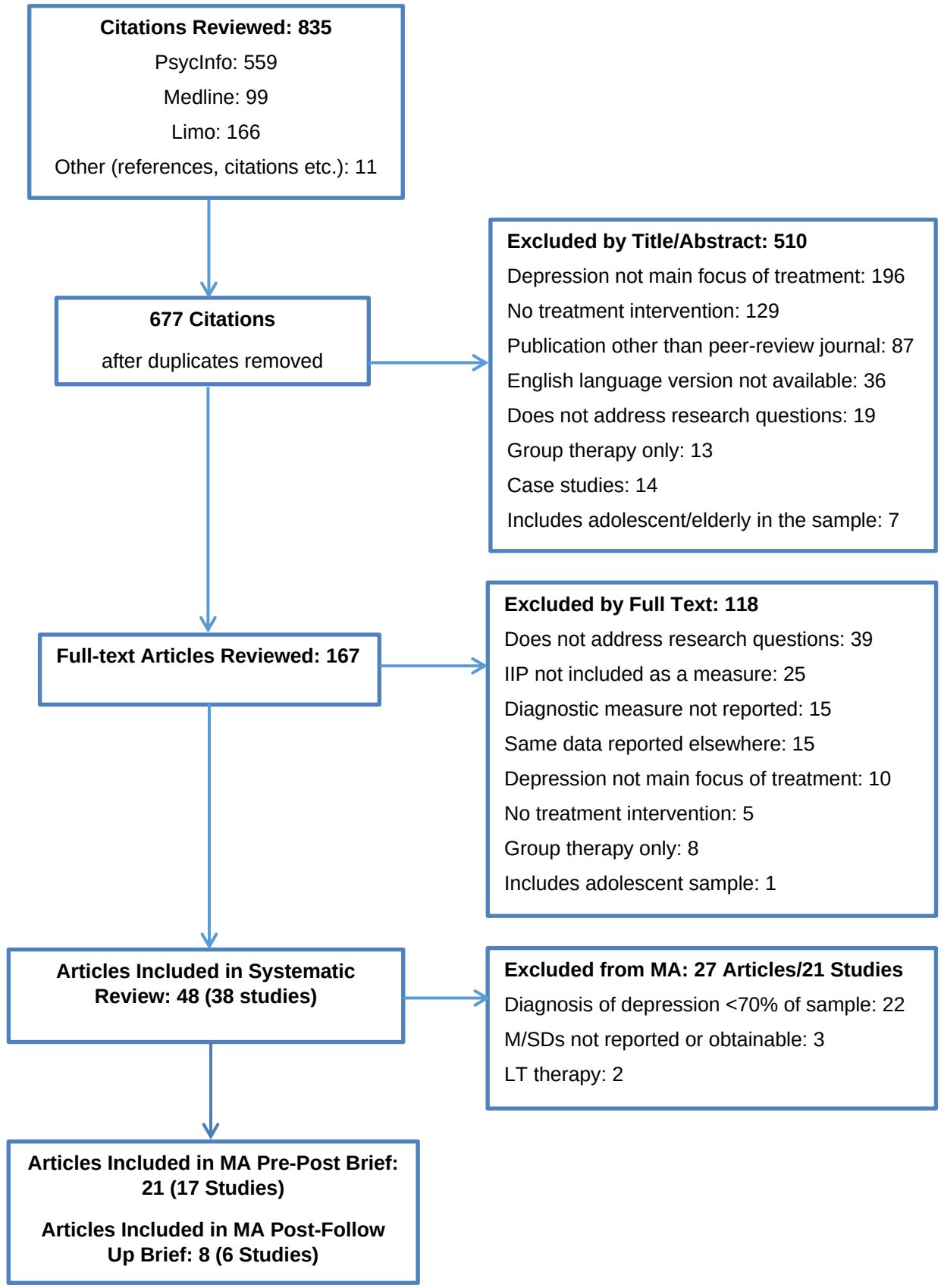


Table V: Studies Included in the Systematic Review of Interpersonal Problems in Intervention Studies for the Treatment of Depression

STUDY	Randomised	N	In/Out Patient	Patient Diagnostic Disorder (% of sample)	Intervention	Treatment duration/ Last follow up	Depression & interpersonal problem outcome measures	Study Quality	Findings 1. Did IIP scores change between pre-treatment, post-treatment and follow up? 2. Was pre-treatment IIP associated with treatment outcome?
Steinert, Kruse et al (2019)	Single arm	709	In	Depressive (70.2) Somatoform (12.1) Anxiety (9.2) OCD (1.4) Stress (4.9) Eating (1.1) Dissociative (.8) Personality (.7)	Multi-modal, psychodynamically oriented psychosomatic treatment	M=7.9 weeks/end of Tx	SCL-90R HADS IIP64	Low	1. IIP mean total scores reduced significantly pre to post Tx from 13.5 (4.1) to 12.1 (4.6), p<.0001, d=.34.
Fonagy, Lemma et al (2020) (includes analysis conducted for chapter 5)	R	147	Out	MDE (100%)	DIT v CBT v LIT	16-24 weeks/6 months for LIT and CBT, 12 months for DIT	HRSD BDI-II IIP64	High	1. DIT: IIP total mean scores reduced significantly pre to post Tx from 112.1 (28.7) to 94.5 (35.0), p<.001. There were significant reductions on the cold, socially-inhibited and non-assertive subscales (p<.005) and the domineering, vindictive and overly accommodating subscales (p<.05). There was no significant difference between Tx groups on marginal means post Tx for IIP total or the subscales. IIP amplitude mean scores reduced significantly pre to post Tx, .89(.48) to .76(.42), p<.05. No significant change in LOV and DOM scores or angle of displacement pre to post DIT. CBT: no significant change in pre to post Tx IIP total mean scores, p=.391. LIT: no significant change in pre to post Tx IIP total mean scores, p=.68.

									2. DIT: patients with dominant interpersonal styles (particular hostile-dominant) had the best improvement in interpersonal problems and the highest rates of HRSD response and remission and the groups with submissive styles the fewest responders. Pre-Tx IIP total scores were positively correlated with post-Tx depression scores, r=.3, p<.05, as were pre-Tx affiliative subscales scores, r=.34 to .35, p<.05. Pre-Tx LOV, DOM and angle of displacement were not related to post-Tx depression scores.
Vittengl, Clark et al. (2018)	Non-R	351	Out	MDD (100%)	Acute phase CT, followed by continuation phase (no further tx for responders; non responders randomised to CT/fluoxetine/placebo pill	12 weeks acute phase, 8 months continuation phase/late in Tx (weeks 13-14 or immediately after)	BDI HRSD IIP127	high	1. IIP total mean scores reduced from early/pre Tx (1.67 (.53)) to and late/post-acute Tx (1.15 (.56)). 2. IIP total mean scores correlated with depression symptom severity in early/pre Tx, r=.46, p<.05 and also in late/post-acute Tx, r=.53, p<.05
Assmann, Schramm el al. (2018) and Schramm, Kriston et al. (2017)	R	268	Out	MDD (100.0) Anxiety (34.0)	CBASP v SP	20 weeks acute, then 28 weeks extended /end of acute Tx	HRSD IIP64	High	1. IIP mean total scores reduced pre-post Tx in both groups. CBASP: 14.6 (3.6) to 13.5 (4.2). SP: 15.2 (3.7) to 14.7 (4.3). Total: 14.9 (3.7) to 14.1 (4.3).

Lemmens, Galindo-Garre et al (2017)	R	151	Out	MDD (100.0)	CT v IPT	6 months/ end of Tx	BDI-II IIP64	high	1. IIP mean total scores reduced pre-post Tx in both groups. CT: 83.1 (24.7) to 62.9 (36.3), d=.82. IPT: 89.7 (33.9) to 72.0 (36.8), d=.52. Total: 86.4 (29.7) to 67.4 (36.7), d=.64. 2. Pre Tx IIP total scores were significantly correlated with BDI scores post Tx, r=.3, p<.01. Pre-post change in IIP total was significantly correlated with pre-post change in BDI, r=.53, p<.01. Change on the BDI early in Tx was mediated by initial IIP scores. Change on the BDI was mediated by concurrent change on the IIP in early and late Tx. The relation between changes in interpersonal functioning and depression severity was different: for IPT there was a concurrent relationship between change in IIP and changes in BDI in late Tx, and evidence for a negative longitudinal relationship. For CT, relationships were concurrent and the (non-significant) longitudinal relationship was positive.
Fizke, Mueller et al (2017)	Non R	235 and 514	In	Sample 1 (2000-02): MDD/dysthymia (100.0) personality (26.0) somatoform (16.0) eating (12.0) anxiety (9.5) substance (6.0) PTSD (2.5) OCD (2.5) Sample 2 (2008-10): MDD/dysthymia (100.0) personality (25.0) somatoform (18.0) eating (14.0) anxiety (16.0) substance (8.0) PTSD (3.5)	psychoanalytically oriented multimodal: psychodynamic individual and group, plus art and body-centred therapy, imaginative techniques, relaxation therapy, and family consultations. Sport groups, social skills training, social work and psychopharmacological treatment as required	Sample 1: M=8.97 weeks Sample 2: M=8.41 weeks /end of Tx	SCL-90R IIP64 GAF	Low	1. IIP mean total scores reduced pre-post Tx in both groups. Sample 1: 1.81 (.47) to 1.57 (.5), mean difference in IIP total scores pre to post Tx was .24 (SD=.42), t=8.96, df=352, p<.001, CSC in 23% of patients. Sample 2: 1.7 (.54) to 1.48 (.55), mean difference in IIP total scores pre to post Tx was .22 (SD=.50), t=10.43, df=543, p<.001, CSC in 24.3% of patients. Patients with comorbid personality disorder had significant pre to post improvement on IIP total scores, p=.048

				OCD (3.0)					
Doran, Safran et al. (2017) Brief Psychotherapy Research Program	Non R	47	Out	primary or secondary depressive (46.6) anxiety (72.5) multiple diagnoses (53.2) no clinical diagnosis (6.4) personality (48.9)	CBT or BRT or Combined CBT/BRT	30 weeks/end of Tx	SCL-90R BSI IIP32	low	1. IIP mean total scores reduced pre to post Tx from 1.34 (.57) to 1.18 (.60). No statistically significant differences across treatment conditions on IIP total. 2. baseline IIP total mean scores were significantly positively correlated with SCL at termination, r=.58, p=.01.
Dinger, Zimmermann et al. (2017)	Non R	3051	In	affective (49.1) adjustment/stress (13.9) anxiety (13.2) eating (5.8) somatoform (5.4) personality (3.1)	intensive psychodynamic psychotherapy: group & individual, plus individual combinations of art, body-oriented and pharmacological therapies	12 weeks/6 weeks post Tx	SCL-90R IIP-64	low	1. IIP mean total scores reduced significantly pre-Tx (13.81 (4.23)) to post-Tx (12.07 (4.8)), mean difference=1.73, SE= .067, 95% CI [1.60, 1.86]. 2. There was a moderate correlation (r=.42) between IIP mean total scores at baseline and GSI at discharge (significance not reported).
Dinger, Ehrenthal et al (2017) and Dinger, Klipsch et al. (2014)	R	40	In v out	MDD (97.7) dysthymia (2.3) anxiety (45.5) somatoform (13.6) OCD (6.8) personality (33.0)	Multimodal psychotherapy, Inpatient setting v day clinic	8 weeks/6 months post Tx	HRSD BDI-II GSI IIP-64	medium	1. IIP mean total scores reduced significantly pre-Tx (1.79 (.35)) to post-Tx (1.36 (.6)), t(39) = 4.92, p < .001, d=.92 and the change remained stable after 6 months. There were no differences between the treatment groups (all p > .22), patients with an additional Axis II diagnosis showed less change in interpersonal problems (t[28] = -2.60, p = .015). 2. Within treatment change in interpersonal problems was not a significant predictor of depressive symptoms at 6 months follow up
Altenstein-Yamanaka, Zimmermann et al (2017)	R	144	out	MDD (100.0) Anxiety (34.0) Personality (23.6)	CBT v EBCT	26 weeks/3 months post-Tx	BDI-II IIP-32 IDS-C SCL-9	medium	1. IIP LOV significantly increased in men only, p<.001, there was no significant change in IIP DOM. IIP total distress significantly decreased, p<.001, d=-.363. 2. pre–post change in IIP distress was associated with pre–post change in the BDI-II, r =.181, p=.047 and IDS-C, r =.320; p=.001, but not with pre–post change in SCL-9, and remained significant after controlling for change in the other interpersonal variables.

Steinert, Klein et al (2015)	Single arm	254	In	Depressive (59.4) anxiety (13.1) Stress (9.8) somatoform (17.7)	psychodynamically oriented psychosomatic treatment	4-12 weeks/ End of tx	HADS IIP-64	low	1. IIP mean total scores reduced significantly pre-Tx (1.53 (.55)) to post-Tx (1.32 (.58)), t(253) = 6.99, p < .001, d=.38. For the depressive disorders subsample (n=151), mean total IIP scores reduced significantly from pre-Tx (1.66 (.52)) to post-Tx (1.41 (.59)), d=.48.
Solbakken & Abbass (2015)	Non-R	60	In	Affective (88.3) Anxiety (71.7) Substance (20.0) Somatoform (16.7) Eating (6.7)	ISTDP, individual and group sessions v TAU on waitlist	8 weeks/ 1 year post-Tx	OQ-45 SCL-90-R IIP-64	medium	1. IIP mean total scores reduced significantly in the ISTDP group pre-Tx (1.76 (.33)) to post Tx (1.44 (.49)), p<.05 with an estimated reduction of .041 points per week (ES=.84). There was also further significant post-Tx improvement, (1.33 (.52)), p<.05; an improvement of .11 points. Pre to follow up reduction in IIP mean total scores averaged .43 points (ES=1.14). There were no significant changes in IIP total mean scores in the TAU group.
Lindfors, Knekt, et al (2015) Helsinki Psychotherapy Study	R	326	Out	Mood (85.0) Depressive (82.0) Anxiety(44.0) Personality (18.0)	SFT v STPP v LTPP	SFT & STPP 6 months; LTPP 3 years/ 5 years post randomisation	BDI SCL-90 IIP-64	medium	1. IIP total scores reduced significantly pre to post Tx in all groups (p<.001), SFT: 97.2 (30.1) to 77.6 (36.4); STPP: 92.8 (31.4) to 79 (35.8); LTPP: 88.1 (30.8) to 62.5 (34.5). In all groups there was a significant improvement in IIP total scores during the 5 year follow up (p<.001). IIP total scores improved more in the short term therapy groups at the 1 year follow up, but IIP scores were more reduced in the LPP group than in the SFT group at the 5-year follow-up (score difference of 10.0)
Zimmermann, Loffler-Stastka, et al (2014) And Huber, Henrich et al (2007) Munich Psychotherapy Study	Non-R	77	Out	Severe depressive episode (40.0) Double depression (51.9) Personality disorder (31.2)	PP or PD or CBT	8-118 months/ 3 years post Tx	BDI IIP-64	medium	1. IIP mean total scores reduced pre-Tx (1.75(.43)) to post-Tx (1.27(.57)) and to follow-up 3 years post-Tx (1.14 (.59)). In a subsample of PP therapy only (Huber, Henrich et al. 2007), there was a highly significant reduction in all pre-post Tx IIP subscales, p>.001. ES were large for HI, JK, LM and NO. PA had the lowest effect size (.49). 2. The % of patients considered to have achieved clinically significant change (RCI+CS) in the PP subsample only was highest for JK and HI (both 39.3%) and lowest for PA and DE (18.3%)

McEvoy, Burgess, et al (2014)	Non-R	199	Out	MDD (57.8) Dysthymia (11.1) GAD (13.1) Social phobia (10.1) panic (5.5) Phobia (1.5) PTSD (0.5) Anxiety NOS (0.5)	CBT or CBGT	CBT: m=11.1 (6.9) sessions. CBGT: 8.6 (2.2) sessions/ End of Tx	BDI-II IIP-32	low	1. IIP total scores reduced significantly pre to post Tx both groups, CBT: 1.62 (.58) to 1.02 (.53), ES=1.03; CBGT: 1.73 (.55) to 1.27 (.53), .84. 2. In the CBT group, pre-Tx IPs were not related to attrition or outcome, but in the CBGT group, more severe pre-Tx IPs were associated with a higher attrition rate and poorer outcome.
Clapp, Grubaugh, et al (2014)	Non-R	513	In	Depressive (55.0) Bipolar (13.6) Anxiety (11.1) Psychotic (9.6) Substance Abuse (2.9)	group psychotherapy, individual PD and CBT sessions, and group psychoeducation	M=35 (14.4) days/ End of Tx	BASIS-24 IIP-32	low	1. 48.3% of patients with a pre-Tx IIP submissive profile had transitioned to a normative profile at post-Tx. 57.1% of patients with a hostile/withdrawn transitioned to the normative profile by post-Tx.
Quilty, Mainland, et al (2013)	R	125	Out	MDD (100)	CBT v IPT	16-20 weeks /End of Tx	BDI-II HRSD IIP-32	high	1. IIP global sum scores reduced significantly from 6.29 (2.04) pre-Tx to 5.45 (2.23) post-Tx, $p<.01$. There were no treatment effects. Mean IIP-DOM scores increased significantly from -2.77 (2.17) pre-Tx to -2.44 (1.95) post-Tx. A small increase in pre-post IIP-LOV scores was non-significant. Pre to post-Tx IIP-amplitude reduced significantly. However, changes in IIP-DOM and amplitude were not significant when pre-Tx elevation was taken into account. 2. Higher pre-Tx DOM and amplitude were associated with decreased change in depression over the course of treatment. Results consistent across therapy type.
Hersoug, Høglend, et al (2013) AND Hoglend, Bogwald, et al (2008) First Experiment	R	100	Out	Depressive (58.0) Anxiety (27.0) Somatization (7.0) Adjustment (5.0) Other (14.0) Personality (46.0)	PD with transference interpretations v PD without transference interpretations	12 months/ 3 years post end of Tx	SCL-90 GSI IIP-64	medium	1. Mean IIP total scores reduced significantly pre to post Tx in both groups, transference: 1.18 (.53) to 1.02 (.55); non-transference: 1.14 (.51) to 0.9 (.52). Both groups showed large ES. There were no significant treatment differences. Over the 4 year study period, 43% of the patients obtained clinical significant change in IIP score. An additional 14% obtained reliable change of IIP.

al Study of Transference									
Dinger, Zilcha-Mano, et al (2013)	R	151	Out	MDE (100.0) Comorbidity (85.0)	SET v medication v placebo	16 weeks/ End of Tx	HRSD-17 IIP-64	medium	2. LOV predicted symptom change overtime. Patients who reported being overly friendly (i.e. high affiliation) improved more slowly than those less friendly. There was no significant interaction between LOV and treatment type. In SET, there was a significant effect of DOM on symptomatic improvement: depressive symptoms decreased significantly for more dominant patients ($p<.001$), but not for highly submissive patients. In the medication and placebo groups, highly submissive and highly dominant patients improved at the same rates.
Renner, Jarrett et al (2012) C-CT-RP	Single arm	523	Out	MDD (100)	CT	12-14 weeks/ End of Tx	HRSD IIP-127	high	1. IIP mean total scores significantly reduced pre-Tx (1.66(.53)) to post-Tx (1.15(.56)), $p<.01$. There was significant improvement on all IIP-C octant scales ($p<.01$, medium effect sizes); no octant scale means indicated clinically significant distress post-treatment. LOV and angle of displacement remained stable pre to post-Tx ($p>.05$). DOM scores increased significantly pre to post-Tx ($p<.01$). 2. Higher pre-Tx distress scores significantly predicted higher mean symptom scores over the course of treatment. Higher pre-Tx dominance predicted lower symptom scores in the middle of treatment and slightly lower symptom scores at the end.
Berghout, Zevalkink, et al (2012)	Non-R	113	Out	mood (50.0) anxiety (12.0) Personality (85.0)	LTPP or long term LT PA	25 sessions or more >1 year/ 2 yrs post start Tx	SCL-90-R BDI-II IIP-64	low	1. In the PP group only, a statistically significant improvement was found in the PA scale ($p = .02$) and NO scale ($p = .004$). PP patients showed more improvement than PA patients in the first 2 years of treatment on the NO scale ($p = .024$). However, both groups still had moderate to high levels of IPs 2 years into Tx compared with non-clinical samples. 2. Slow responders in both groups tended to have higher scores on pre-Tx IIP scores as compared to fast responders.

Salzer, Leibing, et al (2010) Aggregated data from Brockmann, Schlüter, & Eckert, (2006), Grande et al., (2006) Huber & Klug, (2005); Leichsenring, Biskup, Kreische, & Staats, (2005)	Single arm	121	Out	Depressive (76.9) Phobia/Anxiety/OCD (44.6) Personality (38.8) Somatoform (24.0) Eating (9.9) Substance (5.8)	LTPP	M=3.5 yrs/ 1 yr post end Tx	IIP-64	medium	1. IIP mean total scores significantly reduced pre-Tx (1.78(.43)) to post-Tx (1.19(.59), d=1.37), to follow up (1.09(.58), d=1.6) p<.001. At the end of Tx, the IIP total score for patients no longer differed significantly from the German reference sample. At follow-up, patients reported significantly fewer interpersonal problems than the German general population. There was a strong improvement in Amplitude for those IP subtypes that reported very weak interpersonal differentiation before treatment (medium to large effect sizes). In the Leichsenring et al's (2005) subsample (n=36), pre to post IIP subscales all significantly improved, p<.05, except for PA. ES were large (d=.80) for HI, JK, LM, FG and NO. At 1-year follow-up (n = 23), significant improvements were found on all scales except for the PA scale. IIP total score ES= 1.84, an increase post-Tx of > 40%. 2. In the Leichsenring et al's (2005) subsample (n=36), Pre to post IIP total score correlated with pre to post SCL-90-R GSI, r=.38, p<.05, but improvements in IIP total scores were no longer correlated with change in symptoms at the 1 year follow up.
Johansson (2010)	Non-R	76	out	Affective (38.8) Neurotic/stress/somatoform (52.6) Eating/Personality (10.5)	Pharmacological or PD or a combination of both	M=10.8 (9.1) sessions, range 2-47/ End of Tx	BSI IIP-26	low	1. IIP total scores significantly reduced pre-Tx (55.6(12.5)) to post-Tx (49.5(12.2)), p<.002, d=.5 in the PD group and in the combination group- 53.6(10.4) to 49.9(12.7), p=.04, d=.32. The drop in scores was not significant in the pharmacological group. Scores on all the IIP subscales fell for all three groups (d=.06-.59)- there was no significant difference between groups.
Bressi, Porcellana, et al (2010)	R	60	Out	MDD (50.0) Dysthymic (20.0) Panic (50.0) Social Phobia (26.8) GAD (53.2) Personality (36.7) OCD (8.3)	STPP v TAU	12 months/ End of Tx	CGI SCL-90 IIP-127	high	1. Mean IIP total scores reduced significantly pre to post Tx in the STPP group, 1.08 (.43) to .8 (.41); p=.005, d=.64. The small reduction in the TAU group was not significant, d=.27. STPP was significantly superior to TAU at reducing IIP total scores (p=.025), d=.69. The change in the IIP total score achieved clinical significance in 13 of 24 patients in the STPP group and in 5 of 24 patients in the TAU group (p= .036).

Marriott & Kellett (2009)	Non-R	193	Out	Depression (34.2) Anxiety (22.3) OCD (14.0) Personality (3.6) PTSD (3.1) Phobia (2.6) Other/missing (29.0)	CAT or CBT or PCT; short or medium term	Short term=7-15 sessions, medium term= 16-30 sessions/ End of Tx	BSI BDI-II IIP-32	medium	1. IIP total mean scores significantly improved in all groups pre-Tx to post-Tx, effect sizes .28-1.68. PCT showed a slower rate of improvement on IIP-32 than either the CAT and CBT clients, p<.001) in the medium-term therapies.
Ellison, Greenberg, et al (2009) AND Goldman, Greenberg & Pos (2005) York University Psychotherapy Depression Project	R	43	Out	MDD (100)	CCT v EFT	16-20 sessions/ 18 months post Tx	BDI SCL-90-R IIP-127	high	1. IIP total mean scores significantly (p<.001) reduced pre-Tx (1.49(.58)) to 6 month follow-up (.99(.54)) in the CC group and in the EFT group- 1.54(.4) to .97(.53). At 18 month follow-up, means had increased for CC, 1.23 (.61), but not for EFT 0.91(.49). There was no significant between the groups at 6-month follow-up, and a trend in favour of EFT at 18-month follow-up, p= .035.
Haase, Frommer, et al (2008)	Single arm	408	In	Depressive (32.0) Acute Stress & Adjustment (16.7) Anxiety (20.5) Somatoform (24.9) Eating (4.5) Other (1.4)	PD	M=10hrs per week/ 12 months post end Tx	SCL-90-R IIP-64	medium	1. There were significant differences between pre-post Tx scores for PA (d=-.27), BC (d=-.63), FG (d=.34) and HI scales (d=.29), p<.001-.0001. At 12 month post-Tx follow-up, significant differences appeared on the PA BC and HI scales p<.0001-.027. Effect sizes were small over pre-post Tx and follow up.
Dinger, Strack et al (2007)	Single arm	1513	In	Affective (72.8) Personality (64.8) Anxiety (46) Adjustment-stress (45) Eating (24.1) Somatoform (21) OCD (8.8)	PD	regular inpatient M=13.6 (4.85) weeks; crisis intervention unit	SCL-90 IIP-64	low	2. Patient LOV did not influence outcome ratings, but higher scores on the DOM dimension predicted better outcome (p=.03).

				Psychotic (6.1)		M= 5.9 (2.57) weeks/ End of Tx			
Klein & Elliott (2006)	Single arm	40	out	Mood (77.5) Anxiety (47.5) Substance (20.0) Personality (47.5)	PET	M=21.8 (16.0) sessions, range=4-63/ End of Tx	SCL-90-R IIP-26	medium	1. IIP total mean scores significantly reduced pre-Tx (1.74(.66)) to post-Tx (1.5(.62)), p<.007, d=.38.
Holtforth, Lutz & Grawe (2006)	Non-R	393	Out	Anxiety (35.5) Affective (28.7) Adjustment (7.8) Eating (4.7) Somatoform (3.7) Other Axis I (6.7) Other non-Axis I (11.2)	Integrative form of psychotherapy, adapted to specific setting (individual, group, couple). May include cognitive-behavioural, process-experiential, and interpersonal interventions	M=29.1 sessions (range=5-127)/ End of Tx	IIP-64	low	1. IIP total mean scores significantly reduced pre-Tx p<.001, d=.69. LOV scores also decreased, p < .05, d =.09, but DOM scores increased, p < .001, d =.32. Pre to post scores on all 8 IIP scales were significantly decreased, p<.001, d=.22-.65. Small ESs for PA, BC, DE and NO. Medium ESs for FG, HI, LM and JK. The predominant theme of mal-adjustment (angular displacement) was *too exploitable* (315°) pre-Tx and a blend of *too exploitable* and *overly nurturant* post- Tx.
Beutel, Hoflich, et al (2005)	Non-R	83	in	Adjustment (34.2) Depression (20.3) Anxiety (16.5) Mixed depression & anxiety(6.3) Eating (3.8) Personality (8.1) Other (7.6)	Multimodal, to include psychodynamic individual and group sessions + medication if required	4-6 weeks/1 & 3 years post Tx (n=65 had additional Tx during follow up, M=27.4 weeks	IIP-64 SCL-90-R	low	2. all pre-Tx IIP subscales were significantly negatively correlated with 1 year follow-up GSI (p<.05), particularly FG (r=.41, p<.001) and DE (r=.37, p<.001). Pre-Tx IIP total mean scores were also negatively correlated with 1 year follow up GSI (r=.41, p<.01). Pre-Tx FG score was a strong negative predictor of GSI at follow up, ß=.282 p=.002.
Vittengl, Clark et al (2004) AND	R	155	Out	MDD (100.0) Social phobia (20.0)	A-CT for all, followed by C-CT v control	A-CT: 20 sessions, 12-14 weeks C-CT /control:	BDI HRSD IIP-127	high	1. IIP total mean scores significantly reduced pre-Tx (1.62(.53)) to post-acute phase Tx (1.01(.55)), p<.0001, d=.91. The percentage of social-interpersonally healthy individuals (at or below the 90th percentile of dysfunction on the IIP in a normative sample) increased from 26.5% of those entering A-CT to 63.3% of those exiting, p<.0001. IIP scores for the C-CT

Vittengl, Clark and Jarrett (2003)				Specific Phobia (12.3) Panic (9.7) PTSD (7.7) Dysthymia (5.2) OCD (1.3)		10 sessions over 8 months/ 2 years post A-CT			group were better that for the control group in the follow up phase but the change was non-significant. In Vittengl et al's (2003) subsample (n=118), all 8 subscales showed significant pre to post-acute phase Tx reductions in scores. There were large ES for LM (d=.80), NO (d=.80) and BC (d=.90) and medium ES (>.76) for the remaining scales. General distress decreased significantly pre-post treatment, p<.01, but LOV, DOM and angle of displacement remained stable over therapy. 2. Over A-CT, change in depression scores was correlated with change in IIP scores, r=.57, but there was no significant change in IIP scores independent of depression scores, r=.01. Depression scores changed partly independently of IIP, r=.69, p<.0001 for prediction by IIP. Treatment responders had significantly lower IIP scores post A-CT than non-responders (p<.0001).
Ruiz, Pincus, et al (2004) Pennsylvania Psychological Association's Practice Research Network	Non-R	220 (42 completers)	Out	Adjustment with depression or anxiety (39.0) Mood (25.0) Anxiety (18.0) Personality (9.0) Other (18.0)	CT, PD, behavioural, family systems, experiential or other	For completers: M=11 (10) sessions /End of Tx	MHI IIP-64	low	2. There were significant inverse correlations between pre-Tx IIP amplitude and MHI outcome (p<.01) and IIP elevation and outcome (p<.05). High amplitude scores were still significantly associated with reduced levels of improvement after the effects of elevation were partialed out. None of the IIP subscales at baseline were significantly correlated with outcome.
Puschner, Kraft & Bauer (2004) Transparency and	Non-R	622	Out	Mood, affective (47.0) Neurotic, stress-related, somatoform (43.4) Behavioural syndromes	PD, CBT, or PP	M=43.6 ± 36.4 sessions over 2 years/ End of Tx	OQ-45 IIP-64	low	2. Neither pre-Tx LOV nor DOM nor their interaction predicted the pace of symptom improvement 2 years after the start of treatment. Initial type and severity of IPs were not predictive of the rate of symptom change during therapy. Only in PP and PD, low LOV positively affected treatment outcome. The model predicted the slowest rate of improvement for participants with interpersonal problems in the FD quadrant. Participants initially showing pronounced interpersonal

Outcome Orientation in Outpatient Psychotherapy (TRANS–OP)				associated with physiological disturbances and physical factors (3.6) Adult personality and behaviour (1.3)					problems in the HS quadrant start with the highest symptom impairment and also show the fastest improvement.
Watson, Gordon, et al (2003)	Single arm	101 (66 completers)	out	MDE (100.0)	CBT v PET	16 sessions (weekly)/ End of Tx	BDI IIP127	high	1. IIP total mean scores for completers reduced pre-Tx (1.33(.51)) to post-Tx (1.18(.53)) ES=.3 in the CBT group and in the PET group- 1.4(.38) to 1.05(.54), ES=.74, p<.001. The interaction was significant: PET clients improved more than CBT clients on interpersonal problems. There were significant pre to post improvements independent of group on the following subscales: PA, JK, DE, LM and NO. There was a significant interaction between treatment groups and time on four as opposed to five of the eight subscales. PET clients reported lower scores on HI, PA, JK and NO than CBT clients post-Tx.
Schauenburg, Kuda et al (2000)	Single arm	180	Out	Adjustment (39.0) Personality (32.0) Affective (23.0) Anxiety (18.0) Other (13.0)	STPP	M=3.4 months, 7.8 sessions/ End of Tx	SCL90-R IIP-64	medium	1. There was no significant change in the IIP global sum score pre-post Tx, d=.07 2. Pre-Tx LOV score was significantly positively correlated with treatment outcome, but the effect size was small. DOM scores had no significant relationship with outcome.
Greenberg & Watson (1998)	R	34	Out	MDD (100.0) Personality (41.0)	CCT v PET	M=17.5 sessions, range=16-20 sessions/ 6 months f/up	BDI SCL-90-R IIP-127	high	1. IIP total mean scores for completers reduced pre-Tx (1.86(.43)) to post-Tx (1.31(.45)) ES=1.25 in the CC group and in the PET group- 1.64(.37) to 0.81(.32), ES=2.4, p=.027. The PE group showed greater improvement in IIP mean scores post-Tx, p<.0001, and in the assertive, sociable and responsibility subscales, p<.05. There were no significant differences between the groups on any measures at the 6 month follow up, or between termination and follow up.
Barkham, Rees, Stiles, Shapiro, Hardy & Reynolds 1996	R	212	Out	MDD (85.0) Retarded/neurotic depression (12.0) Not assessed (3.0)	CBT 8 sessions v CBT 16 sessions v PIT 8 sessions v PIT 16 sessions	8 or 16 sessions/ End of Tx	BDI IIP-32	medium	1. 8 session group, 18% had CSC in IIP scores at end of treatment. 16 session group, 40% had CSC at end of treatment. This difference was significant, p=.012. There was no significant difference between CB and PI on the number achieving CSC in IIP scores.

Participant from SPP2 the MRC NHS Collaborative Psychotherapy Project									

Table adapted from McFarquhar, Luyten et al, 2018.

Table VI: Characteristics of Studies Included in Pre to Post Treatment IIP Total Scores for Brief Psychotherapy Meta-Analysis

Study	Randomised	% MDD Diagnosis	Study quality	Active Intervention	IIP total scoring method	Pre-Tx N	Pre-Tx IIP	Pre-Tx IIP SD	Post-Tx N	Post-Tx IIP	Post-Tx IIP SD	Pre-post Effect Size	95% CI
Steinert, Kruse et al (2019)	Non R	70.2	low	Multi-modal, psychodynamically oriented psychosomatic treatment	Global sum	709	13.5	4.1	523	12.1	4.6	0.33	0.22-0.45
Fonagy, Lemma et al (2020)*	R	100.0	high	DIT	Total raw	66	112.9	28.9	54	90.5	37.3	0.68	0.31-1.05
				CBT		20	114.2	32.0	17	102.5	55.6	0.25	-0.40-0.90
Vittengl, Clark et al. (2018)	Single arm	100.0	High	CT	Total mean	346	1.67	0.53	239	1.15	0.56	0.96	0.78-1.13
Assmann, Schramm et al. (2018)* and Schramm, Kriston et al. (2017)	R	100.0	High	CBASP	Global sum	137	14.6	3.6		13.5	4.2	0.28	0.05-0.52
				SP		131	15.2	3.7		14.7	4.3	0.12	-0.12-0.36
Lemmens, Galindo-Garre et al (2017)	R	100.0	High	CT	Total raw	75	83.1	24.7	70	62.9	36.3	0.66	0.32-0.99
				IPT		75	89.7	33.9	66	72.0	36.8	0.48	0.15-0.82
Fizke, Mueller et al (2017)	Single arm	100.0	Low	psychoanalytically oriented multimodal sample 1	Total mean	234	1.81	0.47	234	1.57	0.5	0.49	0.31-0.68
				psychoanalytically oriented multimodal sample 2		514	1.7	0.54	514	1.58	0.55	0.22	0.10-0.34

Dinger, Ehrenthal et al (2017) and Dinger, Klipsch et al. (2014)	R	97.7	Medium	Multimodal psychotherapy	Total mean	40	1.79	.35	40	1.36	.60	.87	0.31-0.83
Steinert, Klein et al (2015)	Single arm	100	low	psychodynamically oriented psychosomatic treatment	Total mean	151	1.66	0.52	151	1.41	0.59	0.45	0.22-0.68
Solbakken & Abbass (2015)*	Non-R	88.3	medium	ISTDP, individual and group sessions	Total mean	30	1.76	0.33	30	1.44	0.49	0.76	0.23-1.28
Lindfors, Knekt, et al (2015)*	R	82	medium	SFT	Total raw	97	97.2	30.1	93	77.6	36.4	0.59	0.3-0.88
				STPP		101	92.8	31.4	98	79	35.8	0.41	0.13-0.69
Quilty, Mainland, et al (2013)	R	100	high	CBT	Global sum	47	49.6	17.3	47	44.5	20.4	0.79	0.37-1.21
				IPT		50	54.1	13.5	50	43.7	15.1	0.72	0.32-1.13
Renner, Jarrett et al (2012)*	Single arm	100	high	CT	Total mean	490	1.66	0.53	354	1.15	0.56	0.94	0.79-1.08
Ellison, Greenberg, et al (2009) AND Goldman, Greenberg & Pos (2005)	R	100	high	CCT	Total mean	29	1.49	0.58	29	0.99	0.54	0.88	0.34-1.42
				EFT		27	1.54	0.4	27	0.97	0.53	1.2	0.61-1.78

Klein & Elliott (2006)*	Single arm	77.5	medium	PET	Total mean	31	1.74	0.66	31	1.5	0.62	0.37	-0.13-0.87
Vittengl, Clark et al (2004) AND Vittengl, Clark and Jarrett (2003)	R	100	high	CT	Total mean	147	1.62	0.53	122	1.01	0.55	1.13	0.87-1.39
Watson, Gordon, et al (2003)	R	100	high	CBT	Total mean	29	1.33	0.51	29	1.18	0.53	0.28	-0.23-0.8
				PET		30	1.40	0.38	30	1.05	0.54	0.74	0.22-1.26
Greenberg & Watson (1998)	R	100	high	CCT	Total mean	17	1.86	0.43	17	1.31	0.45	1.22	0.48-1.96
				PET		17	1.64	0.37	17	0.81	0.32	2.34	1.45-3.24

Table adapted from McFarquhar, Luyten et al, 2018. *Means and SDs obtained through contact with the authors.

Table VII: Characteristics of Studies Included in Post Treatment to Follow Up IIP Total Scores for Brief Psychotherapy Meta-Analysis

Study	Randomised	% MDD Diagnosis	Follow up period	Study quality	Active Intervention	IIP total scoring method	Post-Tx N	Post-Tx IIP	Post-Tx IIP SD	N	f/up IIP	f/up IIP SD	Post-f/up Effect Size	95% CI
Fonagy, Lemma et al (2020)*	R	100.0	6 months post Tx	high	DIT	Total raw	54	90.5	37.3	23	83.8	36.0	0.17	-0.32-0.66
Solbakken & Abbass (2015)*	Single arm	88.3	12 months post Tx	medium	ISTDP, individual and group sessions	Total mean	30	1.44	0.49	30	1.33	0.52	0.21	-0.29-0.72
Lindfors, Knekt, et al (2015)*	R	82	6 months post Tx	medium	SFT	Total raw	93	77.6	36.4	93	74	37.6	0.07	-0.22-0.36
					STPP		98	79	35.8	98	74.8	36.5	0.11	-0.17-0.39
Ellison, Greenberg, et al (2009) AND Goldman, Greenberg & Pos (2005)	R	100	12 months post Tx	high	CCT	Total mean	29	0.99	0.54	29	1.23	0.61	-0.41	-0.93-0.11
					EFT		27	0.97	0.53	27	.91	0.49	0.12	-0.42-0.65
Greenberg & Watson (1998)	R	100	6 months post Tx	high	CCT	Total mean	17	1.31	0.45	17	1.12	0.55	0.37	-0.31-1.05
					PET		17	0.81	0.32	15	0.98	0.54	-0.38	-1.08-0.32

2.4.3 IIP Total (Distress)

Improvements pre to post active treatment in IIP total mean scores were reported for 29 of the 30 studies (96.7%) recording it included in the systematic review (p values ranged from <0.0001 to <0.05). Of these 30, 23 (76.7%) were rated as medium or high quality studies. Effect sizes were large for 14 (46.7%) of the studies (range from 0.12 to 2.4). One study reported no significant pre-post change in IIP total scores following STPP (mean treatment period=3.4 months) (Schauenburg, Kuda et al. 2000).

A meta-analysis of the pre to post effect sizes for IIP total following brief psychotherapy was performed on those studies meeting criteria (k=17) (see table VI and figures IV and V). This included 26 arms of active treatment, including five psychodynamically-oriented samples, four emotion focused, four cognitive-behavioural, four cognitive, two psychoanalytic, two client-centred, two interpersonal, two solution-focussed and one multimodal. The percentage of the sample diagnosed with MDD ranged from 70.2-100%. Fifteen of the 17 studies were randomised controlled trials or single arm studies. Nine were rated as 'high quality', five 'medium quality and three 'low quality'.

Brief adult psychotherapy yielded a significant medium effect (overall pre to post ES, g=0.62, 95% CI=0.48-0.76). Considerable statistical heterogeneity was observed, $Tau^2 = 0.1$; $Chi^2 = 162.7$, df = 25($p < 0.00001$); $I^2 = 85\%$. A sensitivity analysis was conducted, removing one outlier with an ES >2 (Greenberg and Watson 1998, PET group). The overall ES was slightly reduced, g=0.59, 95% CI=0.45-0.73). Heterogeneity remained significant, $Tau^2 = 0.09$; $Chi^2 = 146.98$, df = 24 ($P < 0.00001$); $I^2 = 84\%$. A funnel plot with the effect size plotted on the x-axis and the standard error on the y-axis (figure IV) visually indicated reasonable symmetry around the pooled effect size and therefore low publication bias with regards to pre to post treatment data, once the outlier was removed.

An additional sensitivity analysis was conducted to include only the studies rated as 'high quality' (k=10), resulted in a larger effect size (g=0.72, 95% CI=0.52-0.91), but heterogeneity remained high, $Tau^2 = 0.12$; $Chi^2 = 90.29$, df = 16 ($P < 0.00001$); $I^2 = 82\%$. Excluding the outlier above produced a similar effect: g=0.67, 95% CI=0.48-0.85, $Tau^2 = 0.1$; $Chi^2 = 77.87$, df = 15 ($P < 0.0001$); $I^2 = 81\%$. The effect size for studies rated either 'low' or 'medium quality' (k=7) was smaller: g=0.43, 95% CI=0.31-0.54.

