

Can the content of a client's construing of personality development be used to predict outcome in  
Cognitive Behavioural Therapy (CBT)?

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## Abstract

**Background:** A variety of factors impact on the outcome of therapy including the therapeutic relationship, the therapist, the family background and co-morbid problems of clients. The Personal Constructs of clients, particularly their concept of ideal self and presenting problem, have been found to affect outcome in therapy. However the impact of a client's wider pattern of construing is an area that has been neglected. In particular, this study investigated whether clients' constructs of factors influencing personality development were associated with outcome in cognitive behaviour therapy (CBT) groups.

**Method:** Clients were recruited from CBT groups for a range of different clinical presentations. The study was in three stages. In stage one participant's constructs around factors influencing personality development were found using dyadic elicitation. In stage two, a participant group categorised the constructs, and all participants then ranked the constructs using a modified resistance to change methodology. In the third stage, the ranking of constructs was compared between participants with good or poor therapeutic outcomes using a Mann-Whitney analysis.

**Results:** A total of 26 participants were recruited, of whom 22 were involved in the comparison of good and poor outcome. Participants identified sixteen constructs of influences on personality development. A particularly sophisticated hierarchical model was developed spontaneously by participants, providing methodological validation. In comparing groups, it was found that constructs about education being ranked low were associated with poor outcome, and dropping out of therapy.

**Conclusions:** CBT groups have many parallels to educational settings. Therefore it was hypothesised that if individuals ranked education constructs low they would find it more difficult to gain benefit from a CBT group. It was suggested that rather than assigning clients to treatment based on diagnosis, more attention should be given to what they construe as 'helpful'.

Can a client's construal of personality development be used to predict outcome in Cognitive  
Behavioural Therapy (CBT)? Part I:

What is the relationship between the personal constructs of clients and the outcome of therapy: A  
review of the literature

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## Abstract

Assessing the outcome of talking therapies on mental health problems is an area receiving much attention. A significant body of literature exists looking at factors influencing outcome such as therapeutic relationship, the client, therapist factors, and demographic factors. This review specifically focussed on how a client's personal constructs (Kelly, 1955) were associated with outcome in therapy. Twenty-one articles were reviewed. The majority of articles concentrated on construal change at outcome, however five articles also investigated aspects of construing that predicted outcome. Three main themes were identified: The centrality of the 'ideal-self' element to outcome across a broad range of therapies and presenting difficulties; the danger in assuming a-priori what would be the desired construal change; and that positive outcome may have been predicted by clients who were better able to construe their presenting difficulty.

## Introduction

Psychological therapies are at the forefront of treatment for mental health difficulties. There are many competing therapies that clinicians of different theoretical orientations utilise in helping their clients. There is, therefore, a need to establish what can influence the outcome of therapy to ensure that clients have access to the most useful intervention possible. The literature has focussed on a number of areas impacting on outcome, and a brief summary of the research for each area is provided in more depth below.

### Therapist Characteristics

The therapist is the primary means of delivering therapy. As such, to discuss ‘therapies’ separately from the therapist is misleading, as it is the therapist who is responsible for tailoring therapies to the client’s needs (Krause and Lutz, 2009). Indeed, it has been argued that variability between therapists, and between different clients with the same therapists, represents a systematic error in much outcome research (Krause and Lutz, 2009). Trying to isolate these therapist characteristics has a long history, but limited success (Lambert and Baldwin, 2009).

Some studies have been able to identify differences in overall outcome between therapists, particularly comparing ‘the best’ and ‘the worst’ therapists (in terms of outcome). Unfortunately, establishing what *causes* these differences remains difficult. For example, in an extensive and large-scale study Okiishi, Lambert, Eggett, Nielsen, Dayton and Vermeersch (2006) compared 71 therapists over 5000 clients. Though there was a wide difference in outcome between therapists, this was not significantly related to the therapist factors investigated, namely gender, type of training, years of training and theoretical orientation.

Trying to identify more personal aspects of therapists associated with outcome has been equally problematic. In reviewing the literature, Aveline (2005) suggested there was evidence to support efficacy of therapists who were genial, self aware and interested in human affairs. However, the highly subjective nature of these claims indicates how difficult an area this is to research, and should probably be regarded as tentative.

In short, investigations into the therapist's influence on therapy outcome have tended to indicate that there are large differences between therapists in outcome, but has not identified causal factors.

### Therapy Characteristics

The literature investigating, and comparing, different therapeutic interventions is vast, and it is well beyond the scope of this current paper to present a full overview. For an overview of CBT, see for example Kingdon and Dimech (2008) and Hunot, Churchill, Teixeira and Silva De Lim (2007). Psychodynamic therapies are discussed in Alexander (2007), and personal construct psychology (PCP) in Metcalfe, Winter and Viney (2007). These papers represent only a fraction of the different therapies utilised by clinicians, and the different problems (e.g. anxiety, depression etc) to which they are applied.

There are several themes, however, that characterise much of the literature. Broadly, most evidence-based therapies, such as CBT, PCP, or psychodynamic interventions show positive outcomes when contrasted to placebo or control conditions. However, it remains much more difficult to distinguish differences in outcome *between* therapies (for example, see Speilmans, Pasek, and McFall, 2007). It has proved, therefore, difficult to establish what characteristics of a therapy directly influence outcome.

Attempts to investigate the effectiveness of different components of therapy (particularly CBT) have met with mixed results. Though some studies have made claims for the relative importance of one component over another, there is little concrete support for this in the literature (Speilman, Pasek and McFall, 2007; Ahn & Wampold, 2001), with no difference found between individual components and the ‘whole package’ in terms of impact on outcome.

In summary, therefore, attempts to investigate what characteristics of therapy influence outcome have ambiguous results. This is curious given that various different types of therapy have evidence suggesting effectiveness in overcoming psychological distress. One factor positively related to outcome, though, is the therapeutic relationship itself.

### Relationship Factors

The therapeutic relationship is often found to be strongly predictive of outcome in therapy (Langhoff, Baer, Zubraegal and Linden, 2008; Barber, Connolly, Crits-Christoph, Gladis and Siqueland, 2000), accounting for a significant proportion of therapeutic change. This applies both to psychodynamic therapies, where the therapeutic relationship is intrinsically conceived to be the medium of change, and other therapies like CBT where the focus is on beliefs and behaviours.

Assessing what makes a ‘good’ therapeutic relationship suggests that similarities between therapist and clients in personality (Anchor, 1977; Nelson & Stake, 1994) and positive perceptions of each other (Visintini, Ubbiali, Donati, Chiorri and Maffei, 2007) all contribute. However these are, arguably, factors that would make for closer relationships in general. It is hard to identify anything *unique* in a therapeutic relationship that would influence outcome. Indeed, given that different therapies may have very different definitions of a ‘good’ therapeutic relationship, this makes defining a therapeutic relationship difficult.

In short, there is good evidence in the literature that a positive relationship between therapist and client has a large impact on therapy outcome. This has high face validity (i.e. if two people dislike each other, it would be harder to work together) though the definition of a specifically therapeutic relationship remains elusive. It is curious that despite different attitudes to therapeutic relationships in different therapies, it remains consistently important. There may be common links between therapies in valuing respectfulness and openness in the therapist.

### Family & Social Effects

Wider socio-economic factors have also received some attention in the literature. This has often focussed on prevalence studies, indicating that income, ethnicity, gender, age, and employment can all play a role in the likelihood of mental health problems occurring (see for example Grant, Hasin, Blanco, Stinson, Chou, Goldstein, Dawson, Smith, Saha, and Huang, 2005; Paul & Moser, 2009). Though therapy may be effective in helping reduce symptoms for clients with ‘poorer’ demographic statistics, they are still more likely to have worse clinical symptoms when therapy has finished compared to ‘wealthier’ clients (Roy-Byrne, Sherbourne, Miranda, Stein, Craske, Golinelli and Sullivan, 2006).

The immediate family and context of a client can also influence the prevalence and treatment of mental health difficulties. Genetic factors and predisposition are one area that has been studied, though this is beyond the scope of this article (for an example, see Hettema, 2008).

The wider influence of family on mental health is again a wide topic largely beyond the scope of this article. However, it is clear that the on-going family context can contribute to mental health difficulties in numerous ways, in providing help and support, or contributing to client’s difficulties (for two examples in this area, see Ginsburg, Kingery, Drake & Grados, 2008; Rehman, Gollan & Mortimer, 2008). Early experiences of parental neglect or abuse have been found to be associated with

later depressive and anxiety disorders (Harris and Brown, 1996; Brown and Harris, 1993). The level of families' expressed emotion has also been linked to schizophrenia and depression (Leff and Vaughn, 1980).