Figure IV: Funnel Plot of Pre to Post IIP Total Effect Sizes

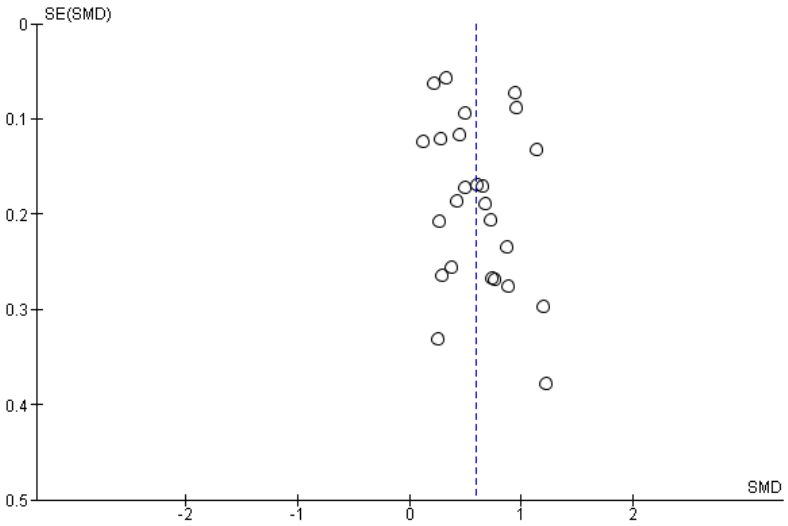
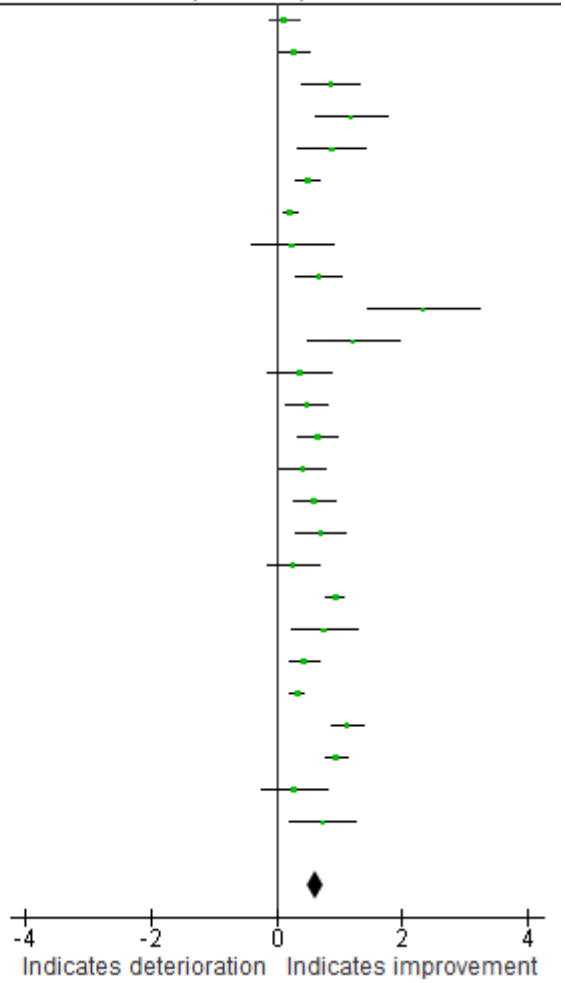


Figure V: Forest Plot of Pre to Post IIP Total Effect Sizes

Study or Subgroup	Pre Tx Mean	Pre Tx SD	Pre Tx Total	Post Tx Mean	Post Tx SD	Post Tx Total	Weight	Std. Mean Difference IV, Random, 95% CI
Assmann, Schramm et al. 2018	1.9	0.46	131	1.84	0.54	131	4.7%	0.12 [-0.12, 0.36]
Assmann, Schramm et al. 2018	1.83	0.45	137	1.69	0.53	137	4.7%	0.28 [0.05, 0.52]
Dinger, Ehrenthal et al. 2017	1.79	0.35	40	1.36	0.6	40	3.4%	0.87 [0.41, 1.33]
Ellison, Greenberg, et al. 2009	1.54	0.4	27	0.97	0.53	27	2.8%	1.20 [0.61, 1.78]
Ellison, Greenberg, et al. 2009	1.49	0.58	29	0.99	0.54	29	3.0%	0.88 [0.34, 1.42]
Fizke, Mueller et al. 2017	1.81	0.47	234	1.57	0.5	234	4.9%	0.49 [0.31, 0.68]
Fizke, Mueller et al. 2017	1.7	0.54	514	1.58	0.55	514	5.2%	0.22 [0.10, 0.34]
Fonagy, Lemma et al, 2020	1.78	0.5	20	1.6	0.87	17	2.5%	0.25 [-0.40, 0.90]
Fonagy, Lemma et al, 2020	1.76	0.45	66	1.41	0.58	54	3.9%	0.68 [0.31, 1.05]
Greenberg & Watson 1998	1.64	0.37	17	0.81	0.32	17	1.7%	2.34 [1.45, 3.24]
Greenberg & Watson 1998	1.86	0.43	17	1.31	0.45	17	2.2%	1.22 [0.48, 1.96]
Klein & Elliott 2006	1.74	0.66	31	1.5	0.62	31	3.2%	0.37 [-0.13, 0.87]
Lemmens, Galindo-Garre et al. 2017	1.4	0.53	75	1.13	0.58	66	4.1%	0.48 [0.15, 0.82]
Lemmens, Galindo-Garre et al. 2017	1.3	0.39	75	0.98	0.57	70	4.1%	0.66 [0.32, 0.99]
Lindfors,Knekt, et al. 2015	1.45	0.49	101	1.23	0.56	41	4.0%	0.43 [0.06, 0.79]
Lindfors,Knekt, et al. 2015	1.52	0.47	97	1.21	0.57	59	4.2%	0.60 [0.27, 0.94]
Quilty, Mainland, et al 2013	1.69	0.42	50	1.37	0.47	50	3.7%	0.71 [0.31, 1.12]
Quilty, Mainland, et al 2013	1.55	0.54	47	1.39	0.64	47	3.7%	0.27 [-0.14, 0.67]
Renner, Jarrett et al. 2012	1.66	0.53	490	1.15	0.56	354	5.1%	0.94 [0.79, 1.08]
Solbakken & Abbass 2015	1.76	0.33	30	1.44	0.49	30	3.1%	0.76 [0.23, 1.28]
Steinert, Klein et al. 2015	1.66	0.52	151	1.41	0.59	151	4.7%	0.45 [0.22, 0.68]
Steinert, Kruse et al 2019	1.69	0.51	709	1.51	0.58	523	5.2%	0.33 [0.22, 0.45]
Vittengl, Clark et al. 2004	1.62	0.53	147	1.01	0.55	122	4.6%	1.13 [0.87, 1.39]
Vittengl, Clark et al. 2018	1.67	0.53	346	1.15	0.56	239	5.0%	0.96 [0.78, 1.13]
Watson, Gordon, et al. 2003	1.33	0.51	29	1.18	0.53	29	3.1%	0.28 [-0.23, 0.80]
Watson, Gordon, et al. 2003	1.4	0.38	30	1.05	0.54	30	3.1%	0.74 [0.22, 1.26]
Total (95% CI)			**3640**			**3059**	**100.0%**	**0.62 [0.48, 0.76]**

Heterogeneity: Tau² = 0.10; Chi² = 161.81, df = 25 (P < 0.00001); I² = 85%
Test for overall effect: Z = 8.63 (P < 0.00001)



Seven studies in the systematic review reported IIP total score data for a follow up period, ranging from six months to five years post end of treatment. All demonstrated a small continued improvement in IIP total between end of treatment and the follow up assessment for at least one treatment arm: six months post DIT, d=0.17 (Fonagy, Lemma et al. 2020); six months post CC, d=0.37 (Greenberg and Watson 1998); 12 months post ISTDP, d=0.22 (Solbakken and Abbass 2015); 12 months post EFT, d=0.12 (Ellison, Greenberg et al. 2009) and five years post start of treatment with SFT or STPP d=0.16 and 0.14 respectively (Lindfors, Knekt et al. 2015). Two studies report small increases in interpersonal problems in one treatment arm, six months post PE (Greenberg and Watson 1998) and 12 months post CC (Ellison, Greenberg et al. 2009). A meta-analysis of the post to follow up effect sizes for IIP total following brief psychotherapy was performed on those studies meeting criteria (k=5) (see table VII and figures VI and VII). This included eight arms of active treatment: two client-centred, two emotion focused, two psychodynamically-oriented, one solution-focussed and one interpersonal. All were randomised controlled trials or single arm. Three were rated as 'high quality' and two as 'medium quality'. Three arms had a follow up six months post treatment and five at 12 months. Brief adult psychotherapy yielded a small effect (overall pre to post ES, g=0.06, 95% CI=-0.09-0.21). Heterogeneity was low, $Tau^2 = 0$; $Chi^2 = 6.16$, df = 7 ($p < 0.52$); $I^2 = 0\%$. There was insufficient data to conduct a subgroup analysis which would have been warranted given the considerable variation in follow-up period. The funnel plot indicated low publication bias (see figure VI).

Figure VI: Funnel Plot of Post to Follow Up IIP Total Effect Sizes

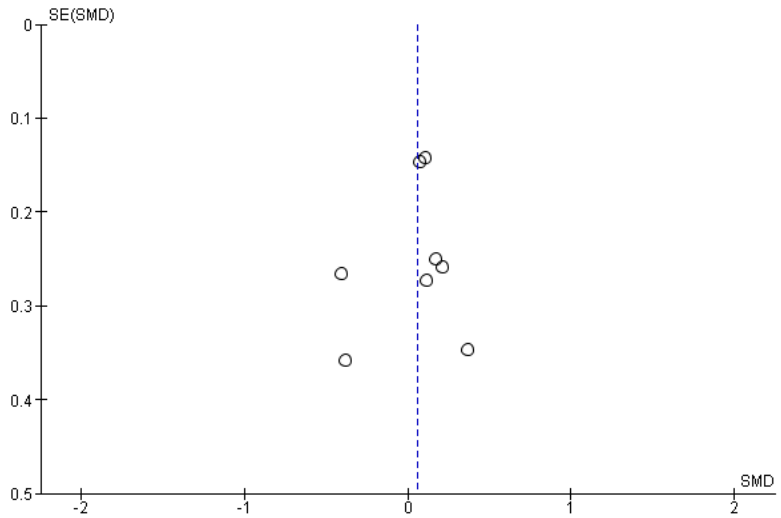
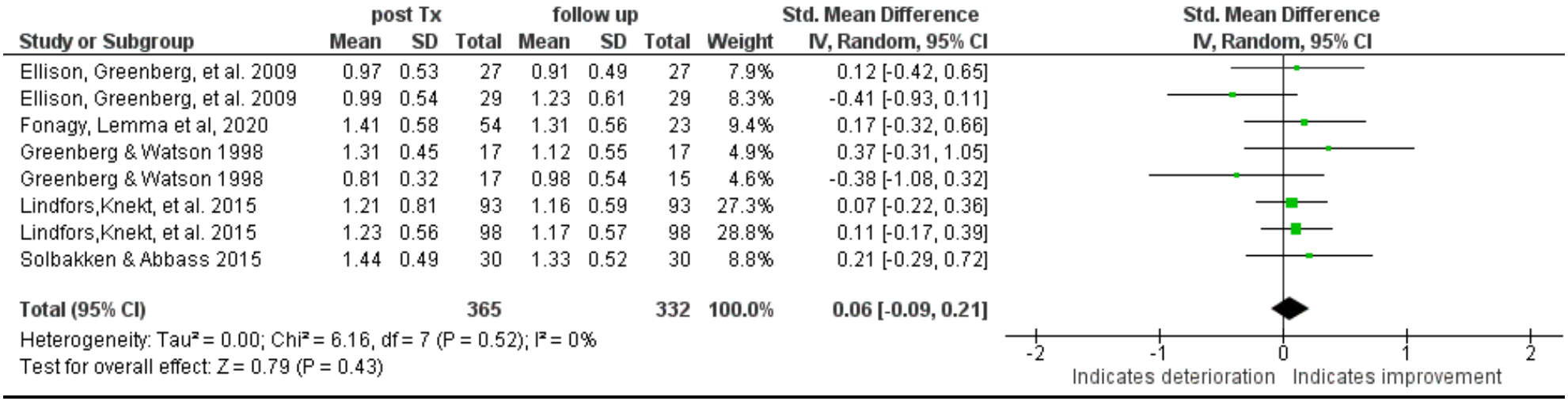


Figure VII: Forest Plot of Post to Follow Up IIP Total Effect Sizes



2.4.4 Dimensions (Love/Dominance/Amplitude/Angle of Displacement)

Six studies provided pre to post data for the IIP love and dominance. Three reported a significant increase in dominance scores, $p<0.01$ (Renner, Jarrett et al. 2012); $p<0.0001$, $d=0.32$ (Holtforth, Lutz et al. 2006), one of these noting that the increase was no longer significant once pre-treatment elevation had been controlled for (Quilty, Mainland et al. 2013). Three found no significant change in dominance scores (Vittengl, Clark et al. 2004; Altenstein-Yamanaka, Zimmermann et al. 2017; Fonagy, Lemma et al. 2020). Four found no change in love scores (Vittengl, Clark et al. 2004; Renner, Jarrett et al. 2012; Quilty, Mainland et al. 2013; Fonagy, Lemma et al. 2020). One study reported a small significant decrease in love scores, $p<0.05$, $d=0.09$ (Holtforth, Lutz et al. 2006). One reported a significant increase in love scores in men only, $p<0.001$ (Altenstein-Yamanaka, Zimmermann et al. 2017).

Three studies included IIP amplitude data. Two revealed a significant reduction pre to post treatment (Quilty, Mainland et al. 2013; Fonagy, Lemma et al. 2020). The third found medium to large effect sizes for a reduction in amplitude scores following LTPP for patients classified as either interpersonally submissive, socially avoidant or exploitable (Salzer, Leibing et al. 2010).

Data for the IIP angle of displacement was recorded in four studies. Three reported no significant change pre to post treatment (Vittengl, Clark et al. 2003; Renner, Jarrett et al. 2012; Fonagy, Lemma et al. 2020). One reported a modest shift from 315° to 327° (Holtforth, Lutz et al. 2006).

2.4.5 Subscales

Pre to post treatment IIP subscale data was available for only one additional study (Fonagy, Lemma et al. 2020) over and above the previous review, giving a total of 10 studies. A lack of eligible studies again precluded a meta-analysis. Seven reported significant improvement on all subscales, with the higher quality studies tending to report larger effect sizes (Vittengl, Clark et al. 2003; Salzer, Leibing et al. 2010; Renner, Jarrett et al. 2012; Zimmermann, Loffler-Stastka et al. 2014). Large and medium effect sizes were generally reported more frequently on the affiliative side of the IIP-C. Less change was slightly more notable on the more hostile side, particularly in the hostile-submissive quadrant: one study reported no change on the HI, FG and BC subscales (Watson, Gordon et al. 2003) and problems on the FG and HI subscales increased post treatment in one study (Haase, Frommer et al. 2008). However, data from Fonagy, Lemma et al. (2020)

revealed significant reductions on the cold, socially-inhibited and non-assertive subscales (p<.005) and the domineering, vindictive and overly accommodating subscales (p<.05).

2.4.6 Comparison of Modalities

A third study of psychotherapy vs. TAU (waitlist) (Fonagy, Lemma et al. 2020) supported previous findings (Bressi, Porcellana et al. 2010; Solbakken and Abbass 2015) that the active treatment group had significant reductions in their IIP total scores pre to post treatment and the TAU groups did not. In the one study reporting IIP total scores for psychotherapy vs. medication (Johansson 2010), the psychoanalytic group IIP total scores reduced (d=0.5) more than the psychoanalytic group with medication (d=0.32) and the medication only group (d=0.06).

Due to the addition of further studies to the meta-analysis of brief treatment conducted in the original paper, a subgroup analysis of treatment types was conducted. The pooled effect size for IIP total change pre to post treatment was calculated for short term psychodynamic treatments and then for CBT. Brief psychodynamic treatments (five treatment arms, 1057 patients) yielded a small to medium significant effect (overall pre to post ES, g=0.44, 95% CI=0.30-0.57). Heterogeneity was low, $Tau^2 = 0.01$; $Chi^2 = 5.47$, df = 5 ($p < 0.24$); $I^2 = 27\%$. CBT (4 treatment arms, 233 patients) yielded a smaller but significant effect (overall pre to post ES, g=0.28, 95% CI=0.10-0.46). Heterogeneity was low, $Tau^2 = 0$; $Chi^2 = 0.01$, df =3 ($p < 1.0$); $I^2 = 0\%$.

2.4.7 Pre-Treatment IIP Data and Outcome

Twenty studies reported data addressing the relationship between IIP scores and outcome and 11 of these met the meta-analysis criteria. However, too few studies addressed the same IIP construct in the same way to permit a specific meta-analysis.

Fourteen studies reported the effect of total IIP distress (elevation). Pre-treatment IIP distress was found to be significantly positively correlated with post treatment outcome scores in five studies, r=0.3 to 0.6 (Dinger, Zimmermann et al. 2017; Doran, Safran et al. 2017; Lemmens, Galindo-Garre et al. 2017; Vittengl, Clark et al. 2018; Fonagy, Lemma et al. 2020). Higher pre-treatment IIP distress was predictive of poorer outcomes in two studies: for patients receiving CT (Renner, Jarrett et al. 2012) and also short-term, mixed modality therapy (Ruiz, Pincus et al. 2004; Beutel, Hoflich et al. 2005). There was a significant positive correlation between change in IIP distress and change in depression scores following A-CT (Vittengl, Clark et al. 2003; Vittengl, Clark et al. 2004), LTPP (Salzer, Leibing et al. 2010), CBT/EBCT (Altenstein-Yamanaka, Zimmermann et al. 2017) and

CT/IPT (Lemmens, Galindo-Garre et al. 2017), r=0.2 to 0.6. In one study investigating change in interpersonal problems as a predictor of depressive symptoms at a six month follow up, no significant relationship was identified (Dinger, Ehrenthal et al. 2017). Slow responders to long term PP or PA had higher levels of pre-treatment distress than faster responders (Berghout, Zevalkink et al. 2012). Pre-treatment IPs were not related to outcome in individual CBT, but in group CBT, more severe IPs were associated with a poorer outcome (McEvoy, Burgess et al. 2014). No association was found between pre-treatment interpersonal distress and the speed of symptom improvement in a study where patients were treated with either PD, CBT or PP (Puschner, Kraft et al. 2004).

Eight studies reported results for the relationship between pre-treatment IIP dimensions and outcome, but with little consistency. Too few met the criteria for meta-analysis. Higher pre-treatment dominance scores was associated with a poorer outcome in IPT and CBT (Quilty, Mainland et al. 2013), and a better outcome in CT (Renner, Jarrett et al. 2012), PD (Dinger, Strack et al. 2007) and SET and no difference in the medication and placebo groups (Dinger, Zilcha-Mano et al. 2013) . Pre-treatment dominance scores were unrelated to outcome in STPP (Schauenburg, Kuda et al. 2000) and DIT (Fonagy, Lemma et al. 2020). Patients with higher pre-treatment affiliation improved more slowly than the low-affiliation patients in a RCT of SET/medication/placebo (Dinger, Zilcha-Mano et al. 2013), and pre-treatment affiliation was significantly positively correlated with outcome in STPP (small ESs)(Schauenburg, Kuda et al. 2000). Pre-treatment affiliation was unrelated to outcome in PD (Dinger, Strack et al. 2007) or in DIT (Fonagy, Lemma et al. 2020). Affiliation and dominance were unrelated to outcome in PD, CBT and PP treatments analysed together, however lower affiliation was associated with better outcomes for the PD group (Puschner, Kraft et al. 2004). Higher pre-treatment amplitude (rigidity) was associated with a poorer outcome in IPT and CBT (Quilty, Mainland et al. 2013) and in short-term, mixed modality therapy, even after the effects of total distress were partialed out (Ruiz, Pincus et al. 2004). It was unrelated to outcome in DIT (Fonagy, Lemma et al. 2020).

Three studies reported data for IIP-C subtypes and outcome. Puschner, Kraft et al. (2004) compared treatment outcomes for PD, CBT or PP. Patients with problems in the hostile-submissive quadrant of the IIP-C had the fastest rate of improvement and patients with problems in the friendly-dominant quadrant had the slowest rate of improvement. Clapp et al (2014) reported that 48% of participants with a pre-treatment submissive profile (elevations across non-assertive, overly accommodating, and self-sacrificing scales) had transitioned to a normative profile at end of treatment, compared to 57.1% of those with a hostile/withdrawn profile (elevations across vindictive/self-centred, cold/distant, and socially inhibited subscales). Analysis of data from Fonagy, Lemma et al (2020) revealed

that for patients treated with DIT, those with dominant interpersonal styles (particular hostile-dominant) had the best improvement in interpersonal problems and the highest rates of HRSD response and remission and the groups with submissive styles the fewest responders.

Five studies investigated the relationship between baseline IIP subscales and outcome. Patients who scored highly on the overly accommodating and non-assertive subscales were more likely to reach reliable change and clinically significant change on the outcome measure. The percentage of patients reaching reliable change and clinically significant change and was lowest for patients who scored highly on the domineering/controlling and cold/distant subscales (Zimmermann, Loffler-Stastka et al. 2014). In short term multi-modal treatment, significant correlations were reported between high scores on all the pre-treatment IIP subscales and worse outcomes, particularly the socially inhibited and cold/distant subscales (Beutel, Hoflich et al. 2005). However, the other two studies of mixed modality treatment failed to find correlations between any subscales and outcome (Puschner, Kraft et al. 2004; Ruiz, Pincus et al. 2004). Higher scores on the overly accommodating and self-sacrificing subscales were correlated with higher post treatment depression scores (Fonagy, Lemma et al. 2020).

2.5 DISCUSSION

This update both confirmed and added to the findings of its predecessor (McFarquhar, Luyten et al. 2018). Ten new studies reporting results for IIP scores in depression intervention outcome studies between 2016 and 2020 were added to the systematic review. All ten reported a significant reduction in IIP total (distress/elevation) following a course of brief or long term individual psychotherapy, giving a total of 29 out of 30 studies. The majority of these studies (76.7%) were of medium or high quality, an increase of 11.2% on the previous report. Effect sizes ranged from 0.28 to 2.4. An addition of seven studies (11 arms of treatment) to the meta-analysis of pre to post brief psychotherapy, revealed that IIP total scores improved with a moderate ES (g=0.62, 95% CI=0.48-0.76). Given the number of patients pre-treatment increased from 1293 to 3640, this was a small and expected decrease from the previous ES, g=0.74, 95% CI=0.56-0.93. Studies with smaller sample sizes tend to produce larger and more variable effect sizes (e.g. Slavin and Smith, 2008). As before, statistical heterogeneity continued to be an issue (I^2 = 85%). This is unsurprising due to the need for the necessary broad inclusion criteria across treatment settings, treatment modalities and patient diagnosis. Cautious interpretation is again advised. The previous finding that higher quality studies produced higher ESs was confirmed.

The inclusion of new studies allowed a meta-analysis of post to follow-up brief treatment IIP total distress scores which was not possible in the original paper. Five studies (eight arms of treatment) were included, with follow-up periods of six or 12 months post treatment. Small continued improvement was noted in six arms of treatment, d=0.12 to 0.37. A small (non-significant) effect was found (overall pre to post ES, g=0.06, 95% CI=-0.09-0.21), with low heterogeneity. IIP total scores had increased in two treatment arms at follow up, six months post PE (Greenberg and Watson 1998) and 12 months post CC (Ellison, Greenberg et al. 2009). With such a small sample of studies (n=365 post treatment) and varying follow up periods, it is difficult to draw conclusions regarding interpersonal functioning beyond the end of treatment. These findings do cast some doubt on the previous conclusions regarding the strength of sleeper effects (McFarquhar, Luyten et al. 2018). Recent meta-analytic evidence also points to the presence of only very marginal sleeper effects in psychotherapy research (Fluckiger and Del Re 2017). A meta-analysis of 20 studies comparing psychodynamic with non-psychodynamic therapies indicated no sleeper effects (Kivlighan, Goldberg et al. 2015) and another of 15 studies comparing evidence-based psychotherapy with treatment as usual found small to moderate differences post treatment in efficacy in favour of evidence-based treatments but no extended efficacy at follow-up (Durham, Higgins et al. 2012; Knekt, Lindfors et al. 2008). More studies and subgroup analysis of follow up periods and treatment modalities are required to investigate this further.

The evidence for a relationship between pre-treatment IIP total and treatment outcome was more convincing than the previous report, however, studies were still too few and too different to allow a meta-analysis. Eight studies found higher pre-treatment IIP total distress was associated with poorer outcomes with small to moderate effect sizes. Five studies found change in distress was correlated with change in depression scores following A-CT, LTPP, CBT/EBCT and CT/IPT, also with small to moderate effect sizes, and three found no relationship after multimodal, CBT, PD or PP.

The previous report indicated a trend towards greater improvement in IIP total scores in patients receiving ‘emotion-focused’ therapy compared to those receiving a more ‘goal-focused’ therapy, but there was an insufficient numbers of studies available to investigate effect sizes for treatment modalities. A key new finding of this study was the result of the subgroup analysis of treatment modalities in pre to post brief treatment, made possible by the addition of new studies. Psychodynamic therapies were found to have an ES of 0.44 for improvement in IIP total distress, compared to 0.28 for CBT. This encouraging finding contributes to the evidence that some therapies are more effective than others at reducing interpersonal distress, which has implications for the allocation of patients to specific modalities as opposed to a ‘one size fits all approach’.

IIP dimensions remained under-reported. Only two further studies reported pre to post treatment data for love and dominance, giving a total of six. Half the studies (k=3) reported a significant increase in dominance and half reported no change. Four studies reported no significant change in love scores, one a small decrease and one a significant increase among males. As before, treatment modality did not seem to discriminate between those studies which reported change in love and dominance and those which did not. These results do seem to suggest that there is a case for testing the theory that love is more stable than dominance. Altenstein-Yamanaka, Zimmermann el al. (2017) have suggested that the treatment period mediates the effect of treatment on change in love and dominance, i.e. because interpersonal change is a second order effect, as opposed to a first order symptomatic effect, it requires a longer period over which to observe change in the underlying dimensions. However, variance in pre to post treatment love and dominance is notable across these studies, all six of which were brief treatment. The evidence base for change in amplitude is still very small, yet quite consistent: all three studies reported a reduction in rigidity pre to post treatment. While two found that higher pre-treatment amplitude was associated with poorer outcomes and that the change in amplitude was associated with change in depression score, the third found no relationship between baseline amplitude and outcome. Likewise, four studies reporting angle of displacement indicated no change or a very small one. Lack of data again precluded the use of IIP dimensions as response predictors.

With regards to the IIP subscales, only one additional study had reported pre to post change. Unlike most of the other studies which reported significant improvements on all eight scales and particularly the affiliative side of the circumplex, Fonagy, Lemma et al. (2020) reported more notable reductions on the hostile side. This study was also the only report of outcomes in DIT, a key focus of which is interpersonal relating. As investigated in chapter five, perhaps DIT is particularly suitable for patients with interpersonal problems which are more hostile in nature. Looking at the studies reporting outcomes for patients categorised according to their interpersonal style, there is some interesting evidence emerging that contrary to the theory that hostility impacts alliance and consequently outcome (Kiesler and Watkins 1989; Muran, Segal et al. 1994; Binder and Strupp 1997; Gurtman 2004), hostile patients are actually doing quite well in treatment. In PD, hostile-submissive patients had the best outcomes and friendly-dominant the worst (Puschner, Kraft et al. 2004). In multimodal psychotherapy, hostile/withdrawn patients had better outcomes than submissive patients and in DIT, hostile-dominant patients did better than submissive ones. Of course, the treatment modality may be key to understanding why this may be. Chapter five provides a detailed analysis of outcomes in DIT based on interpersonal classification.

2.6 LIMITATIONS

The same limitations apply as to the previous report. Some data may have been omitted due to only including data reported in English language journals. While an attempt was made to contact relevant authors directly to obtain raw data, not all replied or were able to supply the data within the time period. Due to the sparse reporting of IIP data, relatively loose inclusion criteria were applied, for example only restricting the patient diagnosis to 70% and above diagnosed with MDD. If more data were available, a criteria of 100% MDD in the sample would have been desirable. The high level of heterogeneity observed in the meta-analyses was likely due to the variability in patient populations, treatment period and modality. The need to produce a study-specific assessment of study quality impacts the comparison with other studies, but was considered essential in order to capture the key indicators relevant to this analysis.

2.7 CONCLUSIONS

In conclusion, the addition of data from 2347 patients collected between 2016 to 2020 confirmed that brief psychotherapy for depression is associated with an improvement in interpersonal symptoms with a moderate effect size. While sleeper effects for interpersonal problems at six to twelve months follow up were found to be small, maintenance of gains are indicated. Improvement in interpersonal problems was larger for psychodynamic therapies than for CBT. The evidence regarding the types of interpersonal problems most amenable to change in psychotherapy remains conflicting: dominance appears to improve more readily than affiliation and patients classified as hostile are reportedly having better outcomes, yet the subscales on the affiliative side of the circumplex have been shown to improve more than those on the hostile side. Little has been added to the evidence base for a relationship between pre-treatment IIP scores and outcome. While higher baseline interpersonal distress and rigidity appear to be likely candidates for poorer outcomes, current findings permit little more than speculation.

It is gratifying to observe that frequency of reporting is improving. When the data for the last report was collected between 1946 and 2016, only 10 randomised studies of psychotherapy for depression included the IIP as a measure. Between 2017 and 2020, there were five. The number of studies reporting IIP data which was classified as medium or high quality also appears to be improving, by around 11%. However, this is limited mainly to IIP total, there is still very little data being reported for the subscales or dimensions. Only better reporting will lead to a clearer understanding of whether outcomes are affected by types of interpersonal problems.

CHAPTER 3

Developing a prototype classification system for the Interpersonal Affective Focus in DIT

3.1 CHAPTER OVERVIEW

Dynamic Interpersonal Therapy (DIT) is a recently developed, time-limited short term psychodynamic therapy which focuses on understanding the presenting depressive symptoms as responses to interpersonal difficulties. Chapter three reports the development of a novel typological classification system of the predominant and recurring interpersonal pattern which has brought the patient to treatment. Termed the 'IPAF' (Interpersonal Affective Focus), it is a way of conceptualising problematic interpersonal representations of the self and others, must be agreed upon by both the therapist and the patient and becomes the main focus of treatment in DIT. The typology takes the form of a classification system which allows the user to characterise the predominant style described by the IPAF in interpersonal terms. The purpose of such a typology is to allow an investigation of treatment outcomes (the subject of chapter five) based on a classification of problematic interpersonal interactions which is informed by both the therapist and the patient, as opposed to simply using self-report or therapist rated baseline measures. The IPAF typology was developed by way of a theory-driven qualitative analysis of transcriptions of audio recordings of the IPAFs in two trials of DIT: REDIT (Randomised Evaluation of Dynamic Interpersonal Therapy) and REDIT-CT (Randomised Evaluation of Dynamic Interpersonal Therapy vs. Cognitive Behaviour Therapy). The qualitative analysis was informed by contemporary interpersonal approaches and the way interpersonal problems are conceptualized in the Inventory of Interpersonal Problems (IIP) in particular. As described in chapter one, contemporary interpersonal approaches group interpersonal problems together as quadrants and octants that share common themes based on two dimensions underlying interpersonal problems: agency and communion. Additionally, the chapter provides the first report of how the IPAF is presented to the patient and how consistently between therapists.

The qualitative analysis revealed that the IIP could be used to conceptualize four master-themes which arose in the transcriptions. IPAFs could be described as hostile-dominant, hostile-submissive, friendly-dominant or friendly-submissive, with a list of sub-themes

relevant to each one. Each sub-theme is described and sample quotes are provided. Sub themes were both deductive (drawn from the IIP) and inductive (derived from the data). Master-themes and sub themes were then arranged into a 2x2 matrix forming the four-fold typology (see appendix B) and instructions were written for the user, including how to handle IPAFs which don't seem clearly represented by any one particular category. The IPAF was found to be explicitly shared with the patient in 48/59 (82%) of cases and in 40/48 (83%) of cases in the fourth session, indicating good treatment adherence.

The findings are discussed in terms of their similarities and differences to Gurtman's (1996) quadrant descriptions including potential explanations for unidentifiable and unclassifiable IPAFs and the limitations of the study.

3.2 INTRODUCTION

DIT is brief psychodynamic protocol provided within IAPT (Improving Access to Psychological Therapies) in the UK, beginning to challenge the recent emphasis on CBT as the treatment of choice for depression. It has also been delivered beyond the UK with adults in Italy, Belgium, the Netherlands and United States (Chen, Ingenito et al. 2017), and recently with teenagers and young adults in Sweden (Landstrom, Levander et al. 2019). Its origins lie in the competency framework developed for the psychoanalytic/dynamic therapies commissioned by the Department of Health (Lemma, Roth et al. 2008), which comprise what is considered to be good clinical practice based on empirical evidence of efficacy. Delivered over the course of 16 weekly sessions, it requires the therapist to identify an attachment related problem which has caused the patient to seek help for their depressive symptoms. The therapist then works collaboratively on this problem with the patient to improve mentalization of interpersonal issues, encourage new ways of thinking and feeling, actively use transference to highlight the patient's typical patterns of relating, reflect on change and finally, provide the patient with a jointly-produced "good-bye" letter detailing the view of the self and the area of unconscious conflict which has been worked on in therapy and potential areas for growth to reduce the risk of relapse (Lemma, Target et al. 2010).

The DIT model builds on attachment theory (Bowlby 1958; Bowlby 1969), Sullivan's interpersonal psychoanalysis (Sullivan 1953b) and object relations theory (Kernberg 1976, 1985) by considering unconscious conflict to result from a clash between self and other representations which produce a recurring interpersonal pattern and expectation of others (Lemma, Target et al. 2011). It emphasises how early childhood experiences are relevant to adult functioning, how internal and external forces contribute to the perception of self with respect to others and the role of the unconscious as a motivating force. Transference

is also considered vital in allowing both the patient and the therapist to recognise unchallenged maladaptive developmental models. Depressive symptoms are considered as responses to perceived threats to attachment and the self; relationship problems cause the attachment system to become disorganised and lead to distorted thinking and feeling (Lemma, Target et al. 2010). Behavioural and psychological defence strategies sustain the depression and anxiety. Treatment proceeds in three phases: sessions one to four involve assessment and identification of interpersonal patterns and the key focus for treatment, sessions five to 12 work through the focus of treatment and aim to identify more adaptive ways of relating and coping with interpersonal threats and sessions 13 to 16 focus on preparing the patient for ending therapy and manage future difficulties.

Due to its very recent implementation in the NHS (currently in phase II clinical trials), the evidence base for DIT is currently fairly limited. Early reports indicate efficacy and demand for DIT by patients and referring clinicians outstrips the capacity to provide it (Chen, Ingenito et al. 2017). A small naturalistic pilot study reported that DIT was associated with a significant reduction in symptoms to below clinical levels in 15 out of 16 patients (Lemma, Target et al. 2011). Over 75% of patients showed improvement on the PHQ-9 and GAD-7 following DIT in a small study of 24 primary care patients (Wright and Abrahams 2015). In a larger RCT of DIT (n=147), 51% of patients showed clinically significant change post treatment with a large effect size on pre to post HRSD-17 scores and DIT was superior to LIT (low-intensity treatment) (9%) and equal to CBT in reducing symptoms of depression (Fonagy, Lemma et al. 2020). In a qualitative study, young adults described placing lower demand upon themselves following DIT, being better able to set interpersonal boundaries and a growing ability to express their own needs and emotions (Landstrom, Levander et al. 2019).

The key component of DIT is the IPAF (interpersonal affective focus). Its formulation occurs collaboratively with the patient during the fourth of 16 sessions and its focus is the patient's mind in relation to self and others, rather than their behaviour (Gelman, McKay et al. 2010). Defined as "the dominant internal relationship that is linked to the manifest problem", it is formulated by examining internal narratives (INs) and sketching out a detailed picture of the patient's internal world of relationships (Lemma, Target et al. 2011p. 106). A defining feature of the IPAF is that it should be explicitly shared with the patient: the therapist aims to provide a focus for treatment that is meaningful to and agreed upon by the patient. The patient is encouraged to respond to the formulation and work with the therapist to refine it to ensure a good fit with the problems that brought them to treatment. The first version of the IPAF is preliminary; it can also be edited and clarified as treatment continues. During the middle phase of DIT, the therapist will repeatedly draw the patient's attention to the way in which the IPAF is being played out in their interpersonal

relationships. Four dimensions make up the IPAF: a self-representation (e.g. a demanding infant); an object representation (e.g. a rejecting mother); an affect linking the two (e.g. terror) and a defence function (e.g. avoidance of own aggression). In this example, the individual sees the self as seen as demanding of others, for example of their time, affection, or support. The other is seen as dismissive- rejecting the self or withholding what it needs. The affect is an overwhelming fear of being abandoned when most in need. The defence may be the avoidance of acknowledgment of the self's own aggression and rejection of others by always seeing the self as the one who is rejected.

According to the DIT model, producing the IPAF should involve five steps (Lemma, Target et al. 2011):

I. Describe the problem as patient sees it
II. Describe the cost to the patient, what limits functioning?
III. contextualises the problem- how do environmental and biological givens relate to the presenting problem
IV. Describe recurrent self-other representation
V. Identify defence function of self-other representation

This chapter will aim to identify a novel method of consolidating and categorizing the problematic interpersonal style described by the IPAF. If IPAFs can be reliably categorised, the various different IPAF types can then be investigated for their relationship with treatment outcome. Currently, there are no empirical results reporting for whom DIT specifically is most effective, although there are several theories which might be used to make a prediction (see chapter five). A typology for IPAFs would allow further investigation of the types of interpersonal problems which can be most successfully treated with DIT and may also provide insight into how DIT might be modified if certain IPAF types are associated with poorer outcomes.

The development of a typology began with selecting an existing theoretical framework for discriminating different types of interpersonal behaviours. The basis of DIT is rooted in the frequent observation of clinicians that depressed patients also typically report interpersonal problems (Lemma, Target et al. 2010). The interpersonal circumplex approaches provide an ideal basis for classification of IPAFs due to their many similarities. Like DIT, they are based on object relations theory and emphasise ties to early caregivers (Kernberg 1985; Horowitz 1996).

Chapter one provided an overview of the emergence of contemporary interpersonal circumplex approaches in the 1950s, beginning with the empirical investigations of

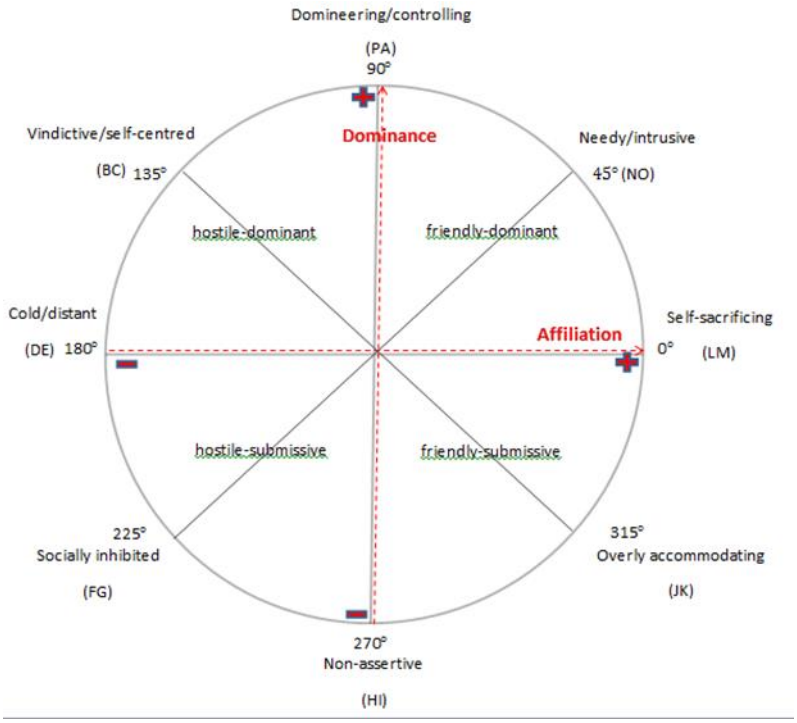
Sullivan's interpersonal theory. Group psychotherapy sessions and data from psychological tests were used to develop the interpersonal circle (Freedman, Leary et al. 1951): a model of interpersonal constructs as a circular array of variables projected onto two axes: love and dominance. Sixteen categories of interpersonal behaviour were proposed as representations of a specific combination of these two dimensions (Leary 1957). One of the most widely used circumplex measures is the IIP-C (Alden, Wiggins et al. 1990), in which eight scales describing particular types of interpersonal problems are arranged in a circle based on their loadings onto the two underlying factors, love and dominance. This chapter will adopt the interpersonal circumplex approach, and the IIP-C in particular, as a model for describing the interpersonal affective focus of treatment in psychotherapy.

The basic components of the two polarities models underlying contemporary interpersonal approaches are self-definition and relatedness (Blatt 2002; Blatt 2004; Blatt 2008) which correspond neatly with the self-other representation of the IPAF: both are contextualising psychic pain as being rooted in some combination of problems with sense of self and relating to others. Specifically, the IIP aims to identify interpersonal problems causing psychic pain to the individual in much the same way as the IPAF aims to describe the recurrent self-other representation which is limiting functioning. Additionally, unlike other measures of dysfunctional behaviour which tend to focus on the two most commonly encountered problems in clinical settings (anxious avoidant behaviour and interpersonal aggression) (Horowitz 1979; Horowitz, Rosenberg et al. 1988), the IIP covers a much broader range of interpersonal problems such as intrusive behaviour and overdependence (Alden, Wiggins et al. 1990). There is however a notable difference between the interpersonal circumplex approaches and DIT: the defence function which is key to DIT is not present in the interpersonal circumplex. In DIT, the four components of the IPAF link together and are complementary, for example, submissive behaviour may defend against aggression. However, this is not the case in the interpersonal circumplex where the behaviours are polarised and correlations between types of interpersonal behaviours decrease as they get further away from each other in the circle. Being a self-report measure, the IIP cannot distinguish between problems that form a defence strategy and those that don't. Theoretically, this may present a problem in using an interpersonal measure to classify a DIT structure: in order to produce the IPAF, the clinician must still take the defence function into account. However in classifying an IPAF, the clinician must determine what defensive behaviours are defending against, thereby selecting the true problematic area rather than the defence.

The various versions of the IIP (see chapter one) have described several ways to discriminate themes of interpersonal problems. Horowitz's (1979) early investigations of

the IIP identified five thematic groups: intimacy, aggression, compliance, independence and socialising. Multi-dimensional scaling resulted in three thematic groups: control, degree of psychological involvement and nature of involvement and a PCA finally produced six scales: assertive, sociable, intimate, submissive, responsible and controlling (Horowitz, Rosenberg et al. 1988). Alden, Wiggins et al. (1990) went on to identify two factors in a PCA of the IIP (love and dominance), and by determining each item's loading and orientation in the circumplex space, developed a set of eight circularly arranged scales using 64 of the IIP's 127 items: domineering (PA), vindictive (BC), cold (DE), socially avoidant (FG), non-assertive (HI), exploitable (JK), overly nurturant (LM) and intrusive (NO) (see figure VIII). Correlations between adjacent sub-scales were higher than between opposing sub-scales, i.e. the sub-scale correlations decrease as one moves around the circumplex. The structure was confirmed with further exploratory tests (Pincus, Gurtman et al. 1998; Acton and Revelle 2002). This circumplex structure lends itself particularly well to informing both quantitative and qualitative analyses. The octant items are known to co-occur and be semantically similar (Horowitz, de Sales French et al. 1980). Therefore, there is already a framework for conducting a qualitative analysis: the items (which will become the sub-themes) have already been shown to be statistically correlated with each other to a greater or lesser extent.

Figure VIII: Quadrants and Sub-Scales of IIP-C



Adapted from Alden, Wiggins et al (1990) and Gurtman (1996)

If a large sample of IPAFs were available, a typology based on the IIP octants would be ideal. However, due to the relatively limited number of participants in the REDIT and REDIT-CT trials, a broader method of discriminating themes of interpersonal problems was required for this study. Another method by which to divide the IIP-C is to bisect it along the underlying dimensions of love and dominance (see figure VIII). Interpersonal styles can then be described as particular combinations of these two dimensions: the love dimension ranging from hostile/cold behaviour to warm/friendly behaviour and the dominance dimension ranging from yielding/submissive behaviour to controlling/dominating behaviour (Carson 1969; Kiesler 1983; Horowitz, Alden et al. 2000). Gurtman (1995) conducted a principal component analysis (PCA) of the IIP-127 and identified three factors: love, dominance and distress. When plotted on a circular two-dimensional graph based on their loading on the love and dominance factors, items were well dispersed (circular variance=0.97). One or more of the interpersonal problems of the IIP-127 were found to fall in each of the narrow segments of the circle, indicating that an item exists for every combination of the two underlying factors of love and dominance. A hierarchal cluster analysis of 127 item matrix revealed 20 even dispersed clusters of interpersonal problems. On the basis of this work, Gurtman (1996) went on to develop a four-fold typology of interpersonal problems based on the circumplex for 104 outpatients. The system of quadrants formed by the intersection of love and dominance were named (after Carson 1969) friendly-dominant (0-90°), hostile-dominant (90-180°), hostile-submissive (180-270°) and friendly-submissive (270-360°) and individuals could be placed in one partition of the circle based on their IIP results for distress, angular displacement and vector length (see chapter one). A descriptor summarising the key problems for each quadrant was arrived at: FD (n=23) was characterised by being overly controlling, intrusive and revealing, HD (n=25) by having problems getting along with others, being aggressive and lacking in social feeling, HS (n=31) by having problems feeling close to people and being open and FS (n=25) as having problems of dependency, exploitability and lacking assertiveness.

Given the sample size for the current study was small, the aim of the analysis was to use the IIP items as sub-themes but also allow themes to emerge organically from the IPAF transcriptions and to assign the sub-themes within the quadrant descriptors described by Gurtman (1996). Attempting to allocate sub themes according to octant would have resulted in too few IPAFs per octant to conclude any meaningful difference in outcomes. By using a pre-determined analytic framework in this way, it was expected that IPAFs could be categorised in a four-fold typology based on the dimensions of the IIP, in a similar way to Gurtman's classification of individuals' IIP scores.

So why not simply use IIP scores at baseline to predict outcome? As reported in chapter one, the angular displacement of the IIP circumplex provides a statistical and narrative description of the patient's predominant theme of interpersonal maladjustment (Leary 1957) which could be used to investigate outcome of DIT. In the eight octant model of the interpersonal circumplex, subscales are evenly spaced at 45° intervals and the angle at which an individual's peak vector lies indicates the particular nature of their interpersonal problems (Alden, Wiggins et al. 1990). However, this would account only for the patient's pre-treatment understanding of their interpersonal problems. In theory, an IPAF typology could be a more robust measure to use as a predictor of outcome as it should encapsulate what both the patient *and* the therapist agree are the crux of the problem and the goal of treatment. Criticism has been levied at self-report measures such as the IIP due to their reliance solely on the patient's account of their interpersonal problems-there is a lack of research on how IIP scores relate to therapist's judgements of interpersonal function (Gurtman 1996). In general, substantial differences have been identified between reported and actual behaviour (Baumeister, Vohs et al. 2007). Responders may be affected by a conscious or unconscious desire to produce an acceptable answer, or there may be variability in the way the questions are interpreted by different responders. Self-report may be also affected by psychopathology in clinical populations (Alden, Wiggins et al. 1990), for example, some groups of patients may have difficulty with mentalization. By contrast, the IPAF includes the clinician's take on the problems, informed by the patient's internal narratives and transference. It is more likely than self-report measures to identify unconscious affective components. Additionally, it is formulated after 3-4 sessions of treatment, rather than on one day prior to treatment when general distress may make the crux of the problem difficult to pin-point. An IPAF has the advantage of being able to account for a patient's defences which IIP scores alone cannot. It should be a better reflection of what is actually worked on in therapy, rather than a description of symptoms. In summary, an IPAF typology should give a rounder indication of (a) the patient's problems and (b) the problems that are actually tackled in therapy than any baseline self-report measure.