### Patient Characteristics

One important topic is the influence of client characteristics on a particular therapy. However, the research focus has been on co-morbid factors and personality disorder (for example, see Keeley, Storch, Merlo and Geffken, 2008). One particular area investigated has been the impact of 'self-esteem' on outcome (Davis, Hooke and Page, 2009). In general, presence of personality disorders appears to decrease the likelihood of a client benefiting from therapy. The evidence for co-morbid factors and low self esteem is more mixed, though they tend to indicate a worse outcome in therapy.

#### Paucity of personality

The studies of patient characteristics tend to have neglected the area of how the wider personality of clients impacts on outcome in therapy, with the focus on 'clinical' factors, like self-esteem or personality disorder. Alternatively studies have investigated personality factors associated with certain clinical presentations, e.g. what traits does someone with a particular disorder possess? (e.g. Dalle Grave, Calugi and Marchesini, in press). This might be described as focusing on a model of 'dysfunctional' personality. Merrill and Strauman (2004) noted that the CBT literature focussed on 'maladaptive' personality, as opposed to 'adaptive' personality influencing therapeutic outcome, and suggest that this wider 'adaptive' approach to personality needs greater research. Indeed, they indicate a lack of attention in general to the interaction between treatment and personality.

There have been some attempts to research this area, of which the most rigorous has been the studies by Piper, Joyce, McCallum, and Azim (1998), Piper, McCallum, Joyce, Rosie and

Ogrodniczuk (2001), and Ogrodniczuk, Piper, Joyce, McCallum, & Rosie (2003). They utilised both personality traits and a measure of the Quality of Object Relations (QOR) of participants, mixing trait and psychodynamic perspectives on personality. They found that high Conscientiousness, Extroversion and QOR were associated with positive outcomes in therapy, and high neuroticism negative outcomes. Broadly, these factors may have captured the interpersonal nature of therapy. It might be argued that these characteristics suggest people who are better at forming relationships do well in therapy.

Unfortunately, the literature is sparse, and there is little consistency in what measures are used to define personality, e.g. ‘defensivity’ (Firestone and Witt, 1982) or ‘novelty seeking’ (Jimenez-Murcia, Alvarez-Moya, Granero., Aymami, Gomez-Pensa, Jaurrieta, Sans, Rodriguez-Marti and Vallejo, 2007). In general, though, this remains a highly under-researched area, and focuses on very broad concepts (such as ‘extroversion’) that may miss nuances in how personality influences outcome. One of the major difficulties is defining personality.

### What is personality?

Personality is a particularly difficult concept to identify, beyond a broad definition, such as given by Pervin and John (1997): “*representing those characteristics of the person that account for consistent patterns of feeling, thinking, and behaving*”. Operationalising this definition has proved problematic in the literature, however. For example, one of the most common ways of describing personality comes from the use of ‘factor’ models, where a small number of persistent traits (like extroversion or conscientiousness) are used to define personality.

Even within trait-based approaches, however, there is a range of different models. The most common is the NEO-Five (Costa and McCrae, 1992a & 1992b; McCrae and John, 1992). But models with a wide range of different traits are used, making it unclear to what extent the different traits can be compared, or refer to the same underlying characteristic. For example, is ‘conscientiousness’

(Ogrodniczuk et al., 2003) referring to a similar concept as ‘perseverance’ (Jimenez-Murcia et al., 2007)?

When different therapies are compared, the problem of incompatibility between definitions of personality becomes even starker. For example a cognitive model, which is arguably closest to a factor model, essentially defines personality as a series of cognitive beliefs or schemas. Conversely, psychodynamic models emphasise unconscious processes, drives, and primitive anxieties as the main mediators of personality.

If, therefore, an investigation was to be made into the relationship between personality and outcome, a model should be chosen that avoids the above confusion. This model would need to be robust and able to encompass a range of different responses across different therapies so avoiding difficulty in comparisons such as between Ogrodniczuk et al. (2003) and Jimenez-Murcia et al. (2007). Ideally it should avoid confusion around the very concept of personality, and be derived from a sound theoretical base. The model deemed most able to meet these criteria was that of Personal Construct Psychology (PCP).

### Personal Construct Psychology

Personal construct psychology (PCP) was devised by George Kelly (1955), and sought to provide a framework by which people understand the world through an interconnected hierarchy of bi-polar constructs (e.g. good vs evil, tasty vs horrid). These constructs are ways that individuals make discriminations between things (called elements) in the world. Constructs further up the hierarchy are more fundamental to the person’s beliefs about the world and themselves. Constructs do not need a verbal label, and can be represented in any way, for example through images.

Kelly did not particularly view PCP as being a theory of personality (see Kelly, 1967 for his discussion of all the labels PCP was given). This avoids the problem of definition of personality discussed above. What is labelled as ‘personality’ is probably an expression of aspects of the construct system. However, the construct system was conceived as being very broad, encompassing things (like basic biological processes) that typically fell outside traditional definitions of personality.

PCP lacks the idea of motivation, or drive, used in some theories. Instead, decisions are taken that, according to the individual’s constructs, would give the greatest chance of elaborating that system. Perceived threats to the system provoke various emotions (what Kelly called the ‘professional constructs’ like anxiety and anger). People can change their construct system in response to this elaboration, or act in ways to avoid the system changing.

PCP offers several further advantages over the other theories discussed above. It is a coherent, defined description of people’s psychology, that encompasses reasons for both stability of the construct system over time, and reasons why it changes. Unlike trait approaches, it allows for a more individualised description of the person to emerge. In addition, both cognitive and psychodynamic ideas can be described in terms of the construct systems. Cognitions and schema are similar to constructs, and can be thought of as describing one pole of a construct. The psychodynamic unconscious and defence mechanisms have several PCP equivalents, including unelaborated poles, poles lacking verbal labels, and constructs with such negative implications they are avoided.

One of the main tools used in PCP is that of the repertory grid, a tool that has been consistently elaborated since it was first introduced by Kelly (for an overview, see Walker and Winter, 2007). In brief, a repertory grid represents the elements under investigation in a series of columns (e.g. mother, father, self, ideal-self). Elements are then contrasted with each other, most commonly in threes. Clients are then asked in what way two elements are similar to each other, and different from a third. This provides the two poles of a construct (similarity vs difference pole). The therapist will then contrast

another set of three elements, eliciting more constructs. Finally, each construct can then be rated as to how close to either pole of a construct it is, often on a five or seven point scale (with 1 denoting one pole, and 5 or 7 the other).

One common way of analysing grids is to find the ‘distance’ between elements. Distance refers to the sum of the magnitude of differences in score on all constructs between two elements of a repertory grid. This indicates how similarly two elements are construed.

### Summary

The literature around outcome and therapies is large and diverse, though there still remains significant scope for research in terms of differences between therapies, ‘active’ components of therapy, and the role of client, therapist, and the relationship between them. One area particularly neglected is that of how the personality of the client affects therapy outcome. Given the diverse and contradictory definitions of personality found in the literature, the focus of this review will be on Personal Construct Psychology, and the influence a client’s construct system has on outcome.

### Method

The aim of this literature review was to investigate how personal constructs have been used to investigate therapy outcome. The focus was not on PCP based therapy per-se, but on any therapeutic situation that had been investigated using a PCP approach. Also, the review did not investigate the comparative effectiveness of different therapies nor how the therapy, therapist, or client was construed, except where a direct link with outcome was established. However, a particular focus was on constructs particularly associated with improvement in therapy. The focus was also on client construal, not on therapist construal.

## Review Question

The review question investigated was “How have the personal constructs of clients been used to investigate outcome in therapy?”. A secondary question investigated was “Have any personal constructs been identified that predict outcome in therapy?”.

## Inclusion and Exclusion criteria

In order to answer the above questions, the following inclusion criteria were used:

1. The articles must, either qualitatively or quantitatively discuss both the client’s personal constructs and outcome in a particular therapy.
2. Outcome was defined in this particular case as referring to whether or not a client has improved during therapy.
3. Articles must have been published in peer-reviewed journals, and contain original research or theory. Single case studies were only included if they demonstrated a novel approach.

These very broad inclusion criteria were balanced by a number of exclusion criteria:

1. If an article only presented outcome data, for example investigating the relative effectiveness of two different therapies in helping a particular client group.
2. If an article only focused on constructs, without any indication of therapeutic outcome (e.g. describing constructs associated with clients attending therapy for anxiety, but no description of how this turned out).
3. Constructs of therapists, unless this was in the context of interaction with the client’s constructs and outcome.