The first step in categorising the IPAFs was to determine how identifiable they are. There are two issues here which may cause complication. Firstly, the saliency of the IPAF may vary between patients, depending on the therapist's determination of what the patient is able to engage with. Patients are often deeply affected by the therapist offering an account of how they have understood their experience (Lemma, Target et al. 2011 p108); conversely there is potential for it to be exposing or humiliating. Comprehensiveness of the IPAF is thus also driven by what the patient is capable of taking in at the time (Lemma, Target et al. 2011 p109). Secondly, it may be difficult for the clinician to distinguish between potential IPAFs if a patient exhibits very unstable interactions or extreme IIP spin (see

chapter one). Interpersonal spin is the extent to which an individual's interpersonal behaviour is distributed around the circumplex; high spin indicates a marked variation in behaviours across situations (Moskowitz and Zuroff 2004). While a certain level of spin is considered adaptive, patterns of high spin are consistent with Borderline Personality Disorder (Moskowitz, Russell et al. 2009) and are likely to cause difficulty in selecting one IPAF. In this case, the DIT manual states that the most salient IPAF should be selected: generalizable across domains, a meaningful connection between IPAF and presenting symptoms, goodness of fit with internal narratives (Lemma, Target et al. 2011, p121). Prior to an analysis of IPAFs, criteria were set for identifying the IPAF based on the manual. In cases where it was not possible to identify the IPAF, the case was excluded from the qualitative analysis.

After identification, a qualitative analysis using an adapted template approach was conducted on the IPAF session to identify the key themes of the patient's typical problematic interpersonal interactions. Descriptions of these themes based on the items contained within them were then used to create the typology: a set of statements for classifying an individual's IPAF according to its characteristics.

3.3 METHOD

3.3.1 Participants

The study participants were drawn from a total of five East London clinics over two sites included in two pilot trials of DIT in IAPT (figure IX), The trials were granted ethical approval by NHS Research Ethics Committees and were registered with the ISRCTRN Registry (ISTCRN38209986; ISTCRN06629587). The REDIT trial randomised 107 participants to receive either 16 weeks of DIT (n=53) or 16 weeks waitlist/control (n=54) and the REDIT-CT trial randomised 40 participants to receive either 16 weeks of DIT (n=20) or 16 weeks of CBT (n=20). Of the 73 DIT participants, 12 discontinued the treatment before they had completed four sessions. Of the remaining 61, indicators of an IPAF were identified for 48 participants. Table VIII describes their demographics. 60.4% of participants were recruited from the REDIT trial and 39.6% from the REDIT-CT trial. The typical participant tended to be female, in their 30s, taking psychotropic medication, white, single, employed and earning £10-30,000. All agreed to the recording of therapy sessions.

Figure IX: Flow Chart of Participants

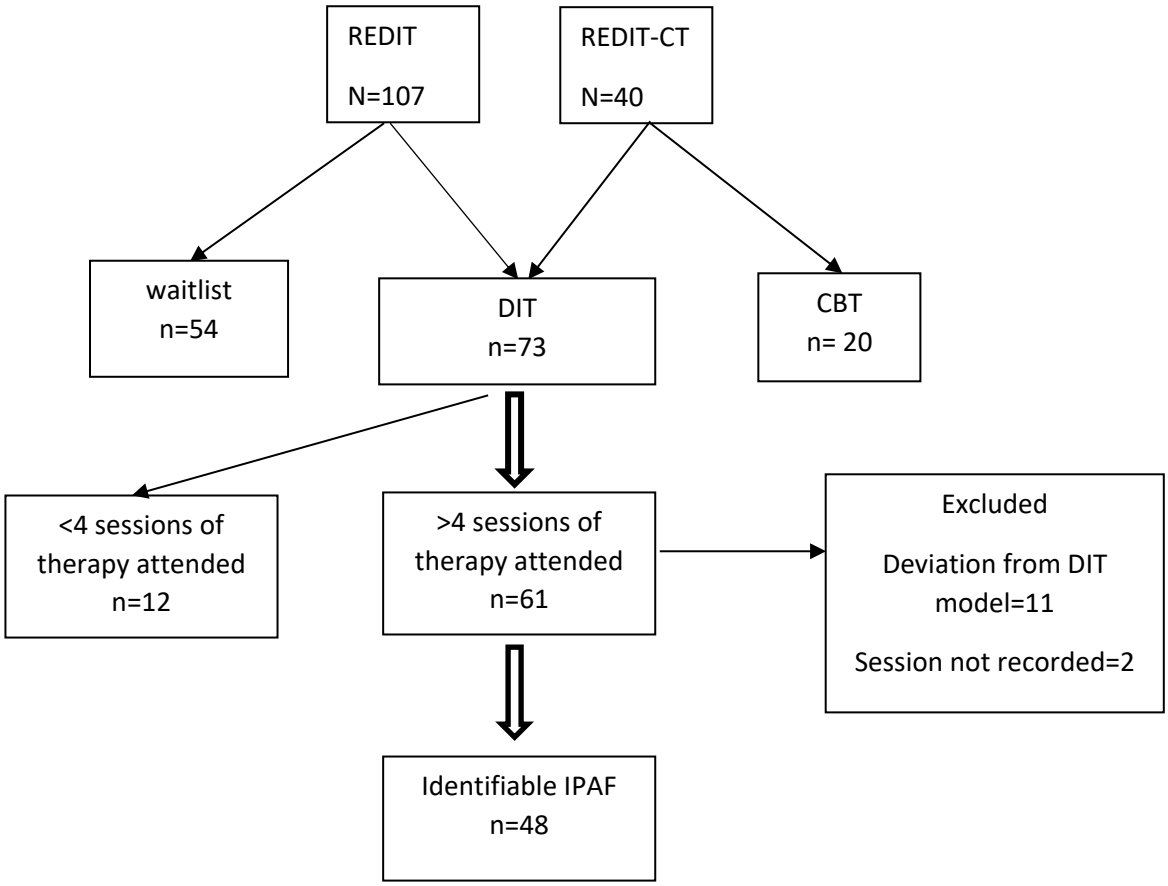


Table VIII: Participant demographics for those with identifiable IPAFs vs. those without (excluded for deviation from DIT model)

		Identifiable IPAF N=48	IPAF not identified (deviated) N=11
Demographic			
Trial N(%)	REDIT	29 (60.4)	11 (100)
	REDIT-CT	19 (39.6)	0
Gender N(%)	Male	15 (31.3)	5 (45.5)
	Female	33 (68.7)	6 (54.5)
Age (SD)	Mean (SD)	39.2 (13.1)	40.9 (13.3)
	Range	19-70	25-69
Current medication **N(%)**	Yes	24 (50.0)	8 (72.7)
	No	20 (41.7)	2 (18.1)
	Unknown	4 (8.3)	1 (9.2)
Ethnicity	White	39 (81.3)	7 (63.6)
N(%)	Black	3 (6.3)	1 (9.1)
	Asian	2 (4.2)	2 (18.2)
	Mixed	2 (4.2)	0
	Other	1 (2.1)	1 (9.1)
Marital Status	Single	24 (50.0)	3 (27.3)
N(%)	Married/living together	13 (27.1)	4 (36.3)
	Divorced/separated	7 (14.6)	3 (27.3)
	Other	3 (6.3)	0
	unknown	1 (2.1)	1 (9.1)
Employment	Full time	25 (52.1)	3 (27.3)
N(%)	Part time	6 (12.5)	2 (18.2)
	Unemployed	10 (20.8)	2 (18.2)
	Student	1 (2.1)	2 (18.2)
	Retired	1 (2.1)	0

	Other	3 (6.3)	0
	unknown	2 (4.2)	2 (18.2)
Income	<£10,000	8 (16.7)	1 (9.1)
N (%)	£10,000-30,000	18 (37.5)	4 (36.3)
	£30,000-50,000	7 (14.6)	1 (9.1)
	>£50,000	10 (20.8)	1 (9.1)
	Unknown	6 (12.5)	4 (36.3)

3.3.2 IPAF Identification

According to the DIT manual, the therapist should typically propose the IPAF to the patient at session four, using an introduction such as this: “Having listened to what you have told me over the last few sessions about how you are feeling and what you are most concerned about in your life right now, I have some ideas about what has being going on for you and how this might help us to make sense of the symptoms that have brought you here. I would like to share these with you to see what you think so that we can see whether this might be of help in finding a focus for our work” (Lemma, Target et al. 2011 p122). Under the DIT model, therapists are discouraged from using the word ‘IPAF’, and rather to say “a recurrent pattern”.

The process of identifying the IPAFs began in the recordings of session four. If the clinician had not begun a discussion with the patient which was similar to the above, the previous and following session recordings were checked. If an attempt to present the IPAF was not apparent between sessions three and seven, the participant was excluded from the analysis on the grounds of deviation from the DIT model. As previously noted, there would be some patients for whom the IPAF was difficult to identify. The clinician is permitted within the model to titrate the comprehensiveness of the IPAF according to what they consider the patient is capable of taking in and it is not uncommon for the defensive function to be addressed in later sessions. For these reasons, a case was included where there was at least some tangible attempt to bring the patient to a focus of treatment. The relevant session of the audio recording was transcribed verbatim by researchers working on the REDIT and REDIT-CT studies and the names of people and places removed to preserve anonymity.

3.3.3 Analysis

A hybrid method of qualitative analysis was selected for this study, based on the approaches described by Miles and Huberman (1994) and template approach (Crabtree

and Miller 1992). Both these methods involve the use of a codebook based on a pre-existing framework from existing theory or prior research, which is then refined as the analysis proceeds. Miles, Huberman and Saldana (2013) refer to this process as deductive coding; a provisional list of codes (can also be understood as sub-themes) is developed prior to the analysis from a conceptual framework. Once coding has begun, the codes are revised based on their utility and goodness of fit in order to produce a framework that fits and accounts well for what is said in the transcripts. In this study, data-driven, inductive coding was also applied in which new codes (or sub-themes) are allowed to emerge progressively (Boyatzis 1998). A code is considered 'good' if it "captures the qualitative richness of the phenomenon" (Boyatzis, 1998, p. 1). Inductive coding ensures that the a-priori coding frame is not force-fitted onto the data and empirical validity is maximised.

Depending on the qualitative method, some researchers refer to codes and some to themes. In this thesis, the terminology chosen by the researchers cited will be used. When describing the qualitative analysis undertaken in this study, the process will be henceforth described as 'coding' and once a code is identified in the transcripts it will be referred to as a 'sub-theme'.

The stages of coding were adapted from a study adopting a similar hybrid approach (Fereday and Muir-Cochrane 2006) and are described in Figure X. Firstly, an a priori codebook consisting of the items from the IIP-127 (Horowitz, Rosenberg et al. 1988) was developed (see appendix A). Each item provided its own label and description. Minor edits were made to the items for brevity and to ensure consistency of pronouns, for example, where it made sense semantically 'another person' was replaced with 'others'. 'Me' or 'I' was changed to 'they' to reflect the change from a self-report measure to a clinician's measure.

The second stage, 'summarizing the data', involved becoming familiar with the IPAF sessions by firstly listening to the audio recording and then carefully reading and re-reading the IPAF transcript and making notes to summarise the IPAF presented to the patient and the patient's reaction and response. This summary included a brief overview of the presenting problem and notes on the way in which each element of the IPAF was described: self, other, affect and defence. The purpose of this stage is to allow initial processing of the data by researcher by becoming immersed in the transcripts.

Next, the codebook was applied to meaningful units of text as sub-themes using the qualitative data management program Atlas.ti v7.5.15 for each of the transcripts. Text was coded by matching the codes with passages of the transcripts selected as representative

of the code. Inductive coding was also employed where a pre-existing code did not capture the participant's description of an element their interpersonal style.

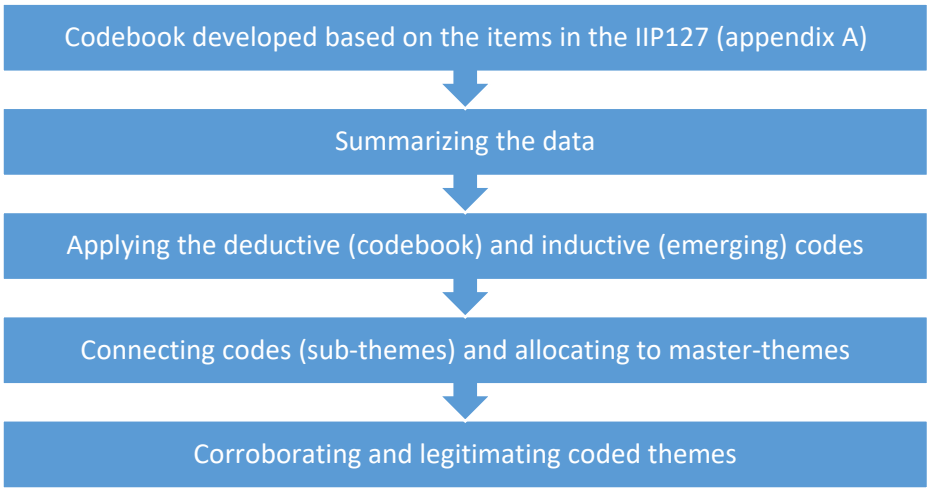
The process of connecting the codes then began: a process of discovering themes and patterns in the data (Crabtree and Miller 1992), informed by the theoretical framework of the IIP. Each identified sub-theme was clustered across the sample into master-themes. This was done using the network manager in Atlas, which allows the user to produce a network of sub-themes attached to a single master-theme. The decision as to which master-theme a sub-theme was allocated to was guided by the vector angle of the IIP item cluster identified by Gurtman's (1995) hierarchical cluster analysis of the IIP-127. This paper reports a vector angle for 20 IIP item clusters, for example his cluster 6: social avoidance was located at an angle of 201°, within the hostile-submissive quadrant of the circumplex. Gurtman (1996) further grouped the item clusters to produce a table of interpersonal problems characteristic of each quadrant. The friendly-dominant quadrant (0-90°) includes problems being overly responsible, overly involved with others, finding it hard to be alone, overly revealing, self-disclosing, wanting to be noticed too much, admired or approved of by others and trying to change others too much. The hostile-dominant quadrant (90-180°) describes problems being too aggressive, controlling, manipulating or exploitative of others, being too critical, arguing or fighting, having difficulty with authority, being too suspicious of others, finding it hard to feel empathy or support or care for others and finding it hard to make commitments to others. The hostile-submissive quadrant (180-270°) includes finding it hard to feel close or to show affection or express admiration of others, difficulty feeling comfortable around others or telling others personal things, finding it hard to make friends, socialize, or join in on groups and introduce self to others, hard to feel self-confident, express one's own needs and be assertive. The friendly-submissive quadrant (270-360°) comprises finding it hard to be aggressive, to express anger or feel superior to others, hard to be firm, set limits or say "no", hard to compete with or disagree with others, being too easily persuaded or influenced by others, being taken advantage of, being too gullible, putting the needs of others needs ahead of one's own, being too affected by others' moods and trying to please others too much. The process of allocating sub-themes to master-themes (equivalent to Gurtman's quadrants) involved the careful comparison of each to Gurtman's clusters. Each of the deductive and inductive sub-themes were considered in terms of their similarities and differences to the descriptors of each quadrant and the vector angle of the relevant cluster if available.

The final stage involved checking and refining sub-themes within their clusters, determining if they were a true representation of the data and really described a distinct stand-alone sub-theme. Corroboration describes the process of confirming findings (Crabtree and Miller 1992) and is a vital part of the analysis to ensure that the themes and

sub-themes are really consistent with the data. Crabtree and Miller (1999) warn against the risk of "fabricating evidence" in the process of interpreting data: the unintentional, unconscious "seeing" of data that isn't there. This risk was minimised by close scrutiny of the previous stages to ensure that the master-themes were representative of the initially assigned sub-themes. Any sub-themes which did not seem to fit easily within a master-theme were discussed with a supervisor and care was taken not to 'force' any sub-themes into master-themes where there did not appear to be a good fit. This was a particularly important part of the process of this qualitative analysis because it was informed by a pre-existing measure. The possibility that sub-themes would be identified which were not semantically aligned with any particular quadrant was always held in mind and considered to be vital part of the analysis.

In a qualitative analysis of this type, the frequency of occurrence of the sub-themes is not considered to be as important as is ensuring that the data is adequately described by the coding system. For this reason, frequency was not reported. Conducting this study as part of a thesis imposed some limitations which affected validity. These are discussed further in the limitations section and are the subject of chapter four.

Figure X: Stages of data coding (adapted from Crabtree and Miller (1992) and Boyatzis (1998)



3.4 RESULTS

3.4.1 IPAF Identification

In the majority of cases, the IPAF session was easily identified (n=48, 78.7%). In two cases, the IPAF session had not been recorded. Table IX shows the linguistic markers of IPAFs identified in the transcripts to indicate when the therapist was presenting the IPAF

and table X indicates the session in which the IPAFs were identified. In accordance with the DIT model, most therapists presented the IPAF in session four (n=40, 83.3%). It was not possible to identify an IPAF session between sessions three and seven for 11 patients (18.0%). In these cases, there were no linguistic markers or the IPAF was so lacking in detail or there was incoherence from the therapist around the IPAF (e.g. lots of stammering around IPAF or multiple IPAFs being presented to the patient). Table VIII identifies the differences in demographics between those with identifiable IPAF and those without (n=11). Those who attended more than four sessions of DIT but for whom an IPAF was not identified were more likely to be from the REDIT study, to be male, on medication and to be of Black/Asian/other ethnicity. They were also more likely to have 'unknown' demographic information.

Table IX: Linguistic Markers of IPAFs

Linguistic markers of IPAF: words/phrases signposting an IPAF
Grouping/pulling things together
Self in relation to others
Establish/pinpoint a pattern of relating/repeated or recurrent pattern/key pattern/stuck in a pattern
Focus for our work
Capture the issue
Most usual or dominant way of relating
Hone things down
Think together
Goals/what you want to work on/change
Repeated themes
Repeated issues
Make sense of
In session 4/today
Find something that's core
Listening to what you've been telling me about your relationships
Common/mutual understanding
How you experience yourself/other
Something keeps happening in close relationships

Table X: Therapy Session in which IPAF was Identified

Session	N	%
3	4	8.3
4	40	83.3
5	4	8.3

3.4.2 Sub-Themes

The codebook was applied to the IPAF transcriptions. Table XI shows the codebook sub-themes which were positively identified within the transcripts (deductive sub-themes) and the additional sub-themes identified during the analysis (inductive sub-themes). Of the total number of sub-themes identified, 51 (76.1%) were deductive, i.e. drawn from the IIP and 16 (23.9%) were inductive, i.e. derived directly from the transcripts. Of the deductive sub-themes, 33 (64.7%) came from the IIP-C and 18 (35.3%) from the IIP-127 items not included in the IIP-C.

Table XI: Sub-Themes Identified in the IPAF Transcripts

SUB-THEMES	
Deductive (n=51)	**Inductive (n=16)**
feel embarrassed in front of others too much	feel others are better than they are
find it hard to feel or act competent as a parent	feel unwanted or excluded by others
find it hard to ask others to get together socially	find others intrusive
find it hard to be assertive	find it hard to define self
find it hard to be self-confident when with others	find it hard to feel like they belong
find it hard to confront others with problems	find it hard to say sorry
find it hard to express feelings to others directly	too often upset or angered by other's lack of consideration for them
find it hard to feel angry at others	too easily become over-invested in romantic relationships
find it hard to feel close to others	feel they are 'too much' for others
find it hard to feel comfortable around others	feel others are less committed to relationships than they are
find it hard to get along with others	feel the judgement of others strongly
find it hard to have others depend on them	feel neglected by others
find it hard to introduce self to new people	find it hard to feel good enough
find it hard to join in groups	feel others are unavailable
find it hard to let others know what they want	feel dismissed or ignored by others
find it hard to let others know when they're angry	find it hard to rely on others
find it hard to make a long-term commitment to others	
find it hard to make friends	
find it hard to make reasonable demands of others	
find it hard to open up and tell feelings to others	
find it hard to put needs of others before own	
find it hard to relax and enjoy going out with others	
find it hard to say no to others	
find it hard to socialise	

find it hard to spend time alone find it hard to take charge of own affairs without help from others find it hard to trust others act like a child too much too aggressive towards others too easily bothered by the demands of others too envious or jealous of others too critical of others feel too guilty for what they have failed to do get irritated or annoyed too easily find it hard to show affection to others too easily lose a sense of self when around strong-minded people worry too much about other's reactions to them let others take advantage of them too much open up to others too much feel too responsible for solving other people's problems put the needs of others before own too much too afraid of others too dependent on others too easily persuaded by others too independent too sensitive to criticism or rejection too suspicious of others try to control others too much try to please others too much want to be noticed too much find it hard to believe that others will find them lovable	

3.4.3 Master-Themes: Overview

Once the transcripts were coded with the sub-themes, the sub-themes were reviewed and allocated to a master-theme represented by each of the IIP quadrants. The following

section describes the results of the qualitative analysis conducted in Atlas.ti. Tables XII to XVI describe the sub-themes found to exist in the data and the master-themes they are part of. Where a deductive sub-theme is included in the IIP-C, the sub-scale is indicated. If the sub-theme is drawn from the IIP-127 items which are not included in the IIP-C, IIP-127 is indicated.

Where sub-themes were deductive and drawn from IIP-C subscales located in the middle of the quadrants, such as vindictive/self-centred, socially inhibited, overly accommodating and needy/intrusive, the process of allocating to a master-theme was relatively simple: these sub-themes were typically clear expressions of problems located the relevant quadrant and had cluster vector angles to indicate this (Gurtman, 1995).

Where the sub-theme was on the border of a quadrant, as in the case of those drawn from the domineering/controlling, cold/distant, non-assertive or self-sacrificing IIP-C subscales, the process was more complex. Careful consideration was made as to which master-theme to select, based on the relevant cluster vector angle and Gurtman's quadrant descriptors. For example, the item 'find it hard to confront people with problems' is drawn from the 'non-assertive' sub-scale of the IIP-C, which borders the HS and FS quadrants. Gurtman's (1995) analysis locates 'lack of assertiveness' at an angle of 272°, just within the FS quadrant. Gurtman (1995) locates the item 'find it hard to show affection to others' from the IIP-C cold/distant subscale at 194°, just within the HS quadrant.

Sub-themes drawn from items included in the IIP-127 but not the IIP-C were each compared to Gurtman's descriptors and the most semantically appropriate quadrant was selected. For example, the items 'find it hard to feel comfortable around others' and 'find it hard to make friends' were considered similar to Gurtman's (1996) HS quadrant descriptor which includes 'hard to feel comfortable around others, tell others personal things' and 'hard to make friends, socialize'.

Inductive sub-themes were allocated to master-themes after the deductive sub-themes, through a process of systematic examination of their similarities and differences to the sub-themes grouped under each master-theme. For example, the item 'find it hard to say sorry' was considered most comparable to the intolerance of vulnerability or lack of remorse described by the HD sub-themes, and in opposition to the FS sub-themes describing a pattern of trying to please too much and being easily taken advantage of.

Two sub-themes were identified which did not fit into any one discreet master-theme, rather described a problematic way of relating which could apply to several master-themes. These sub-themes were termed 'universal'. Sample quotes are given to illustrate each

item, referenced with p (patient) followed by the patient number allocated to them in this study.

Discussion with a clinical supervisor was an important part of handling the inductive and universal sub-themes. The decision as to whether these sub-themes should be assigned to a master-theme or considered applicable to more than one was taken following a careful examination of the quotes.

3.4.4 Master-Themes: Hostile-Dominant

Fifteen sub-themes were identified as hostile-dominant. Of these, 11 (73.3%) were drawn from the IIP-127 and 4 (26.7%) were inductive. The sub-themes described a pattern of aggression towards or excessive irritation with others, a need for control and independence, difficulty in putting the needs of others before their own or making commitments to others and feeling suspicious or jealous of others. The quotes describe examples such as feelings of unreasonable rage towards others which could result in verbal assaults, a desire to hit people and angry text messages. A lack of tolerance for others in shared physical spaces was described, such as flatmates playing music. This sometimes extended to extreme irritation at seemingly innocuous inquiries from others such as “how are you?” and a strong feeling of being intruded upon unless alone. Being unavailable in romantic relationships and a lack of remorse over frequent infidelity were reported. A fear of losing control over others and feeling selfish or like a “control-freak” were described. Patients described intolerance for the feeling of vulnerability to the extent that friendships were ended because they felt unable to apologise. There was sometimes acknowledgement of being overly judgemental or critical of others, for example their own children. Jealousy over the physical appearance of other came up, for example, feeling like ‘Cinderella’ in a friendship whereby the other is more beautiful and worthy of attention and the self is ugly. Some reported frequently feeling that others were not considerate enough of them and their feelings, for example one patient experienced uncontrollable pain and anger at their partner looking at social media during a meal or leaving them to go outside to smoke a cigarette. A strong feeling that they must cope alone because others could not be depended upon was reported by some patients. For some, this was tiring and they expressed a desire to have more supportive relationships. However, for others, the “everydayness” of relationships was boring and unnecessary: “I just don’t like being around people that much. Like…I couldn’t see the same people every day…I wouldn’t enjoy it. You get boring. No, it’s not my thing. Like…I don’t…I don’t like people being there all the time”.

Table XII: Hostile-Dominant Sub-Themes

Hostile-Dominant Sub-themes **[code book source]**	Sample quotes
too aggressive towards others **[IIP-C: domineering/controlling]**	P32: "If someone has said something to me that has made me angry, I'm not one to sit back and not let them know…and that's when it becomes a problem, because I get too blunt, I'm quite sharp-tongued, I can be quite mean, and then obviously it escalates into something it doesn't need to escalate into so…I was just angry. I sat there and looked around and I was just like, I just want to hit someone" P47: "it just felt like pure rage I was so horrible to him, I started sending him so many messages like I don't wanna see you again, I hate you and…I just I don't know what's wrong with me"
too independent **[IIP-C: domineering/controlling]**	P26: "I would like to get closer to people but on the other hand I feel like...I can't or don't want to depend on someone too much" P31: "all the guys that I've been with except for one, have cheated on me…and that's probably due to me, wouldn't necessarily say being difficult to get on with, but…not making myself available because I like to do my own thing. I don't know maybe they just thought I wasn't interested"
Try to control others too much **[IIP-C: domineering/controlling]**	P13: "I think maybe that's something to do with me being a control freak or something but I'm just, it really scares me when I cannot control anything and just something is taking over into a direction that I really don't like. And that I'm yeah, I'm just really like hurting myself, hurting other people" P36: Therapist: "when you try and control everything [Patient: "I feel like god"] it is a bit like omnipotent isn't it? [Patient: "yeah"] That you're the god [Patient: "yeah"] that can make it happen or stop it happening" Patient: "Yeah. It makes me feel a bit secure by controlling them".
find it hard to make a long-term commitment to others **[IIP-C: cold/distant]**	P31: "I'm not looking for anything serious like…I'm not gonna be friends with someone and then get into a relationship with them and then change the way that I speak to them or text them or have to be around them all the time like…I don't care if he's busy or he wants to see his friends instead of me or…he wants to do something and I'm not particularly interested. I'm not a clingy person" P47: "the cheating thing…I felt like so not-guilty about it and like, so happy about it for ages and now I just feel like…I don't know how I feel about it. And I cheated on [partner] a lot"

find it hard to put the needs of others before own **[IIP-C: vindictive/self-centred]**	P33: "it's actually my way or no way and I can quite selfish" P47: "I don't do anything nice for people, I just expect a lot of them, from them. Just can't even look after myself"
too suspicious of others **[IIP-C: vindictive/self-centred]**	P31: therapist: "were you able to open up to her a bit or where you just feeling suspicious and wary?" Patient: "yeah I was just suspicious. I just kind of said I'm fine I'm ok" P34: therapist: "The difficulty is that you have, you carry around this protective suspicion of other people, that if other people show an interest in you, your automatic response is to think that they want to take something away from you, that they want to take something out of you"
get irritated or annoyed too easily **[IIP-127]**	P13: "I just like, felt really annoyed and I didn't know why because it's not that he did anything particularly annoying I was just annoyed by things that I usually don't care about" P47: "I just can't deal with any stress like if anyone plays music if anyone like does anything and like, I just want to scream at them like turn it off! …and people asking questions even just like 'how are you?' and I'm like- I can't f***ing concentrate and I just want to scream at them. And like I just…I just feel like the only place where I can feel like ok is when I'm in bed and it's like dark and like…I just can't deal with anybody being near me…I just don't feel like I've got the normal capacity of like normal people. Like my capacity for any level of stress like even just people playing music is just like…absolutely minuscule"
find it hard to have others depend on them **[IIP-127]**	P31: therapist "what you're also saying is that there's an anxiety that if you open up a little bit that um…you'll get overwhelmed by the other person's…neediness or demands or questions" P33: "I try and be available for the other person, but the reality is a) I'm not that available because I'm quite busy with work and things and b) I actually don't really want to be that available on a kind of more subconscious level"
too critical of others **[IIP-127]**	P33: "if I voiced my judgements every time I judged somebody, which at the moment is a lot, then that would be unacceptable I think" P36: "she'd be crying she only got a B or A and then I have to fight to hide my disappointment, and want to say 'Why? Why didn't you get an A?' And 'you gotta do this and you gotta do that' and I have been slowly getting in to 'What am I doing?' I'm gonna put so much expectations on her you know, and I'm just questioning everything what I'm doing. I thought, you know, I'm critical, very critical".

too easily bothered by the demands of others **[IIP-127]**	P29: “sometimes it’s nice if somebody calls and I feel like it but yeah, I think more often than not I kind of don’t like it when people ask me to do things” P35: “She was trying to ask me what like train tickets in England, when they say ‘off peak’ what it means. And that was it. So I was once again upset because you know, I felt like this was something she could have Googled, rather than ask me”
too envious or jealous of others **[IIP-127]**	P47: “I felt really like jealous of her she’s like really beautiful blonde and I just felt like the ugly sidekick…I get very like jealous and upset. I know it’s not helpful” P38: “Patient: Jealousy (laughs). Therapist: Jealousy ok… that’s really helpful that you’ve named that because I think that- that idea of the Cinderella, you know of feeling other people are getting it, getting the attention and you’re not”
find others intrusive **[inductive]**	P13: “I had that like, since I can remember, like sometimes everything’s just too much for me and I just really want to go somewhere, close the door, just be alone, not talk to anyone, not be seen, not being observed, just really relaxed, feeling like no one’s there, I’m not under surveillance of anyone” P29: I would like to, I guess not feel so irritated with people encroaching on my space”
find it hard to say sorry **[inductive]**	P47: “I was really proud, and I wouldn’t, I didn’t see a reason to try and say sorry to her…I don’t think I know how to like, be vulnerable and like, just say I’m sorry and like, I really miss our friendship. I didn’t know how to do it. I just went, straightaway knew our friendship was over after we had that argument”
too often upset or angered by other's lack of consideration for them **[inductive]**	P13: “he insisted on going outside and smoke cigarette and I felt like “you know, is it so boring with me? Can we not like just talk and watch a film or do whatever? You need, to you feel like you need to go out and smoke a cigarette now?” and it really hurt me as well and I just felt like a wave of pain like I couldn’t control” P47: Therapist: “this theme of your…feeling that others aren’t really giving quite what you need. Don’t care, aren’t giving enough [Patient: Yeah]. And…you might well feel that here too. Somehow the once a week isn’t enough or you know, can’t cover everything…then you kind of experience other people as uncaring…they don’t want to know they’re sort of…can’t be bothered…with your mum, your friends [Patient: Yeah], it’s, it’s quite a repeated experience I think. Patient: “Yeah. Yeah, I think so. Yeah. I get really like upset about like…like a feel that my friends don’t…my friends don’t…nobody cares and I, why can’t they just do like…why don’t… I don’t know. Yeah, I’m kind of expecting more of them…. I’m feeling like, let down by them”

find it hard to rely on others **[inductive]**	P3: “it’s more about dependence, dependable...it’s not that I expect people that are gonna kind of steal things or do this or do that…they’re just not dependable” P14: Therapist: “essentially what you don’t have in your mind is a sense that the other person is going to be 100% there, so 100% reliable so you’re not sure that if you go to them they are going to respond in a way to your vulnerability [P: hmm] that’s going to be helpful, it’s going to be soothing and it’s going to give you permission to feel like that. And I guess what that means is that you often do it for yourself, so you often cope for yourself, you often do what needs to be done for yourself because you don’t see the other as being fully reliable in that way”.

3.4.5 Master-Themes: Friendly-Dominant

Eleven sub-themes were identified as friendly-dominant. Of these, eight (72.8%) were derived from the IIP-127 and three (27.2%) were inductive. The sub-themes described a desire to be noticed, opening up too much to others or trying to please others too much, being overly responsible or excessively guilty for failures, overly investing in relationships compared to the other party, feeling ‘too much’, ‘too clingy’ or ‘too full-on’ for others, difficulty being alone and being overly sensitive to criticism, rejection or others reactions to them. The quotes included examples of trying too hard to win affection and attention and getting carried away in relationships to the point where they had invested their entire being while the other was less emotionally involved: always wanting more than the other was giving. One patient described how he now recognised that he had created a fantasy around his previous relationship in which his partner perfectly understood him, that they were identical and like twins. Being too intense in relating to others came up, for example by texting too much. Patients described worrying about being ‘too much’ for others or overwhelming them with their emotions and needs. Irrational feelings of rejection were described, for example finding it very difficult to tolerate reasonable requests from the other for space. The self was sometimes described as desperate and anxious about losing relationships. Some reported anxiety about spending time alone, to the point where weekends felt intolerable without plans to be with others or they were constantly watching the clock until their partner came home. This extended to a more general fear of being alone emotionally. One woman described crying uncontrollably when arriving home to find her flatmates out; not knowing where they were and feeling ignored was unbearably painful. She described feeling she always “had to fight to have company”. Feeling a strong sense of responsibility and need to fix everyone else’s problems was described: other people must always be made to feel happy. Fear of being honest about their more negative feelings in relationships came up, with some patients describing the need to always give an outward appearance of being in a good mood, happy and supportive towards their

partner in case they left them. Some patients recognised that they were overly sensitive to the judgement of others and too afraid of other's seeing their mistakes, which led them to change their behaviours for example, choosing their clothes to give an impression about themselves that they didn't really feel was their true self or not asking questions they felt made them appear ignorant. This extended to forcing themselves into relationship roles such as the "fun friend" or the "attentive friend" which they did not feel were real.

Table XIII: Friendly-Dominant Sub-Themes

Friendly-Dominant Sub-themes **[code book source]**	Sample quotes
Want to be noticed too much **[IIP-C: intrusive/needy]**	P45: Therapist: "I think you fear at times if you're not in some way being you know, kind of quite present and expressive, that the other person just forgets you [Patient: yeah, yeah]. And you know, kind of either leaves you with very difficult feelings…kind of not be being the burden, the anchor, not... you know being needy or clingy as you put it" P46: "I think the kindness is probably more to do with…winning affection. So, if I do those kind of things then those things will get me noticed"
Open up to others too much **[IIP-C: intrusive/needy]**	P4: "when I fell in love with someone, I use to get into terrible state and I'd find the emotions overwhelming. I'm sure, I know I was, ahh…. I was just emotionally too intense for most other men" P45: "there'd be a lot of people who think I do communicate that a lot, but I feel like, I'm just, it's, for me it feels very superficial a lot of the times... [Therapist: You're thinking about what? The way you text a lot and that sort of…"] Patient: "yeah…yeah... [Therapist: you think of it as being too much, you know, you're thinking you're a bit over the top in that way?"] Patient: "yeah"
Find it hard to spend time alone **[IIP-C: intrusive/needy]**	P50: "when I haven't got people around me I feel very demotivated and sort of apathetic and ha, you know 'how long is it till I go out and see someone?', 'how long is it till (partner) gets home?'" P53: "I hate so much to be alone, I'm just always really stressed when the weekend is coming. For example, yesterday my housemate asked me 'what are your plans for the weekend?' and I have no plans and I started to feel really anxious"

Feel too responsible for solving other people's problems **[IIP-C: intrusive/needy]**	P12: Therapist: "it feels as if you do cry a lot here when you are with me and I wonder how now in your relationships it feels as if you do take a lot of responsibility as if it's your fault, as if you're not good enough…and then that becomes a bit difficult to manage". Patient: "No, it's true". P32: "I know how it feels to feel low, and to have no one, I just have to make sure everyone doesn't feel like that. I have to make sure everyone feels good about themselves, I have to make sure everyone feels happy and I have to try and resolve everyone's problems, I don't know why".
Try to please others too much **[IIP-C: self-sacrificing]**	P11: "I'm not really sure where I've got this idea that that I need to work so hard at pleasing people". P53: "I felt that I didn't deserve my boyfriend because I was not like my friends, so in a sense I had to work harder to keep him. That's why I'm always shocked when my friends, the way they are treating their boyfriends, because they were annoying, didn't mind to be in a bad mood because… in a sense they know that it's like more equal relations? I mean, if their boyfriend is doing something wrong, they're not afraid to tell them or be pissed off over it, but I'm not like that. I've never been like that because I thought I was lucky to be with him and I didn't want to lose him, so I've always been really kind and always supporting him for his projects and everything"
Feel too guilty for what they have failed to do **[IIP-127]**	P8: "I feel guilty. I do feel guilty 'cause I have felt guilty when I've not been able to help people in the past, because I've not physically been able to help them, and I do feel guilty and then I'll think back over it, I don't let it go. I think back over 'oh I could have done this, or I could have done that' and I'll still go back to them and say, 'well look, I know I couldn't do this, but have you tried this?' 'Cause I've gotta…and it I do…it is guilt. I know it's guilt that I feel and it's just that I could have done something else". P37: "I could've dressed a bit better, you know. I mean 'what's the matter with me?' I say, you know, if I'm gonna meet a person like yourself and it's, even disrespectful to turn up in a tracksuit. You know, I mean, it's stupid of me, I feel so guilty about it, what a rotter".
Feel too sensitive to criticism or rejection **[IIP127]**	P3: "the mere hint that she when she says something like she feels she might…you know she does like a little bit of space it does make me feel massively insecure all of a sudden. You know, I shouldn't cos I mean it's no big deal… immediately I got this rejection- not good enough, you know, I'm a liability. And I know again you know, spilt the mind into two the one side of my mind knows that that's not what's she's saying at all, I know that, I know that's not what she's saying… It's actually, I'm turning it about me and the rational side of my brain says it's actually not about me at the moment, it's about her… But I'm turning it round to be about me. You know? And I know I'm doing that…I got these irrational feelings of rejection, you know?".

	P25: Therapist: “But I think then in terms of how you experience other people... it seems like you know one of the fears is... that other people will be very critical of you? [Patient: Yeah, yeah definitely]. And rejecting...” Patient: “yeah. Yeah, it’s easier for me as I am to reject people or to judge them or to, you know... just avoid them or not talk to them ‘cause it’s easier to do that than... I don’t know, they have the opportunity to…get to you know you and think that you’re not what they think or not what you should be…I don’t like being told that I got something wrong, I want to do everything right”.
Worry too much about other people’s reactions to them **[IIP-127]**	P11: “rather than ‘what do I want to do?’ Erm or ‘which would please me most?’ I think sometimes I get all of those things confused in that, instead of thinking ‘which would be the right decision for objective reasons?’ Like, really objective reasons, erm that I have it all tied up with ‘which would be the right decision that will make other people think the way I think I want them to think’ P33: “I’m probably too bothered about what people think of me…too bothered about putting on-not an act- but kind of like forcing this kind of fun relationship with other people or forcing this kind of attentive friend thing. When really, it’s probably not me, deep down”.
Feel others are often less committed to relationships than they are **[inductive]**	P4: “I realise how I’d mistaken the kind of man he was and also I had…I think I had… we… I had invested my entire being, my entire love with him and I think he had a barrier, he did have a barrier which was for his own self-protection” P46: Therapist: “I know you mentioned avoidant, but I was just wondering actually what – in what context or…you know how you think about this, this descriptor that the other is avoidant? Whether you feel that the other is avoidant to meet, or fulfil your needs or whether you think about think about this word in a different way when you described the other as avoidant before?” Patient: “The other avoids commitment”. Therapist: “Mmm ok so it’s about a commitment to you?” Patient: “Yeah”.
Easily become over-invested in romantic relationships **[inductive]**	P4: “the fantasy was their perfect understanding of me…searching for someone who would have this total identification…the fantasy was he was the twin, he was the identical he was the identical me…it stayed in the in the realm of this sort of highly romantic fantasy and that focused on the idea of twin, the idea of course, that was just nonsense. That is what, that is what sort of love will do to me, sort of displace me from reality… I just, I ridiculously over invested emotionally in this relationship. I couldn’t help it, it was, I just completely carried away”. P46: Therapist: “you were a little bit concerned about focussing too much on your relationship with (partner) or focussing too much on (partner) defining YOU as a person?”

Feel they are too much for others **[inductive]**	P45: “there’d be a lot of people who think I do communicate that a lot, but I feel like I’m just, it’s, for me it feels very superficial a lot of the times. Therapist: “You’re thinking about what the way you text a lot and that sort of… [Patient: “yeah”] like when you say... you think of it as being too much, you know, you’re thinking you’re a bit over the top in that way... [Patient: “yeah…I know that I need to not be so full-on with people...”] P35: Therapist: “I also have the impression that sometimes you know, you experience yourself as too much for other people? That, you know, you’re kind of too miserable or too angry or [Patient: yeah] you know when you hit your boyfriend for example, erm or you get called ‘Miss Hissy Fits’ when you’re little. Then I think at other times you feel you’re too much in terms of being too miserable or needy [P: mmm] kind of like when you were feeling really low and your boyfriend is taking you to the toilet”

3.4.6 Master-Themes: Friendly-Submissive

Seventeen sub-themes were identified as friendly-submissive. Fourteen (82.4%) derived from the IIP-127 and three (17.6%) were inductive. The themes described difficulty feeling or expressing anger, difficulty prioritising own needs or setting limits on others, excessive dependence on others, a weak sense of self and own desires, feeling inferior or child-like and feeling unlovable. Patients described being fearful of their own anger which led to them suppressing it, working hard to calm themselves down or forcing themselves to be apologetic rather than angry. Expressing anger didn’t feel like an option or even a right for some, one patient described it as only being allowed to “be cross in private”. Some reported engaging in activities they don’t want to do because of an inability to say no, such as agreeing to work assignments which they did not feel were worth doing and doing favours for people. One patient described how they often found themselves agreeing to go out in the evenings for drinks or parties or to the theatre when they were very aware that they did not want to go, but found it too difficult to say no. One therapist suggested to their patient that they often found themselves in the position of feeling like they were not in charge and the other person was “the manager”. Patients frequently described knowing that they were being taken advantage of, but not doing anything about it, for example collecting their abusive partner and their friends from drunken nights out or feeling they must accept being bullied by their boss. Therapists often drew attention to how the patient was failing to look after themselves by putting the needs of others before their own, for example by not feeding themselves properly, responding to their own exhaustion or allowing themselves any leisure time. Making reasonable demands of others was often described as difficult- patients described “constantly reining in” their own feelings, being “ridiculously polite” and finding it very hard to ask others to do something. One patient

connected her difficulty with asking things of others with her father's explosive reaction to her questions as a child.

Following peers in life decisions rather than making one's own choices came up, for example selecting a university based on where their friends were going or starting a business with their partner which was not one they would have chosen. One patient joked that if their friends had been drug addicts, they would have ended up addicted too: they would have "just followed along and not even noticed". This was sometimes accompanied by a loss of sense of self: it was difficult to know what they found interesting or preferred. A patient described being told by her mother that she had very bad taste as a child and taking it very seriously, causing her to question who she was, and her own originality. As an adult, she found it difficult to know if she liked something or not and was unsure if her preferences were really her own or had "all been put there" by people in her life. For some, the feeling went as far as being unable to define themselves completely: feeling empty or like they don't exist and out of touch with who they are. Some patients described feeling like a child, often deferring decisions to their parents or partner. One older patient described himself as "infantile" and recounted how he often turned employers into father-figures, whom he needed to motivate him at work. This also encompassed a feeling of being afraid of doing the wrong thing and "being told off" by their partner or boss.

Many patients described holding back and allowing others to take control, not being able to confront them with a problem if it arose because of their desire "to keep the peace". This resulted in them walking away from problems at work and tolerating infidelity in relationships. Some felt guilty about not sharing their true feelings, with one patient describing feeling "two-faced" over biting their tongue at work.

There were many examples of patients recognising that they were dependent or reliant on their friends and family to do things which they knew others did for themselves, such as domestic chores, shopping and paying bills. Sometimes this extended to decision-making more generally, with patients describing themselves as unable to look after themselves, reliant on their parents for help, not responsible enough, lacking their own motivation or "get up and go", unable "to stand on their own two feet", "inert" and "pathetic". There was worry about the lack of control in their lives and being a burden or too needy which might result in rejection and being alone. Some worried that they were incapable of looking after themselves and would be unable manage their own life outside the context of a relationship. Some patients found it difficult to feel competent as a parent, saying they

were unsure how to guide their children or to know how involved they should be in their lives. This was connected to their feelings of not having their own life "sorted".

It was very common for patients to report that they found it difficult to believe that others would find them lovable and often cited these feelings as what they would most like relief from in treatment. This included finding it hard to trust others would like them or find them acceptable, being "un-preferred", feeling "invisible", "dull", "undesirable", "ugly", "dirty", "damaged", "bad", "unlikable", "boring", "disgusting" and "not quite right". Finding it hard to feel good enough was very commonly reported and reached across all areas of life. Patients variously reported not feeling good enough to have friends, partners, jobs, go on to further study or make a home. Some described themselves as feeling "weak", "useless", "no good to nobody", "incompetent", a "failure", "riddled with self-doubt and insecurities", "not up to it", "flawed", "not special", "undeserving of anything better", "not worth bothering with" and "not up to scratch". Similarly, feeling others were better than the self was also reported, feeling "inferior", less clever, less cultured, and "at the bottom of the food chain". Although the way these feelings were defended against were connected to other master-themes, having these strong doubts about their own value was frequently connected with vulnerability to being dominated by others or continually adopting a submissive stance, for example: "let's say I met someone that wasn't really what I wanted, I kind of accepted it, because I was like, oh anyway, I can't have anything better. I deserve this maybe. I don't deserve anything better" and "I felt that I didn't deserve my boyfriend because I was not like my friends, so in a sense I had to work harder to keep him".