4. 'Personality disorder' populations, as this was felt to strongly represent a 'dysfunctional personality' approach.
5. Articles validating, or discussing the validity of, psychometric assessments.
6. Comparison between therapies (particularly PCP vs other therapy), unless the constructs related to that difference and outcome were also discussed.
7. Articles published before 1980. This was both to allow a focus on more recent articles and research, and avoid the more haphazard availability of articles from earlier decades.

One marginal case as to whether it would match the inclusion or exclusion criteria, was if an article's sole measure of therapeutic outcome was construal change. Though a perfectly legitimate measure of outcome in general, it did not necessarily mean it would meet the definition of outcome laid down in point 2 of the inclusion criteria. Therefore, these studies would be included if there was some attempt to link construct change with positive or negative outcome, or if such a link could be clearly inferred from the article. For example, if a self-esteem group reported a change in construal related to positive self esteem after the group.

### Search Criteria and Database

The databases used to conduct the initial literature search were Scopus, Psychinfo & Psycharticles, and Medline databases, through Athens. These databases provide on-line access to a wide range of journals and articles. Several terms were inputted into the databases through the search function of each database. Given the relatively small literature that exists on PCP, broad search terms were used. The database engine scanned the title, abstract, and keyword section of articles. Several restriction criteria were used, namely that results should be articles (i.e. not reviews), should apply to the adult population, and should be limited to those tagged as 'psychology' within the database (psychotherapy & psychotherapeutic counselling for Psychinfo, Psychology and therapy for Medline). The keywords used were:

1. “Construct” AND “therapy”
2. “Repertory grid”
3. “construal”
4. “personal construct”
5. “construct” AND “Kelly”

### Procedure

After the initial search using the keywords, the titles of articles identified were then examined to eliminate articles that clearly did not correspond with inclusion or exclusion criteria. A shortlist of articles was then created, and an abstract search of these articles was undertaken to further identify articles that met the inclusion/exclusion criteria, creating a second shortlist.

An extraction template (Appendix 1) was used to scan the full articles from this shortlist, and identify information to be included for this review. This also acted as a final check for articles failing to meet the inclusion/exclusion criteria. A simple, four item rating system was used to differentiate quality of papers, each item being rated from 0 to 2. The four items were:

1. Replicability/clarity: This item rated an article on how clearly and easily it described its topic material.
2. Clinical Population: Whether the article used a clinical sample (scored 2), or was either primarily a theoretical paper or drew most of its data from a non-clinical source.
3. Appropriate population size: This took into account whether the article was qualitative or quantitative.
4. Clinical implications explained: Was there a clear link drawn between the findings of the study, and how this related to the wider literature and current clinical practice.

Having extracted the information pertinent to the review from the final shortlist of articles, a search was then made to identify any common themes that emerged from the literature. Given that this review was focussed on a PCP approach, these themes were in the form of constructs, with articles assigned to either one pole or the other.

## Results

The literature search took place between April and June of 2009. The initial use of the search terms returned a total of 2628 papers (including repetitions). The initial title sort reduced this to 83 articles. Finally, following the abstract search, a total of 21 articles were found that matched the inclusion and exclusion criteria. For a full summary of the reviewed articles, please see Appendix 2.

### Overview of Papers

A number of different thematic constructs were identified in the literature. Broadly, these related to the type of therapy being explored by the articles, whether the focus was on the constructs themselves or the structure of the construct system, and finally whether there was some prediction of outcome or not. These themes are discussed in more detail below.

### PCP therapy vs Other therapies

One construct useful for describing the literature was whether the article was focussed on PCP-based therapy, or 'other' therapies – a pole that was necessarily undifferentiated due to the range of different therapies investigated. Nine of the articles focussed on PCP. Four of these measured the outcome solely in terms of changes in the personal constructs of the participants (Luk & Shek, 2006; Viney et al., 1997; Green, 1998; Stein, 2007), clearly describing how these were related to desired

outcome in therapy. These articles demonstrated the power and flexibility of PCP as a tool, in these cases simultaneously used as a therapeutic approach, a research tool, and an outcome measure.