Table XIV: Friendly-Submissive Sub-Themes

Friendly-Submissive Sub-themes **[code book source]**	Sample quotes
Find it hard to feel angry at others **[IIP-C: overly accommodating]**	P38: "So I do still feel kind of bitter and resentful and angry, which kind of…I may kind of like really calm myself down, rather than let myself be very angry". P48: "I can't be angry with people because…I will just sort of start shaking and all the rest of it and so I can't. I can't be angry with people. I just have to tell myself to…be apologetic instead".
Find it hard to say no to others	P8: "Well I feel like I've let people down if I say no, that I'm not doing what I should be doing, 'cause I should be able to help these people. I mean when I was being brought up at home it was always, that was what I could see. My mum was

[IIP-C: overly accommodating]	always helping, she had all these kids running around and a neighbour would what a hand and she'd still do it" P13: "she was like 'oh I would really love to go to the to see this play' and although I thought like 'oh actually I'm not sure if I want to' because I would really prefer just to have a calm evening because yesterday was the barbeque and Saturday was the birthday party so it just felt like it's getting a bit too much for me, but I just was not able to say and now I'm really like, annoyed with myself". Therapist: **"**You're going to the theatre tonight"? Patient: "Yes. I don't even understand why I didn't say no because I was very aware that I actually don't want to".
Let others take advantage of them too much **[IIP-C: overly accommodating]**	P14: "I used to do everything for him. I used to drive him about, I use to go and pick him up if he'd been out and he was off his face. I used to go and pick all his mates up and he was awful to me constantly". P39: "see and it's like with my sisters sometimes I feel invisible and yet other times I feel that they put so much weight on my shoulders it's unbelievable, do you know what I mean? But they could walk in and I'm feeling miserable because they're making all these plans and everything else and not one of them concerns me, but…when it all comes on top or something 'oh (patient) can go, (patient) can do this'. Therapist: "And that was what I was trying to get at I suppose, was this feeling that you can both be taken advantage of, but also feel that that…perhaps other people are unoccupied or unavailable". Patient: "sometimes you give people an inch they take a yard…and…so yeah in that way it can sort of get to me".
Too easily persuaded by others **[IIP-C: overly accommodating]**	P33: "I'm so easily influenced I guess, by whomever I'm talking to, that I don't actually have opinions of my own, not really. I just kind of… listen or read other people's and kind of latch onto those but I really struggle… like I don't ever remember being very sure of myself really". P44: "if my friends hadn't done something I would never have done the same thing for... my friends in high school, everyone was going to [university] the university of XXX, everyone was going to XXX and I just did the same thing... without even thinking... really. I don't you know... I dreamed about going to other schools, but I couldn't afford them [laughs] but I just... I just followed along...which it was a good thing but you know... and I walked...in fact I'm lucky I had good friends...if I'd ended up with you know, a bunch of drug addicts I'd probably just end up a drug addicted you know ha-I would've just done whatever... [Therapist: what everyone else was doing] yeah I wouldn't even of noticed…"
Find it hard to let others know when they are angry	P11: "I think sometimes that's not very good for me because I end up not actually showing people that I'm cross or upset so that they know that I'm cross or upset, so that then maybe something could be done about it or we could make it that it

[IIP-C: overly accommodating]	doesn't happen again, but I kind of, sort of, erm err kind of internalise it all and sort of hold it all in and then I'm sort of cross in private, if you know what I mean?" P41: "if I'm…annoyed with something and not ok with something I feel overwhelmed because…they might think I'm in the wrong; feeling angry about something and standing up for myself so it's automatically erm I think often it's like…questioning whether I'm in the right to actually…voice my anger or concerns"
Put the needs of others before their own too much **[IIP-C: self-sacrificing]**	P8: Therapist: "'it seems like you're so dependable for everybody else, to get things done, and you get things done, but to do things for yourself, whether it's taking food regularly or making time for yourself to be dependable for you, it seems that things go a bit [Patient: yeah] awry, and I'm wondering whether the stomach symptoms are somehow communicating that, when it comes you being dependant to take care of you something isn't happening?" P12: "I've never had to address myself…I've always held other people as being more important than me, their emotions, their heartache".
Find it hard to confront others with problems **[IIP-C: non-assertive]**	P3: "That's another thing that I was, you know, I was talking, thinking about a lot is this walking away and not sort of, fighting it out has been a massive pattern in my adult life and it's shaped my adult life. Gets difficult? Pfft sod you, I'm off. Job, you know I've been self-employed for donkey's years, but things don't go well, instead of going 'right I'm gonna sort this out', I go "pfft, nope, do you know what? I think I'll leave'". P51: "then rather than me say 'well actually I had six months of you like contacting me every day at work and it was putting me under at pressure at work' I just went over and gave her a cuddle and said 'oh look you know let's forget it now' but maybe that wasn't the thing to do, maybe I should've said, well actually this is how I felt"
Act like a child too much **[IIP-127]**	P3: "She might have, you know, she'll say something, she might react in a funny way and I find it really cuts me you know but it shouldn't because it's almost like being a little child you know where you sort of tell you little kid off for doing something stupid and they get hurt and their bottom lip trembles and I feel like I'm still behaving like that with her…it's all because I'm acting like a, like a child, in this like a, you know, like a silly little kid, really. I do sometimes think that". P37: "I'm very infantile I also think. I had jobs…a very long time ago. These jobs didn't pay, but they were more satisfactory than the one that eventually paid some money…I can think of one job for instance where they put me together with somebody, you know…and he told me what to do and eventually I did it on my own and I was an ordinary

	employee…but you see this man that was teaching me was like a saw him, like a father figure sort of thing. I turn people into that you see…and that's why I responded…to him, to what he was teaching me. I suppose he was motivating me somehow…and that's happened before in jobs where I've turned my employer into a father figure you know, 'yes sir, no sir, three bags full sir'".
Too easily lose a sense of self when around strong-minded people **[IIP-127]**	P13: Therapist: "you've given me lots of examples of yeah feeling erm that there's no space for you and I wonder whether it feels a bit inside like there's kind of, no space actually for you and what keeps happening is just like with your sister that you get taken over by other people [Patient: yeah] and it's hard to know who you are and what you want to do". Patient: "Yeah, that's how it feels exactly". P34: "So my mum told me 'you've got really bad taste' and I think I took that really serious like, too serious. I remember questioning a lot of things about myself and like 'who am I?', 'I'm not as cultured as my parents' and stuff like that. So I remember being, I wouldn't call it repressed, but I was highly criticised, about the things I would read, the things I would watch on TV. My dad wasn't much there but my mum was very picky about what I could do".
Find it hard to make reasonable demands of others **[IIP-127]**	P4: "I always have to be the one who's diplomatic and the one who concedes to other people's foibles. I have this ridiculously over polite way of doing things." P30: "even with [ex-partner], when he was disappearing at the beginning of our relationship, I let him do it, because I thought, ok, maybe if I…yeah, I was so insecure that I said ok… maybe this is what I deserve again, and if I put up with it maybe he won't leave me… but maybe it wasn't. Maybe he would have appreciated me saying 'no'. Or you know, to deal with the problem straight away and not after two years, because I kind of fed that bad behaviour, I mean something that was hurting me".
Find it hard to take charge of own affairs without help from others **[IIP-127]**	P15: "In a way my parents always have been controlling me, and on, on the other hand my partner I always have been so dependent on my partners as well. So that's why sometimes I feel myself like, it has been really difficult for me to take decisions, because between my parents and my partner, I have, I always have people around me, to decide for, for me, yeah" P40: "I feel like...my mother couldn't really let go of me as a child so she- although she was pushing me very hard to succeed in one way she was also, couldn't let go... in another so it was this kind of like dichotomy and so then when I did you know, free reign to do what I wanted, 18... I didn't, I wasn't used to having all that freedom and responsibility and so it's taken a long time to... to grow up I think and in that sense…I think that is maybe partly the problem, it's about taking a sufficient amount of responsibility for my actions and

	for myself now like you know I'm 29 years old so I can't just stay in a sort of... limbo type space where I just don't take responsibility for my actions".
Find it hard to feel or act competent as a parent **[IIP-127]**	P1: "I feel like I'm incompetent like, or like I say, I feel like I'm not there for my family the way I should be, I feel like I'm letting them down a lot. I'm not there for them the way I should be, I'm not sorting… me as the bigger person or as the adult or as the mother I should just I should have had my life more sorted. My life should be more sorted for me to help them sort out their lives. And if I'm not sorting out my own life, it's how can I help them if I can't even help myself?" P38: "they're at an age now where they're kind of wanting to be- making their own sort of identity…yeah…it is quite hard…I definitely feel like I don't know how much I should ask them, or how much I should know about them. Or…or no, but at the same time wanting to know what's going on. But yeah, it is really hard to have sort of a conversation…and I sort of feel like with my oldest son, I feel quite awkward".
Too dependent on others **[IIP-127]**	P37: "I'm always scared to see my mate but then if he went away, this thing that I can't stand on my two feet you know, that I need, you know, that I need someone, I can't be really alone. God I'm a total mess for God's sake". P47: "I mean he does so much for me like today, I mean he got up and did most of the dishes and stuff like he helped cooked the dinner pretty much did it all. Like he does everything for me and he said on the weekend 'I don't want to be with you anymore, but I don't feel I can leave you because I don't feel that you'll be ok'. And I was just like 'well…you can leave me, but I won't be ok'. I didn't say that to him but like…I don't feel like I can live without him, like I always feel like through our whole relationship that I wouldn't be able to like, handle life without him".
Find it hard to believe that others will find them lovable **[IIP127]**	P19: "if someone says 'oh you look nice…' Sometimes I just put the makeup and some people 'wow you have makeup on today!' I don't use makeup, particularly summer, because it's too itchy my skin. But some people say 'you look nice' but I don't feel like I'm nice or beautiful or anything" P30: "all my uncle and my aunties, these people, they were always really, really lovely with me. Like, hugging me and saying that I was beautiful, but I couldn't believe that. I say 'yeah, you say that just because you are my family', you know?"
Find it hard to define self **[Inductive]**	P21: "I see myself in completely different ways, so I actually feel lots of anxiety and this anxiety makes me feel…erm in a different way depending on the context…and it's very unpredictable…I feel sort of different, differently with different people and completely different, that's the problem. I think if I had like a more stable sense of self that might help"

	P34: “I’ve always struggled to know where I am at, and also like, to define myself and stuff like that. Like talking about myself, I do struggle with that, it’s very strange. I can talk about the relationships, but in terms of myself…it’s just blank… when people ask me things, to define myself, yeah- the kind of stuff that you’ve mentioned, I do struggle with the idea of myself. If someone will ask me ‘how do you think people perceive you?’ I don’t know. I don’t know that”.
Find it hard to feel good enough **[Inductive]**	P32: “I just don’t feel like I can do that course, I don’t feel like I’m going to get any grades, I don't feel like I’m ever going to get into university, I feel like I’m too old, I’ve wasted so much of my life and that it’s pointless, I’m never going to get anywhere…I’m too scared to face someone I don’t know, because of the fear of not being good enough. I can’t face it. I can’t bear the thought of going and being… that’s what there they’re to do, to judge, to find someone right for the job, and I can’t face that…I really don’t feel good enough to do anything”.
Feel others are better than they are **[Inductive]**	P30: “I just think that I’m not enough to make someone happy, you know? That I’m not…. but this comes just when I’m with someone, because if I’m alone, I know that I am a good person and I look after other people and I care about other people more than what I should. And…. So I know that I’m a good person, I know that I’m not going to hurt anyone, but at the same time, I feel like other people are better than me, so why don’t they choose someone else, rather than choose me, because maybe I’m not good enough in terms of… I don’t have a brilliant career, I don’t have a house, I don’t have all the things that usually people look for like stability” P37: “Well it’s like you are on a big great pedestal or one of those gigantic Egyptian statues and I’m down at the bottom”

3.4.7 Master-Themes: Hostile-Submissive

Twenty-two sub-themes were identified as hostile-submissive. Of these, 18 (82.0%) derived from the IIP-127 and four (18.0%) were inductive. The sub-themes were characterised by difficulties socialising, difficulties opening up to or feeling close to others, trouble with being assertive or self-confident, a lack of a sense of belonging, feeling unwanted or excluded, difficulty trusting others and feeling judgement too strongly. Patients reported that they couldn’t be bothered to socialise or that they found it very tiring and “a constant effort”. One patient described his teenage years as “totally wasted” because his shyness and insecurity made it so difficult to be around others and he had often wondered how other people were able to “be good company”. He was ashamed to admit he would rather be alone. Another described needing a few days alone after a period of socialising with others. Another reason patients found socialising difficult was a feeling

that perhaps others did not particularly like them or want them there, one patient reported ruminating constantly for two weeks before a party about why he had been invited. Conversely, many were also afraid to invite others to parties or holidays because they were afraid that no-one would come and therefore seldom celebrated with others. Fear of rejection was strong.

Finding it hard to open up and tell feelings to others, even friends, was very commonly reported. Avoiding getting into conversations or finding themselves unable to answer a question such as 'how are you?' without crying were often mentioned, for example "your guards go up, everything goes up, your shutters basically go down and you shut off all your emotion and you say 'everything is good, yeah' and you don't bother to finish it off, you don't bother to go any further". Moving from an acquaintance stage to becoming friends with a person was described as hard and there was a recognition by some patients that they were "standoffish", one even describing himself as like a "zombie". Some described this problem as beginning in childhood, being unable to talk about personal feelings with their parents at home. For others, the difficulty was in expressing feelings directly. Unable to tell the other person what they were feeling, patients reported employing sarcasm, making jokes, feigning disinterest or trying to make the other person feel bad rather than tackle the issue: "there are times when I would rather be upset by something and then someone feel slightly guilty about it than me tell them upfront".

Many described often feeling embarrassed in front of others, by their appearance, their interests or their perceived ignorance. This was particularly marked in a group social setting and in the workplace. Sometimes patients described being scared of being around others or talking to others which made them avoid situations such as socialising with strangers, job interviews, attending medical appointments or in one case, leaving the house at all. Some participants found joining a group particularly difficult, often experiencing the feeling of being excluded or that they "don't belong".

Finding it difficult to feel close to others was very commonly reported. Patients described feeling alone or disconnected, even when with others or in a relationship, keeping people at a distance, feeling the need to protect oneself from others and being "an outsider". Some described themselves as "emotionally unavailable" and a dichotomous feeling of at once wanting relationships and also not wanting them because they were too overwhelming, too much effort or made them feel too vulnerable. Feeling dismissed or ignored by others was often cited; not feeling understood by others or that their opinions were valid, that they were overlooked or unacknowledged. The other was often described as "disinterested". One patient felt that others were "not really seeing me as a human being".

Difficulty trusting others was also frequently described. Suspicion or even paranoia of other peoples' motives and agendas was common and patients described questioning themselves on whether another person could genuinely be relied upon or whether the other being there for them was conditional on something else. Only the self could really be depended upon. This was also discussed in terms of what the patient believed the therapist's real agenda to be: was their story really of interest to the therapist? For a number of patients there was a concern that the therapist was only interested in them for research purposes, that their problems seemed "petty and juvenile" to the therapist, or that they would be "throw aside" at the end of treatment.

Some patients reported difficulty getting along with others, describing themselves as "awkward", "weird", not "a very good guest", "moody", "impossible to live with", "difficult", "a monster", "a geek", "an outsider" and "a misfit". One patient recounted how difficult she found it to go on holiday with others or live in share accommodation, describing herself as "moody" and "difficult" and "awful".

Problems with being assertive were common, for example not feeling able to take control at work or allowing others to take charge. One patient described how he avoided checking up on projects he managed because he was afraid of finding problems: "I feel that I don't take control over my life because I'm always walking away from things and it's even like I'm running away from my own life instead if actually saying 'I am going to take the reins, I'm gonna do this. I'm in control. I can…I can affect the outcome.' Erm it's almost like I'm, I'm letting everybody else affect the outcome of my life". Others felt controlled in their relationships- by their parents or partner. In some cases lack of assertiveness was associated with a fear of upsetting others or being blamed for things. Another patient described feeling like others "ride rough-shod" over him. Feeling "helpless" and "powerless" and "in the wrong" were described. Several stated that their desired outcome from therapy was to feel less bullied by others, to be able to speak up for themselves more and take control of situations. Similarly, being self-confident was often cited as being very difficult. One patient described how he gave up his career for which he had considerable talent after a particularly difficult audition because he felt unable to recover from the criticism. Another felt unable manage her feelings or make decisions because she had no confidence in her own ability to do so, she felt due to her controlling parents who had always made decisions for her. An underlying feeling of being inferior and always being in the wrong was often reported, which led to a fear of expressing opinions or taking on responsibility. One patient express a particular fear of making a fool of himself in front of professional people because he felt they had a quicker mind than him and his lack of training would be exposed. Assertiveness problems also included difficulty telling others what they want; as one therapist put it "the language of desire feels so difficult". This was

described as “others feeling deaf” to them, or others seeming not to notice what they might need and being unable to tell them. Many expressed a desire to better articulate what they want without fear of the others reaction which may be dismissive or humiliating.

A general feeling of discomfort around others was common- patients often found it easier to be alone and avoided being around others. Some patients recognised that they were distancing themselves from safe situations, such as close groups of friends. Others found going shopping, into town or standing in queues very difficult. Being able to relax and enjoy themselves with others was almost impossible for some, the feeling of not wanting to be there or to go home was always with them.

A sense of belonging was lacking for many. Patients described feeling “on the outside”, not fitting into a category, “not needed”, “just there out of habit”, “disconnected”, not having a place, “left out”, “isolated”, “being an odd one”, “without a cohort”, “out of the picture”, “stranded” and “on the edge”. One patient described it as a feeling of always looking in but not being able to get in. This was also commonly associated with feeling unwanted or excluded by others: feeling pushed out, rejected or not special enough to be needed. Many patients recognised that they felt others judgment very strongly, feeling the need to hide their perceived inferiority from the critical other. One described how she always felt others thought she was “failing at life”.

Table XV: Hostile-Submissive Sub-Themes

Hostile-Submissive Sub-themes **[code book source]**	Sample quotes
Find it hard to introduce self to new people **[IIP-C: socially inhibited]**	P30: “I spent the last year, or two years ago, almost by myself because I wasn’t really able to make friends or…. But it was even because, as we said, I didn’t look for it. I wasn’t going to parties, I wasn’t going to this and to that, so [sigh]. But the other part of me doesn’t believe that I can make things real” P35: “when I kind of first meet people where I’m just kind of like, block and avoid, that’s my technique”.
Find it hard to socialise **[IIP-C: socially inhibited]**	P37: “I can’t be bothered to see other people socially. Well the other day we went out with someone else, with a third party you know, a friend of his…I find it a strain you know…because you’ve got to give attention to the other person, you’ve got to make an effort to be interested in what the other one has to say…on the other hand what do you

	want to talk to people about? The meaning of life…the meaning of the Universe…I mean, I don't know I feel totally useless if I socialise. To myself first of all, speaking selfishly…and to other people, so I think I'd rather be on my own. And I'm ashamed to say so actually, you know, I feel gutted to say this in front of somebody". P48: "I'd never describe myself as outgoing. But I am often busy and I am often with people. But erm, I do find it really tiring. I do find it hard work. And yeah, after kind of a week of it, or if I'm out for four days in a week I would need a couple of days just to like not be around people".
Find it hard to open up and tell feelings to others **[IIP-C: socially inhibited]**	P1: "I then I can't talk to people, I can't talk to people. They try talk to me, I can't talk to people (starts to cry). It's like when people try talk to me right, and then they were just like 'you alright?' and things like that and everything things like normal conversation…or they might say something and that might hit a nerve, they might hit a nerve right, but like, they obviously don't know and things like that and everything. I mean I will just break down crying. But even though I break down crying I still don't talk to them. I won't talk to them, I won't talk to them and they just feel that they can't help me 'cause they don't know and so forth and everything. I just break down and cry". P35: "I do kind of definitely … avoid sharing. I often find I'm, like caught up in any kind of emotion and I'll think you know, whatever, I'll start, like you know, writing a text somebody to saying, 'oh I'm so sad' and then I think, just that I shouldn't. Like, that I'm infringing on other people or, invading them".
Find it hard to ask others to get together socially **[IIP-C: socially inhibited]**	P53: "I never have a birthday party, because I'm always afraid people won't come". P53: Therapist: "or you perhaps, kind of, might rather withdraw. Not try and arrange the holiday because you are anxious nobody will want to go, so you sort of stand back a bit [Patient: yeah, always], as a way of protecting yourself from what you feel is going to be a rejection".
Feel embarrassed in front of others too much **[IIP-C: socially inhibited]**	P34: "I sometimes don't know how to express myself properly and I feel a struggle there, like an embarrassment? And I prefer not to talk. But that happens even in [home country]. They actually go deeper on certain subjects that I'm not able to reach and prefer just to not talk. I'm actually scared of looking ignorant or asking certain things. It happens at work as well". P39: "I'm worried about what people will say, I think that is a lot of it, this is why I won't do a lot of things because I dunno because as I say I get embarrassed easy and I don't like group things".

Find it hard to express feelings to others directly **[IIP-C: socially inhibited]**	P16: "my father had promised to take me to see a film at the cinema and he changed his mind and then I got so upset by that, but I really couldn't express it and he went off, you know, didn't care how I felt just went off, after that I started I started doing strange things, I started stealing from [shop] and stuff like that". P32: "I think I get to a point, like, when I'm in a situation I don't want to be in like, out, and I don't want to be out, it makes me angry. I just want to go home. I just get fed up. I just try and um… keep up with everyone else and try and act like I'm ok all the time, and it's just like, really exhausting to pretend what I want to do all the time when it's not. I just try and make everyone else feel like 'oh ok, she's alright, she's fine, she's happy'. I just try and do that all the time…I just try and make myself feel less important, focus on other people. I don't like people knowing somethings wrong with me, so I just continuously make out that I'm ok, I'm fine, I'm happy".
Too afraid of others **[IIPC: socially inhibited]**	P32: "I've applied for jobs but I'm too scared, I've applied for jobs and had quite a few interviews, but I can't even go to the interview, I'm that scared. I'm too scared to face someone" P38: "I mean I'd be terrified of the, like…you know having to have a conversation with a doctor or something".
Find it hard to join in groups **[IIP-C: socially inhibited]**	P18: "you'll find yourself drawn towards a group of people where you feel as if somehow you've gotta break in to this group of people so you, when you described meeting X and Y and Z, you say they were like a threesome [Patient: yeah]. And you have to sort of break in and become a foursome [Patient: yeah] erm and then you find yourself in a way that we don't fully understand yet, kind of getting caught up in something where again you're feeling excluded". P21: "I lived in one of the worst areas actually- so my parents just sent me to the nearest school which is the most horrible school you can imagine so I felt I was very different there. Then I went to another school so I felt a bit different from…so every time I come somewhere I just feel different erm…and I don't actually have this I thought about it, it's probably a part of a problem of an immigrant but I feel like I don't actually belong, what is the group that I feel connected to and that creates a lot of problems actually making sense of yourself"
find it hard to feel close to others **[IIP-C: cold/distant]**	P51: "like some friend, if they get quite close and like quite demanding, I feel like they're quite clingy, I don't, I really don't like that feeling" P14: "I find it difficult to be completely close with people"
find it hard to show affection to others	P31: "I mean if my hands are cold, I'm not going to hold someone's hand, I'm going to shove them in my pockets. Um

[IIP-C: cold/distant]	yeah…I'm just not one of these romantic, gooey, lovey people".
find it hard to trust others **[IIP-C: vindictive/self-centred]**	P9: "there's only me gonna look after myself, I can't actually trust or rely on anybody else" P14: "if you trust someone then you…and they don't deliver, as it were then…so I don't often trust people. I very rarely trust people"
Find it hard to get along with others **[IIP-C: cold/distant]**	P47: "I was always really moody in the house and like really impossible to live with. Like I just…yeah like every…like I was awful… 'you can't find another person to live with her cause nobody will live with her cause everyone knows she's so like moody and like difficult' and I was just like…'oh my god what's wrong with me? I'm just like some monster like nobody wants to live with me, nobody like likes me and I'm just terrible, I'm just an awful person'". P49: "I didn't form relationships with people that well or was always the geek, the outsider".
Find it hard to be assertive **[IIP-C: non-assertive]**	P3: "I had to pluck up the courage to contact them because I was frightened in case something had gone wrong and I didn't want to get an ear bashing. And it's ridiculous, that's the kid in me again. Whereas instead of taking control of the situation-I mean ultimately, I did and there was nothing wrong of course. But I, you know, I should be going 'right' (claps hands) 'I'm getting on with this, I'm gonna get in touch with them, make sure everything is ok. I'm going to make sure everything is ok. I'm gonna do this'. But I'm not, I'm just kind of retreating and thinking 'you know I haven't heard from anybody about what's happening err, I don't want to sort of, I don't want to contact them just in case there is something wrong'. You know, which is ridiculous". P39: "I'm not that type of person that erm…that likes to say no or, do you know what I mean? If, if we was in a queue – if I was in a queue and you just come along and swoop in front of me I probably wouldn't say a word. Whereas some other people would probably go 'excuse me you're…' [Therapist: There's the back of the queue, yeah] Yeah. I'll probably just let it go".
Find it hard to be self-confident when with others **[IIP-C: non-assertive]**	P30: "I was always the scared one, you know? Even when I was going out with people, I was always silent and I never really say what I thought to anyone. And most of the time, people were like, 'hey, do you talk? Do you say something?'" P37: "certainly if I go to see someone, if err I have to see someone…for business for instance and I know that that person has certain qualifications and he knows more than me…then yes, I feel very insecure because my experience is only…err what I have to give but it's only born out of common

	sense, no training or…so I feel very insecure you know. I'm afraid to make a fool of myself…yeah, then I do you know, I feel very uncomfortable if I have to go and see a financial advisor and all that you know, I feel very uncomfortable because I know these people are very quick minded, you know?"
Find it hard to let others know what they want **[IIP-C: non-assertive]**	P36: Therapist: "I think what happens though is that your needy bit gets so hidden then, 'cause people think oh, you know (Patient) has the answer, she's a strong woman [Patient: yeah] but actually you're feeling very, like the very much the opposite [Patient: yeah] so that's the cost, that actually you get ignored then and you get even more leaned on [Patient: yeah] or asked for support". Patient: "And I, and, but to be honest, and I just, I don't know what it is that, letting your feelings out it's so hard, it's scary. It really is scary". P38: "I just feel sort of embarrassed…sort of, like having to say what I want and what I don't want and who I want to be or…how I want to be seen. Because I mean people have tried, you know they ask 'what do you want' or 'what do you really want to do' or…and I'll just sort of (blows out). Even (partner) did used to try, I think you can only go…go so far. I just sort of blank out…but it's kept me sort of stuck".
Find it hard to feel comfortable around others **[IIP-127]**	P4: "The thing is now I've spent so much life alone I I'm not, I'm not good with I'm not good with erm people with…I don't feel that comfortable with other people now" P13: "sometimes everything's just too much for me and I just really want to go somewhere, close the door, just be alone, not talk to anyone, not be seen, not being observed, just really relaxed feeling like no one's there, I'm not under surveillance of anyone, I can just really relax and do my things and not doing anything in particular just kind of being alone in a room".
Find it hard to make friends **[IIP-127]**	P11: "it's sort of difficult yes, and I've found it hard sort of, making friends with people I think or opening up a little bit more to people so they might move sort of from the acquaintance stage to someone that I'm more friends with and I think I find that quite difficult and I sort of end up…I think I end up being a rather standoffish and so that means that that other people don't feel that they want to make the effort either erm which sort of you know ends up being a rather vicious circle really" P16: "there's people that I'd like to get to know who always seem to erm keep me at a distance and I don't know whether it's because I look like erm I dunno a troublemaker or something".
Find it hard to relax and enjoy going out with others	P1: "I can't stand all that now, I can't stand it. I can't stand to go out and do that. See like crowds I can't, I don't like it. See like the carnival? I used to love going to the carnival, I ain't been to the carnival for years because I just don't want to go

[IIP127]	in the crowds. I just um, I dunno I just don't want to, I just don't want to. It's like I dunno, too much people around I don't like it". P32: "I don't even know. I was just angry. I sat there and looked around and I was just like, I just want to hit someone, I just feel angry, I just don't know why. I don't know why it happens, I just felt really angry and I wanted to go home". Therapist: Did [partner] work out that you wanted to go?" Patient: "yeah, he kept asking me, 'we can go', but I was like, no, we can stay, because, I'm not gonna cut your night short when you've been looking forward to it. He was the one who asked me to go, and I was like, I don't know if I really want to go with people I don't really know. Then I was just like, ok, if you want me to go, I'll go. And yeah, he was like let's just go, but I was like no, we're not leaving at like, 9 o'clock for nothing…. I stayed till about 1. And then I had had enough, I was like I wanna go now, I really wanna go now. I just did not feel like being out".
Feel dismissed or ignored by others **[Inductive]**	P16: "everything I tried to do at home my parents just basically ignored me, erm I was good at drawing and painting, I was often sitting at a table I the living room doing a drawing or making something, but I never got kind of erm supported. I never really got noticed by my parents, they were in kind of a different world". P31: "People just shut me down again. Telling me I'm fine…Saying they understand…But all they'll say 'everyone has problems in life. You're no different to anyone else'. And that's fine and I know that there are people who are worse off than me but…when…you're speaking to someone about themselves, I don't think you should come off topic and start speaking about world hunger and things like that. Of course, there are people worse off and they treat me like…I think I have the worst problem in the world and I don't understand and I don't think that there are people who are worse than me and there are people dying but…"
Find it hard to feel like they belong **[Inductive]**	P11: Therapist: "belonging is somehow dangerous [Patient: hmm]. You want to belong but if you belong you kind of get forced into a ridged identity that [Patient: yeah] doesn't fit you [Patient: hm mm] erm and so being outside but lonely [Patient: uh huh] is preferable to being inside but somehow being coerced [Patient: yeah] erm but the apart from inside your family, the world hasn't felt like a place where you can easily be yourself" P27: "I think that I am sad because I don't feel I have a place".
Feel unwanted or excluded by others	P18: "I feel like I'm not wanted there. It's this is weird kind of thing, saying it". Therapist: "Maybe that's a better, if we, if we're thinking of almost a shorthand because I think what

[Inductive]	we're, I'm noticing this repeated experience of you feeling that you're not wanted, that you're left out [Patient: yeah]". P38: "I do feel very low sometimes and I feel left out and I'm missing out and I've…missed out on going to the ball. Sometimes I feel like I feel like sort of Cinderella not going-taken to the ball"
Feel the judgement of others strongly **[Inductive]**	P16: "when I was engaged that time this elder from the congregation seemed to think that I wasn't good enough that I was err… that if she carried on the relationship with me she would be getting, I would be causing her problems and I don't understand, he was so judgemental, he hardly knew me, he just went by sight I suppose, I don't understand that attitude, why he felt that I wasn't worthy of being engaged to someone" P41: "I think it's more that I've done something wrong. I think it's more of guilt. Erm…and it's like as if I feel that other people are standing together and just shaking their head [makes tutting noises)] if that makes sense (laughs) erm…I guess it's often like…other people from outside would judge me and would judge me negatively; like 'she's done wrong'".

3.4.8 Universal Sub-Themes

Two sub-themes occurred frequently across the transcripts but did not fit semantically within any one quadrant. Rather, feeling neglected by others or that others were unavailable to them could be considered to be interpersonal problems which could be part of more than one, if not all master-themes and which describe generally feelings of not being kept in mind by others.

The word 'neglected' was commonly coded and was considered to be a separate sub-theme to 'feeling unwanted or excluded by others' because it implied a less active interest of the other in the self. Where the patient might attribute a reason to being excluded, for example being boring, feeling neglected was use to code descriptions of feeling insignificant to or abandoned by the other. Patients reported feeling "un-noticed", "invisible", like a relationship was all one-way, or that care-givers were absent or unable to provide comfort or affection. The other is "busy doing their own thing" or "doesn't seem to care".

Similarly, feeling others are unavailable was also frequently reported across the context of multiple master-themes. In this case, the other may be physically present at times but is insensitive, undependable or too preoccupied with themselves. One patient described his mother as "filling all the space with 'I". They may also disappear unpredictably and be hard

to stay connected to. The patient feels as if he “can’t get through to them” or that they are “unreachable”. Other descriptors included the other having “their own agenda” and being “behind a grid”.

Table XVI: Universal Sub-Themes

Sub-theme **[code book source]**	Sample quotes
Feel neglected by others **[Inductive]**	P12: “I suppose I put my barriers up again like when I was a child and mum didn’t really give me attention, so my barrier went up and it was like well if she doesn’t love me or care for me then I’m not gonna you know dwell on it”. Therapist: “it sounds really hard because on one hand, one thing that you can say here is that people have been quite neglectful, quite absent as the caring figures.” P16: “I didn’t understand at the time why I was, why I should suddenly start stealing things but erm I suppose it’s something to do with that neglect and lack of affection”
Feel others are unavailable **[Inductive]**	P4: “I was very angry with him for being ill and with my mother for being so hysterical and [Therapist: And not letting you get alongside him to have a relationship with him?] No, no, no she sort of kept him to herself, but my dad was very affectionate toward me in periods and then in other periods he’d be very withdrawn and concerned with himself”. P45: Therapist: “this experience of the other person as in some way not available... is and it’s quite a familiar feeling to you, quite a familiar experience, I was thinking about it partly say... you know like when your dad becomes withdrawn and unavailable... and you know you can’t... reach him as it were? [Patient: yeah] but there’s also the way in which... you know kind of when somebody’s actually not there like in another country, they’re not available or they’re out of reach [Patient: yeah] and that when it’s like that you know, it does leave you feeling as though you can’t get through to them or you know, they’re, you know, you’re just not in their mind [Patient: yeah]

3.4.9 Development of a Prototype IPAF Typology

Having successfully establishing sub-themes for each of the master-themes, the qualitative framework was used to produce a prototype IPAF typology. The first step in this process was to place each master-theme (hostile-dominant, friendly-dominant, friendly-

submissive, and hostile-submissive) in a 2x2 matrix. Each cell contained one master-theme and the sub-themes associated with it in bullet point form (see fig. XI).

The second step was to summarise the contents of each cell to produce a concise descriptor of each master-theme. Each cell lists the interpersonal themes likely to appear in that particular type of IPAF, which a clinician can compare with their patient's IPAF. This stage involved a number of amendments to the cells, to link conceptually similar sub-themes and reduce unnecessary wording. The amendments are detailed in table XVII (none were made to the FD cell).

To assist with comparison, Likert scales were added to each of the four cells to allow the user to quantify how like their patient's IPAF each type is. After reviewing each type, the clinician can select the cell which is most representative of the types of problems described by the IPAF. The prototype typology is shown in appendix B.

Figure XI: Developing the prototype IPAF Typology: Sub-themes and master-themes in a 2x2 matrix

<table>
<tr><td colspan="2">Master-theme:

Hostile-Dominant [HD]</td><td colspan="2">Master-theme:

Friendly-Dominant [FD]</td></tr>
<tr><td>HD Sub-themes</td><td>• Get irritated or annoyed too easily
• Try to control others too much
• Find others intrusive
• Too independent
• Find it hard to rely on others
• Find it hard to have others depend on them
• Often upset or angered by other’s lack of consideration for them
• Too easily bothered by the demands of others
• Too envious or jealous of others
• Find it hard to put needs of others before own
• Find it hard to make a long-term commitment to others
• Too aggressive towards others
• Too critical of others
• Too suspicious of others
• Find it hard to say sorry</td><td>FD Sub-themes</td><td>• Feel they are ‘too much’ for others
• Find it hard to spend time alone
• Try to please others too much
• Feel others are less committed to relationships that they are
• Easily become over-invested in romantic relationships
• Want to be noticed too much
• Open up to others too much
• Feel too responsible for solving other people’s problems
• Feel too guilty for what they have failed to do
• Feel too sensitive to criticism or rejection
• Worry too much about other’s reactions to them</td></tr>
<tr><td colspan="2">Master-theme:

Hostile-Submissive [HS]</td><td colspan="2">Master-theme:

Friendly-Submissive [FS]</td></tr>
</table>

HS Sub-themes	• Find it hard to trust others • Find it hard to open up and tell feelings to others • Find it hard to express feelings to others directly • Find it hard to be assertive • Find it hard to feel close to others • Find it hard to show affection to others • Find it hard to be self-confident when with others • Find it hard to let others know what they want • Feel dismissed or ignored by others • Find it hard to feel like they belong • Feel unwanted or excluded by others • Feel the judgement of others strongly • Find it hard to feel comfortable around others • Feel embarrassed in front of others too much • Too afraid of others • Find it hard to get along with others • Find it hard to ask others to get together socially • Find it hard to make friends • Find it hard to relax and enjoy going out with others • Find it hard to introduce self to new people • Find it hard to socialise • Find it hard to join in groups	**FS Sub-themes**	• Find it hard to say 'no' • Find it hard to make reasonable demands of others • Put the needs of others before own too much • Too easily persuaded by others • Too easily lose a sense of self when around strong-minded people • Let others take advantage of them too much • Find it hard to feel angry at others • Find it hard to let others know when they are angry • Find it hard to confront others with problems • Find it hard to take charge of own affairs without help from others • Too dependent on others • Find it hard to feel good enough • Feel others are better than they are • Find it hard to believe others will find them lovable • Act like a child too much • Find it hard to feel or act competent as a parent • Find it hard to define self

Table XVII: Moving from matrix to typology: consolidation of sub-themes

Cell	Matrix sub-themes	Typology sub-themes
HD	Too independent	too independent- hard to rely on others or have others depend on them'
	find it hard to rely on others'	
	Find it hard to have others depend on them	
	Too critical of others	Too critical or suspicious of others
	Too suspicious of others	
FS	Find it hard to say 'no'	Find it hard to say no or to make reasonable demands of others
	Find it hard to make reasonable demands of others	
	Too easily persuaded by others	Too easily persuaded by others or easily lose a sense of self
	Too easily lose a sense of self when around strong-minded people	
	Find it hard to define self	
	Let others take advantage of them too much	Feel taken advantage of too much
	Find it hard to feel angry at others	Find it hard to feel or express anger
	Find it hard to let others know when they are angry	
	Find it hard to take charge of own affairs without help from others	Too dependent on others for help
	Too dependent on others for help	
	Find it hard to feel good enough	Find it hard to feel good enough compared to others
	Feel others are better than they are	
HS	Find it hard to open up and tell feelings to others	Find it hard to open up or to express feelings to others directly
	Find it hard to express feelings to others directly	
	Find it hard to be assertive	Find it hard to be self-confident or assertive with others
	Find it hard to be self-confident when with others	
	Feel dismissed or ignored by others	Feel dismissed, ignored or excluded by others
	Feel unwanted or excluded by others	
	Feel unwanted or excluded by others	Hard to feel a sense of belonging or being wanted
	Find it hard to feel like they belong	
	Find it hard to ask others to get together socially	Find it hard to socialise or make friends
	Find it hard to make friends	
	Find it hard to socialise	
	Find it hard to introduce self to new people	Find it hard to join new groups or introduce self
	Find it hard to join in groups	

The process of producing a usable typology required careful consideration of the instructions for use. Of particular importance was the way in which the defence component of the IPAF should be handled when selecting an IPAF type. As noted in the introduction to the chapter, the defence function must be accounted for in the development of the IPAF. In order to select the IPAF type, it is likewise important for the user of the typology to consider what defensive behaviours are defending against. For example, the patient may describe a friendly-submissive interpersonal style themselves, yet the clinician notes hostility. In this case, the clinician should decide whether hostile submissive is a better descriptor. Or, a patient may describe feeling rejected or excluded by others (hostile-submissive), but the clinician draws their attention to their experience of themselves as a victim actually being a reflection of their own tendency to reject others (hostile-dominant). In most cases, the defence will have been explored with the patient as part of the IPAF formulation, so the category should not be difficult to select, except where the clinician has decided for a clinical reason not to explore the defence with the client at this stage of treatment. The instructions therefore required recognition of the consideration of the defence as part of the IPAF type selection.

A brief introduction for users of the typology was written (see notes for use, appendix B), detailing the purpose of the typology and its method of application (see appendix B). The user is informed that the typology is intended for use after the IPAF has been arrived upon collaboratively with the patient and that the whole IPAF session should be considered before an IPAF type is selected. Firstly, the user is asked to indicate on a 7-point Likert scale the degree to which each cell is like the IPAF and then secondly to select which of the cells best characterises the problems described by the IPAF. If no one cell can be used to describe the IPAF, the user can select ‘unclassifiable’ and enter a reason, for example the IPAF lacked the necessary detail to determine a category or the problems discussed fell into multiple categories with no single one capturing the IPAF.

The notes for use highlight the problems which were found to be less helpful in discriminating the IPAF types (universal subthemes) and cautions the user that these problems may be indicated for more than one IPAF. They also remind the user that the defence is an important part of the IPAF and that in selecting a category, they should consider what is being defended against, rather than the defensive behaviour alone.

3.5 DISCUSSION

A qualitative analysis revealed that four discreet categories of IPAFs were identifiable in the transcriptions of DIT sessions. These categories described patterns of relating that could be labelled as hostile-dominant, friendly-dominant, friendly-submissive and hostile-

submissive, confirming that the IIP can be usefully employed as a basis for informing a four-fold IPAF typology. Of the sub-themes identified in the IPAFs, 76.1% were drawn directly from the IIP. The typology was empirically improved by the addition of a number of inductive sub-themes. The sub-themes in each category are very similar to those identified statistically in the quadrants of the IIP-C (Gurtman 1995; Gurtman 1996) and the inductive themes all matched closely with the clusters.

For the friendly-dominant type, both identified being overly responsible or overly involved, difficulty being alone, being overly revealing or self-disclosing, trying to please others too much, being overly reactive and wanting to be noticed too much. The inductive themes identified (feeling too much for others, overly investing and feeling less committed in relationships) were very much in keeping with Gurtman's (1995) cluster titled 'overly-intimate'. For friendly-submissive, both identified a difficulty expressing anger or aggression, excessive dependence, difficulty prioritising own needs or setting limits, being easily taken advantage of or overwhelmed by others and difficulty feeling good enough or superior to others. The hostile-submissive type was almost identical to the HS quadrant description, although some additional specific themes around feeling ignored, excluded, unwanted or judged were identified. These are in keeping with Gurtman's (1995) 'distrust/lack of intimacy' cluster. Both describe a pattern of social anxiety and avoidance, coldness and lack of intimacy. The hostile-dominant type was also closely matched, describing aggression or irritation with others, a need for control and independence, difficulty in putting the needs of others before their own or making commitments to others and feeling suspicious or jealous of others. The inductive themes identified (finding others intrusive or lacking in consideration and having difficulties saying sorry) are comparable to Gurtman's (1995) hostile-control cluster.

There were a small number of IIP items which were not identified in the qualitative analysis. For the friendly-dominant type, the theme of 'trying to change others too much' was not observed. For friendly-submissive, finding it hard to compete or being too gullible were not notable themes and for hostile-dominant, manipulating or exploiting others, difficulty with authority, arguing or fighting too much were not described in the IPAFs. Possibly patients with these types of problems would have been less likely to seek treatment, be referred to the trials or may have found the triage process for a clinical trial difficult. The best fit with the quadrant descriptors seemed to be with hostile-submissive types. If the opposing quadrants are reciprocal and complimentary (Leary 1957; Carson 1969) and a therapist would typically expected to adopt a friendly-dominant style, it is unsurprising that hostile-submissive problems would be clearly represented. The finding that hostile-submissive problems were more clearly represented than hostile-dominant ones is consistent with early work on the IIP: problems of assertiveness were very salient in brief dynamic

psychotherapy (and successfully treated) compared to problems of intimacy, and problems of intimacy were rated as less distressing (Horowitz, Rosenberg et al. 1988).

The hostile-dominant type seemed to lack some of the most aggressive IIP items. The most likely explanation for this is the small sample size; there were just fewer patients with IPAFs in this sample. Perhaps individuals with these types of problems are also less likely to seek treatment or less likely to have been selected as suitable for DIT. These items are typically associated with personality disorder- a diagnosis of which was an exclusion criterion for the REDIT and REDIT-CT studies. It is conceivable that highly aggressive or manipulative patients would have been more likely to drop out of treatment- it may be more difficult for them to comply with a fairly rigid treatment schedule or to develop rapport with the therapist. They may also be patients for whom the therapist either decides to delay sharing the IPAF with or finds it more challenging to stay within the DIT model and consequently they may be over-represented among those excluded from this study. Potential reasons for a disparity in numbers between the types of interpersonal problems encountered in these trials will be further investigated in the following chapters.

The presence of two 'universal' sub-themes is one notable difference between the IPAF typology and the IIP quadrants. The feelings of being neglected by others and that others are unavailable to them were frequently discussed by therapists and their patients, but these items were not useful in discriminating the four types of IPAF, rather they seemed applicable in one sense or another to all the types. There were no clusters in Gurtman's (1995) IIP typology which paralleled these items. It may be that these items are tapping into something the IIP does not capture. Or, they may relate somehow to the underlying factor of Distress: it is known that this factor is distinct from love and dominance (Gurtman 1992; Gurtman 1992). Early adversity and particularly interpersonal neglect and abuse are transdiagnostic factors implicated in most if not all mental disorders, including depression (Myers, McLaughlin et al. 2014; McLaughlin, Conron et al. 2010). These factors are also known to be related to the so called 'p factor', a dimension of general psychopathology ranging from high to low severity (Caspi & Moffitt, 2018). Thus, it is possible that general interpersonal distress is also related to the p factor.

Many of the quotes associated with these sub-themes describe past relationships which is consistent with the DIT model and a good sign of adherence- therapists should discuss the links between past relationships and the current pattern. They are also consistent with interpersonal models which emphasise problems resulting from unavailable caregivers (e.g. Sullivan 1940, 1963; Arieti & Bemporad, 1978, 1980). It could be the case that discussion of these themes is a mentalisation tool used by the DIT therapist to describe the process of pattern development and to get to the crux of the developmental origin.

Perhaps these items are present across all quadrants because depending on some other unspecified factors, they will go on to develop into a particular IPAF category.

This study also provides the first report of how the IPAF is presented to the patient in DIT. The results showed that the IPAF was explicitly shared with the patient in 82% of cases. Of these, 83.3% of IPAFs were shared in session four, in accordance with the DIT model. A rigid script was not used to introduce the IPAF, but the language used by the therapists was consistent in its meaning: the patient was invited to reach a focus or pattern of problematic relations between the self and other and there was an emphasis on this process being collaborative and agreed upon by both parties. In 11/61 (18%) of patients attending more than four sessions of DIT, there were not enough of these IPAF 'signposts' present to enable an IPAF to be identified between session three and seven of DIT. The reasons for this are unknown; perhaps there were some patients for whom therapists believed there was a clinical need to deviate from the model. Failure to record the session was cause for a small number of cases (n=2, 3.2%). Demographics may shed some light on the patients for whom an IPAF was not clearly arrived upon in this sample, despite them attending more than four sessions of treatment. Compared to those with an identifiable IPAF, they were more frequently male, on medication and from an ethnic minority. This may point to a higher risk of deviation from the DIT model for these patients. It is notable that all these patients were randomized in the first trial (REDIT); identifying IPAFs does not seem to have been problematic in the second (REDIT-CT). Perhaps this indicates merely that therapist's adherence to the DIT model improved over time, or that adherence varies across sites.

3.6 LIMITATIONS

The obvious limitation of this study is the small sample: the deductive and inductive subthemes described by this typology have been limited by those described in IPAFs available for analysis and it is likely that more would be identified in a larger sample. In particular, this sample seems lacking in items describing hostile-dominant problems. The sample is not particularly diverse in terms of demographics: twice as many women than men took part and the sample were overwhelmingly white (77.9%). Future research would be beneficial comprising a larger, broader sample.

Ideally, a qualitative analysis should be undertaken by a team of researchers, discussing and refining themes in a collaborative process. As this analysis was undertaken as part of a thesis, the sub-themes and master-themes were identified by one individual and although the analysis was discussed with a supervisor, it was therefore lacking in the additional perspectives of other researchers which would typically be involved in a

qualitative design. Ideally, coding would be carried out collaboratively with at least one other researcher. The validity of the typology would have been improved by adding an additional stage in the coding process between the development of the codebook and its application to the data. An early check here of its applicability by an additional researcher to a number of test pieces to ensure no modifications were required would have been desirable. The researchers conducting the analysis should also be blind to treatment outcome. While outcome was not considered as part of this chapter, the coder cannot truly be considered 'blind' as they were party to the pilot study findings at a later date and prior to completion of this thesis.

Another potential limitation of the typology is whether the defence function of the IPAF presents a problem in selecting a category. It shouldn't, if the clinician has been able to explore the defence with the patient in enough detail to pick apart the true representation of self and other. If, however the clinician determines a clinical need not to do so when they share the IPAF, the classification may not be in keeping with the patient's take on their problems and validity is weakened.

One issue with using an IPAF typology is that it is difficult to be sure that the IPAF agreed upon is what is actually worked on in therapy. However, the same criticism could be levied to any pre-treatment assessment: symptoms may vary from day to day. The IPAF type should be a more robust assessment than pre-treatment IIP scores given it is formulated in collaboration with the client after four sessions.

It should be noted that while many of the quotes used to illustrate a particular sub-theme appear to be quotes from either the therapist or the patient, they are actually part of a back and forth, collaborative process of arriving at the IPAF. Due to the need for brevity in such a report, some of subtleties of this developing process are not apparent and such short quotes don't always do justice to process.

3.7 CONCLUSIONS

This study describes an attempt to produce a coding frame for IPAFs based on the IIP. Results indicate that the IIP provides a good basis for such a system, and that four distinct types of IPAF can be identified and described similarly to the IIP quadrants: friendly dominant, friendly submissive, hostile submissive and hostile dominant. A prototype typology was designed for clinical use within DIT with the hope that it can be used to determine which types of IPAF have the best outcomes. The next step in developing an IIP typology will be to test it for reliability and validity: this will be the subject of the following

chapter. The study also provides evidence of good adherence to the DIT model within these pilot trials, with the IPAF being presented as per the model in 82% of cases.

CHAPTER 4

Reliability and Validity of the Prototype IPAF Typology

4.1 CHAPTER OVERVIEW

The following chapter tested the application of the IPAF typology developed in chapter three and its reliability and validity were assessed using data from the REDIT and REDIT-CT trials registered with the ISRCTRN Registry (ISTCRN38209986; ISTCRN06629587) (Fonagy, Lemma et al. 2020). Each IPAF obtained in the REDIT and REDIT-CT trials was classified using the typology and reliability was tested by double coding a sample of IPAFs with an independent rater. The demographics of the patients in each of the IPAF categories were compared and baseline assessments used to test the validity of the IPAF typology. Different patterns of baseline scores were predicted for each of the four IPAF types: IIP subscale scores would be higher for those scales associated with the patient's IPAF type, IIP angular displacement was expected to fall within the quadrant which corresponded to the IPAF type, avoidance was expected to be higher for patients with a more submissive IPAF, hostility higher for patients with a less affiliative IPAF and anxiety higher for those patients with a more affiliative IPAF. Rigidity was expected to be a more general factor across IPAF types. Those patients for whom no IPAF was identified were considered independently in order to shed light on the types of IPAF which might be more difficult to classify. The results reported the successful application of the IPAF typology to a sample of IPAFS, with only 3/48 (6.3%) considered 'unclassifiable' and good reliability (80%, kappa=0.676, $p<0.001$) was established using an independent rater. Almost half the sample were classified as hostile-submissive IPAFs. Patients with submissive IPAFs were found to have significantly more interpersonal distress at baseline than those with hostile IPAFs. Few significant differences were found between IPAF types on the baseline measures, or between those patients with IPAFs compared to those without, although they were trending as predicted. The highest scores on IIP socially-inhibited and non-assertive subscale were in the hostile-submissive IPAF group. Avoidance was higher among the hostile IPAF types and the highest scores on hostility were for the hostile-dominant IPAF type. Patients with hostile-dominant IPAFs tended to be younger and those with a friendly-submissive IPAF older. All the patients with a hostile-dominant IPAF were female, providing support for the gender incongruity hypothesis (Blatt 2004). Those patients for whom an IPAF type could not be established tended to be more hostile and recruited from an earlier trial.

4.2 INTRODUCTION

Chapter three reported the results of a study which developed a new method of classification for IPAFs- the interpersonal affective focus of dynamic interpersonal therapy (DIT). DIT is a 16-week one-to-one psychodynamic therapy currently in phase II trials within IAPT. It has two primary aims: to help the patient make a connection between their symptoms and their relationships through identification of an often unconscious repetitive pattern of relating and to assist the patient in managing their interpersonal problems by improving their ability to reflect on their own state of mind (Lemma, Target et al. 2011). The key focus of treatment (the IPAF) is identified in collaboration with the client. The IPAF comprises four dimensions, *self* in relation to *other*, the *affect* linking them and a *defence* function. Using the interpersonal circumplex as a basis for a theory-driven qualitative analysis of therapy sessions, the previous study established that four discreet types of IPAF could be identified and labelled as *hostile-dominant [HD], friendly-dominant [FD], friendly-submissive [FS] and hostile-submissive [HS].* A number of items derived deductively from the IIP and inductively from the data resulted for each category (see figure XI).

The purpose of the typology is to provide the clinician with an additional tool with which to make a judgement early in treatment as to whether the client is likely to benefit from DIT and also to provide a framework for thinking about how they might tailor treatment to a particular patient. The IPAF type will be relevant throughout all phases of treatment. In the initial phase, the IPAF is formulated and working alliance is developed. The emerging IPAF type may have a bearing on the way in which the clinician engages the client, for example, patients with more hostile IPAFs may be wary of and inexperienced with engaging in a trusting relationship with another person. More submissive patients may passively accept what is offered in therapy and the clinician may be required to enlist them in more active participation. During the middle phase- in which the IPAF is explored and reflected upon in terms of relationship difficulties- the type is also relevant. For example, patients with FS IPAFs may need to focus on working through their dependency issues as part of tackling the IPAF and conversely patients with HD IPAFs may be more focused on problems accepting support and tolerating intimacy in both the therapeutic relationship and outside of treatment. The way in which the therapist approaches ending the therapy with the patient may also be different depending on the IPAF type: it may be experienced as abandonment in more affiliative profiles and potentially as humiliating in those who find it difficult to tolerate vulnerability (HD profiles). Patients with more friendly-dominant profiles may be more defensive against the existence of another preferred, more ‘needy’ patient whom requires the attention of the therapist. The IPAF type will also be pertinent to the way in which the clinician makes use of the transference and counter transference; its

interpretation may be aided by the interpersonal principles of reciprocity. An individual's interpersonal behaviour elicits responses from a partner which are reciprocal or complimentary, whereby dominance elicits submissiveness in the other and vice versa and hostility and affiliative behaviours provoke similar responses (Leary 1957; Carson 1969; Kiesler 1983). The IPAF type therefore will be relevant to the understanding of the operation of transference in the patient's interpersonal relating. Interpretation of the IPAF is a continual session-by-session process which may be aided by a framework on which to 'hang' the IPAF.

Previous work by Gurtman (1996) using the IIP reported that patients (n=104) awaiting long term psychotherapy could be assigned to one of four groups dependent on their position in the IIP circumplex, and that these distinct groups had significantly different profiles. They differed on patient endorsement of particular IIP problems, therapist assessment of personality, suitability for psychotherapy and global functioning at end of treatment. FD patients reported problems in being overly controlling, intrusive and revealing, HD patients experienced problems involved getting along with people, aggressiveness, and lack of social feeling. For HS patients, problems in feeling close and being open with others were most salient and FS patients reported most problems regarding dependency, exploitability, and lack of assertiveness. Moreover, these groups of patients differed in their therapists' ratings of suitability for psychodynamic psychotherapy. HD patients were considered to be more impulsive, present-oriented and reluctant to establish close relationships and hence less suitable, whereas FS were generally seen as more suitable due to better impulse control and a more reflective attitude. By the end of treatment, those patients who were determined to have a more affiliative problem style (FS and FD) were considered by their therapists to have a better outcome than those with a HD problem style, as measured by The Global Assessment Scale (Endicott, Spitzer et al. 1976) and the Level of Functioning scale (Carter and Newman 1980).

Other research demonstrating interpersonal prototypicality- the extent to which a profile has a reliable style and distinctiveness (Girard, Wright et al. 2017)- includes attempts to locate personality disorders on the IIP circumplex. This had proved relatively successful. It has been proposed that at their core, personality disorders are disorders of relating to others (Kiesler 1983; Benjamin 1993; Hopwood, Wright et al. 2013). A meta-analysis of 2,579 effect sizes from 127 studies investigating associations between personality disorders and interpersonal functioning (Wilson, Stroud et al. 2017) found good IIP prototypicality for paranoid, schizoid, schizotypal, antisocial, borderline, histrionic, narcissistic, and avoidant personality disorders. Each of these disorders were interpersonally distinct: the interpersonal profile of narcissistic personality disorder was

domineering, antisocial personality disorder was vindictive and domineering, paranoid and borderline personality disorders were vindictive, schizoid and schizotypal personality disorders were cold, avoidant personality disorder was socially avoidant and histrionic personality disorder was intrusive and domineering. The predominant interpersonal themes (angular displacement) were also different for each personality disorder: paranoid, schizoid, schizotypal, and obsessive– compulsive personality disorders were located in the dominant-cold quadrant, avoidant personality disorder was located in the submissive-cold quadrant; antisocial, borderline, and narcissistic personality disorders were located in the dominant-cold quadrant, histrionic personality disorder was located in the dominant-warm quadrant, and dependent personality disorder was located in the submissive-warm quadrant. Additionally, even those located in the same or next quadrant differed by at least an octant (45°), indicating meaningful differences in their circumplex locations. These results suggest that particular personality disorders are associated with particular interpersonal problems and have unique predominant interpersonal themes and styles which might also apply to IPAF types.

Using hierarchical modelling and a sample of 825 clinical and community participants, Girard, Wright et al. (2017) examined the interpersonal profiles of sixteen psychiatric diagnoses and five transdiagnostic dimensions. A five-factor structure of psychiatric diagnoses was replicated and all of the dimensions showed good interpersonal prototypicality except for the internalizing factor (which was heterogeneous): the detachment factor had a socially avoidant and non-assertive interpersonal style, the compulsivity factor had a non-assertive style, and both the disinhibition and dominance factors had a domineering style. An analysis of Therapy Session Reports (TSR) completed by patients immediately after psychotherapy sessions demonstrated that the interpersonal themes reported by patients were consistent with their angular displacement (Gurtman and Balakrishnan 1998). Dominant patients reported being more controlling and combative in therapy compared to the average patient, whereas for hostile patients, loneliness, lack of emotional connection and defeatism were more commonly described.

Interpersonal clusters have also been identified in other psychopathologies which may impact the treatment course and outcome. FS and HD clusters of patients have been identified within social phobia (Kachin, Newman et al. 2001). Patients with eating disorder have been found to have an FS interpersonal profile, regardless of specific eating disorder diagnosis (Ung, Erichsen et al. 2017). Interpersonal subtypes have also been identified in GAD patients, namely exploitable, non-assertive, cold and intrusive problems (Kasoff and Pincus 2002; Salzer, Pincus et al. 2008; Gomez Penedo, Constantino et al. 2017) and two studies investigating outcomes in anxiety disorder established that patients fell into one of four distinct interpersonal styles: socially avoidant, non-assertive, modestly nurturant and

overly nurturant (Salzer, Pincus et al. 2011; Pitman and Hilsenroth 2016). Moreover, clinical improvement was dependent on the predominant interpersonal theme (Borkovec, Newman et al. 2002; Kasoff and Pincus 2002; Crits-Christoph, Gibbons et al. 2005; Salzer, Pincus et al. 2011).

Whether some interpersonal problems types are more typically associated with age or gender is under-reported. Some research suggests a 'gender axis', whereby men tend more towards the HD pole and women more towards the FS pole (Lippa 1995; Horowitz, Alden et al. 2000; Gurtman and Lee 2009; Akyunus, Gencoz et al. 2019). However, the effect sizes in studies of gender differences tend to be small (Hyde 2005). As noted above, the interpersonal profiles of personality disorders have been shown to have distinct locations within the interpersonal circumplex and the DSM-IV-TR (APA, 2000) states that men have a greater prevalence of antisocial, narcissistic, obsessive-compulsive, paranoid, and aggression-related disorders, whereas women have higher rates of dependent, borderline, and depressive disorders. These personality disorders have been found to project into particular quadrants- anti-social, paranoid and narcissistic into the HD quadrant (Pincus and Wiggins 1990; Soldz, Budman et al. 1993) and dependent, borderline and depressive into the FS quadrant (Pincus and Gurtman 1995; Hilsenroth, Menaker et al. 2007). Borderline personality disorder can also be located in the HD quadrant, depending on the subtype: autonomous (cold, aloof and non-obsequious) or dependent (lacking autonomy in relationships, complacent and conflict-avoidant) (Leihener, Wagner et al. 2003). Observed gender prevalence rates of personality disorders have been found to match the expected prevalence rates based on gender differences on the five factors of personality (Lynam and Widiger 2007). It seems reasonable therefore to hypothesize that these observed gender differences would also be expected in interpersonal problems- women's peaking in FS and men's in HD, and indeed this was observed in one of the few studies to investigate this (Gurtman and Lee 2009).

With regards to age differences in the interpersonal circumplex, the extremely limited previous research indicates that with age, domineering-controlling and vindictive-self-centred problems decrease and overly accommodating problems increase (Horowitz, Alden et al. 2000). A community study of young adults found that the youngest group experienced more domineering-controlling and cold-distant interpersonal problems and higher interpersonal distress compared to the older groups (Akyunus, Gencoz et al. 2019). Based on these findings, younger patients might be expected to be more frequently represented in the HD IPAF type and older ones in the FS type.

The extent to which such interpersonal prototypes are useful in predicting treatment outcome will be examined in further detail in the next chapter, and whether the IPAF

typology can be used to discriminate between patient outcomes will be investigated. This chapter will first focus on reliability and validity of the IPAF typology.

4.2.1 The Present Study

Data drawn from the REDIT and REDIT-CT studies will be used firstly to apply the IPAF typology and review any differences in demographics between the groups, secondly to test the reliability of the typology using double rating, and thirdly to test its validity by testing for differences in baseline measures which might be expected to vary between the groups, i.e. the interpersonal prototypicality. Any differences might also be useful in explaining outcome differences. The REDIT and REDIT-CT studies were pilot trials of DIT for depression within IAPT comparing DIT with wait-list control and CBT respectively. In addition to investigating the data from those patients for whom an IPAF could be assessed, this chapter will also consider the patients for whom it could not, as this might provide some useful information about why it might be difficult for a therapist to develop a coherent IPAF in collaboration with their patient.

Three measures were collected at baseline in REDIT and REDIT-CT which could be useful in assessing the validity of the IPAF typology; the IIP64, the Experiences in Close Relationships-Revised (ECR-R): avoidance and anxiety subscales (Fraley, Waller et al. 2000) and the Brief Symptom Inventory (BSI): hostility subscale (Derogatis and Melisaratos 1983). The IIP64 can be used in several ways, to compare total distress, the subscales and the angular displacement of the circumplex and its vector length. The angular displacement is a vector angled measured in degrees (see chapter one, table IV) which indicates where on the IIP-C an individual's predominant theme of maladjustment lies (Gurtman 1993). If this component of the IIP is found to be similar to the IPAF typology, it may be an indicator of validity. The vector length or amplitude is considered an indication of rigidity of interpersonal style- the more extreme or 'peaked' the profile is, the more constrained the behaviour is to a limited part of the circle (Leary 1957). Others consider vector length more simply as the distinctiveness of an individual's interpersonal distress (Gurtman and Balakrishnan 1998); how 'typable' the individual's interpersonal profile is (Gurtman 1996). A difference in amplitude between IPAF types was not expected due to it being a general indicator of adjustment, rather than particular to any specific interpersonal profile (McCarthy, Connolly-Gibbons et al. 2008).

The ECR-R avoidance subscale measures attachment related avoidance (i.e., the extent to which people are uncomfortable being close to others vs. secure depending on others) with 18 items such as "I prefer not to be too close to others", "I prefer not to show others how I feel deep down", and "it is easy for me to be affectionate with others". Higher scores

indicate high avoidance. The ECR-R anxiety subscale measures attachment-related anxiety (i.e., the extent to which people are insecure vs. secure about the availability and responsiveness of others) with 18 items including “I often worry that others will not want to stay with me”, “when I show my feelings for others, I'm afraid they will not feel the same about me” and “I'm afraid that once others get to know me, they won't like who I really am”. Higher scores indicate higher anxiety. These two dimensions of attachment behaviour (attachment avoidance and attachment anxiety) are theoretically and empirically related to the underlying dimensions of personality development, love and dominance, or relatedness and self-definition (Meyer and Pilkonis 2005; Mikulincer and Shaver 2007; Roisman, Holland et al. 2007). A fear of being abandoned or rejected (attachment anxiety) is conceptually related to the affiliation dimension and being uncomfortable with closeness or dependence on others (attachment avoidance) overlaps with the autonomy dimension (Luyten and Blatt 2013). A meta-analysis of five studies measuring correlations between measures of attachment anxiety and avoidance and measures of sociotropic and autonomous personality reported moderate to strongly positive correlations between autonomy and attachment avoidance (r=0.51) and sociotropy and anxiety (r=0.42) compared to autonomy and anxiety (r=0.35) and sociotropy and attachment avoidance (r=0.05) (Sibley 2007). Therefore, higher scores on ECR-R avoidance might be likely for those patients with HD IPAFs and higher scores on ECR-R anxiety might be higher for those patients with FS and FD IPAFs.

The BSI hostility subscale measures with five items the extent to which the patient has been bothered in the last week by feelings of hostility such as “feeling easily annoyed or irritated” and “getting into frequent arguments”. Higher scores for hostility would be expected for those patients with IPAFs on the introjective side of the circumplex: HD and HS.

Patients with an FD IPAF describe being overly responsible or overly involved, difficulty being alone, being overly revealing or self-disclosing, trying to please others too much, being overly reactive and wanting to be noticed too much, feeling too much for others, overly investing and feeling less committed in relationships. Compared to the other IPAF categories, patients in this category might be expected to have higher scores on the IIP domineering subscale, lower scores on IIP non-assertive and higher scores on self-sacrificing and intrusiveness. An angular displacement of 0-90° might be expected for this group of patients. Higher scores on the ECR-R anxiety subscale, lower scores on the ECR-R avoidance subscale and the BSI hostility subscale might be expected compared to those in the hostile groups.

For those with an FS IPAF, problems expressing anger or aggression, excessive dependence, difficulty prioritising own needs or setting limits, being easily taken advantage of or overwhelmed by others and difficulty feeling good enough or superior to others are most salient. Previous research has shown that patients report the highest distress and depression chronicity for problems of assertiveness, and problems of intimacy have been found to be less distressing than other types of problems (Horowitz, Rosenberg et al. 1988; Ley, Helbig-Lang et al. 2011; Cain, Ansell et al. 2012; Simon, Cain et al. 2015). On this basis, the highest score on IIP total might be expected for this group. Compared to the other IPAF categories, patients in this category might be expected to have lower scores on the IIP domineering subscale and higher scores on non-assertive, overly-accommodating and self-sacrificing subscales. Angular displacement might be expected to lie between 270° and 360°. Higher scores on the ECR-R anxiety subscale and lower scores on the ECR-R avoidance subscale and the BSI hostility subscale might be expected compared to those in the hostile groups. Compared to other IPAF types, female patients and older patients would be expected to be more frequently represented.

For HS IPAFs, social anxiety and avoidance, coldness, lack of intimacy and feeling ignored, excluded, unwanted or judged were identified. As above, higher scores in IIP total might be expected, along with higher scores on the cold, socially inhibited and non-assertive subscales. Lower scores might be expected on domineering and intrusiveness subscales. Angular displacement may lie between 180° and 270°. Higher scores on the ECR-R anxiety subscale would be expected than those in the HD group. Higher scores on the ECR-R avoidance subscale and the BSI hostility subscale would be expected compared to those in the FD and FS groups.

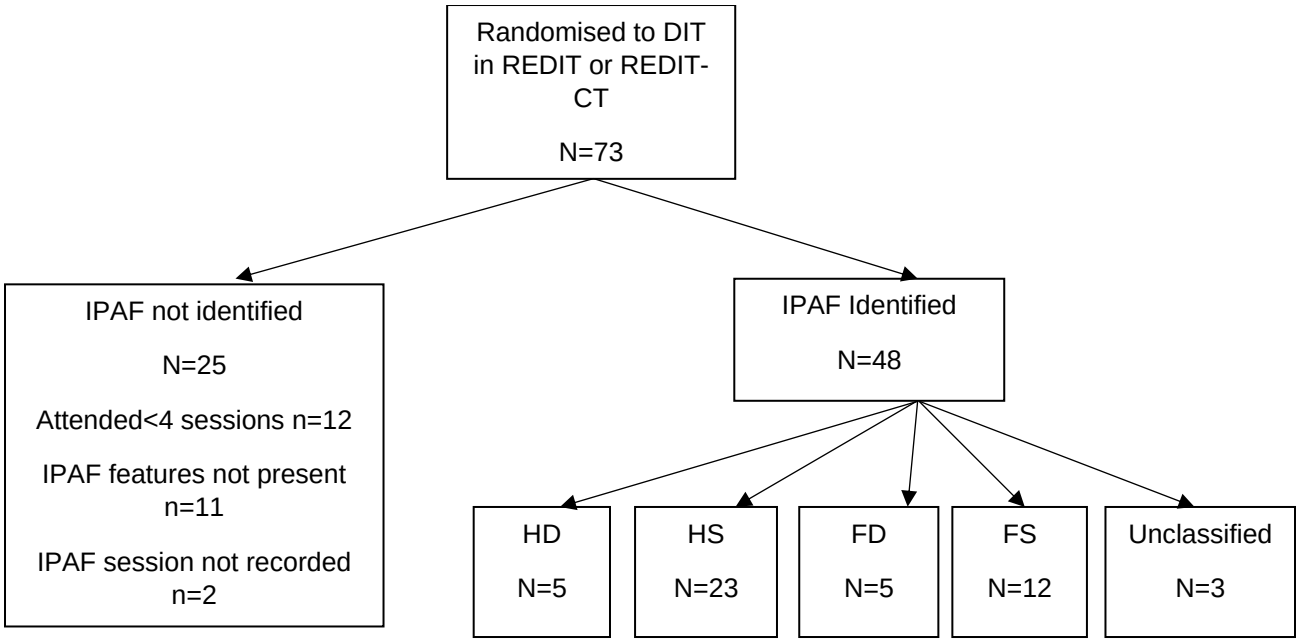
For HD IPAFs, aggression or irritation towards others, a need for control and independence, difficulty in putting the needs of others before their own or making commitments to others and feeling suspicious or jealous of others, finding others intrusive or lacking in consideration and having difficulties saying sorry were particularly problematic. If problems of intimacy are less distressing than other types of problems, the lowest IIP total scores would be expected in this group. Compared to the other IPAF categories, patients in this category might be expected to have higher scores on the IIP domineering, vindictive and cold subscales and lower scores on non-assertive and self-sacrificing subscales. An angular displacement of 90-180° might be expected for this group of patients. Lower scores on the ECR-R anxiety subscale and higher scores on the ECR-R avoidance subscale and the BBI hostility subscale would be predicted compared to those in the friendly groups. Compared to other IPAF types, male patients and younger patients would be expected to be more frequently represented.

4.3 METHOD

4.3.1 Participants

A total of 147 patients were randomised, with 73 allocated to DIT (see chapter three, figure IX). Of these, 48 had a recognisable IPAF according to the criteria established in chapter three, 11 did not and for two the IPAF session was not recorded and thus could not be included in the study. Twelve patients attended less than the four sessions of treatment required to formulate the IPAF. A flow chart is shown in figure XII.

Figure XII: Participants Included in the Present Study



4.3.2 Demographics

The typology was applied to the 48 IPAF transcriptions obtained from the REDIT and REDIT-CT studies and the predominant category identified as either hostile-dominant, friendly-dominant, friendly-submissive, hostile-submissive or unclassifiable. A 7-point Likert scale was use to assess how like each category each IPAF was. Baseline demographics and characteristics were compared for each category, and also for those patients for whom no IPAF was obtained.

4.3.3 Reliability

A stratified sub-sample of 15 IPAF session transcriptions was selected and a second rater applied the typology, selecting the category which best described the IPAF and applying the Likert scale above. The inter-rater agreement for categories was assessed using

Cohen's kappa (McHugh, 2012). Cohen's weighted kappa was run to determine the agreement between the two raters on the Likert ratings of how like each category the IPAFs were. Quadratic weighted kappa was chosen because the Likert scores were ranked and the penalties for being 3 or 4 points away from the other judge were considered worse than being 1 or 2 points away. Discrepancies were discussed and agreed upon.

4.3.4 Validity

A series of ANOVAs were run to test the predictions outlined above for five groups of participants on baseline measures: those with a HD/FD/FS/HS IPAF, and those with no IPAF classification. This last group included both those for whom the IPAF was found to be unclassifiable using the typology and those for whom no IPAF was identified using the signposting (see chapter three). This analysis was then repeated for the four IPAF groups only. Where relevant to the hypothesis being tested, a one-way ANOVA was conducted on baseline measures by two groups: dominant/submissive or hostile/friendly. Due to the unequal number of IPAFs in each of the groups, Levine's Test was used to determine whether the homogeneity of variance assumption was violated. Where it was, the Kruskal-Wallis test was adopted. Predictions for each baseline variable by IPAF group are detailed below.

H1. IIP total scores. Higher scores were predicted for those with submissive IPAFs compared to those with dominant IPAFs.
H2. IIP domineering subscale. Higher scores predicted for HD and FD than HS and FS.
H3. IIP vindictive subscale. Highest scores predicted for HD.
H4. IIP cold subscale. Higher scores predicted for HD and HS than FD and FS.
H5. IIP socially-avoidant subscale. Highest scores predicted for HS.
H6. IIP non-assertive subscale. Higher scores predicted for HS and FS than HD and FD.
H7. IIP overly-accommodating subscale. Highest scores predicted for FS.
H8. IIP self-sacrificing subscale. Higher scores predicted for FS and FD than HS and HD.
H9. IIP intrusive subscale. Highest scores predicted for FD.
H10. IIP Love dimension scores. Higher scores predicted for FS and FD than HS and HD.
H11. IIP Dominance scores. Higher scores predicted for HD and FD than for HS and FS.
H12. IIP amplitude predicted to be similar across IPAF types.
H13. ECR-R avoidance subscale. Higher scores are predicted for HD than FS and FD.

H14. ECR-R anxiety subscale. Higher scores predicted for FS and FD than HD.

H15. BSI hostility subscale. Higher scores are predicted for HS and HD than FS and FD.

H16. Relative to other IPAF types, female patients would be expected to be more frequently represented in FS.

H17. Relative to other IPAF types, male patients would be expected to be more frequently represented in HD.

H18. Relative to other IPAF types, patients with FS IPAF types will be older.

H19. Relative to other IPAF types, patients with HD IPAF types will be younger.

The formulas used by Gurtman (1993) were used to calculate Love and Dominance scores and the IIP angular displacement.

Additionally, a multinomial regression was conducted to analyse predictors for IPAF classification. The reference category was HS and each of the other three IPAF types were compared to this reference group. Predictors were age, gender, IIP scores, ECR-R anxiety and avoidance and BSI hostility scores.

4.4 RESULTS

4.4.1 Demographics

Table XVIII shows the number of IPAFs in each cell of the typology: 23/48 (47.9%) of the IPAFS were classified as HS, 12/48 (25.0%) as FS, 5/48 (10.4%) as HD and 5/48 (10.4%) as FD. The proportion of male and female patients did not differ by IPAF type, X^2 (3, N = 45) = 4.12, p > .05. However, it is notable that all the HD IPAFs were female patients. Patients with hostile IPAFs were younger on average, in particular HD and the eldest patients were those with FS IPAFS, although the difference did not reach significance as determined by a one-way ANOVA, f (4,56)=1.59, p=0.189 (H18 and H19). Fewer patients with hostile IPAFs were taking medication than those with friendly IPAFs.

Three IPAFs were ‘unclassifiable’ (6.3%). In two cases (patients A and C), the level of overlap of the interpersonal problems across the IPAF types made selecting one cell impossible. In the third case, patient B was so resistant to the therapist’s attempts to present the IPAF that its validity was questionable. These patients were all female and all taking medication. Their baseline scores and IIP circumplex data are detailed in table XIX and figure XIII. IIP data was missing for patient C.

The last column of table XVIII describes a group of participants which was not assessed using the typology for one of three reasons, [i] because there were too few defining features of an IPAF (see chapter three) present (n=11); [ii] they attended less than four sessions of treatment (n=12) or [iii] the IPAF session was not recorded (n=2). These differ from those considered 'unclassifiable' in that there was no delineated IPAF discussion available within the transcript; they are not included in the total column. All but one of these patients came from the REDIT study and they were younger than the average patient. In table XX, the 'unclassifiable' and 'no IPAF' groups are collapsed together in order to allow comparison between the four IPAF groups and those for whom there was a departure from the DIT protocol. Table XXI presents the comparison of the four IPAF groups only.

Table XVIII: Demographics and IPAF Types

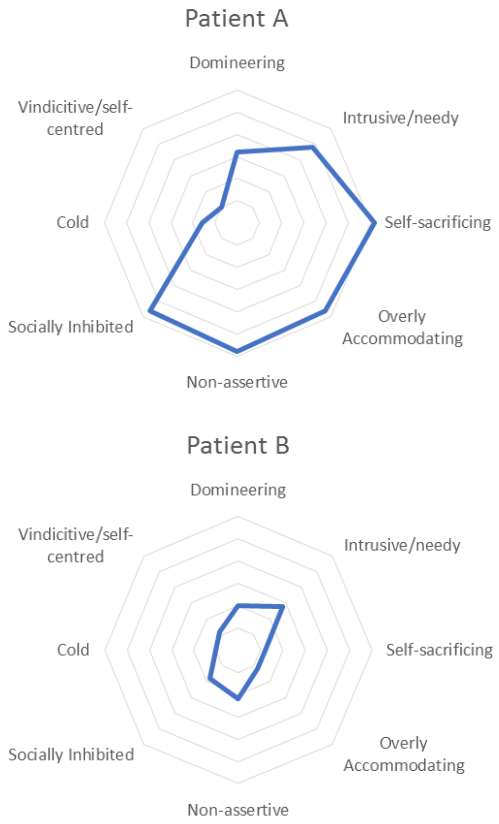
	HD	FD	HS	FS	Unclassi-fiable	Total	No IPAF
N (%)	5 (10.4)	5 (10.4)	23 (47.9)	12 (25.0)	3 (6.3)	48 (100)	25
Male/Female N (%)	0/5 (0/100)	3/2 (60/40)	8/15 (34.8/65.2)	4/8 (33.3/66.7)	0/3 0/100	15/33 (31.3/68.8)	9/16 (36/64)
Mean age (SD)	30.0 (11.1)	43.4 (12.7)	36.8 (11.7)	44.6 (14.8)	44.3 (12.8)	44.0 (15.7)	34.5 (11.1)
Medication %	40.0	60	43.5	50.0	100	50	40
Mean HRSD (SD)	18.4 (4.6)	17.2 (4.0)	18.1 (4.1)	19.1 (3.1)	19.0 (5.2)	18.4 (3.9)	18.4 (4.5)
Trial: REDIT/ REDIT-CT %	80/20	40/60	30/70	60/40	0/100	60/40	96/4

Table XIX: Baseline Scores for Three Patients with Unclassified IPAFs Compared to Total DIT Sample

	Baseline score			
Baseline measure	**Patient A**	**Patient B**	**Patient C**	**Total DIT sample Mean (SD) N=73**
HRSD	25	16	16	18.4(4.1)
IIP total	169	67	-	110.8(32.1)
IIP domineering	16	10	-	8.4(4.8)
IIP vindictive	5	6	-	10.0(5.0)
IIP cold	8	5	-	13.2(6.6)
IIP socially-inhibited	28	9	-	17.5(6.6)
IIP non-assertive	29	11	-	19.4(7.0)
IIP overly-accommodating	28	6	-	16.0(6.0)
IIP self-sacrificing	31	6	-	17.1(6.0)
IIP intrusive	24	14	-	10.0(6.3)
IIP Love	1.75	0.16	-	0.005(0.6)
IIP Dominance	-0.44	0.99	-	-0.02(0.8)
IIP Amplitude	1.81	0.99	-	0.9(0.5)
IIP angular displacement	345.8	89.1	-	182.1(104.1)
ECR-R avoidance	4.56	1.06	-	4.0(1.3
ECR-R anxiety	6.67	1.38	-	4.5(1.2)
BSI hostility subscale	1.2	1.4	-	1.0(0.7)

-data missing

Figure XIII: Circumplex Charts for Patients with 'Unclassified' IPAFs



4.4.2 Reliability

The typology was tested by a second rater who applied it to a stratified sample of 15 IPAFs. The inter-rater agreement for categories was 80%, kappa=0.676, p<0.001 which is considered 'good' agreement (Fleiss, Levin et al. 2003). There was good agreement for all four IPAF types between the two raters on the Likert ratings of how like each category the IPAFs were: HD κ = .633 (95% CI, .182 to 1.084), p < .01; HS κ = .510 (95% CI, .139 to .881), p < .05; FD κ = .625 (95% CI, .069 to .774), p = .01 and FS κ = .549 (95% CI, .276 to .822), p < .05.

4.4.3 Validity

The outcomes for the baseline hypotheses predictions are shown in Table XX (four IPAF types and no IPAF group) and table XXI (four IPAF types only). Levine's test was only violated in one case, BSI hostility for comparison of the four IPAF types, and consequently the X^2 statistic was reported. Only the IIP total reached statistical significance in the IPAF group comparison. However, several comparisons showed trends in the expected directions. Findings are summarised below alongside their relevant hypothesis.

H1 was accepted. The mean IIP total scores for submissive IPAFs was significantly higher than for the dominant ones, f (1,41)=5.47, p<0.05. IIP total was significantly different for the four IPAF groups, f(3, 39)=3.121, p<0.05. A post hoc Tukey test showed that FD IPAF group had significantly lower IIP total scores than both the FS and HS IPAF groups at p < .05; IIP total for the HD IPAF group was not significantly different from the other groups.

H2 was rejected.

H3 was rejected.

H4 was rejected.

H5 was rejected. However, of the IPAF groups, HS did score the highest on IIP socially inhibited.

H6 could be accepted. The mean IIP non-assertive subscale scores for submissive IPAFs was significantly higher than for the dominant ones, f (1,41)=3.91, p<0.05.

H7 was rejected.

H8 was rejected.

H9 was rejected.

H10 was rejected.

H11 was rejected.

H12 was accepted. There was no significant difference between the IPAF groups for IIP amplitude.

H13 was rejected, although there was a trend for the HD group scores to be higher for ECR-R avoidance than FS and FD.

H14 was rejected.

H15 was rejected. However HS and HD hostility scores were higher than FS and FD.

H16 was rejected.

The profile of the group of patients with no IPAF did not differ notably from the categorised patients, although IIP intrusive and BSI hostility were highest for this group. However, the baseline IIP circumplexes of the two patients with 'unclassifiable' IPAFs provide some interesting insight (figure XIII). Patient A was difficult to classify because there were too many different types of interpersonal problems described in the IPAF session to be narrowed down to one type. No one consistent pattern of relating emerged. And sure enough, on examination of the baseline IIP circumplex, spin is clearly apparent: there is notable variability across three of the four quadrants. There is low pulse, i.e. low variation in overall extremity of behaviour; indicating an individual who continually experiences a similar (in this case high) intensity of feeling across situations (Kuppens, Van Mechelen et al. 2007). Elevation is also high, as indicated by high scores on five subscales. There was very little information in Patient B's IPAF session from which to draw any conclusions as to the IPAF category. The patient said very little and seemed resistant to the therapist's attempts to present their take on the IPAF. Once again, this is apparent on examination of the circumplex, spin is notable across at least two quadrants. Elevation and pulse are low although this time the patient seems to experience low intensity of feeling across situations.

The multinomial regression model was statistically significant, $\chi^2 = 52.8$, $p < .05$. The model correctly classified 82.4% of IPAF types. While there were several significant predictors indicated in the model (ECR-R anxiety subscale, IIP vindictive subscale, IIP socially-inhibited subscale, IIP self-sacrificing subscale and IIP intrusive subscale), none were significant in a comparison of each IPAF category with the reference category (HS). While the histograms indicated relatively normally distributed data, multicollinearity was certainly an issue and most of the predictors had high VIF values.

Table XX: Differences between Baseline Scores for each IPAF Type and 'No IPAF' Group

	Baseline mean (SD)					F	p
Baseline measure	**HD (n=5)**	**FD (n=5)**	**FS (n=12)**	**HS (n=23)**	**No IPAF (n=28)**		
IIP total	111.2 (14.2)	83.6 (34.0)	120.4 (22.7)	116.4 (22.7)	112.9 (35.4)	1.599	0.186
IIP domineering	8.8 (3.9)	6.4 (5.2)	8.8 (5.7)	8.0 (4.6)	8.9 (5.1)	0.325	0.860
IIP vindictive	9.6 (6.8)	7.4 (3.7)	11.3 (5.3)	10.6 (4.7)	9.4 (5.1)	0.670	0.615
IIP cold	13.0 (5.7)	9.6 (5.3)	14.5 (7.6)	13.6 (6.4)	13.0 (7.0)	0.480	0.750
IIP socially-inhibited	16.6 (2.7)	13.0 (5.1)	16.7 (7.3)	19.1 (7.0)	17.5 (6.6)	0.998	0.416
IIP non-assertive	18.0 (3.3)	13.2 (9.5)	19.0 (7.8)	20.9 (6.0)	19.7 (7.1)	1.391	0.248
IIP overly-accommodating	17.6 (4.3)	12.6 (6.9)	15.7 (4.9)	17.4 (5.5)	15.2 (6.9)	0.934	0.450
IIP self-sacrificing	18.8 (4.5)	11.6 (5.9)	17.6 (5.2)	17.5 (5.1)	17.2 (7.2)	1.219	0.312
IIP intrusive	8.8 (6.0)	9.8 (7.3)	9.9 (7.7)	9.2 (5.9)	11.3 (6.0)	0.367	0.831
IIP love	0.17 (0.9)	0.01(0.6)	-0.09(0.6)	-0.03(0.6)	0.05 (0.7)	0.194	0.941
IIP dominance	-0.04(0.5)	0.26(0.9)	0.11(0.9)	-0.23(0.9)	0.06(0.8)	0.684	0.606
IIP amplitude	0.80(0.42)	0.93(0.35)	0.93(0.45)	0.92(0.55)	0.83(0.4)	0.188	0.944
IIP angle	245.3(96.4)	175.3(105.5)	130.9(99.4)	192.3(101.9)	184.1(107.7)	1.203	0.319
ECR-R avoidance	4.5 (0.8)	3.9 (2.5)	3.8 (1.4)	4.1 (1.1)	4.5 (1.2)	0.630	0.643
ECR-R anxiety	4.9 (0.9)	4.5 (1.7)	3.7 (1.6)	4.5 (1.1)	4.6 (1.4)	0.964	0.436
BSI hostility	1.1 (0.9)	0.9 (1.3)	0.9 (0.7)	0.8 (0.4)	1.3 (0.8)	1.211	0.318

Table XXI: Differences between Baseline Scores for the Four IPAF Types Only

	Baseline mean (SD)				Statistic	P
Baseline measure	**HD (n=5)**	**FD (n=5)**	**FS (n=12)**	**HS (n=23)**		
IIP total	111.2 (14.2)	83.6 (34.0)	120.4 (22.7)	116.4 (22.7)	F=3.121	0.037
IIP domineering	8.8 (3.9)	6.4 (5.2)	8.8 (5.7)	8.0 (4.6)	F=0.317	0.813
IIP vindictive	9.6 (6.8)	7.4 (3.7)	11.3 (5.3)	10.6 (4.7)	F=0.758	0.524
IIP cold	13.0 (5.7)	9.6 (5.3)	14.5 (7.6)	13.6 (6.4)	F=0.660	0.582
IIP socially-inhibited	16.6 (2.7)	13.0 (5.1)	16.7 (7.3)	19.1 (7.0)	F=1.324	0.280
IIP non-assertive	18.0 (3.3)	13.2 (9.5)	19.0 (7.8)	20.9 (6.0)	F=1.921	0.142
IIP overly-accommodating	17.6 (4.3)	12.6 (6.9)	15.7 (4.9)	17.4 (5.5)	F=1.236	0.309
IIP self-sacrificing	18.8 (4.5)	11.6 (5.9)	17.6 (5.2)	17.5 (5.1)	F=2.160	0.108
IIP intrusive	8.8 (6.0)	9.8 (7.3)	9.9 (7.7)	9.2 (5.9)	F=0.051	0.984
IIP Love	0.17 (0.9)	0.01(0.6)	-0.09(0.6)	-0.03(0.6)	F=0.213	0.887
IIP Dominance	-0.04(0.5)	0.26(0.9)	0.11(0.9)	-0.23(0.9)	F=0.683	0.567
IIP Amplitude	0.80(0.42)	0.93(0.35)	0.93(0.45)	0.92(0.55)	F=0.096	0.962
IIP angular displacement	245.3(96.4)	175.3(105.5)	130.9(99.4)	192.3(101.9)	F=1.676	0.188
ECR-R avoidance	4.5 (0.8)	3.9 (2.5)	3.8 (1.4)	4.1 (1.1)	F=0.407	0.749
ECR-R anxiety	4.9 (0.9)	4.5 (1.7)	3.7 (1.6)	4.5 (1.1)	F=1.245	0.310
BSI hostility subscale	1.1 (0.9)	0.9 (1.3)	0.9 (0.7)	0.8 (0.4)	X^2=1.076	0.783

4.5 DISCUSSION

The typology presented in chapter three was applied to the IPAFs in the REDIT and REDIT-CT studies for the treatment of depression, revealing data regarding their characteristics which could be relevant to the course of treatment and outcome. More IPAFs were characterised by problems which were submissive than dominant (35/48, 72.9%), in particular hostile-submissive (23/48 47.9%). These included problems socialising, expressing feelings, getting along with others, feeling excluded and lacking a sense of belonging. This is consistent with previous research findings that the predominant interpersonal style of depressed patients tends towards submissive and hostile. For example, the predominant interpersonal style of a sample of adult outpatients with MDD treated with cognitive therapy fell between social avoidance and non-assertiveness both before and after therapy (Renner, Jarrett et al. 2012) and depressed individuals often have a predominantly socially avoidant interpersonal profile (Barrett and Barber 2007; Girard, Wright et al. 2017; Gomez Penedo, Babl et al. 2020). A study of 988 psychiatric outpatients in Norway showed that a low degree of assertiveness (socially inhibited, non-assertive and overly accommodating) most commonly characterised the three most prevalent octants (Bjerke, Hansen et al. 2011). It also supports a growing body of literature indicating that patients with depressive disorder, in particular persistent depressive disorder, are more hostile and submissive than patients with episodic depression and healthy controls (e.g. Constantino, Manber et al. 2008; Ley, Helbig-Lang et al. 2011; Wiersma, van Oppen et al. 2011; Cain, Ansell et al. 2012; grosse Holtforth, Altenstein et al. 2012; Quilty, Mainland et al. 2013; Grosse Holtforth, Altenstein et al. 2014). As noted in chapter two, a number of other studies have reported that social avoidance and non-assertiveness seem to be particularly problematic in depression (Ball, Otto et al. 1994; Vittengl, Clark et al. 2003; Puschner, Kraft et al. 2004; Heinonen and Pos 2020). It may also be the case that patients with a more submissive interpersonal style are more likely to seek psychotherapy, or to be selected as suitable for DIT, than those with a more dominant style. Therapeutic alliance has been generally regarded as having a positive effect on treatment outcome (e.g.Gurtman 2004, see chapter two) and interpersonal problems characterised as submissive specifically were predictive of a positive helping alliance (Muran, Segal et al. 1994), so it is plausible that submissive patients might be expected to respond more readily to the therapist and to the goals of DIT. A number of studies have indicated that patients with problems classified specifically as friendly-submissive are most likely to benefit from psychotherapy (e.g. Horowitz, Rosenberg et al. 1993; Davies-Osterkamp, Straws et

al. 1996; Gurtman 1996; Grosse Holtforth, Altenstein et al. 2014). Chapter five will investigate whether this was the case in the DIT studies.