The remaining five PCP articles (Winter et al, 2007; Winter et al, 2006; Stewart, 1996; Lane & Viney, 2005; Sheehan, 1985) also include various different psychometric measures to assess outcome. One difficulty in adopting a variety of different measures is meaningfully comparing them, or adequately explaining why a therapy had reduced a score on a measure. A PCP perspective was particularly useful in directly linking changes in measures to changes in the construct system. Though all five of the articles achieved this to some degree Stewart (1996) particularly highlighted this in stutterers. He linked measures of speech fluency to changes in the participant's construct system around the implications and meaning of being a stutterer, and how central this was to self perception (core roles).

Taking a PCP approach can link different psychometric measures by exploring why the scores they record are linked to the underlying construct system. This was noticeable in Winter et al. (2007), where the various measures related to depression, suicidal ideation, and hopelessness were directly compared to the repertory grid of the participants, linking constriction of the construct system (see constructs vs structure below) to higher depression and hopelessness. Using PCP in this way to explore construing helped relate abstract measures of outcome more directly to therapeutic progress.

The twelve articles that investigated therapies other than PCP were wider ranging in what therapy was actually investigated. Clarke and Pearson (2000) investigated Cognitive Analytic Therapy (CAT), Willi, Frei, and Limacher (1993) focussed on couple therapy, Large (1985a) CBT, Large (1985b) Biofeedback in pain management, O'Connor and Gareau (1993) compared behavioural to cognitive therapies, and Feixas, Saul, and Avils-Espada (2009) cognitive therapy. In addition self-hypnosis (James, Large and Beale, 1989; Large and James, 1988), multidisciplinary interventions (Baily and

Sims, 1991; O'Farrell, Tate and Aitken, 1993), and psychoanalytic approaches (Bassler and Krauthauser, 1996; Raz-Duvshani, 1986) were all investigated by several articles.

This eclectic mixture of therapies, however, demonstrated that PCP could be useful in comparing how different therapies work, in terms of their impact on construct systems. Despite different therapies, one common approach to understanding the effect of each therapy was measured in how 'distance' between elements changed. Self/ideal-self changes were common (e.g. Large, 1985b; O'Farrell, Tate and Aitken, 1993), and comparisons with self and other elements such as 'abuser' elements (Clarke and Pearson, 2000) and the therapist (Bassler and Krauthauser, 1996). One of the most common comparisons in chronic pain studies was the self and ideal self with elements associated with the self as ill or in pain (e.g. James, Large and Beale, 1989; Large and James, 1988).

Though in principal it would be possible to compare different therapies using, say, a CBT paradigm, there would be some theoretical conflicts. CBT and psychodynamic, for example, have conflicting theoretical approaches, such as whether or not the focus of therapeutic change is open to conscious scrutiny (and indeed, the very concept of an 'unconscious'). PCP, however, does not have that theoretical limitation, able to cope with 'cognitions' and 'the unconscious' within the same paradigm.

### Constructs vs Structure

The second construct that differentiated the reviewed articles was which aspect of a clients' construct system was focussed on. Ten of the articles (see appendix 2) concentrated only on the constructs themselves and their relationships with the elements. The concept of distance was the most common approach (e.g. Large, 1985a & b; Clarke and Pearson, 2000; Sheehan, 1985).

One interesting contrast was between Stein (2007) and the other articles reviewed. Stein's was the only study that used imagery as constructs, as opposed to the verbal labels otherwise used. This was used both to elicit constructs (via the use of art cards as elements), and to measure outcome and change – for example how the client visualised their mother. Though a case report, Stein demonstrated that the verbal labels or numeric measures are not the only way of assessing outcome and construal change in clients.

The remaining articles focused on constructs all used variations on measuring numeric relationships between constructs in terms of the rating of single elements (Viney et al., 2007; Luk & Shek, 2006) or 'variation around construct means' – a concept very poorly explained by O'Connor and Gareau (1993).

In short, articles that focused on the constructs and elements themselves tended to use some measure of numerical change in the relationship between the elements and constructs at outcome.

The remaining articles focussed on wider patterns of relationship between the constructs, or on how the outcome studied related to other PCP concepts. This construct pool was again rather undifferentiated, containing a variety of different approaches, and some articles that also investigated the constructs themselves (Winter et al., 2007; Winter et al., 2006; Bassler and Krauthauser, 1996; Baily and Sims, 1991; Sheehan, 1985; Raz-Duvshani, 1986).