The relatively lower frequency of the dominant IPAF types is unsurprising; octant scores for intrusive within the friendly-dominant quadrant have been reported to be the lowest of octant scale scores for both the normal population and patients with MDD (Barrett and Barber 2007) and this study supported this, hence a fewer number of patients with IPAFs predominantly characterised by problems in this domain would be expected. Problems of over-control (e.g. manipulative and aggressive behaviour, difficulty with authority) are relatively less common in both patient and nonpatient samples as compared to problems with social detachment and self-effacement (e.g. Maling, Gurtman et al. 1995). Patients with a hostile-dominant style (for example that typical for anti-social personality disorder) reportedly have poorer outcomes in psychotherapy (Gerstley, McClellan et al. 1989). They have been considered less suitable for psychotherapy due to poorer impulse control and their reluctance to establish close relationships (Gurtman 1996) and it is less likely that they would have been selected for DIT. Indeed, personality disorder was an exclusion for these trials of DIT. It may also be that these patients were more likely to drop out of treatment prior to the IPAF session- a diagnosis of any personality disorder has been found to increase the likelihood of early termination (Barrett, Chua et al. 2009; Swift and Greenberg 2012).

Similarities were noted between the IPAFs which the IPAF typology was unable to classify and the baseline IIP circumplexes for these patients. Baseline IIP data was available for two of the three 'unclassifiable' IPAFs and both demonstrated profiles consistent with being difficult to classify. Both indicated high spin around the interpersonal circumplex (Moskowitz and Zuroff 2004), suggesting extensive variation in interpersonal problems across situations (see chapter one) which would make it difficult to define an individual's IPAF. For both of these patients, it was impossible to select one set of quadrant descriptors because so many different interpersonal sub-themes featured. Pulse also appeared to be low in both cases, patient A with high intensity of feelings and patient B with low. This is also consistent with a likelihood of difficulty in classifying the IPAF because the patient is not able to distinguish between the intensity of their feelings across situations- they are nearly always high or nearly always low in most interpersonal scenarios- making it hard for them to select a particular problem area. High spin and low pulse therefore may be early indicators of patients for whom constructing the IPAF will be challenging.

There was no support for the hypothesis that IPAF classification would follow a 'gender axis'(e.g. Lippa 1995), whereby males tend towards the hostile-dominant pole and females more towards the friendly-submissive pole. In fact the only HD IPAFs identified were female. The gender incongruency hypothesis (Blatt 2004) might shed light on these findings. This hypothesis suggests that males and females who don't meet the expectations and values of western society by adopting the expected patterns of relating- i.e. higher levels of dependency for women (characterised by a greater need for care and fear of abandonment) and higher levels of self-criticism for men (characterised by a need for control and fear of criticism) are at greater risk for depression. If there is gender incongruence, in particular high self-criticism in women, there may be an associated risk of clinical depression (Luyten, Sabbe et al. 2007). Perhaps these introjective interpersonal patterns involving negative self-evaluation may have resulted in women with HD IPAF types being more vulnerable to depression than men, for whom this interpersonal style is more socially acceptable and hence less problematic.

The results provide some tentative support for previous findings that younger people tend towards more hostile-dominant interpersonal problems and older people more friendly-submissive problems (Horowitz, Alden et al. 2000; Akyunus, Gencoz et al. 2019). Despite not reaching statistical significance, there was a difference of 14.6 years between the mean ages of the patients in these two IPAF groups. Further testing in a larger sample is required.

As predicted, no significant differences were found between the amplitude scores for the different IPAF types, supporting previous research indicating that rigidity is common to all quadrants and unrelated to the location of interpersonal problems within the circumplex (Gurtman and Balakrishnan 1998; McCarthy, Connolly-Gibbons et al. 2008).

The study reports the first results regarding the differences between patients for whom an IPAF is identified and those for whom it is not. Chapter three reported the characteristics of patients for whom an IPAF was not identifiable, despite them having attended at least four sessions of DIT (n=11): they were more likely to be male, recruited into the REDIT trial and identify as black/Asian/other ethnicity. In this chapter, all patients without an IPAF were considered together, i.e. those who discontinued treatment prior to the IPAF session, those for whom an IPAF could not

be identified within seven sessions, those for whom the IPAF session was not recorded and those IPAFs which were unclassifiable (n=28). Taken together, the differences between these patients and those for whom an IPAF was identified on the demographics or baseline data are less apparent, other than being recruited into the REDIT trial (n=24), younger (by a mean of 10 years compared to the average patient) and having higher scores for hostility. It is possible that these patients were more difficult to establish rapport with and therefore the IPAF formulation was more challenging. It may be that adherence to DIT by the therapists at the sites in this first trial was weaker, which may be due to a relatively large population of people for whom DIT was difficult to deliver (e.g. chaotic personal circumstances). At the time of recruitment, there was substantial service restructuring at both of the REDIT sites which resulted in funding cuts for service provision and a notable increase in the complexity of the average referral. Perhaps the fact that the REDIT trial preceded the REDIT-CT trial was also relevant. As DIT is a relatively new treatment model, the therapists in the later trial were likely to have more experience in delivering the model.

In terms of reliability, the IPAF typology indicated good agreement between two raters on a sample of IPAFs on both the category selected and the degree of similarity between the IPAF and each category. Further research assessing the reliability in a clinical context between DIT practitioners on an independent sample of IPAFs is required in order to draw any further conclusions.

With regards to validity, analyses yielded mixed findings. Patients with submissive IPAFs were found to have significantly higher IIP total (distress) scores than those with dominant IPAFs, scored significantly higher on the IIP non-assertive subscale and those with HS IPAFs scored highest on the social-inhibited subscale (although this latter difference did not reach significance). Patients with FD IPAFs had significantly lower levels of interpersonal distress than those with HS and FS IPAFs. IIP amplitude was consistent across IPAF types as predicted. Other baseline measure scoring patterns were in the predicted direction despite not reaching significance which may again point to problems with statistical power: ECR-R attachment avoidance was higher in the HD group than in the FS and FD groups and BSI hostility was higher in HS and HD than FS and FD. It is difficult to draw conclusions as to why there were so few significant differences between the groups on the baseline measures. Overall, the distribution of IPAF types across the four quadrants of the circumplex is as one would expect: submissive interpersonal styles are commonly reported to be more depressed than dominant ones (e.g. Pearson, Watkins et al.

2010; Bird, Tarsia et al. 2018), more likely to be considered suitable for psychotherapy (e.g. Filak, Abeles et al. 1986; Horowitz, Rosenberg et al. 1988; Gurtman 1996; Huber, Henrich et al. 2007) and more likely to form a positive alliance with the therapist (e.g. Muran, Segal et al. 1994; Gurtman 1996; Gomez Penedo, Zilcha-Mano et al. 2019). However, the sample being dominated by HS IPAFs lead to difficulty in detecting significant differences between the IPAF types- unequal groups were unavoidable and no more than a handful of dominant IPAFs could be expected in a sample of this size. This contributed to a lack of statistical power to detect group differences, despite medium to large differences in terms of effect sizes for the trends in the expected directions. With a larger sample, Gurtman (1996) was able to select only those patients who's IIP total score and vector length were above the median, which would have allowed inclusion of only the most 'typeable' patient profiles. This was not possible in this study. IIP baseline measures may just not be a good indicator of the IPAF category arrived at after 4 sessions of treatment. Rather than this being an indicator of poor validity for the IPAF typology, it may be a demonstration of its value: four sessions of treatment and the therapist's contribution to the patient's understanding of their problems helps them to determine a more accurate picture of their interpersonal behaviour, resulting in a different interpersonal problem quadrant being selected to that determined by the IIP scores prior to treatment. The difference between baseline measures and the IPAF represents the discrepancy between what the patient reports about their interpersonal problems prior to treatment and how they conceptualise them collaboratively with the therapist. As discussed in chapter three, the element of defence in the IPAF may be responsible in part for a discrepancy between IIP scores and IPAF type. The IIP lacks the detail which the IPAF typology is able to capture because it cannot distinguish between what an individual is defending against and the defensive behaviour. For example, an individual scoring highly on friendly, submissive IIP subscales may actually be defending against their underlying feelings of hostility. The IPAF arrived upon collaboratively after several sessions of treatment should better capture their true self-other representation which may lie in a different quadrant from their more salient defensive behaviours represented by their IIP-C angular displacement.

4.6 LIMITATIONS

The obvious limitations of this study are the small sample, the fact that the majority of IPAFs fell into one category and the lack of an independent sample of IPAFs on which to test the typology. Ideally, a larger sample would be double rated by independent

clinical raters to maximise the external validity of the measure. Due to the relatively small amount of available data from DIT studies and the scope of this thesis, it was not possible to test the measure in this way at this time. The test re-test reliability of the typology might also have been determined, through an additional application to the same IPAFs at a later date. Measuring its stability over time would have allowed a better understanding of the typology's external reliability.

4.7 CONCLUSIONS

In conclusion, it was possible to apply a typology of IPAFs based on the IIP and obtain good reliability using a second rater in a sample of patients seeking help for depression in a primary care setting. The majority of IPAFs were classified as hostile-submissive as would be expected based on what is theorised (although not exclusively) about the predominant interpersonal problems of people with depression and successful outcomes from psychotherapy. Patients with submissive IPAFs had greater interpersonal distress than those with dominant IPAFs. Few significant differences were found between the baseline measures for the typology classifications, making it difficult to draw conclusions regarding its validity. Patients with an unclassified IPAF tended to be younger, more hostile and recruited from an earlier trial than those without. The next chapter will further investigate outcomes in DIT for particular IPAF classifications and for those patients without IPAFs, and the predictive value of baseline measures in treatment outcome.

CHAPTER 5

Interpersonal Problems as Predictors of Outcome in DIT

5.1 CHAPTER OVERVIEW

Chapter five investigates the relationship between interpersonal problems and treatment outcome after 16 weeks of DIT. Theoretical explanations and empirical evidence for interpersonal predictors of response to psychotherapy are discussed and the evidence surrounding the typical assumption that the more disagreeable interpersonal problems associated with hostile-dominance are less likely to be conducive to good treatment response than problems that are friendly-submissive in nature. Three analyses were conducted. Firstly, pre to post treatment changes in Inventory of Interpersonal Problems (IIP) scores over the course of DIT were reported and considered alongside the results of the meta-analysis of IIP scores in psychotherapy reported in chapter two. Secondly, differences in outcome were investigated for the IPAF types identified by the typology in chapter four. Thirdly, the IIP components were investigated to determine their contribution to outcome of treatment as measured by the change in the Hamilton Rating Scale for Depression (HRSD). The independent variables included IIP total distress score, IIP amplitude, love and dominance dimension scores, IIP subscale scores and IIP angle of displacement.

As with the meta-analysis reported in chapter two, the reduction in pre to post DIT IIP elevation scores was significant with a medium effect size. IIP amplitude scores also fell with a small effect size but there was no change in Love and Dominance scores or angle of displacement. The biggest treatment gains in the IIP subscale scores were on the domineering, vindictive, cold, socially inhibited and non-assertive subscales, the more hostile side of the circumplex. The IPAF typology did not discriminate statistically between patients with regards to pre to post treatment scores and IPAF type was not a significant predictor of treatment response. However, the group of patients with dominant IPAFs (in particular HD) had the greatest improvement in interpersonal problems and the highest rates of response and remission and the groups with submissive IPAFs had the fewest responders. While baseline IIP scores were not strong predictors of outcome in the sample, higher scores on general interpersonal distress and on the affiliative subscales were correlated with higher post

treatment depression scores. Methodological, theoretical and clinical explanations for these findings are discussed. The limitations of the study are considered, including sample size, range and severity of interpersonal problems and the scope of the IIP as a self-report measure. In particular, the lack of statistical power for the analysis of IPAF types limit the conclusions that can be drawn. Unlike common assumptions regarding the types of problems most suited to brief psychotherapy, these findings may indicate that for DIT, patients with higher levels of interpersonal distress and problems associated with being too accommodating and too self-sacrificing at the expense of their own needs may have poorer outcomes.

5.2 INTRODUCTION

Despite being the target of several treatment modalities and a known reason for seeking psychotherapy (Horowitz, Rosenberg et al. 1993), there remains a lack of consensus on the role of interpersonal problems in the treatment of depression. The strong focus on interpersonal issues within psychodynamic theory and its numerous treatment modalities contrasts with a surprising lack of research studies directly investigating the role of interpersonal problems in psychodynamic treatment (Luyten, Blatt et al. 2012). Moreover, as reported in chapter two, thirty years after the IIP was first developed, the potential predictive qualities regarding outcome of treatment are still elusive. The types of interpersonal problems which are most suited to treatment is an underexplored area which could be invaluable in directing the scarce resource of NHS psychotherapy appropriately, but this decision is not always made with the benefit of a scientific body of evidence, as summed up by Lemma, Target and Fonagy (2011): “if there is an art to psychotherapy then surely this is most relevant to the assessment for suitability because we are short on science in this domain”. There is little research regarding changes in interpersonal measures over treatment, less still on their role in outcome prediction.

The school of interpersonal theory expounded by Horowitz et al (Wiggins 1982; Kiesler 1983; Horowitz and Vitkus 1986; Orford 1986) proposed that interpersonal behaviours range along the two axes of affiliation and dominance and that these behaviours are reciprocal (see chapter one), i.e. that one person’s actions will invite a particular type of reaction in the other (Carson 1969). On the affiliative dimension, complimentary behaviours are similar- friendly behaviour will invite friendly behaviour and hostile will invite hostile, and on the dominance dimension, complimentary behaviours are reciprocal- dominant behaviour will invite submissive and submissive

dominant. Accordingly, in a treatment setting, there is likely to be enactment of complimentary roles within the therapeutic relationship, so for example overcontrolling patients may pull submissiveness from their therapist, detached patients a corresponding detachment and self-effacing patients would invite a more friendly dominant reaction. The role of the therapist is to deliberately adopt "anticomplementary" stances which will guide the patient towards more adaptive interpersonal behaviour (Maling, Gurtman et al. 1995). The theory postulates that friendly-submissive interpersonal styles will respond more favourably than hostile-dominant styles in brief psychotherapeutic treatment: being more agreeable and open to change and more able to maintain a positive therapeutic relationship seem likely to facilitate a better outcome. The generally more disagreeable traits associated with hostile-dominance, such as distrust, manipulativeness, difficulty with intimacy and aggressive control-seeking are unlikely to be conducive to the therapeutic process (Gurtman 1996). This has been demonstrated in both longer term and shorter-term treatments. In a study of 63 participants undergoing psychoanalytic psychotherapy for depression over a mean duration of 32 months, the overly accommodating and non-assertive subscales were found to be almost twice as amenable to change as the domineering and cold subscales (Huber, Henrich et al. 2007). A study of 125 patients with a primary diagnosis of MDD randomised to either CBT and IPT over 16 to 20 weeks found that in both groups, higher pre-treatment dominance scores were associated with smaller changes in depression scores (Quilty, Mainland et al. 2013). Interpersonal behaviours which inhibit therapeutic alliance, generally regarded as an important factor in a successful outcome (Orlinsky, Grawe et al. 1994), particularly as rated by the patient (Orlinsky, Ronnestad et al. 2004), are likely indicators of poorer outcomes in brief psychodynamic psychotherapy.

Early investigations of the IIP as a predictor of outcome reported that in brief outpatient psychotherapy (20 sessions), patients with problems with assertiveness had a more favourable outcome than those with problems of intimacy (Horowitz, Rosenberg et al. 1988). Problems in the 'exploitable' octant improved most frequently (over 90% showed improvement); less so those problems in the 'dominating', 'vindictive' and 'cold' octants (less than 30% showed improvement) (Horowitz, Rosenberg et al. 1993). The inability to relax control over another and tolerate the intimacy of a therapeutic relationship associated with problems of hostile-dominance may result in resistance and negative transference in brief psychodynamic therapy, leading to a poorer treatment outcome (Horowitz, Rosenberg et al. 1992).

Several later studies supported these conclusions, indicating that patients with problems classified specifically as friendly-submissive are most likely to benefit from psychotherapy. For example, Filak, Abeles et al. (1986) investigated 55 outpatients treated with an average of 24 sessions of weekly psychotherapy and found that patients rated as successfully treated (by themselves and the therapist), were significantly more affiliative before and after therapy. Seventy-two percent of patients assessed to be affiliative pre-treatment had successful outcomes, compared to 38% of those characterized as hostile. No significant differences were found between outcome groups for dominance scores pre or post treatment. In a study of 194 inpatients receiving group psychoanalytically oriented therapy in three to five sessions per week over a mean period of 117 days, patients considered 'cured' or 'improved' had the highest initial scores on the overly-submissive (HI) IIP subscale, overly-competitive subscale (BC) and the overly-introverted subscale (FG) (Davies-Osterkamp, Straws et al. 1996). Following outpatient psychotherapy, patients categorised as having more affiliative problem styles (friendly-submissive and to a lesser extent friendly-dominant) were considered by their therapists generally to have a better outcome than those with a hostile-dominant problem style (Gurtman 1996). Friendly-submissive problems have been found to be associated with more positive ratings of early working alliance (Muran, Segal et al. 1994; Gomez Penedo, Zilcha-Mano et al. 2019). Higher scores on the affiliative dimension (being overly nurturant) were a positive predictor of treatment outcome in a study of 180 outpatients receiving short term psychodynamic psychotherapy over a mean period of 3.4 months (Schauenburg , Kuda et al. 2000), as were lower scores on dominance subscales in short-term group psychotherapy (Davies-Osterkamp, Straws et al. 1996) and in patients treated with CBT for GAD (Borkovec, Newman et al. 2002).

Likewise, attachment and interpersonal patterns characterised as cold and vindictive or dismissive and avoidant have reportedly less successful outcomes in short term psychotherapy (Strauss and Hess 1993; Chiesa and Fonagy 2007; Blatt, Zuroff et al. 2010). These introjective interpersonal styles are typical of the left side of the IIP circumplex and there is empirical evidence demonstrating poorer outcome for patients who score more highly on these subscales. For example, in a sample of 127 patients receiving four weeks of multi-modal inpatient treatment including psychodynamic individual treatment and group treatment, the baseline overly cold and socially avoidant subscales of the IIP-D had the strongest negative correlation with outcome (Beutel, Hoflich et al. 2005). Luyten, Lowyck et al. (2010) reported a negative correlation between cold and vindictive IIP subscales and outcome following

multi-modal hospital-based treatment which included group psychodynamic psychotherapy over the course of a year. These subscales also showed little improvement over the treatment period. Patients with these interpersonal features may find it particularly difficult to engage with therapy or to form a positive working alliance with the therapist due to higher levels of aggression and their use of avoidant strategies (Chiesa and Fonagy 2007). Additionally, hostile patient behaviour is likely to illicit a counter-hostile response from the therapist which may be managed to varying degrees (Safran and Muran 1996). A systematic review of the differences between patients with chronic and non-chronic depression (Kohler, Chrysanthou et al. 2019) reported that patients with chronic depression had a more submissive and hostile interpersonal style (Constantino, Manber et al. 2008; Ley, Helbig-Lang et al. 2011; Wiersma, van Oppen et al. 2011) and demonstrated more behavioural and emotional avoidance (Bagby, Parker et al. 1994). In particular, hostile-dominant interpersonal styles have been thought to be associated with poor outcome. Patients with hostile-dominant interpersonal problems have been found to have poorer alliance early in counselling treatment (Krieg and Tracey 2016) and mid-treatment in supportive-expressive and cognitive therapy (Connolly Gibbons, Crits-Christoph et al. 2003). Gurtman (1996) reported that therapists rated hostile-dominant patients less suitable for psychodynamic psychotherapy due to their more impulsive, present-oriented interpersonal styles and reluctance to establish close relationships, whereas friendly-submissive patients were generally seen as more suitable due to better impulse control and a more reflective attitude. Patients with a diagnosis of borderline personality disorder, which can be located in the hostile-dominant quadrant in the case of the autonomous subtype (Leihener, Wagner et al. 2003), have been found to have poorer outcomes and an increased risk of early termination of treatment than those without this diagnosis (Clarkin and Levy 2004; Bohart and Wade 2013).

In addition to therapeutic alliance and perhaps a mediator of it, another prognostic indicator of a successful outcome of psychodynamic psychotherapy is the extent to which the patient is psychologically minded (e.g. Appelbaum 1973; Bloch 1979; McCallum, Piper et al. 2003), i.e. the extent to which they are able to identify the internal experiences of the other and link them to their emotions and defences. Similarly, mentalization, the mainly pre-conscious interpretation of human behaviours in the self and others as motivated by inner mental states (Fonagy, Gergely et al. 2002; Allen 2003) has been considered to be related to treatment response. Mentalization is quantified by assessing reflective functioning (RF), a measure of the psychological processes underlying the ability to imagine and think about one's own

and others' mental states in order to construct realistic models for interpreting behaviours, thoughts and feelings (Fonagy, Luyten et al. 2016). Studies investigating RF as a predictor of outcome have found positive correlations between baseline RF and treatment outcome (Muller, Kaufhold et al. 2006; Ekeblad, Falkenstrom et al. 2016; Boldrini, Nazzaro et al. 2018) and therapeutic alliance (Taubner, Kessler et al. 2011; Ekeblad, Falkenstrom et al. 2016). Evidence regarding the relationship between interpersonal problem types and mentalization specifically is scarce, however, patients with a more affiliative interpersonal style have been found to communicate more clearly about others than those with a more hostile style (Horowitz, Rosenberg et al. 1992). Patients with more friendly-submissive problems were also found to be more open to change brought about by self-exploration (Orlinsky, Grawe et al. 1994). Deficits in mentalization are considered a key feature of borderline personality disorder (BPD) (Bateman and Fonagy 2010) and if BPD is indeed located in the hostile-dominant quadrant of the IIP, individuals with interpersonal problems in this quadrant might also be expected to have poorer treatment outcomes. Given that impairments in mentalization ability are also associated with insecure attachment (Fonagy, Steele et al. 1991; Fonagy and Bateman 2006; Taubner, Hörz et al. 2013) weight is added to the theory that patients with an interpersonal style which falls in the left side of the circumplex will have poorer outcomes in psychotherapy.

However, despite what the theory predicts, not all the literature points exclusively to a friendly-submissive profile being the most conducive to a successful outcome. In a study of 307 patients receiving outpatient psychotherapy, problems in being overly controlling as measured by the IIP were found to be most amenable to change and self-effacing problems least amenable (Maling, Gurtman et al. 1995). Likewise, dominant patients profited most from short-term psychodynamic psychotherapy in a large study of 1513 inpatients (Dinger, Strack et al. 2007) and patients with more severe levels of vindictiveness had higher improvement rates in longer-term psychotherapy delivered to 156 outpatients with personality disorder (Vinnars, Barber et al. 2007). Higher pre-treatment dominance predicted lower depressive symptom scores mid and post treatment in a study of 523 out-patients with MDD treated with cognitive therapy over three months (Renner, Jarrett et al. 2012). Low affiliation pre-treatment had a positive effect on outcome in long term psychoanalytic psychotherapy over two years (Puschner, Kraft et al. 2004). Others have found no predictive effects of IIP subscales (Ruiz, Pincus et al. 2004; Grande, Dilg et al. 2009), however these

studies were small (n=42 completers and n=59 respectively) and both had significantly mixed patient diagnoses and treatment modalities.

Some authors concede that these conflicting results are difficult to reconcile, concluding that methodological differences in assessing improvement or the effects of inpatient vs outpatient settings or group vs individual therapy may have been implicated. Length of treatment may also play a role, with cold-vindictive and avoidant patients reportedly having better outcomes over longer periods of treatment compared to briefer ones due to the requirement of more time to build a positive working alliance with the therapist (Blatt, Zuroff et al. 2010; Salzer, Leibing et al. 2010; Vermote, Lowyck et al. 2010). Of course, variation in treatment modality is also a likely a contributor to the lack of consensus in the predictive value of pre-treatment IIP scores. Treatments focusing on improving interpersonal behaviour may have very different impacts on IIP scores than those focused merely on reducing depressive symptoms. Another explanation may be that those patients who are more submissive and exploitable are motivated more by gaining the therapist's approval than they are to make real change in their interpersonal world. Their excessive compliance and fear of displeasing others keeps them locked into rigid and maladaptive patterns of relating, leading to fewer treatment gains (Boswell, Constantino et al. 2016). Given the strong theoretical explanation for better treatment outcomes among more affiliative and submissive patients, the short term treatment period of DIT and its emphasis on working alliance for a positive outcome, it is expected that those patients classified as friendly and specifically friendly submissive will have a significantly better treatment response to DIT than hostile, specifically hostile-dominant patients in this study.

As reported in chapter two, overall interpersonal distress (elevation) and rigidity of interpersonal style (amplitude) have also been considered predictors of response to treatment, thought the research leaves very little to conclude. While psycho-therapeutic treatment for depression has been shown to reduce elevation (McFarquhar, Luyten et al. 2018), evidence of the effect of pre-treatment elevation on outcome is weak. In a sample of 199 out-patients, no effect of pre-treatment IIP elevation was found on outcome as measured by the BDI for patients treated with individual CBT, however higher pre-treatment elevation was associated with higher attrition and poorer outcome for patients treated with group CBT (McEvoy, Burgess et al. 2014). In longer term treatment over two years with either psychodynamic, psychoanalytic or cognitive behavioural therapy in a sample of 622 outpatients, IIP

elevation was not predictive of the rate of symptom change during treatment (Puschner, Kraft et al. 2004). For multimodal treatment (cognitive, psychodynamic, behavioural, family systems, or experiential therapy) over a mean of 11 sessions, high pre-treatment elevation was inversely correlated with Mental Health Index (MHI) scores at the end of treatment (Ruiz, Pincus et al. 2004). In short term cognitive therapy delivered to a sample of 523 patients with MDD, higher pre-treatment elevation predicted worse outcomes as measured by HRSD (Renner, Jarrett et al. 2012). This was also the case in long term psychodynamic psychotherapy (n=36 outpatients) and psychoanalytic psychotherapy (n=113 outpatients) (Leichsenring, Biskup et al. 2005; Berghout, Zevalkink et al. 2012).

Amplitude would be expected to be implicated in treatment response: Sidney Blatt considered rigidity the hallmark of all pathology (Luyten, Campbell et al. 2019). Individuals who are inflexible and lack the ability to adapt within their social environments, thereby relying on limited templates for relating, may be more difficult to reach in therapy. The very limited reporting of amplitude scores in depression outcome studies indicate that higher pre-treatment scores are associated with poorer outcomes on the MHI (Ruiz, Pincus et al. 2004) and change in amplitude is associated with change in depression scores (Quilty, Mainland et al. 2013). However, amplitude has also been found to have no relationship with outcome after the effects of elevation are accounted for in the analysis (Gurtman and Balakrishnan 1998).

In addition to predictors of outcome, this study will also investigate previously underreported pre to post changes in IIP dimensions. Previous empirical evidence for changes in interpersonal problems over the course of psychotherapeutic treatment for depression was reviewed in chapter two. The meta-analysis revealed a large effect size for reduction in elevation scores (g=0.62, 95% CI=0.48-0.76), and a similar result is expected in this study. However evidence for changes in the other IIP dimensions is inconclusive. With regards to Love, no significant change over the course of treatment was found in three studies (Vittengl, Clark et al. 2004; Renner, Jarrett et al. 2012; Quilty, Mainland et al. 2013), a fourth reported a small significant decrease, $p<0.05$, d=0.09 (Holtforth, Lutz et al. 2006) and a fifth reported a significant increase, $p<0.001$, d=0.32 (Altenstein-Yamanaka, Zimmermann et al. 2017). Three reported a significant increase in Dominance scores (Holtforth, Lutz et al. 2006; Renner, Jarrett et al. 2012; Quilty, Mainland et al. 2013) and two no change (Vittengl, Clark et al. 2004; Altenstein-Yamanaka, Zimmermann et al. 2017). A recent randomised study investigated dependency and self-criticism over the course of treatment for

depression with either medication, placebo pill or supportive-expressive therapy (SET)(Chui, Zilcha-Mano et al. 2016). Dependency is described as a tendency towards loneliness, fear or abandonment and a need to be close to others: it is externally directed and concerns interpersonal relatedness (or Love). Self-criticism on the other hand is internally directed and concerns self-definition (or Dominance): it is a tendency to feel failure and guilt that threaten self-worth and competence (Luyten and Blatt 2013). Using the Depressive Experiences Questionnaire to measure dependency and self-criticism, the study supported the findings of chapter two with regards to Love: dependency remained unchanged following SET. However, self-criticism decreased over treatment in all groups. Higher pre-treatment scores for dependency, but not self-criticism, predicted poor response in all groups and greater reduction in self-criticism was associated with greater reduction in depressive symptoms. Blatt (Blatt 2008; Luyten and Blatt 2013) described the two underlying dimensions of personality development as anaclitic- interpersonal relatedness (Love), concerning the development of a mature and empathetic relationship with significant others, and introjective- concerning self-definition (dominance), the development of a realistic and positive sense of self identity. If efforts to maintain a balance between these polarities become distorted and there is an excessive emphasis on one or the other, psychopathology may result (Luyten and Blatt 2013). For example, individuals with an emphasis on the dominating anaclitic pole may experiences problems relating to others in close relationships, whereas individuals with problems with a more introjective emphasis may have difficulty developing a sense of self. Blatt (2002; 2004) considered effective psychotherapy to result in the reactivation of the previously disrupted balance between the two polarities, whereby anaclitic individuals develop more agency and assertiveness and introjective individuals are more invested in relationships with others.

While this might suggest that Love and Dominance scores would change over treatment, perhaps the lack of empirical evidence of such change indicates that fundamental interpersonal style doesn't radically alter but becomes more finely balanced. A small multi-case study of 14 patients classified half of the patients' pre-treatment personality configuration as anaclitic and half as introjective (Werbart and Forsstrom 2014). Following treatment with psychoanalysis four times per week over a mean treatment period of 61 months, characteristic personality style was maintained, but was modified and less rigid. Considering this very small evidence base as a whole, it is hypothesises that Love scores will not significantly alter following

treatment with DIT, but that Dominance may increase or decrease depending on where the individual's emphasis lies along the polarity.

Studies reporting changes in IIP subscales generally reported significant improvements on all 8 scales, with larger effect sizes on subscales on the affiliative side of the IIP-C (Vittengl, Clark et al. 2003; Watson, Gordon et al. 2003; Leichsenring, Biskup et al. 2005; Holtforth, Lutz et al. 2006; Huber, Henrich et al. 2007; Haase, Frommer et al. 2008; Johansson 2010; Renner, Jarrett et al. 2012; Zimmermann, Loffler-Stastka et al. 2014). Likewise, significant reductions are expected on all IIP subscales following DIT.

Little has been reported regarding change in amplitude scores over treatment. Salzer, Leibing et al. (2010) reported medium to large effect sizes for a reduction in amplitude scores following LTPP over a mean of 3.5 years for a sample of 121 patients classified as either interpersonally submissive, socially avoidant or exploitable. Amplitude scores also fell for more dominant patients classified as overly nurturant, but with a small effect size, suggesting their rigid interpersonal style was less amenable to change. A randomised trial of 125 outpatients with MDD found significant reductions in amplitude in both those patients treated with CBT and IPT for 16-20 weeks (Quilty, Mainland et al. 2013). In accordance with the two polarities model, successful treatment should require a more balanced interpersonal style, requiring a less rigid reliance on one polarity and the expense of the other. Therefore, a reduction in amplitude is predicted following DIT.

As far as can be determined from its limited reporting, the angle of displacement seems to hover around the friendly-submissive quadrant both pre and post treatment. In Renner, Jarret el al's (2012) study of cognitive therapy for MDD, no significant change was found for angle of displacement; the predominant interpersonal profile fell between social avoidance (225°) and non-assertiveness (270°) both pre and post treatment. Similarly, Vittengl, Clark et al. (2003) located the angle of displacement in the non-assertive octant both pre (275.7°) and post (273.4°) cognitive therapy. In a study of longer term, integrative form of psychotherapy, the mean angle pre-treatment was 310.5° (too exploitable) and the mean angle posttreatment was 327.6° (overly nurturant) (Holtforth, Lutz et al. 2006). Given the lack of evidence for change in angular displacement over treatment and the assumption that the aim of treatment is to reduce interpersonal distress rather than alter the nature of the distress, no change in angle of displacement is predicted following DIT. However, an association between

the angle of displacement at baseline and outcome is expected given that type of interpersonal problem is investigated as a predictor of outcome.

5.2.1 The Present Study

Knowing the kinds of interpersonal problems which a patient brings to treatment is integral to interpersonal models because it informs the therapeutic relationship and the strategies likely to be most effective in bringing about change. The IIP is a well-established, reliable method by which to measure this and psychotherapeutic interventions for depression generally result in a reduction in total interpersonal distress (McFarquhar, Luyten et al. 2018). But how interpersonal problems change over the course of treatment and whether baseline dimensional scores or interpersonal categories are useful in predicting outcome is not clearly understood. Despite a well described theory, the empirical evidence as to whether certain types of problems are more suited to particular types of psychotherapeutic models is both scarce and conflicting.

By categorising the IPAFs and investigating their relationship with outcome, it is possible to relate the patient and the therapist's collaborative process of coming to a joint understanding of the nature of the patient's interpersonal problems to outcome of treatment.

The aim of this chapter is twofold. Firstly to add to the body of research summarised in chapter two regarding changes in IIP scores over the course of a time limited, short term psychodynamic psychotherapy for depression. Secondly, to investigate the predictive qualities of the IIP and IPAF types in determining the likely outcome of treatment. The following hypotheses regarding changes in IIP scores were tested:

H1: There will be a significant reduction in IIP total score (elevation) pre to post treatment with DIT.
H2: Patients randomised to DIT will have a larger reduction in IIP total (elevation) pre to post treatment than patients randomised to LIT.
H3: There will be a significant reduction in each of the IIP subscale scores pre to post treatment with DIT.
H4: There will be a significant change in IIP dominance scores pre to post treatment with DIT.

H5: There will be a significant reduction in IIP amplitude pre to post treatment with DIT.
H6: there will be no significant difference between IIP angular displacement pre to post treatment with DIT.

Additionally, the following hypothesis regarding treatment outcome was tested:
H7: There will be a significant difference between IPAF types on pre to post change scores on the primary and secondary outcome measures, controlling for pre-treatment score: patients with friendly-submissive IPAFs will have significantly better outcomes than those with other IPAF types.

It should be noted for hypothesis 7 that due to the unequal numbers of IPAF types identified in chapter four, this analysis can only be considered exploratory and any significant findings tentative.

No significant change in IIP love scores pre to post treatment with DIT was expected. The degree to which patient age, patient gender, pre-treatment IIP total, pre-treatment IIP subscale scores, pre-treatment amplitude and pre-treatment IIP angle of displacement predict treatment outcome was assessed with correlations and a regression model.

5.3 METHOD

5.3.1 Participants

Data was obtained from pilot studies of Dynamic Interpersonal Therapy (DIT) in two randomised studies, vs low intensity treatment (LIT) (REDIT) or vs cognitive behavioural therapy (REDIT-CT) (Fonagy, Lemma et al. 2020). Inclusion criteria for these studies were a current diagnosis of MDD with or without dysthymic disorder according to DSM-IV criteria, HRSD score above 14, PHQ score above 10 and a confirmed need for high-intensity treatment. Exclusion criteria were current psychotic symptoms, bipolar disorder, current use of antipsychotic medication, complex Personality Disorder, historic or current self-injury/parasuicide, historic or current eating disorder, current excessive use of drugs/alcohol, Non-English speaking, participation in another depression clinical trial within the last year where subject has received CBT, previous unsuccessful CBT treatment, clinical contra-indication to

short-term psychotherapy, evidence of pervasive use of help, highly unstable or insecure life arrangements (e.g. domestic violence).

Table XXII shows the demographics for the REDIT trial for both the DIT group and the LIT group. The demographics were broadly similar: mean age was 37.1 years in DIT and 37.2 years in the LIT. Males and female distribution was similar with around twice as many females than males in both groups. Approximately half of each group were taking medication. Both groups were majority white ethnicity and single. Distribution of incomes was similar, with the highest number of patients in both groups stating their annual household income was between £10,000 and 30,000.

Table XXIII shows the demographics for the collapsed sample comprising all patients randomised to DIT in both studies. The majority of patients were recruited from the REDIT trial (72.6%). There were around twice as many females than males and the mean age was 37.1 years. Again the majority of patients reported their ethnicity as white (74%), marital status as single (42.5%) and their annual household income to be in the £10,000 to £20,000 bracket. Of the 73 DIT participants, 12 discontinued the treatment before the IPAF had been formulated (<4 sessions). Of the remaining 61, IPAF features were identified for 48 participants.

Table XXII: Demographics for the REDIT Trial vs. LIT

		Treatment Group	
		DIT N=53	**LIT N=54**
Demographic		**N(%)**	**N(%)**
Gender	Male	15 (28.3)	19 (35.2)
	Female	38 (71.7)	35 (64.8)
Age	Mean (SD)	37.1 (12.5)	37.2 (10.0)
Current medication	Yes	25 (47.2)	27 (50.0)
	No	21 (39.6)	22 (40.7)
	Unknown	7 (13.2)	5 (9.3)
Ethnicity	White	34 (64.2)	31 (57.4)

	Black	6 (11.3)	6 (11.1)
	Asian	6 (11.3)	9 (16.7)
	Mixed	2 (3.8)	3 (5.6)
	Other/unknown	5 (9.4)	5 (9.3)
Marital Status	Single	25 (47.2)	32 (59.2)
	Married/living together	12 (22.6)	15 (27.8)
	Widowed	2 (3.8)	0
	Divorced/separated	10 (18.9)	4 (7.4)
	unknown	4 (7.5)	3 (5.6)
Income	<£10,000	8 (35.4)	7 (13.0)
	£10,000-30,000	18 (40.0)	17 (31.5)
	£30,000-50,000	6 (11.3)	10 (18.5)
	>£50,000	7 (13.2)	6 (11.1)
	Unknown	14 (26.4)	16 (29.6)

Table XXIII: Demographics for the Collapsed Sample, All Patients Randomised to DIT

Demographic		**DIT N=73** **N(%)**
Trial	REDIT	53 (72.6)
	REDIT-CT	20 (27.4)
Gender	Male	24 (32.9)
	Female	49 (67.1)
Age	Mean (SD)	37.1 (12.4)
Current medication	Yes	34 (46.6)
	No	31 (42.5)
	unknown	8 (11.0)
Ethnicity	White	54 (74.0)
	Black	6 (8.2)

	Asian	6 (8.2)
	Mixed	2 (2.7)
	Other/unknown	5 (6.8)
Marital Status	Single	31 (42.5)
	Married/living together	20 (27.4)
	Divorced/separated	14 (19.2)
	Other/unknown	6 (8.2)
Income	<£10,000	12 (16.4)
	£10,000-30,000	24 (32.9)
	£30,000-50,000	10 (13.7)
	>£50,000	12 (16.4)
	Unknown	15 (20.5)

5.3.2 Treatment

Patients randomised to DIT received individual weekly one hour sessions over 16 weeks in an adult out-patient setting within IAPT services. DIT was delivered by accredited therapists who had completed DIT training. Patients randomised to low LIT received weekly guided self-help over the phone. LIT was delivered by Psychological Wellbeing Practitioners. Patients randomised to LIT who had not recovered at the end of the 16 week trial period were then offered high intensity treatment within IAPT.

5.3.3 Measures

Interpersonal problems were measured using the IIP-64 (Horowitz, Alden et al. 2000), including elevation, the eight subscales, love and dominance dimensions, amplitude and the angle of displacement. Elevation is the mean score within the profile and represents the individual's overall level of distress. The subscale scores each measure a particular group of interpersonal problems (see chapter one for a more detailed description) and love and dominance scores represent the position which the individual occupies on the two continuums: cold-affiliative and dominant-submissive. Amplitude gives an indication of the rigidity of the interpersonal problems and the angle of displacement the predominant theme of maladjustment.

Primary treatment outcome was assessed using two inventories for the assessment of depression severity: the Hamilton Rating Scale for Depression (HRSD) (Hamilton 1980) and the Beck Depression Inventory (BDI-II) (Beck, Steer et al. 1996). IPAFs were categorised using the prototype IPAF typology formulated in chapter three.

Three other secondary outcome measures were also assessed. The Global Severity Index (GSI) of the Brief Symptom Inventory (BSI) (Derogatis and Melisaratos 1983) is a weighted frequency score based on the sum of the individual's rating for each symptom. The BSI is a self-report, 52 item scale designed to measure levels of psychological distress on the following dimensions: somatization, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobic anxiety, paranoid ideation and psychoticism. The patient rates the distress associated with each symptom or problem on a five-point Likert scale ranging from 'not at all' to 'extremely'. A higher score indicates greater distress. The revised Social Adjustment Scale (Weissman, Prusoff et al. 1978) is a 24-item self-report measure of social functioning and role performance in seven major areas over the past two weeks: at work, in the home, socially, relationships with extended family, marital relationship, parental relationships and as a member of the family unit. The questions in each area fall into four categories: the individual's performance at expected tasks, the amount of friction with others, detailed aspects of personal relations and inner feelings and satisfaction. Questions are rated using a five-point scale which can be summed to produce an overall score and a higher score indicates more severe impairment. The EQ-5D (EuroQol Group 1990) is a self-report measure of generic health status along five dimensions: mobility, self-care, usual activities, pain/discomfort, and anxiety/depression. The visual analogue scale (VAS) was used in the study which asks the rater to mark their health status on that day on a 20cm vertical scale ranging from 0 to 100. Zero corresponds to "the worst health you can imagine", and 100 corresponds to "the best health you can imagine".

5.3.4 Statistical Analysis

Where relevant pre to post data was missing, cases could not be included in the analysis. Where analysis involved the IPAF, only participants for whom an IPAF was identified could be included: of the 73 DIT participants, 12 discontinued the treatment before the IPAF had been formulated (<4 sessions). Of the remaining 61, IPAF features were identified for 48 participants.

5.3.4.1 *Pre to Post Treatment IIP Scores*

Any outliers in IIP scores were removed after examination of the box plots.
To test hypotheses 1 [there will be a significant reduction in IIP total score (elevation) pre to post treatment with DIT] and hypothesis 2 [Patients randomised to DIT will have a larger reduction in IIP total (elevation) pre to post treatment than patients randomised to LIT], t-tests were conducted using the REDIT data only for pre to post treatment IIP elevation (mean distress) scores for each group, DIT (n=53) and LIT (n=54). Effect sizes (ESs) were calculated using Cohen's d (Cohen 1977), where 0.2 is considered a small ES, 0.5 a moderate ES and 0.8 a large ES.

Then, to test hypotheses 3 to 6 [there will be a significant change in each IIP subscale score, dominance score and amplitude scores but no significant change in love score or angular displacement pre to post DIT] all patient's randomised to DIT across both trials (REDIT, n=53 and REDIT-CT, n=20) were collapsed and paired samples t-tests were used to compare the IIP elevation, subscale scores, love and dominance dimensions, amplitude and IIP angle of displacement pre to post treatment period for all patients and then by IPAF type.

5.3.4.2 *Treatment Outcome by IPAF Type*

To test hypothesis 7 [there will be a significant difference between IPAF types on pre to post change scores on the primary and secondary outcome measures, controlling for pre-treatment score: patients with friendly-submissive IPAFs will have significantly better outcomes than those with other IPAF types], ANCOVA was used to firstly to compare pre to post change scores on the studies' primary outcome measures- HRSD, BDI and IIP total- between IPAF groups, controlling for pre-treatment score. ANCOVA was then used to compare pre to post change scores of the secondary outcomes- GSI, SAS total and EQ-5D VAS, again controlling for pre-treatment score. Pre to post treatment effect sizes and confidence intervals were also calculated using Hedge's g (Hedges 1981) (selected due to the small group sizes) where 0.2 corresponds to a small ES, 0.5 a medium ES and 0.8 a large ES. There was insufficient follow up data available to measure the pre to follow up effects between groups.

Pre to post remission and response were also calculated for each IPAF group on the HRSD-17. The same method of calculation of clinically significant change (Jacobson

and Truax 1991) employed by Fonagy, Lemma et al (2020) was also used for this study as the same sample was used. The baseline standard deviation on the HRSD was used along with Cronbach's α estimates of reliability from meta-analyses. Reliable improvement or deterioration were defined using a cut off of a pre to post treatment change score of 4.81 on the HRSD and no reliable change comprised change scores of between -4.81 and 4.81. Clinically significant improvement (remission) was defined using a validated clinical cut-off score of ≤7 (Zimmerman, Martinez et al. 2013). Response was defined as ≥50% reduction in pre to post scores (Bobo, Angleró et al. 2016).

5.3.4.3 *Predictors of Treatment Outcome*

A multiple regression analysis was used to predict the HRSD percentage pre to post treatment change score for the DIT sample. Independent variables were age, gender, pre-treatment IIP total, pre-treatment IIP subscale scores, pre-treatment amplitude and pre-treatment IIP angle of displacement.

Additionally, the Pearson product moment correlations were calculated between interpersonal problems at baseline and depression scores at baseline, at 8 weeks, at the end of treatment and at 52 weeks for the DIT sample.

5.4 RESULTS

5.4.1 Pre to Post DIT Treatment IIP Scores

Hypotheses 1 and 2 were accepted: an examination of the REDIT data only (DIT and LIT groups, pre to post total IIP elevation) revealed a significant reduction in IIP elevation scores for the DIT group between baseline and end of treatment with a medium effect size, $t=2.791$ ($df=33$), $p<0.01$, $d=0.6$. There was no significant change in the LIT group, $t=1.903$ ($df=26$), $p=0.068$, $d=0.3$.

Tables XXIV and XXV show the pre to post treatment IIP scores. Differences were calculated for all the active DIT patients, each of the IPAF types and those with no IPAF. For all the DIT patients across both trials (valid n=49; pre or post IIP data missing for 24 participants), there was a significant reduction in IIP elevation, $t=3.932$ ($df=49$), $p<0.001$, with a medium effect size (Cohen's $d=0.52$) further confirming hypothesis 1. Hypothesis 3 was partially accepted: there were also significant

reductions on six of the eight subscales: domineering ($p<0.05$), vindictive ($p<0.005$), cold ($p<0.005$), socially inhibited ($p<0.005$), non-assertive ($p<0.005$) and overly accommodating ($p<0.05$). A similar pattern was found for reductions in IIP scores for patients with a HS IPAF type, but no significant differences were found for other types. For those with no IPAF, there were no significant reductions on any of the subscales. No significant differences were found pre to post treatment in any of the groups for the intrusive subscale. Hypothesis 4 was rejected: no significant difference between pre and post DIT scores on the dominance dimension was detected. Hypothesis 5 regarding amplitude was accepted, there was a significant pre to post DIT reduction, $t=2.621$ ($df=46$), $p<0.05$ with a small effect size (Cohen's $d=0.29$). The FS group only had a significant reduction in amplitude ($p<0.05$). No significant difference was detected between pre and post DIT scores on the love dimension or the angle of displacement (hypothesis 6). A small effect size was found for reduction IIP total scores in the LIT patients, ($d=0.19$).

Figures XIV to XIX illustrate the pre to post IIP scores on a circumplex model. Individual models are included for all the DIT patients, patients with no IPAF and each of the four IPAF types. The blue lines indicate the mean pre-treatment subscale mean scores (raw score/number of items (8)) and the red lines the post treatment scores. Significant reductions are indicated by green data points. These models provide an opportunity to compare an independent raters assessment of the patients' IPAFs using the IPAF typology with the patients' self-reports of their interpersonal problems using the IIP64. It is notable that all the models have a broadly similar shape both pre and post treatment: flatter in the dominant quadrants and elevation mostly concentrated in the submissive quadrants. None of the IPAF groups are reporting many interpersonal problems associated with being cold, vindictive, self-centred or dominant. Looking at the DIT patients as a group (figure XIV), a submissive profile is noted both pre and post and the significant reductions in IIP subscale scores pre to post treatment are indicated. The patients with no IPAF (figure XV) look fairly typical of the whole DIT sample- pre to post treatment IIP score reductions (non-significant) are apparent on most subscales, the highest being on the non-assertive and self-sacrificing subscales. The HD IPAF (figure XVI) group have the clearest reductions on all subscales compared to other groups, despite not reaching significance. However, the IIP indicates the highest mean subscales scores in the FS quadrant, not in the HD quadrant as would have been expected. There is also a noteworthy 'trough' in the FD quadrant for these patients which is not apparent for any of the other groups. As expected, the circumplex model for the HS IPAF group (figure XVII)

has peaks of elevation on the non-assertive and socially-inhibited subscales. Significant reductions on subscales are indicated, except for socially-inhibited and intrusive. The most elevation is apparent in this model (see also table XXIV), suggesting that this was the IPAF group with the most general distress due to interpersonal problems. The flattening is again noted in the dominant quadrants, with elevation concentrated in the submissive quadrants. The model for the FD IPAF group (figure XVIII) is also very flat in the dominant quadrants, indicating that patients with a FD IPAF did not particularly report problems of dominance in their baseline IIP. While the shape of the model is similar to the entire DIT group, there is lower elevation in the profile. Almost no improvement is apparent pre to post DIT in the FD quadrant. The FS IPAF group model (figure XIX) has peaks as would be expected in the non-assertive and self-sacrificing subscales. It was the only model indicating an increase in pre to post treatment scores- on the overly-accommodating and dominance subscales.

5.4.2 Treatment Outcome by IPAF Type

Figure XX shows the ESs and confidence intervals for the change scores of the primary treatment outcome measures of each of the IPAF types. For HRSD, 20.5% of data was missing post treatment and for BDI, 9.6% of data was missing at baseline and 31.5% post treatment. Improvement was noted with large ES for all groups for the two depression measures, in particular HD, d=1.42 for HRSD change score and d=2.53 for BDI change score. Medium ES were observed for the IIP change scores for all groups except FD which showed almost no change.

Figure XXI shows ESs and confidence intervals for the change scores of the secondary outcomes for each IPAF type. For GSI, 27.5% of data was missing at baseline, 41.1% post treatment. For SAS, 23.2% of data was missing at baseline and 39.7% post treatment and for the EQ-5D, 19.2% at baseline and 39.7% post treatment. Improvement was noted in all groups with large ESs for GSI and SAS. For the EQ-5D, improvement ES was small for the dominant IPAF groups and the HS group, but large for the FS group.

A one-way ANCOVA using post treatment score as the dependent variable and baseline score as the covariate revealed no significant difference between IPAF groups for HRSD ($f(4,49)=0.262$, $p>0.05$), BDI($f(4,39)=0.062$, $p>0.05$) or IIP total ($f(4,43)=0.483$, $p>0.05$). Neither did a one-way ANCOVA reveal a significant

difference between IPAF groups for the secondary outcomes: GSI (f(4,35)=0.271, p>0.05), SAS total (f(4,33)=1.01, p>0.05) and EQ-5D VAS (f(4,37)=1.444, p>0.05). Hypothesis 7 was rejected.

Table XXVI reports the HRSD means at baseline, mid treatment and end of treatment by IPAF group and also the percentage of patients in each group for whom scores indicated response, remission, improvement, no change and deterioration in HRSD pre to post scores. Patients with dominant IPAFs had better rates of response than the patients with submissive IPAFs: 4/5 (80%) for HD and 3/5 (60%) for FD compared to 6/12 (50%) for FS and 10/23 (43.5%) for HS. They also had better rates of remission: 3/5 (60%) for HD and FD compared to 6/12 (50%) for FS and 10/23 (43.5%) for HS. Patients with HS IPAFs had the poorest rates of all the IPAF types on response (10/23, 43.5%), remission (9/23, 39.1%), improvement (12/23, 52.2%) and no change (9/23, 39.1%). Two IPAF types included patients who had deteriorated: HD, 1/5 (20%) and FS, 2/12 (16.7%), although these findings have to be interpreted with caution given small number of patients in these categories. When the rates of patients with no change or deterioration were collapsed together, HS had almost twice the percentage of deterioration of the other IPAF types. Compared to those with an IPAF classification, the group of patients with no IPAF classification had consistently lower rates of response (7/28, 25%), remission (6/28, 21.4%) and improvement (10/28, 35.7%). Again, caution must be observed given the small numbers of patients.

5.4.3 Predictors of Treatment Outcome

A multiple regression was run to predict percentage HRSD change score in the DIT sample from age, gender, pre-treatment IIP total, pre-treatment IIP subscale scores, pre-treatment amplitude and pre-treatment IIP angle of displacement. There was no statistically significantly prediction, $F(12, 48) = 0.785$, $p > 0.05$, $R^2 = .207$.

Table XXVII reports the correlations between baseline IIP total, subscales, dimensions, amplitude and angle of displacement and depression scores at baseline, end of treatment and at the 52 week follow up as measured by the HRSD for the DIT sample. At baseline, the IIP total and the overly-accommodating and self-sacrificing subscales were significantly and moderately positively correlated with HRSD at baseline ($p<0.01$) and these correlations were maintained at eight weeks and at end of treatment. At eight weeks, the non-assertive subscale also became significantly

moderately correlated but this was not maintained at the end of treatment. Baseline IIP total, overly accommodating and self-sacrificing subscales were still moderately correlated with HRSD at end of treatment ($p<0.05$). At the 52 week follow up, no significant correlations were found with the baseline measures, although there were several trends.

Table XXIV: Pre to Post Treatment IIP Scores for All DIT Patients and by IPAF Type

	Pre to Post Treatment IIP Means (SD): Total and Subscales								
	IIP total	**Domineering**	**Vindictive**	**Cold**	**Socially Inhibited**	**Non-Assertive**	**Overly Accommod-ating**	**Self-sacrificing**	**Intrusive**
All DIT (n=49)	112.1 (28.7)-94.5 (35.0)***	8.0(4.4)-6.6(5.0)*	9.8(5.1)-7.6(4.0)*	13.0(6.7)-10.5(6.0)**	17.5(6.6)-14.9(7.0)**	19.7(6.7)-16.9(7.1)**	16.3(6.0)-14.3(7.5)*	17.0(6.0)-15.8(6.6)	9.0(6.0)-8.2(5.0)
HD type (n=5)	111.2(14.2)-84.5(43.9)	8.8(3.9)-6.8(4.8)	9.6(6.8)-6.2(4.1)	13.0(5.7)-9.8(6.6)	16.6(2.7)-12.4(4.0)	18.0(3.3)-14.6(8.8)	17.6(4.3)-12.4(10.3)	18.8(4.5)-14.2(9.9)	6.3(2.2)-3.9(1.3)
FD type (n=3)	96.0(27.7)-80.6(38.3)	6.3(6.5)-5.7(5.5)	8.3(2.9)-5.3(3.5)	12.3(4.6)-10.6(6.6)	15.7(5.0)-14.0(7.2)	17.3(10.0)-14.3(9.7)	15.0(7.0)-11.0(7.0)	13.7(6.4)-12.7(5.9)	7.3(3.2)-7.0(3.6)
FS type (n=8)	115.9(23.3)-107.5(31.4)	8.2(4.0)-9.4(5.8)	10.4(5.0)-8.3(3.7)	12.9(7.5)-9.9(6.1)	15.9(6.8)-13.3(6.9)	19.5(7.6)-18.5(5.2)	15.2(5.1)-16.3(7.0)	17.1(5.6)-14.8(8.0)	8.9(7.1)-8.7(5.9)
HS type (n=21)	117.8(21.7)-100.0(29.3)**	8.2(4.7)-5.9(5.3)*	10.6(4.8)-7.9(3.5)*	13.9(6.7)-11.6(5.0)*	19.8(6.9)-17.2(6.9)	21.1(5.7)-18.1(6.6)*	17.5(5.4)-15.3(6.7)*	17.6(5.1)-15.1(5.7)*	9.0(6.0)-8.9(4.9)
No ipaf (n=12)	103.8(44.2)-83.8(42.2)	7.7(4.6)-6.0(4.1)	8.0(5.7)-7.6(5.1)	11.7(7.8)-9.3(7.7)	15.4(6.7)-13.4(8.1)	18.6(8.3)-15.3(8.1)	14.8(8.1)-12.7(8.3)	15.8(8.2)-13.9(6.0)	10.2(7.0)-8.5(5.3)

***P<0.05, **P<0.005, ***P<0.001**

Table XXV: Pre to Post Treatment Scores for IIP Love, Dominance, Elevation, Amplitude and Angle of Displacement

	Pre to Post Treatment IIP Means (SD)				
	IIP LOVE	**IIP DOMINANCE**	**IIP Elevation**	**IIP Amplitude**	**IIP Angle of Displacement**
All DIT (n=49)	-0.0064(0.7) 0.1002	-0.1172(0.8) -0.0826(0.6)	1.74(0.48)- 1.46(0.56)***	0.89(0.48) 0.76(0.42)*	184.92(104.3) 185.65(111.5)
HD type (n=5)	0.1702(0.9) 0.1889(1.1)	-0.0435(0.4) 0.0474(0.4)	1.73(0.22)- 1.32(0.68)	0.80(0.42) 0.85(0.69)	245.27(96.4) 154.75(110.1)
FD type (n=3)	-0.1281(0.6) -0.0047(0.3)	-0.1329(1.0) -0.0820(0.7)	1.50(0.43)- 1.25(0.59)	0.92(0.35) 0.59(0.16)	235.2 (91.1) 231.6(103.6)
FS type (n=8)	0.0295(0.7) 0.2665(0.4)	-0.0018(0.6) 0.0180(0.5)	1.81(0.36)- 1.67(0.49)	0.78(0.35) 0.55(0.35)*	122.2(109.1) 153.9(125.2)
HS type (n=21)	-0.0569(0.6) 0.0823(0.6)	-0.2540(0.9) -0.2571(0.7)	1.84(0.33)- 1.56(0.45)**	0.95(0.56) 0.86(0.4)	188.3(100.4) 212.4(108.1)
No ipaf (n=11)	0.0167(0.8) 0.0018(0.7)	0.0307(0.6) 0.1182(0.5)	1.57(0.65) 1.26(0.50)	0.91(0.5) 0.74(0.44)	183.0(107.2) 159.2(113.8)

***P<0.05, *P<0.005, ***P<0.001**

Figure XIV: Pre to Post DIT IIP Circumplex Model for All DIT Patients

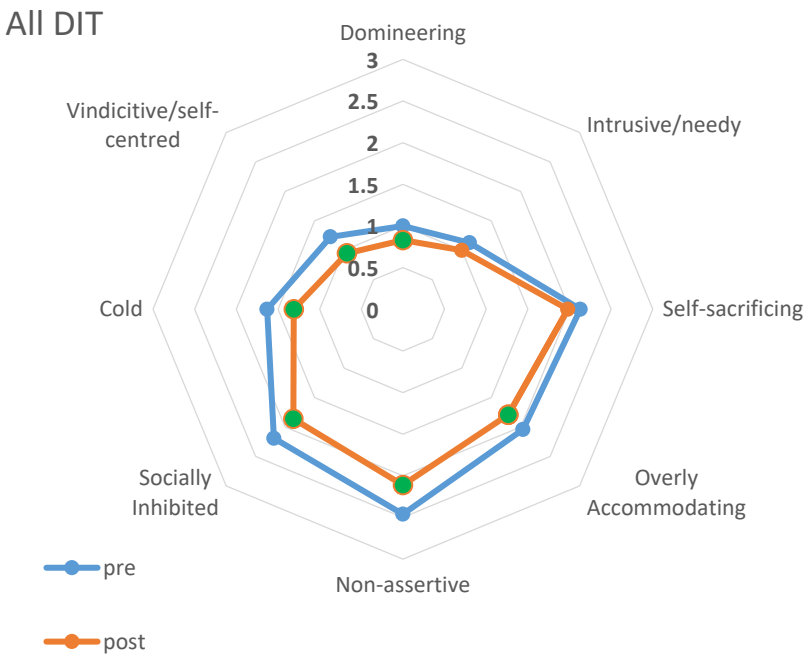
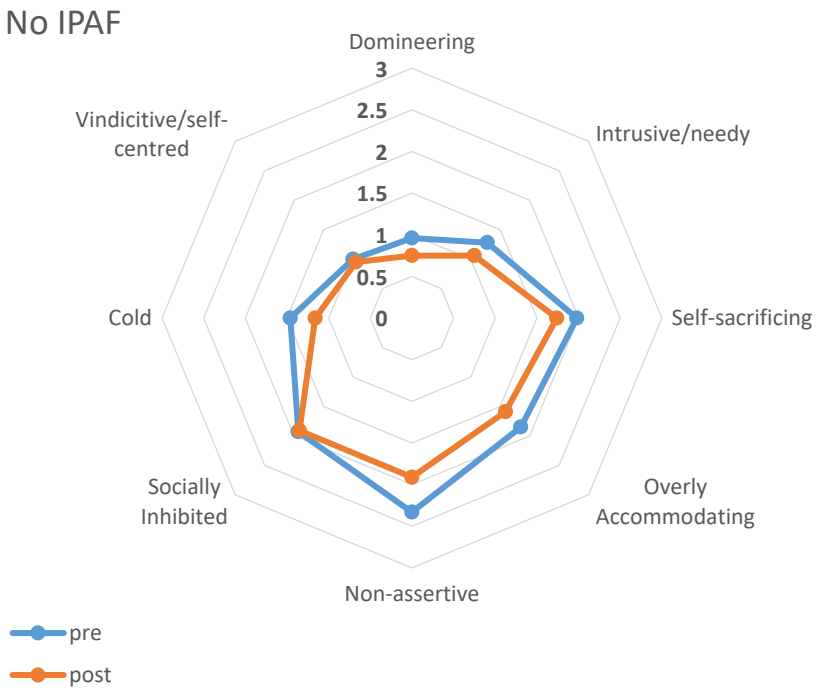


Figure XV: Pre to Post DIT Circumplex Model for Patients with no IPAFs



Green data points indicate statistically significant reductions in pre to post IIP subscale scores.

Figure XVI: Pre to Post DIT Circumplex Model for Patients with HD IPAFs

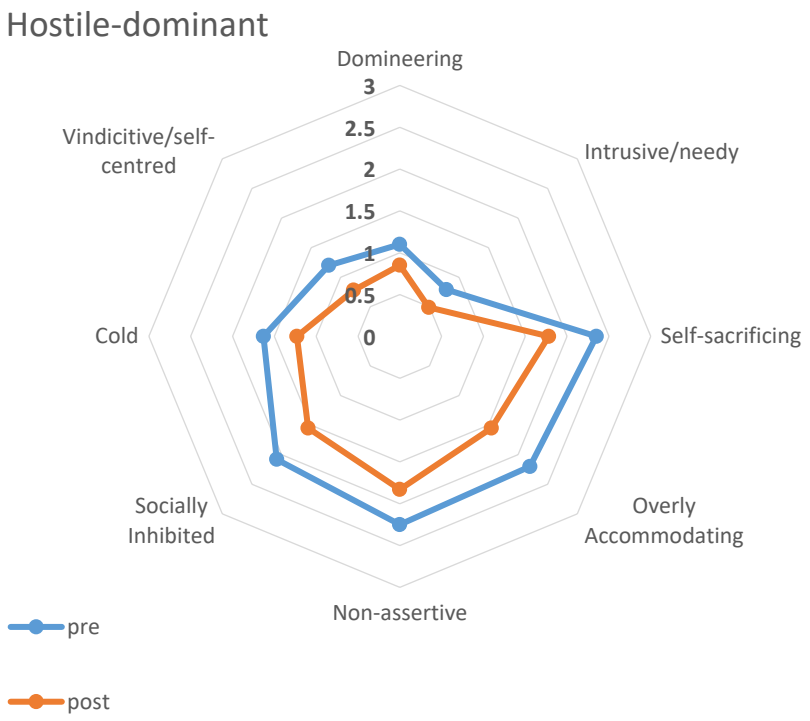


Figure XVII: Pre to Post DIT Circumplex Model for Patients with HS IPAFs

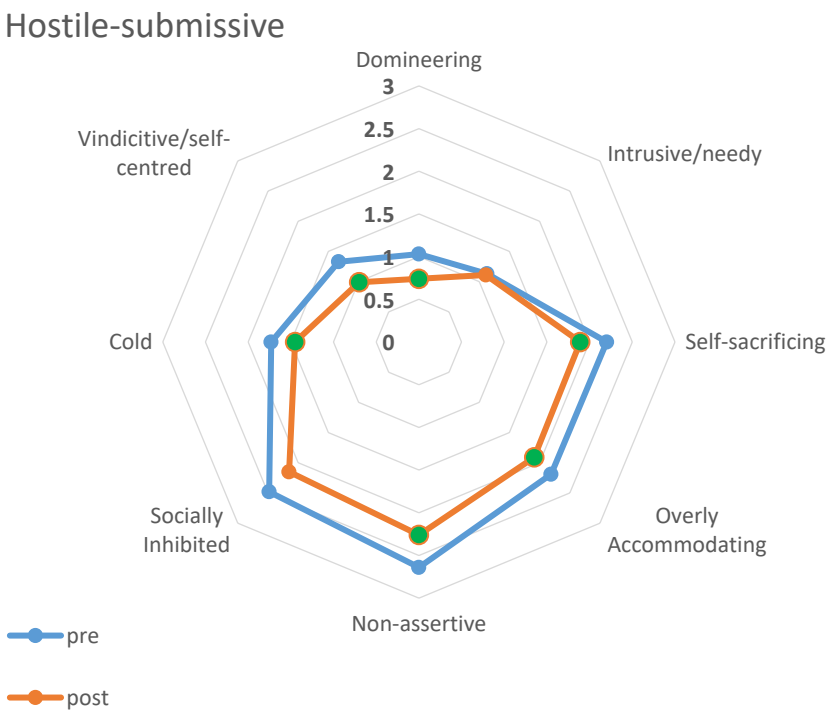


Figure XVIII: Pre to Post DIT Circumplex Model for Patients with FD IPAFs

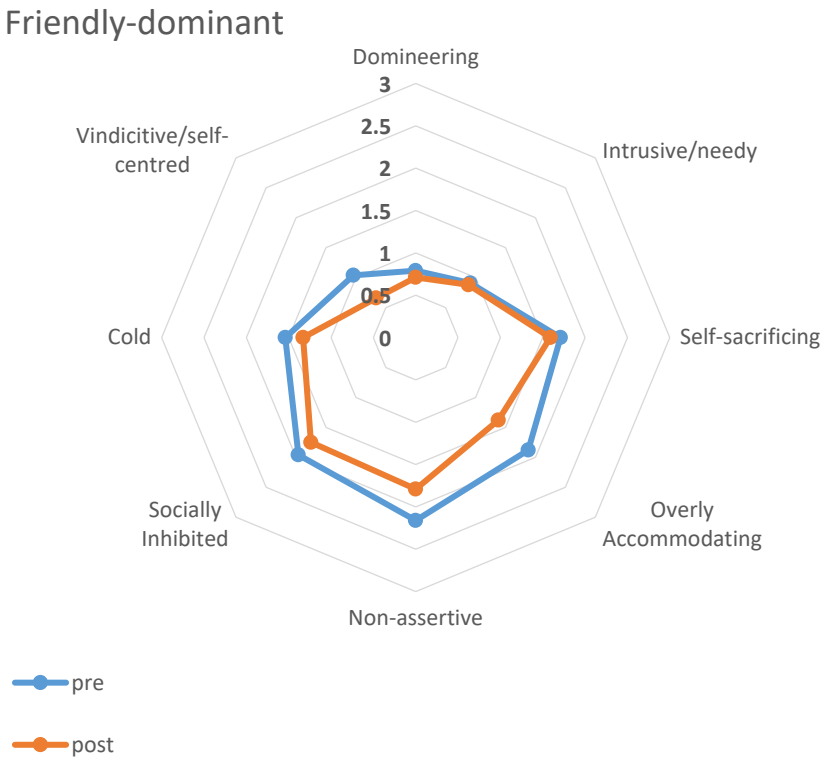


Figure XIX: Pre to Post DIT Circumplex Model for Patients with FS IPAFs

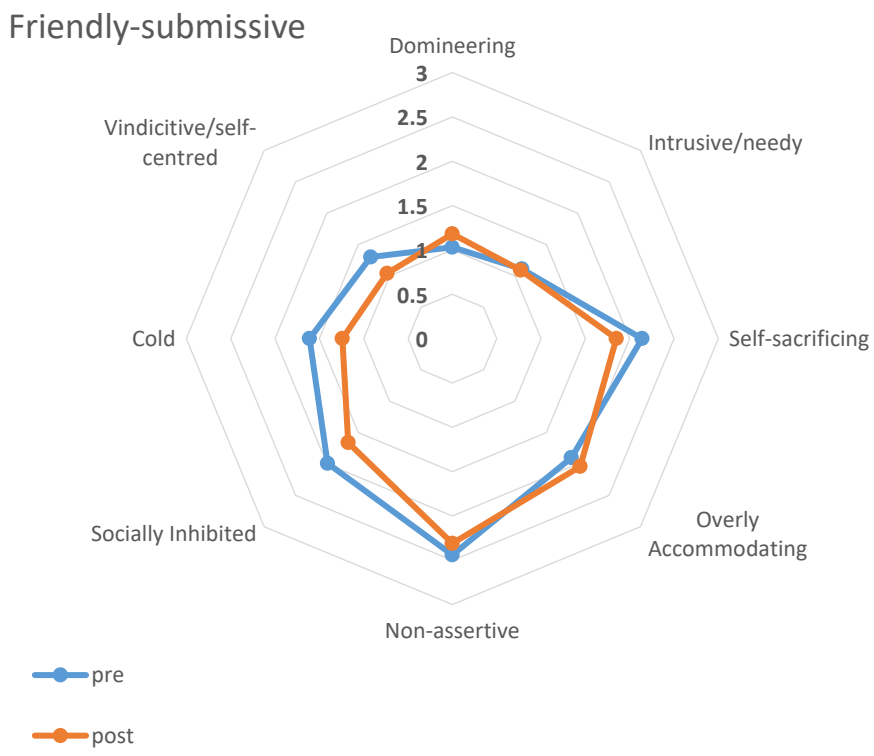


Table XXVI: HRSD Means and RCI for each IPAF Type at Baseline, Mid-Treatment and End of Treatment

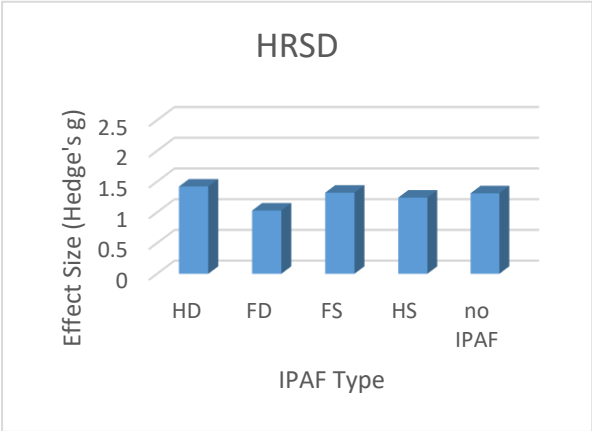
	IPAF type				
HRSD mean score (SD)	**HD**	**FD**	**FS**	**HS**	**No IPAF**
Baseline	18.4 (4.6)	17.4 (4.0)	19.1 (3.1)	18.1 (4.1)	18.4 (4.5)
Mid treatment	12.3 (6.3)	9.5 (6.6)	13.0 (6.0)	14.1 (4.4)	17.5 (6.1)
End of treatment	9.4 (5.5)	7.5 (8.8)	10.6 (7.8)	11.0 (6.7)	10.6 (6.5)
HRSD RCI n (%)					
Response	4/5(80%)	3/5(60%)	6/12(50%)	10/23(43.5%)	7/28 (25%)
CSC (remission)	3/5(60%)	3/5(60%)	6/12(50%)	9/23(39.1%)	6/28(21.4%)
Improvement	3/5(60%)	3/5(60%)	8/12(66.7%)	12/23(52.2%)	10/28(35.7%)
No change	0/5(0%)	1/5(20%)	1/12(8.3%)	9/23(39.1%)	4/28(14.3%)
Deterioration	1/5(20%)	0/5(0%)	2/12(16.7%)	0/23(0%)	0/28(0%)

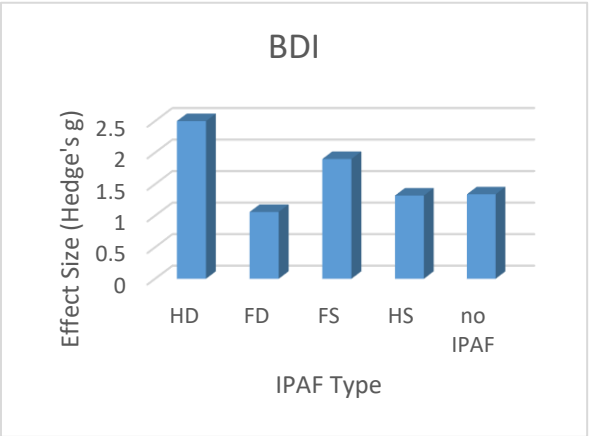
Table XXVII: Pearson's Correlation: IIP and HRSD Over the Course of DIT

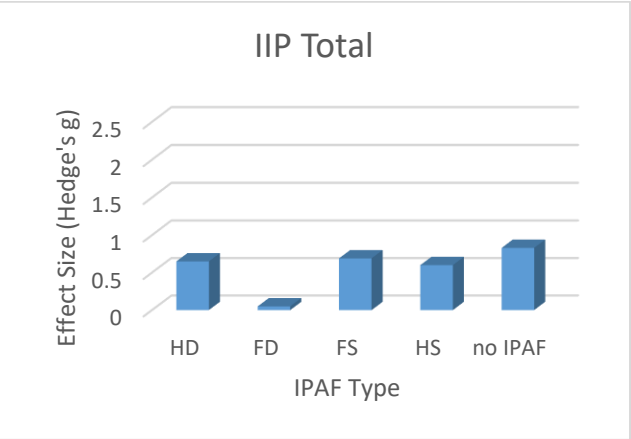
IIP at baseline	HRSD at baseline (n)	HRSD mid treatment (n)	HRSD at end of Treatment (n)	HRSD at 52 week follow up (n)
Total	0.371** (66)	0.354 (50)*	0.286* (50)	0.148 (26)
Domineering	0.074 (67)	0.161 (51)	0.051 (51)	0.332 (27)
Vindictiveness	0.149 (66)	0.050 (50)	0.133 (51)	0.201 (26)
Cold	0.207 (67)	0.109 (51)	0.125 (51)	0.034 (27)
Socially Inhibited	0.141 (67)	0.226 (51)	0.170 (51)	-0.212 (27)
Non-assertive	0.190 (66)	0.333* (50)	0.176 (50)	-0.185 (26)
Overly accommodating	0.385** (67)	0.422** (51)	0.342* (51)	0.090 (27)
Self-sacrificing	0.427** (67)	0.345* (51)	0.354* (51)	0.238 (27)
Intrusive	0.176 (67)	0.260 (51)	0.175 (51)	0.338 (27)
Amplitude	0.240 (67)	0.115 (51)	0.172 (51)	0.263 (27)
Angle of displacement	0.127 (67)	0.128 (51)	-0.035 (51)	-0.367 (27)
Love	0.155 (67)	0.200 (51)	0.173 (51)	0.208 (27)
Dominance	-0.078 (67)	-0.150 (51)	-0.132 (51)	0.333 (27)

*p<0.05; **p<0.01

Figure XX: Pre to Post Effect Sizes for Primary Outcome Measures by IPAF Type





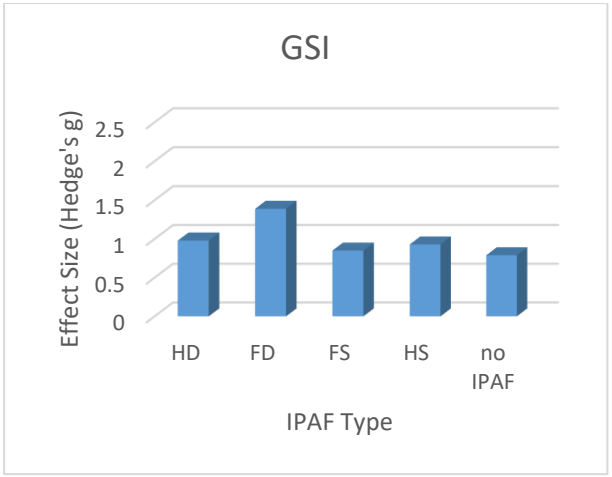


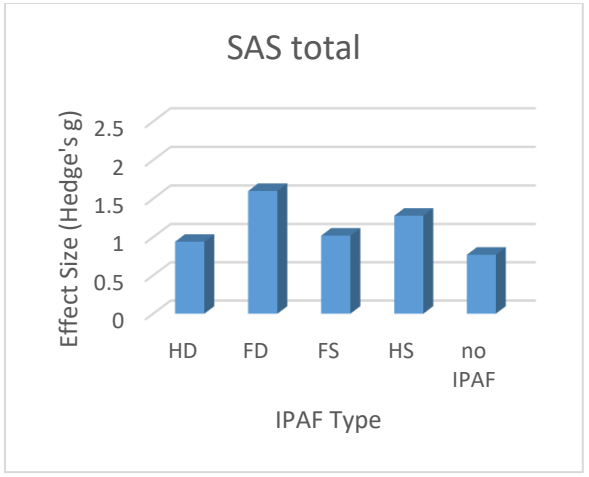
HRSD			
IPAF Type	**ES Pre-Post Treatment**	**N**	**CI**
HD	1.42	5	0.06-3.4
FD	1.03	4	-0.03-3.03
FS	1.32	11	0.43-2.4
HS	1.24	21	0.71-1.85
No IPAF	1.31	14	0.6-2.16

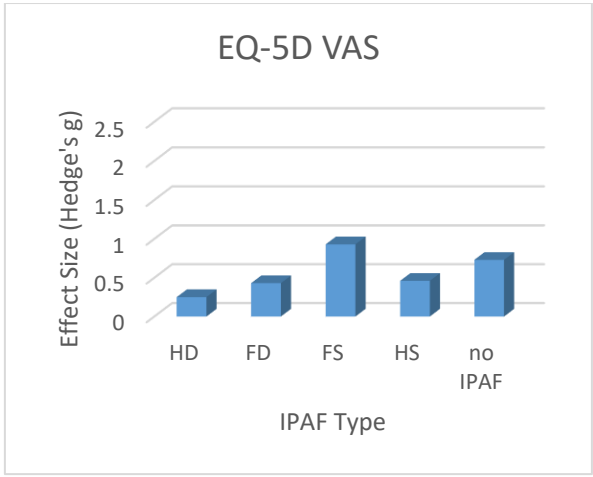
BDI			
IPAF Type	**ES Pre-Post Treatment**	**N**	**CI**
HD	2.53	5	0.65-5.6
FD	1.06	5	-0.16-2.7
FS	1.9	8	0.94-3.32
HS	1.32	17	0.66-2.09
No IPAF	1.34	10	0.4-2.49

IIP total			
IPAF Type	**ES Pre-Post Treatment**	**N**	**CI**
HD	0.65	5	-0.44-2.0
FD	0.05	3	-0.27-0.41
FS	0.69	8	-0.09-1.6
HS	0.6	21	0.17-1.07
No IPAF	0.83	12	0.2-1.5

Figure XXI: Pre to Post Effect Sizes for Secondary Outcome Measures by IPAF Type







BSI GSI			
IPAF Type	**ES Pre-Post Treatment**	**N**	**CI**
HD	0.98	5	0.33-2.12
FD	1.39	3	0.37-4.64
FS	0.85	9	0.31-1.54
HS	0.93	17	0.43-1.5
No IPAF	0.79	11	-0.06-1.75

SAS total			
IPAF Type	**ES Pre-Post Treatment**	**N**	**CI**
HD	0.94	3	-0.59-3.74
FD	1.6	2	0.1-5.6
FS	1.02	9	0.5-1.73
HS	1.28	17	0.65-2.03
No IPAF	0.77	11	0.11-0.54

EQ-5D VAS			
IPAF Type	**ES Pre-Post Treatment**	**N**	**CI**
HD	0.25	3	-0.57-0.8
FD	0.43	3	-1.5-0.02
FS	0.93	9	-1.74-0.28
HS	0.46	17	-0.97-0.01
No IPAF	0.73	12	-1.37-0.16

5.5 DISCUSSION

5.5.1 The Effect of DIT on IIP Scores

With regards to IIP elevation, results from the randomised control REDIT trial revealed a significant improvement in IIP elevation scores over 16 weeks for the DIT group, with a medium effect size (d=0.6). There was no significant change in IIP elevation for the LIT group which is consistent with previous findings of no significant change in total interpersonal distress in TAU groups reported in chapter two (Bressi, Porcellana et al. 2010; Solbakken and Abbass 2015). The consolidation of the DIT data across the two trials resulted in significant pre to post treatment reductions in IIP elevation with a medium effect size (d=0.52) which can be observed in the circumplex model (figure XIV). Again, this was comparable with the 19 of 20 studies included in the systematic review and the results of the meta-analysis (McFarquhar, Luyten et al. 2018) reporting a mean effect size of 0.78 for brief psychotherapy in general and its update reported a mean effect size of 0.62 in chapter two.

Treatment gains in the IIP subscale scores were most notable on the hostile side of the circumplex: domineering, vindictive, cold, socially inhibited and non-assertive. There were no significant changes to the self-sacrificing and needy/intrusive subscales. No significant change in the love and dominance dimensions was noted following DIT.

Significant reductions pre to post DIT in IIP amplitude were found, albeit with a small effect size (d=0.29). This supports the findings of the studies reporting it detailed in chapter two (Ruiz, Pincus et al. 2004; Quilty, Mainland et al. 2013). Angle of displacement was found to be unchanged pre to post DIT and taken as a group, DIT patients had a submissive interpersonal profile both pre and post treatment (see figure XIV), which supports previous findings (Vittengl, Clark et al. 2003; Crits-Christoph, Gibbons et al. 2005; Renner, Jarrett et al. 2012). One might argue that a shift in the predominant theme of maladjustment from for example, a more hostile profile to a more friendly one would be desirable, on the other hand a shift might not be beneficial depending on the nature of the individual's interpersonal problems which brought them to treatment. It is the extent to which the interpersonal problems are impacting on mood that psychotherapy aims to improve, not to simply move the nature of the problem from one domain to another.

A consistent pattern of score changes between the IPAF types as determined by the typology was difficult to determine, potentially due to the lack of power in the study to detect an effect. The results related to IPAF outcomes must be interpreted with caution and can only be considered as exploratory findings. The HS group only showed significant reductions in pre to post measures, but this is likely due to their larger group size. While all groups had relatively high levels of interpersonal problems at baseline, only the dominant IPAF types showed a pre to post reduction in IIP total which brought them closer to the scores of the general U.S. population (raw score m=51.5) than the submissive types (Horowitz, Alden et al. 2000). However, the circumplex models for the IPAF types revealed some interesting patterns. All the models, regardless of IPAF type, indicated that patients tended to report more problems of submissiveness than dominance in their baseline IIP (as indicated by elevation in the submissive quadrants and flattening in the dominant quadrants, figures XIV to XIX), which is consistent with early investigations of the IIP (Horowitz, Rosenberg et al. 1993). Furthermore, even when the IPAF has been assessed as dominant, the patients are tending to report more problems of submissiveness than they are of being too cold, vindictive, self-centred or dominant. The profile for the HD IPAF group indicates elevation in problems of being friendly-submissive, not hostile-dominant and similarly, the FD profile is very flat across the dominant quadrants. Perhaps dominant problems are particularly painful to acknowledge- it is not difficult to see how admitting to being controlling, manipulative, needy or aggressive might be more difficult than say, being socially anxious or too accommodating to others. One can also see how people who are defending against cold, angry or controlling feelings towards others might also feel they are too often being asked to accommodate others, too often taken advantage of or too permissive with others. As reported in chapter four, there is crossover between the hostile-dominant and friendly-submissive quadrants in borderline personality disorder (Leihener, Wagner et al. 2003). Perhaps this notable peak in the FS quadrant for patients with a HD IPAF is a nice demonstration of the strength of the IPAF over the IIP: it is able to pick apart the defensive behaviours and allow the patient to acknowledge their less palatable interpersonal problems to produce a more detailed understanding of what the focus of treatment should be.

Findings from the investigation of reliable change were also informative. More patients with dominant IPAF types responded to DIT (defined as a 50% reduction between pre to post scores), HD patients in particular. They also had better rates of remission (post treatment HRSD≤7) than the patients with submissive IPAFs.

Comparing the four groups of IPAF types, patients with HS IPAFs faired most poorly in terms of response, remission and improvement and had much higher rates of deterioration. This is somewhat contradictory, given the finding that IIP problems on the cold, socially-inhibited and non-assertive subscales did change significantly over treatment for the DIT patients as a whole. The group with HS IPAFs were the most interpersonally distressed however (see figure XVII and table XXIV): the reduction in distress may have been insufficient to alleviate depressive symptoms. Perhaps social-inhibition, which notably did not change over treatment for the HS patients, is particularly contributing to feelings of depression in this group and limiting their response rate. Importantly, the group of patients with no IPAF classification, despite having a similar IIP profile to the DIT group as a whole (see figure XIV), were found to have the lowest rates of response, remission and improvement. This may provide some confirmatory evidence for what DIT clinicians are already likely to suspect: patients for whom the IPAF is vague or insubstantial or difficult to classify show less improvement in depressive symptoms at follow up.

5.5.2 Predictors of DIT Outcome

While IIP baseline features were not significant predictors of DIT outcome in this dataset, there are interesting findings to note. With regards to the demographic variables of age and gender, it is unsurprising and consistent with much of the literature that they were not predictive of outcome. A review of large naturalistic studies previously concluded that patient age and gender were not significant predictors of treatment change trajectories when accounting for initial symptom severity (Lambert 2010) and the same was concluded by Nordberg, Castonguay et al. (2014) in a naturalistic study of over 19,000 patients. However, the moderately significant positive correlations between baseline IIP elevation, overly-accommodating subscale and the self-sacrificing subscale and HRSD at the end of treatment are interesting: higher scores on general interpersonal distress and on these subscales from the friendly side of the circumplex were associated with higher depression scores at the end of treatment. This, together with the findings that DIT seemed more effective at reducing the more hostile interpersonal problems and patients with hostile-dominant IPAFs had better rates of response and remission and the clearest reductions in subscale scores (see figure XVI) could be indicative of the type of patient who may be less responsive to DIT- those with a higher levels of average interpersonal distress and problems associated with being too acquiescent to others (including their therapist)- too accommodating and too self-sacrificing at the

expense of their own needs. Patients with a FS IPAF were the only group to show an increase in some interpersonal problems over treatment (see figure XIX). While IIP elevation has previously been found to be positively associated with outcome (e.g. Dammann, Riemenschneider et al. 2016) the findings regarding specific types of interpersonal problems are contrary to what has been typically assumed about the types of patients who do well psychotherapy: those who are more affiliative and amenable (e.g. Horowitz, Rosenberg et al. 1988; Horowitz, Rosenberg et al. 1993; Gurtman 1996) and less prone to aggression, avoidance and acting on impulse (e.g. Fonagy, Leigh et al. 1996; Beutel, Hoflich et al. 2005; Luyten, Lowyck et al. 2010).

However, as outlined in the introduction, it is by no means an anomalous finding. Faster rates of improvement have been found for hostile-submissive problems than for friendly-dominant (Puschner, Kraft et al. 2004) and for hostile/withdrawn problems than for submissive ones (Clapp, Grubaugh et al. 2014). In a study of 307 outpatients with at least one Axis I and/or Axis II disorder, being overly controlling was found to be easier to change over the course of 37 sessions of psychotherapy than being too self-effacing (Maling, Gurtman et al. 1995). A number of studies have reported more severe depressive symptomatology and poorer outcomes for individuals with a more submissive profile, for example submissive interpersonal styles particularly characterised by excessive reassurance seeking and need for affirmation were found to have more severe and enduring depression (Pearson, Watkins et al. 2010). Exploitable patients made fewer treatment gains over time while vindictive patients made steady progress (Boswell, Constantino et al. 2016) and more submissive patients had a more chronic course of depression over a 10 year follow up and poorer interpersonal functioning (Cain, Ansell et al. 2012; Simon, Cain et al. 2015). Higher initial scores for dependency (interpersonal relatedness) predicted poor response across conditions in a randomised study comparing SET with medication and placebo pill (Chui, Zilcha-Mano et al. 2016).

Theoretical explanations for such findings include Coyne's (1976) proposal that excessive reassurance seeking by individuals with a fundamental sense of worthlessness as an expression of depressive behaviour eventually begins to invite non-genuine reassurance from the other. The individual recognises this and it reinforces their perception of the other as critical and rejecting and maintains the depressive state. According to this theory, intrusive/needy patients, i.e. those with FD IPAFs would be expected to be more difficult to treat and there is some support for this in the findings of this study. Patient's with an FD IPAF had very small

improvements in their interpersonal problems pre to post DIT (d=0.05), particularly problems in the friendly-dominant quadrant (see figure XVIII), and the lowest ESs (although still large) for improvement in HRSD and BDI relative to the other IPAF types. Attachment theory (Bowlby 1958; Bowlby 1960; Bowlby 1969) assumes that loss or rejection in childhood leads to a representation of the other as rejecting or unavailable and the self as helpless when it comes to maintaining relationships as an adult. This rejection sensitivity perpetuates the depressive symptomatology, again pointing towards submissive interpersonal profiles being more vulnerable to depression. Generally, avoidance behaviour makes the resolution of interpersonal conflicts more difficult and a loss of a social support and positive reinforcement maintain depression (Pearson, Watkins et al. 2010). The findings of this study add some support to this body of literature: hostile patients, in particular hostile-dominant ones had better response rates to DIT. Perhaps patients with an interpersonal style that is more dominant do well in DIT because they are less avoidant and have fewer dependency issues to work through in a time-limited therapy.

This contrasts with submissive patients for whom more affiliative behaviours such as excessive reassurance seeking and conflict avoidance maintain depression (Joiner 2000). A submissive interpersonal style may impact on the patient's ability to express their interpersonal concerns to their therapist (Horowitz, Gomez Penedo et al. 2017). Early treatment sessions with submissive patients may be dominated by their issues of excessive compliance or fears of not giving the therapist what they believe he or she wants, perhaps making it more difficult to make significant progress on addressing the IPAF in short term therapy. Hostile-dominant patients may also do well in short-term treatments such as DIT because the parameters are more acceptable to individuals who find it difficult to relinquish control or tolerate vulnerability. Time limited treatment, one session per week is relatively un-demanding in comparison with longer term treatments with more frequent sessions. Patients with a HD IPAF in this study did have lower baseline scores (16%) for amplitude than the other IPAF types, despite the difference not reaching significance (see chapter four, table XX). It may be that this group of patients were less rigid than the rest of the sample making them more capable of social learning and more amenable to change. It has been proposed that hostile patients might seem to benefit more from psychotherapy because the level of distress caused by their problems is lower than for more self-effacing patients (Maling, Gurtman et al. 1995), however this doesn't appear to be the case in this study as IIP total distress wasn't significantly different between IPAF types at baseline (see chapter four). Perhaps therapeutic alliance isn't

as impaired by hostile interpersonal problems as might often have been assumed; indeed Gurtman (1996) found no relationship between interpersonal problems and therapeutic bond in his study of outpatient psychotherapy. Similarly, the effect of initial IIP distress on patient and therapist's alliance ratings was not significant in a study of inpatient psychotherapy (Dinger, Zimmermann et al. 2017). The explicitly collaborative process of arriving at the IPAF together which is specific to DIT may be relevant to the successful treatment of cold or avoidant problems. It is interesting to note the findings of a recent study of out-patients receiving psychotherapy comparing the frequency of use of psychodynamic-interpersonal and cognitive-behavioural techniques in early treatment (McMillen and Hilsenroth 2019). It reported a significant positive relationship between global and specific psychodynamic-interpersonal techniques and problems of vindictiveness/self-centredness, emotional coldness, social inhibition, non-assertiveness, suggesting that therapists were more likely to employ psychodynamic-interpersonal strategies with patients describing problems on the left side of the interpersonal circumplex.

In this data set, it was not possible to distinguish between patients with regards to significant change in outcome using the IPAF typology. No significant difference was found between IPAF types on any of the change scores on the primary outcome measures (HRSD, BDI and IIP total) or the secondary outcome measures (GSI, SAS and EQ-5D) when controlling for baseline score. Insufficient power and unequal groups were certainly issues which make it difficult to draw conclusions regarding its use, but the findings regarding remission and response point to the potential value of classifying IPAFs. However, it may also be the case that it was just wasn't sensitive enough to detect the finer detail contained within a quadrant. For example, the HS quadrant ranges from problems of avoidance to problems of submissiveness which may be treated more or less successfully relative to one another with DIT. In an effort to produce a concise, usable measure for clinicians in practice, the IPAF typology may have proved too reductive. How then, was Gurtman (1996) able to produce such a clear delineation between patient outcomes in different quadrants? The items identified within the typology categories were broadly similar the those he identified in his quadrants. But, his sample was larger (n=104) and the groups were of equal sizes. Participants were also selected specifically for higher levels of interpersonal distress by including only those above the median level. Perhaps crucially, the treatment was long term psychodynamic therapy as opposed to short term. All these factors may impact the usability of an IPAF typology as an outcome predictor. A recent investigation on the latent structure of interpersonal problems (Wendt, Wright

et al. 2019), which included the IIP, compared the validity of dimensional models (computing elevation, love and dominance scores), categorical models (subgroup classification of interpersonal profile) and hybrid models (a spectrum of dimensional and categorical latent variable models) and concluded that a dimensional approach was more useful that a categorical one. They argue that categorical models neglect the within-category variance, thereby shrinking the effect which could explain the poor predictive qualities of IPAF types and subscales found in this study. However, the scope of the paper was limited to latent structure and did not evaluate outcomes of treatment.

The underlying dimensions of love and dominance were not associated with outcome in this study which is not entirely surprising given the inconsistent findings of the small number of studies investigating this in depression outcome research (Schauenburg , Kuda et al. 2000; Vittengl, Clark et al. 2003; Puschner, Kraft et al. 2004; Dinger, Strack et al. 2007; Renner, Jarrett et al. 2012; Dinger, Zilcha-Mano et al. 2013; Quilty, Mainland et al. 2013) (see chapter two). Likewise, neither the angle of displacement at baseline nor the IPAF type were correlated with outcome. If Love and Dominance are considered, like relatedness and self-definition, to be more trait than state (Vittengl, Clark et al. 2003), they would not be expected to be drastically altered following treatment. It may in fact be indicative of the strength of DIT: perhaps therapists are tailoring DIT to individuals so well that their initial interpersonal weaknesses are irrelevant to the success of the treatment. Schauenburg, Kuda et al (2000) propose that the IIP generally explains only a small proportion of the variance in outcome because of this; therapists adjust their therapeutic strategies to the individual in order to avoid rejecting interactions, making the dyadic bond difficult to quantify. Perhaps this individual adaption by the therapists is occurring *after* the IPAF formulation, during the main body of treatment which is why this IPAF typology is not as consistent with the IIP baseline scores as might have been expected. As described above, the IPAF typology is capturing a broader indication of the interpersonal problems being managed in treatment, extending beyond the scope of the IIP which is limited to what the patient is able to acknowledge on his own.

5.6 LIMITATIONS

A serious limitation of this study was the lack of viable data. At its inception, the potential number of IPAFs which could be derived from the trials was 73, compared to the actual number which could be included, 49. There was also a lot of missing IIP

data (43% missing either pre or post treatment, 68% missing at follow up) and the mid treatment IIP data collection was dropped early on in the first trial due to length of the protocol being intolerable to patients. Missing data for primary outcomes of DIT participants ranged from 9.6% at baseline to 31.5% post treatment and for secondary outcomes from 19.2% at baseline to 41.1% post treatment. By nature, a feasibility study is partly designed to establish the length of test battery which is tolerable to the patient, and in this case the number of measures was at times too onerous for participants resulting in missing data. This imposed considerable limitations on the power of the study to detect the effect of the IPAF typology on outcome in particular and as a result, findings can only be interpreted tentatively. The large number of therapists (17) and clinics (5) involved in the two trials was also undesirable, introducing potential for unseen variance which was difficult to control for in a small sample. Likewise, there were other variables which were not controlled for which could have had an effect in a small sample, such as therapeutic alliance and medication. The necessarily strict inclusion/exclusion criteria of the trials also limited the scope of what could be learned from the IIP as a predictor of outcome. Patients with more complex problems such as personality disorder, chaotic personal circumstances and a history of failed CBT were excluded and overall baseline depression scores were at the lower end of moderate (HRSD mean score= 18.4 (4.1). Patients considered too unwell to be randomised to the LIT group could not be included in the trials either. As such, it was not possible to examine the outcomes for patients with a full range of depression severity.

Recent approaches to evaluating outcomes for groups of patients with different baseline characteristics have employed multivariable prediction models. A prognostic model might have been interesting to test in this study and they are recognised as being more likely to result in powerful predictions (Perlis 2013). However, in this case the limitations imposed by the data were considered too broad to undertake multivariable modelling. The IPAF types had insufficient statistical variability, there was high collinearity between the potential predictors and there were insufficiently statistically significant relations between predictors and outcome (Cohen and DeRubeis 2018).

Whether a self-assessment measure is really a good way of measuring the underlying structure of interpersonal problems is a criticism typically levied at the IIP. While this is ameliorated by the IPAF typology which incorporates both the patient and the therapists take on the problems leading up to treatment-seeking, it was not possible

in this study to use it fully as it was designed. Ideally the typology should be used by a clinician, not researchers as was the case in this study. It should be used 'in-vivo', and not 'post hoc' as was necessary for this research. Any element of the IPAF which the clinician chose to withhold from the patient (for example, due to concerns about the patient's capacity to fully explore the problems early in treatment) is unknown to the researcher.

5.7 CONCLUSIONS

While the dataset in this study is undoubtably modest and results must be interpreted with caution for this reason, some tentative conclusions regarding the findings may be useful in informing future research. These conclusions will now be considered in light of what might be expected following successful psychotherapeutic treatment: what interpersonal change might we hope for and was this indicated? Firstly, a reduction in both total interpersonal distress and overall mean distress across all subscales of the IIP (elevation). Patients receiving DIT were less interpersonally distressed following 16 weeks of treatment and they showed a greater reduction in their interpersonal distress than those on a wait-list. Secondly, successful DIT would ideally result in the patient become less locked into their problematic interpersonal style and more open to other ways of relating to others, i.e. less rigid, and amplitude did indeed reduce pre to post treatment. This study contributes to previous findings that psychotherapeutic treatment for depression reduces rigidity of interpersonal problems (Ruiz, Pincus et al. 2004; Quilty, Mainland et al. 2013). The distinctly collaborative process of constructing the IPAF in DIT may be particularly good at building epistemic trust (Fonagy, Luyten et al. 2015) which allows the patient to safely change their position away from an inflexible and exaggerated insistence on either relatedness or self-definition (Luyten and Blatt 2011). Thirdly, what baseline measures are indicative of a good treatment outcome? Problems located in the hostile side of the interpersonal circumplex seemed to improve more than those on the friendly side. Patients with dominant IPAFs had the best rates of response and remission. High levels of interpersonal distress, being overly accommodating and too self-sacrificing and having an IPAF classified as hostile-submissive were associated with a poorer outcome.

Encouragingly, the lack of correlations between baseline measures and treatment outcome may point to a treatment's universality (Luyten, Lowyck et al. 2010): the particular interpersonal problems of a patient do not preclude them from treatment.

Further research may reveal if DIT in particular is indicated for patients whose interpersonal problems are more hostile in nature.

While the findings of this study with regards to the use of the IPAF typology as a predictive tool are modest, it would be premature to dismiss its value. This study has demonstrated that patients without an IPAF or with an IPAF which is unclassifiable show less improvement in depressive symptoms post treatment than those with a classified IPAF. The IPAF typology may be able to identify a more realistic picture of the individual's interpersonal problems than they are able to describe using the IIP. While it may be that the therapists are tailoring treatment so well to the individuals that the type of IPAF is unrelated to the outcome, it may also be that this preliminary investigation of the typology's properties was inadequately powered to detect statistical differences, as the IIP circumplex profiles for the IPAF types do indicate the presence of differences. It is interesting to note that in a recent qualitative study of young adults who had undergone DIT, the majority of the respondents initially claimed that they could not remember the IPAF, although most did so soon after in the interview. A few also felt the IPAF chosen became irrelevant over the course of therapy (Landstrom, Levander et al. 2019). Further research would be useful in a more robust sample, using clinicians IPAF assessments in real time. At least, therapists and researchers should be wary of assuming that patients with hostile interpersonal problems are less capable of being psychologically minded or part of a positive therapeutic alliance. Assumptions about other patient groups such as those with schizophrenia and personality disorder once resulted in them being considered unsuitable for psychotherapy but it has since been show that this is not the case. These patients are now treated quite successfully and psychotherapy is recommended as a primary intervention in personality disorder (Clarkin, Levy et al. 2007; Fonagy 2015) More submissive patients may benefit from therapeutic work which focusses on improving assertiveness to avoid the pitfall of excessive compliance at the expense of true engagement with therapy. Recent research has begun to test this hypothesis in IPT, finding that disrupting patients' submissive tendencies by 'pulling' for adaptive assertiveness was associated with lower depressive symptoms during and post treatment (Coyne, Constantino et al. 2018). This specific handling of problems with assertiveness may be a useful proposal for a modification of DIT for submissive patients. Further process-outcome research is required in order to further our understanding about what works for whom.

Chapter 6

The Role of Interpersonal Problems in Psychotherapy for Depression: Summary of Findings

6.1 CHAPTER OVERVIEW

The scope of this thesis was to review the development and use of the IIP in the context of depression and then to create a coding system for classifying the interpersonal focus of therapy based on IIP, using data from pilot studies of DIT. The system was tested for reliability and validity against the IIP and then investigated as a predictor of outcome response in DIT, alongside existing scoring methods of the IIP. The main focus of interest was to add to the body of knowledge about what types of interpersonal problems are associated with better outcomes in psychotherapeutic treatment for depression. Findings are summarised and limitations and clinical implications discussed.

6.2 FINDINGS

Chapter one investigated the IIP as a measure in the context of the 'two-polarities' model, summarising its development and versions and the numerous ways in which it can be interpreted. The parallels between the theory underpinning the IIP and the DIT model were noted: both assume that undesirable interpersonal interactions can become reciprocal and repetitive and both emphasise the relevance of the patient's presenting interpersonal symptoms to their relationships more generally. The proper use of the IIP requires an understanding of its different versions and care should be taken when comparing studies using it, particularly translations. This chapter attempted to provide some clarity as to which version to select for which purpose and how to compare scoring methods across versions. Mis-reporting of versions of the IIP was noted in the literature.

While interpersonal problems might be expected to improve after psychotherapeutic treatment for depression, evidence in the literature was patchy and sometimes conflicting. Chapter two set out to evaluate results of studies reporting pre to post IIP results for psychotherapy for depression. A systematic review revealed that 29 of the 30 studies reporting IIP total scores (distress/elevation) reported a significant

reduction following a course of brief or long-term individual psychotherapy, effect sizes ranging from 0.12 to 2.4. A meta-analysis of 17 studies confirmed this to be the case- IIP total scores pre to post brief treatment for depression improved with a moderate effect size (g=0.62, 95% CI=0.48-0.76). Psychodynamic therapies were found to improve with a larger effect size (0.44) than CBT (0.28) but this is yet to be confirmed. The literature review highlighted underreporting and the conflicting results of studies investigating pre-treatment interpersonal styles and outcome. While there is reasonable data to show that higher pre-treatment interpersonal distress may be associated with poorer outcomes, the paucity of reporting of amplitude scores, angular displacement, flux, pulse and spin was such that little insight could be gained into their potential to predict response to treatment, other than some tentative findings indicating that a rigid interpersonal style may be associated with poorer outcomes. Study quality was implicated as a factor affecting changes in pre to post IIP score: higher quality studies produced an effect size almost twice the size of the lower quality studies. Larger effect sizes were found for studies which randomised participants to treatment arms, diagnosed MDD for the full sample, adopted a manualised treatment, excluded psychotropic medication and trainee therapists, and reported an adherence check of the treatment.

A typical criticism levied at self-report measures such as the IIP is that they are limited to the patient's ability to describe their feelings and behaviours, usually over a short period of days. The study reported in chapter three employed the IIP to gain additional insight into the particular nature of the maladaptive interpersonal patterns which may be contributing to depressive feelings, by using a more robust conceptualisation of interpersonal problems: the IPAF. The IPAF is arrived at collaboratively with the patient and describes "the dominant internal relationship that is linked to the manifest problem" (Lemma, Target et al. 2011p. 106). By sharing the IPAF with the patient, the therapist aims to provide a focus for treatment that is meaningful and agreed upon. This chapter is the first report of the development of a novel instrument to classify IPAFs and of how IPAFs are used in practice. The IIP was used to inform a typology for assigning IPAFs to groups which might then be used to investigate treatment outcomes. Instructions for use are provided for clinicians. A qualitative analysis revealed that four discreet categories of IPAFs were identifiable in the transcriptions of DIT sessions drawn from the two pilot studies. They described patterns of relating that could be labelled as hostile-dominant, friendly-dominant, friendly-submissive and hostile-submissive. The sub-themes identified in each type were broadly in keeping with those items identified statistically in the quadrant clusters described by Gurtman

(1995; 1996). The more aggressive items described by his hostile-dominant cluster were not identified in this sample- manipulating or exploiting others, difficulty with authority, arguing or fighting too much, possibly because these particular types of interpersonal problems are considered less suitable to treatment with DIT within IAPT, or they rendered the patient less likely to seek treatment, be referred or to be able to comply with the treatment schedule. Indeed, chapter four indicated that there were fewer IPAFs classified as dominant (27.1%) as compared to submissive (72.9%) in the REDIT and REDIT-CT studies. The majority of IPAFs were classified as hostile-submissive (47.9%), tallying with previous research reporting that social avoidance and non-assertiveness seem to be particularly problematic for depression sufferers (Ball, Otto et al. 1994; Vittengl, Clark et al. 2003; Puschner, Kraft et al. 2004; Barrett and Barber 2007; Renner, Jarrett et al. 2012).

The results of chapter three also provide some useful early indicators of adherence to the DIT model. In over 80% of cases the IPAF was explicitly shared with the patient and within the recommended session (four). The language used by the therapists was consistent: the patient was invited to reach a focus or pattern of problematic relations between the self and other and there was an emphasis on this process being collaborative and agreed upon by both parties. Patients for whom an explicit IPAF could not be identified (18% of patients attending more than four sessions of DIT) were more frequently male, on medication and identified their ethnicity as Black, Asian or other. However, when all patients without an IPAF were considered together in comparison to those for whom an IPAF was identified (i.e. those who discontinued treatment prior to the IPAF session, those for whom an IPAF could not be identified within seven sessions, those for whom the IPAF session was not recorded and those IPAFs which were unclassifiable), these differences largely disappeared. The only significant difference between these groups of patients was the trial in which they were recruited: all but one were randomised in the first trial, perhaps suggesting that therapists in the second trial were more confident in their delivery of DIT.

Chapter four reported the successful application of the IPAF typology to a sample of IPAFs, with only 6.3% considered ‘unclassifiable’. It was not unexpected that there should be a number of IPAFs were the ‘spin’ around the circumplex was such that one type could not be selected, i.e. the patient seemed to exhibit extensive variations in interpersonal behaviour over time and across situations. Good reliability (80%, kappa=0.676, $p<0.001$) was obtained using a second rater on a sample of IPAFs. Future testing by clinicians on an independent sample would of course be required to

drawn any further conclusions regarding reliability. Validity proved more difficult to assess. Unexpectedly, no significant differences were found between the baseline measures (IIP total, subscale and dimension scores, HRSD, ECR-R avoidance, BSI hostility) for the typology classifications, nor for those with an IPAF classification and those without, although they were trending in the expected directions. The hostile-submissive group had the highest scores on IIP socially-inhibited and non-assertive subscale. The hostile groups scored higher on the ECR-R avoidance subscale and the highest scores on the BSI hostility subscale were for the hostile-dominant group. Undoubtably this study with an opportunistic sample was under powered. However, it may also be the case that IIP baseline measures are poor correlates of an IPAF category in session four. Again, further testing in a larger sample would be the next step in assessing validity of the IPAF typology.

The results of an analysis of the change in IIP elevation pre to post treatment with DIT reported in chapter five concurred with the findings of the meta-analysis in chapter two: scores significantly reduced with a medium effect size. IIP amplitude (rigidity) also reduced with a small effect size but angle of displacement (predominant theme of maladjustment) and love and dominance remained stable. Treatment gains in the IIP subscale scores were most notable on the hostile side of the circumplex: domineering, vindictive, cold, socially inhibited and non-assertive. There was little evidence of a consistent pattern of score changes between the IPAF types as determined by the typology and the types did not predict response- perhaps due to methodological issues or perhaps because it was too reductive; or in fact because therapists tailor treatment so well to individuals within DIT that the types of interpersonal problems they arrive with are irrelevant to outcome.

IIP baseline features were not strong predictors of outcome in this dataset, however, higher scores on general interpersonal distress and on subscales from the friendly side of the circumplex were associated with higher depression scores post treatment. Patients with dominant IPAFs, most notably HD, had the highest treatment gains in interpersonal problems and the highest rates of response and remission. The fewest responders were among those patients whose IPAFs were classified as submissive. In a shift away from what has typically been assumed about the types of patient problems which do well in psychotherapy, these findings indicate that for DIT, patients with problems associated with being too accommodating and too self-sacrificing at the expense of their own needs may be less responsive.

Another key finding from chapter five was that patients with no IPAF classification had the lowest rates of response, remission and improvement following DIT. For a treatment modality in relative infancy, this finding may be valuable to practitioners as confirmatory evidence of the importance of a strong and valid IPAF to good treatment outcomes. For developers of DIT, more guidance will be needed as to what to do when IPAF formulation proves difficult.

The findings of chapters two and five reveal the inconsistency that remains in the findings of studies investigating pre-treatment interpersonal problems and outcome. One the one hand, theory and several studies suggest that friendly-submissive problems have better outcomes; on the other hand, other studies and the DIT data point to hostile profiles being more responsive that friendly-submissive ones. Higher interpersonal distress at baseline was also correlated with higher depression scores across treatment. The paucity of data has made a comparison of treatment types difficult and resulted in several modalities being assessed together, which undoubtably is contributing to the problem of picking apart the effect of interpersonal problems on outcome. Until there is more data reporting interpersonal problem outcomes by treatment modality and treatment length, judgement as to which types of problems are best treated with which types of psychotherapy must be reserved. Promising new research indicates that interpersonal problems may be moderators of outcome between different types of therapy (Probst, Schramm et al. 2020), that is to say there is an interaction between interpersonal problems and the type of therapy on depression outcomes. In a small randomised study (n=68) comparing mindfulness-based cognitive therapy (MBCT) and group cognitive-behavioural analysis system of psychotherapy (CBASP) for the treatment of chronic depression over eight weeks, patients with high pre-treatment scores on the vindictive/self-centred scale of the IIP-32 had greater benefit from MBCT and those who scored more highly on the non-assertive subscale had greater benefit from CBASP.

An alternative explanation for the lack of conclusive evidence regarding interpersonal problems as predictors of outcome which cannot be ignored is that they are in fact, unrelated to outcome. Rather, there is some therapeutic mechanism by which therapists are able to produce outcomes regardless of the types of interpersonal problems which the patient presents with. A review of variation in symptomatic outcomes estimated that therapists' effects such as responsiveness, warmth and verbal fluency represent around 5% of the variance (Wampold and Imel 2015). Although this may seem small, the authors state it is still one of the most influential

factors on outcome. Perhaps therapists are tailoring treatment to individuals in such a way that the effects of baseline interpersonal problems is partialed out, but how that happens is unknown. Perhaps it occurs through the collaborative process of building epistemic trust (Fonagy, Luyten et al. 2015) to enable the patient to feel safe enough to shift their interpersonal axis away from an over-reliance on one or other of the dimensions. However, interpersonal problems are not alone in their seemingly poor predictive qualities. Reviews of outcome predictors in psychotherapeutic treatment for depression typically reveal mixed and contrary results (e.g. Papakostas and Fava 2008) and most other psychopathology domains lack a consistent evidence base for outcome predictors (Huibers, van Breukelen et al. 2014). Potential prognostic indices outside of interpersonal problems include cognitive dysfunction, expectation of improvement, “endogenous” depression, double depression, and duration of current episode (Elkin, Gibbons et al. 1995) and age, intelligence, marital status, employment status and number of recent life events (Fournier, DeRubeis et al. 2009). Unpacking the complex components leading to symptomatic improvement in mood disorders is a challenge which is far from unique to interpersonal problems.

6.3 GENERAL LIMITATIONS

An obvious limitation which became apparent during the course of the thesis was the lack of clarity around the use of the IIP in research studies. It was not uncommon to find that the version had been incorrectly referenced and the many different ways in which it can be scored and interpreted are not conducive to clean comparisons across studies. The numerous translations are of different versions. While most, if not all, versions have their own merits and are broadly comparable, one might question how often the version selected was in fact specifically selected, rather than chosen for availability or because it had been used previously by a relevant study. In order to really maximise its utility, researchers should be cognisant of whether they are best selecting a longer or a shorter version, a factor version or a circumplex version, and if it is a translation- which version it is. There is much more to consider in the analysis phase than simply the total and subscale scores, yet so often these are the only elements of the IIP that are reported. As noted in chapter five, recent in-depth statistical research into measures of interpersonal problems is pointing to the value of a dimensional approach over a categorical one; that is to say that interpreting love, dominance and distress is more useful than subscales (Wendt, Wright et al. 2019). Frustratingly, the insight that could be gained from other scoring methods such as the amplitude, angle of displacement, flux, pulse and spin is unknown because they are

just so seldomly reported. It may be that under-reporting of measures of interpersonal problems in trials is due to missing data. There were significant gaps in the IIP data in REDIT and REDIT-CT. It is possible that when the IIP is reported as a secondary outcome, it gets omitted from the very long protocols which are necessary in pilot trials because the patient gets tired and refuses or, due to the depressive symptomatology, isn't able to concentrate on the items sufficiently. If a research appointment doesn't start on time or has to be cut short, the secondary measures will be the ones omitted from the battery. Consequently, there is just not enough good quality data from which to draw useful conclusions.

One also wonders how vulnerable the IIP might be to completion errors. Are patients contributing to error due lack of comprehension of the questions or distraction? For example, consider item one of the IIP64. The respondent is asked to rate how hard it is for them to "trust other people": 0- not at all, 1- a little bit, 2-moderately, 3-quite a bit, 4- extremely. If they do find this a problem and read and interpret the question accurately, they might answer '4-extremely hard to trust other people'. However, it seems possible that they might also incorrectly answer '0- not at all', having misinterpreted it as "I don't trust others at all". The likelihood of such an error may increase as they work down the list of items, further away from the text reminding them to rate "how hard it is for them to…". Observing study participants completing the IIP as one of a significant number of assessments in a lengthy protocol, sometimes suffering from the lack of concentration or motivation typical of depression, it's not difficult to see how such errors could occur.

An additional limitation is the lack of IIP follow-up data, both in the studies reported in the systematic review and in data used in chapter five. Missing follow up data is preventing a more detailed understanding of how different types of interpersonal problems are related to outcome over the longer term. One explanation of the apparent weak predictive effects of interpersonal problem types on outcome may be the length of the follow up interval. Studies of "sleeper effects" (Grant and Sandell 2004) have found treatment effects emerging as long as eight years after psychotherapy (Bateman and Fonagy 2008). Perhaps interpersonal problem types and IPAF types only distinguish between outcomes over a much longer period than is typically assessed.

Restricting the scope of the thesis to change in interpersonal problems in *depression* was no doubt a limiting factor. While a focus was necessary, it excluded findings from

research reporting the IIP in studies of other patient diagnoses or treatment focus. Given the frequent overlap in patient diagnosis and the move away from multi-axial structure by DSM, restricting the inclusion of studies in chapter two to those where depression was the main focus of treatment likely excluded research which could have been informative. Studies reporting IIP change in treatment for couples, PTSD, somatoform disorder, personality disorder, eating disorder, GAD, social phobia and chronic pain, among others, were not included. Some large studies were also excluded because of the general nature of the treatment which was not restricted to alleviation of symptoms associated with any particular disorder.

There were several methodological limitations which have been reported in more detail in the relevant chapters. The qualitative analysis lacked the input from a team of other researchers which would typically collaborate in such a study. Ideally, the IPAF typology should have been tested in a new sample of IPAFs, by DIT practitioners and double rated by DIT practitioners. Only then would it have been possible to meaningfully assess validity. Translated versions would also be useful to assess cross-cultural reliability and validity now that DIT is being delivered in other languages such as Italian, French and Dutch. The sample size was insufficient to permit modelling of the data, which may have demonstrated more robust effects of treatment and lacked gender and ethnic diversity, being mostly female and mostly white.

Finally, the IPAF itself is limited in its ability to predict outcome. This analysis assumed that the IPAF arrived upon in session four and classified with the typology is the one worked on throughout treatment. However, it is possible that it might be modified or even abandoned and replaced as DIT progresses and the relationship between the patient and therapist develops. No account was made for any such change in this thesis, and given its relatively weak predictive qualities, future research may need to focus more on any modifications to the IPAF.

6.4 RECOMMENDATIONS FOR FUTURE RESEARCH

Firstly, a more detailed understanding of the role of interpersonal problems in depression rests on more studies including measures such as the IIP as a primary outcome. Particularly given the interpersonal focus of many psychotherapeutic interventions, it seems warranted that studies look beyond the customary outcome measures of the HRSD and BDI to measures such as the IIP which are specifically

evaluating what the intervention is targeting. One way of increasing collection of IIP data is for practice research networks to adopt the IIP as part of their core outcome battery (Hughes and Barkham 2005). Some already have, for example the Pennsylvania Psychological Association Practice Research Network include the IIP-C (Borkovec, Echemendia et al. 2001) and the American Group Psychotherapy Association include the IIP-32 in their CORE-R outcome battery (Burlingame, Strauss et al. 2006). Larger sample sizes are obtainable from practice-based data than from typical efficacy studies, allowing for improved benchmarking of outcomes (Barkham, Stiles et al. 2008). More data over longer follow-up periods and more reporting of subscales and dimensions would facilitate more complex, multi-level modelling analysis to allow more definitive conclusions regarding interpersonal problems to be drawn.

Testing the IPAF typology in a larger, independent study of DIT is of course vital in determining its worth. Ideally, it should be employed by clinicians as part of the DIT protocol in a trial after session four. Only data from a much larger sample can provide a more definitive answer as to whether the typology is useful in discriminating between IPAFs in relation to outcome, a power analysis for a one-way ANOVA with four groups to determine a sufficient sample size using an alpha of 0.05 and a power of 0.80 would require sample size of 180 for a medium effect size, or 76 for a large effect size (Faul, Erdfelder et al. 2013). A larger phase III trial of DIT may provide much needed data on its outcome predictors more generally.

As part of a larger study, further thought as to how the typology could be tailored to clinicians would also improve its usability. Consultation with DIT clinicians could be built into a pilot study to provide insight into how ‘clinician-friendly’ the typology is in practice. For example, does it feel too complicated or difficult to hold the IPAF types in mind for a practitioner who is unfamiliar with the IIP? Could the types be re-formulated in a simpler way, or is more detail actually required to allow distinction between IPAFs? Is the current list of the types of problems which are likely within an IPAF type helpful, or would a vignette style for each type be preferable? The detailed descriptions in chapter three (3.4.4-3.4.7) could be further incorporated into the typology to provide the user with more information or examples for each IPAF type. For instance, if a clinician was considering selecting the HD type, might it be helpful to have the examples detailed in section 3.4.4: the patients being the perpetrators of verbal assaults, sending angry text messages, showing a lack of remorse over infidelity or describing themselves as a “control freak”? This might be extended into

the concept of ‘optimal case’ in ideal type analysis (Stapley, O’Keeffe et al. 2021). This type of analysis is described by the authors above as a potential ‘next level’ analysis which can be conducted after an initial qualitative analysis and involves the identification of an optimal case which best represents each ideal type (a cluster of similar cases) within a qualitative analysis. An overview of a sample patient drawn from this study whose interpersonal problems typify a HD, FD, FS or HS IPAF (‘optimal case’) could be provided to aid the user in their selection. In addition to the list or vignette, the user would have an example to refer to for each IPAF type. Another way to improve usability might be to sub-divide the IPAF types, perhaps as the IIP does into ‘things that are hard for the patient to do’ and ‘things that the patient does too much’. Alternatively, the types could be split into ‘more like’ and ‘less like’ sections based on a comparison with the other types. For example a hostile-dominant type might look something like this:

‘**More likely to** have problems around being easily irritated or annoyed, needing control over others, being too independent, being overly aggressive, envious or jealous.

Less likely to try to please others, feel responsible for others, feel dependent on others, find it hard to be assertive, feel embarrassed in front of others’.

An extensive systematic review of interpersonal problems requiring resources beyond the scope of a PhD thesis would be desirable. For example, a review such as those prepared and supervised by the Cochrane Review Group would allow detailed scrutiny of interpersonal problems in psychotherapy, across patient diagnoses, treatment lengths and modalities and follow up periods. Inclusion of all the IIP dimensions would be valuable.

More generally, future research would be usefully directed at further investigation of interpersonal problems as moderators in randomised controlled trials of different treatment modalities, i.e. as prescriptive variables, rather than as prognostic variables. Prescriptive variables affect the strength or direction of the difference in outcome between two or more treatments, whereas prognostic variables can only predict response in a single treatment, as investigated in chapter five (Cohen and DeRubeis 2018). For example, is high dominance predictive of better response in DIT relative to CBT? Process research is also required to gain a better understanding of how therapists are tackling these different interpersonal presentations within a modality: while there is now convincing evidence of interpersonal distress reduction, the mechanism of interpersonal change is still unknown. A process-outcome study on

the mechanisms of IPAFs would also be beneficial in informing us as to the methods by which therapists might be tailoring treatment to individuals and specifically tackle particular types of interpersonal presentations within the DIT model. Also, with regards to the point in the previous section, further research is needed into whether and how the IPAF changes over the course of treatment. One method by which this might be tested is to conduct a study comparing the IPAF with the end of treatment letters provided to the patient at discharge from DIT. These letters are designed to remind the patient of the progress made during DIT and specifically to describe the IPAF and areas which may need further work (Gelman, McKay et al. 2010). Although beyond what was possible within the timescale of this thesis, an analysis of differences between the IPAF in session four and the IPAF summarised in the end of treatment letter and their respective relationships with treatment outcome would be valuable research in the future.

New research is offering alternative methods for measuring interpersonal problems, for example by proposing that dimensional modelling of interpersonal data is more informative that the use of categories (Wendt, Wright et al. 2019). Greater uptake of this modelling by researchers may allow access to a new era of interpersonal research. A new, freely available measure of interpersonal problems, the Circumplex Scales of Interpersonal Problems (CSIP) (Boudreaux, Ozer et al. 2018) has been developed to redress an over-reliance on the IIP-C as a single measure. Eliminating the cost of a commercial instrument such as the IIP might encourage the more frequent use of an interpersonal problems measure in larger studies. Alternative methods of measurement are always welcome for validation purposes and perhaps the additional content of the CSIP will reveal more about how interpersonal problems might influence outcome. For example, the CSIP has expanded the Domineering octant to include arrogant, condescending and overly bossy behaviour, and the Intrusive octant to include excessive flirtatiousness, talkativeness and exaggeration. Also, the CSIP seems to be more strongly related to depression than the IIP-C, indicating that it might be a more suitable choice for researchers focused on the interpersonal aspects of depression (Boudreaux, Ozer et al. 2018). It could provide an additional opportunity to test the validity of the IPAF typology.

6.5 CLINICAL IMPLICATIONS AND CONCLUSIONS

As with the wider research area investigating what works for whom, establishing which patients are most likely to benefit from DIT is important, for both patients,

clinicians and healthcare stakeholders. The appropriate allocation of psychotherapeutic resources is vital in a world where psychopathology is becoming more prevalent and the resources available to clinicians are so often insufficient to meet patient needs. This thesis can draw several useful conclusions. Firstly, that the selection of an IIP version should be based on theoretical assumptions, the onus on the respondent and the need to make comparisons with data from other sources. This applies in both clinical and research domains.

Secondly, that interpersonal problems improve after brief psychotherapeutic interventions for depression (including DIT) with a moderate effect, and early evidence suggests more so following psychodynamic treatments than following CBT. This is of course to be confirmed. Prior to this thesis, research regarding this had not been pooled or evaluated systematically. This is an important finding because it points to the value of a variety of treatment modalities in the clinical context: if interpersonal problems are a key factor in the distress of an individual, they can be reduced with brief psychotherapy and psychodynamically approaches such as DIT may be particularly helpful. Of course, knowing that interpersonal problems reduce over therapy is not the same as knowing that they reduce depressive symptoms. Only better reporting of interpersonal problems in large research studies will allow a fuller understanding of their role in depression.

Finally, this research has demonstrated that IPAFs can be classified using a newly developed tool for clinicians into four groups in accordance with the IIP-C: friendly-dominant, friendly-submissive, hostile-submissive and hostile-dominant. In the first study of DIT, most IPAFs were classified as submissive and hostile-submissive IPAFs were the most common. There is some tentative evidence which warrants further investigation to suggest that patients with hostile and/or dominant IPAFs and interpersonal problems may be particularly suited to treatment with DIT. The finding that higher pre-treatment interpersonal distress, a rigid interpersonal style and a poorly defined IPAF were associated with poorer outcomes in DIT may also be useful to clinicians determining their approach to treatment. Further IPAF research may be directed towards how the DIT competencies could be informed. For example, what guidelines might be useful for clinicians when the IPAF proves difficult to formulate and is the association with risk of poor outcomes a true effect? Can the competencies be added to for patients identified as very submissive? Perhaps different techniques early on in the first phase of DIT would be beneficial to avoid the pitfalls of excessive compliance.

The results of these studies have contributed to the body of research indicating that interpersonal problems play a role in depression outcomes, but there is a limit to what they can reveal as a single patient feature in a small clinical trial. Future research will no doubt be informed by more powerful multivariable treatment selection approaches using larger databases and combining self-report predictors such as interpersonal problems, demographic variables and clinical measures with biomarkers such as neuroimaging and genetic testing (Cohen and DeRubeis 2018). Good patient outcomes produced by effectively targeted treatments likely rest on an aggregated approach. A key priority next step would be to conduct further reliability and validity testing of the IPAF typology and determine if it could be incorporated usefully into DIT training.

APPENDIX A

IIP Code-Book

- find it hard to understand another person's point of view
- find it hard to take instructions from people who have authority over them
- too independent
- too aggressive towards others
- try to control others too much
- try to change others too much
- manipulate others to get what they want
- argue with others too much
- find it hard to trust others
- find it hard to be supportive of other's goals in life
- find it hard to really care about other's problems
- find it hard to put needs of others before own
- find it hard to feel good about another person's happiness
- fight with others too much
- too suspicious of others
- want to get revenge against others too much
- find it hard to make a long-term commitment to others
- find it hard to show affection to others
- find it hard to get along with others
- find it hard to experience a feeling of love for others
- find it hard to feel close to others
- Hard give a gift to another person
- Find it hard forgive others after been angry
- keep others at a distance too much
- find it hard to join in groups
- find it hard to introduce self to new people
- find it hard to socialise with others
- find it hard to express feelings to others directly
- find it hard to ask others to get together socially
- find it hard to open and tell feelings to others
- too afraid of others
- feel embarrassed in front of others too much
- find it hard to let others know what they want
- find it hard to tell a person to stop bothering them
- find it hard to confront others with problems
- find it hard to be assertive
- find it hard to be another person's boss
- find it hard to be aggressive towards others when the situation calls for it
- find it hard to be firm when needed
- find it hard to be self-confident when with others
- find it hard to say no to others

- find it hard to let others know when angry
- find it hard to argue with another person
- find it hard to feel angry at others
- find it hard to be assertive without worrying about hurting another person's feelings
- too easily persuaded by others
- too gullible
- let others take advantage too much
- find it hard to set limits on others
- find it hard to let self feel angry at someone they like
- find it hard to attend to own welfare when someone else is needy
- try to please others too much
- trust others too much
- put the needs of others before own too much
- overly generous to others
- affected by other's misery too much
- find it hard to keep things private from others
- find it hard to spend time alone
- find it hard to stay out of other people's business
- feel too responsible for solving other people's problems
- open up to others too much
- clown around too much
- want to be noticed too much
- tell personal things to others too much
- find it hard to make friends
- find it hard to express admiration for another person
- find it hard to have others depend on them
- find it hard to disagree with others
- find it hard to stick to own point of view and not be swayed by others
- find it hard to do what another person wants them to do
- find it hard to get along with people who have authority over them
- find it hard to compete against others
- find it hard to make reasonable demands of others
- find it hard to get out of a relationship that don't want to be in
- find it hard to take charge of own affairs without help from others
- find it hard to feel comfortable around others
- find it hard to tell personal things to others
- find it hard to believe that others find them lovable
- find it hard to be competitive when the situation calls for it
- find it hard to be honest with others
- find it hard to relax and enjoy self when out with others
- find it hard to feel superior to another person
- find it hard to become sexually aroused towards the person they really care about
- find it hard to feel that they deserve another person's affection
- find it hard to keep up their side of a friendship

- find it hard to have loving and angry feelings towards the same person
- find it hard to maintain a working relationship with someone they don't like
- find it hard to set goals for self without other's advice
- find it hard to accept another person's authority over me
- find it hard to feel good about winning
- find it hard to ignore criticism from others
- find it hard to feel like a separate person when in a relationship
- find it hard to allow self to be more successful than others
- find it hard to feel or act competent in role as a parent
- find it hard to respond sexually to another person
- find it hard to accept praise from others
- find it hard to give credit to others for doing something well
- find it hard to get over the feeling of loss after a relationship has ended
- find it hard to give constructive criticism to others
- find it hard to experience sexual satisfaction
- find it hard to be involved with another person without feeling trapped
- find it hard to do work for own sake instead of for someone else's approval
- find it hard to be close to someone without feeling they are betraying someone else
- too sensitive to criticism
- get irritated or annoyed too easily
- want people to admire me too much
- act like a child too much
- too dependent on others
- too sensitive to rejection
- feel attacked by others too much
- feel too guilty for what they have done
- criticise others too much
- avoid others too much
- affected by other's moods too much
- worry too much about other's reactions to them
- influenced too much by another person's thoughts and feelings
- compliment others too much
- worry too much about disappointing others
- lose temper too easily
- blame self too much for causing other's problems
- too easily bothered by the demands of others
- too envious and jealous of others
- worry too much about family's reactions to them
- too easily lose a sense of self when around a strong-minded person
- feel too guilty for what they have failed to do
- feel competitive even when the situation does not call for it
- too anxious when involved with another person

APPENDIX B

IPAF Typology: Notes for Use

The typology is designed to be used by DIT clinicians following the interpersonal affective focus (IPAF) formulation (session four). Its purpose is to provide a classification tool which captures the particular problematic interpersonal style for which the patient is seeking treatment. It should be used after the patient and the clinician have agreed upon the IPAF collaboratively. The whole session should be reviewed before selection.

During the formulation of the typology, it was noted that two items occurred across all categories. These items may be present in any of the four categories: feel others are neglectful, feel others are unavailable.

The defence is an important part of the IPAF. Ideally, the clinician should explore the defence function with the patient to ensure that it is fully integrated within the IPAF. The user should consider what is defended against, rather than the defensive behaviour alone when selecting a category. For example, the patient may describe a friendly-submissive interpersonal style themselves, yet the clinician notes hostility. In this case, the clinician should decide whether hostile submissive is a better descriptor.

In some cases, it may not be possible to classify the IPAF. Firstly, the IPAF may lack the detail or explicit discussion between the patient and the clinician which would allow a category to be selected with confidence. Secondly, the IPAF may contain items from multiple categories to such an extent that one category cannot be selected. The rater should then select 'unclassifiable' and note the reason.

Rater should
(I) indicate using the Likert scale the extent to which each category describes the IPAF
(II) identify which category best describes the IPAF
(III) if unable to select one category, note the reason(s) why

IPAF TYPOLOGY

Based on your understanding of the patient's IPAF, indicate using the Likert scale the extent to which each of the four categories is like the problematic interpersonal style depicted. Then circle the category which best characterises the IPAF. If it is impossible to select one category due to lack of detail or excessive overlap between categories, select 'unclassifiable' and note the reason(s).

Hostile-Dominant	**Friendly-Dominant**
Get irritated or annoyed too easily Try to control others too much Find others intrusive Too independent- hard to rely on others or have others depend on them Often upset or angered by other's lack of consideration for them Too easily bothered by the demands of others Too envious or jealous of others Find it hard to put needs of others before own Find it hard to make a long-term commitment to others Too aggressive towards others Too critical or suspicious of others Find it hard to say sorry	Feel they are 'too much' for others Find it hard to spend time alone Try to please others too much Feel others are less committed to relationships that they are Easily become over-invested in romantic relationships Want to be noticed too much Open up to others too much Feel too responsible for solving other people's problems Feel too guilty for what they have failed to do Feel too sensitive to criticism or rejection Worry too much about other's reactions to them

Not at all like IPAF		Somewhat like IPAF			Very much like IPAF		Not at all like IPAF		Somewhat like IPAF			Very much like IPAF	
1	2	3	4	5	6	7	1	2	3	4	5	6	7

Hostile-Submissive	**Friendly-Submissive**
Find it hard to trust others Find it hard to open up or to express feelings to others directly Find it hard to feel close to others Find it hard to show affection to others Find it hard to be self-confident or assertive with others Find it hard to let others know what they want Feel dismissed, ignored or excluded by others Hard to feel a sense of belonging or being wanted Feel the judgement of others strongly Find it hard to feel comfortable around others Feel embarrassed in front of others too much Too afraid of others Find it hard to get along with others Find it hard to socialise or make friends Find it hard to relax and enjoy going out with others Find it hard to join new groups or introduce self	Find it hard to say 'no' to or make reasonable demands of others Put the needs of others before own too much Too easily persuaded by others or easily lose a sense of self Feel taken advantage of too much Find it hard to feel or express anger Find it hard to confront others with problems Too dependent on others for help Find it hard to feel good enough compared to others Hard to believe others will find them lovable Act like a child too much Find it hard to feel or act competent as a parent

Not at all like IPAF		Somewhat like IPAF			Very much like IPAF		Not at all like IPAF		Somewhat like IPAF			Very much like IPAF	
1	2	3	4	5	6	7	1	2	3	4	5	6	7

Unclassifiable ☐ *reason…….*

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