Some articles did not focus so much on the client's constructs themselves, but on how they related to Kelly's 'professional constructs'. Green (1988) in a case report investigated the change in guilt in the client. In Kellian terms, guilt describes a sense by somebody that they have been dislodged from a 'core role' (in this case that of being 'a daughter'), in a sense 'failing to live up to their own expectations'. Interestingly, being a case report, Green's outcome was "ambiguous": It was difficult to ascertain if any meaningful change had occurred, perhaps because the dislodgement was too great.

Lane and Viney (2005) focussed on another professional construct, that of ‘threat’. This is the awareness by an individual that a core part of their construct system is at risk of being invalidated. In Lane and Viney’s case, they were dealing with breast cancer survivors, so the threat to the construct system was that of, essentially, complete elimination. Their focus on achieving positive outcomes was, therefore, in reducing that sense of threat.

In addition to threat, Lane and Viney also discuss commonality (similarity in different people’s construct system) and sociality (the ability of one person to construe the construct system of another). Since they were reporting on a group, they highlighted that these two processes helped group members elaborate their construct system, as regard to the threat of cancer and their construal of it. Similarly Willi, Frei and Limacher (1993) discuss a case report of couples therapy. Though they do not explicitly discuss the process, concentrating on the couple’s constructs, they are essentially demonstrating the use of sociality and commonality in helping improve the outcome of couples therapy.

Of the remaining articles, there was a focus on the analysis of more quantitative aspects of construal systems. Winter et al. (2007) investigated the relative constriction or dilation of a construct system (i.e. to what extent an individual can tolerate incompatibilities in the construct system, and experiment with opening it up to varied experiences). Winter et al. (2006) and Baily and Sims (1991) investigated tightness of construing (the degree to which elements are tied to one pole of a construct) as related to outcome. These papers are discussed in more detail below. Finally, some articles looked at the overall relationship between constructs and elements to get a measure of complexity of construing, and differentiation between elements (Raz-Duvshani, 1986; Bassler and Krauthauser, 1996).

A final approach was that of Principal Components Analysis (PCA), to assess the extent to which the construct system is dominated by a series of related constructs (e.g. Stewart, 1996), with those dominated by the principal component referred to as ‘monolithic’. This provided useful information on

the construct system but was rather abstracted, and therefore more difficult to interpret usefulness in relating constructs to outcome.

### Summary

PCP approaches have been used in a number of ways to investigate outcome in therapies. One approach has been to look at the constructs themselves, and their relationship with the elements. This can be a powerful technique for linking outcome to specific changes in somebody's construct system, and as such lends itself to investigating a wide variety of different therapies as well as different outcome measures.

Focussing on more theoretical aspects of PCP, such as tightness or constriction can also provide a useful description of what influences outcome, emphasising that change may not necessarily always focus on specific constructs and elements, but the wider relationship between them. Nonetheless, care should be taken that this level of analysis does not abstract too far from a client's direct construing, potentially obscuring the relationship to outcome and change.

### Constructs Predicting Outcome vs Constructs and Outcome

The final major construct theme suggested by this review was the following differentiation: firstly there were articles focusing on outcome and construal (e.g. what construct change was accompanied by a particular outcome); secondly there were studies that investigated whether particular ways of construing the world predicted outcome in therapy.

The studies looking at constructs predicting outcome were in the minority – only five were at that pole. The majority of articles concentrated on looking at constructs and outcome.

## Constructs and Outcome

As discussed above, one of the most common investigations was between construal change and outcome, sometimes where construal change was the outcome (e.g. Stein, 2007). Changes in the distance between elements was the most common association with outcome. For example reducing the self-ideal self difference (Large, 1985a & b), or increasing a victim of abuse's distance from her abuser (Clarke & Person, 2000) were associated with more positive outcome in therapy. A related approach was to look at change in rating of the self through therapy, moving from distrust to trust and distance to closeness for HIV risk takers, reducing risk taking behaviour (Viney et al, 1997).

The 'distance' studies, in addition to the studies mentioned above that looked at the relationship between guilt, threat, commonality and sociality (Lane & Viney, 2005; Willi, Frei and Limacher, 1993; Green, 1988), were very much classically Kellian in their findings. As such the construct systems act in a way, and produced outcomes, that would be anticipated by PCP theory. This meant that there was (even if not explicitly demonstrated by the articles) reason to accept that those changes in the construct system were the 'positive' outcome recorded.

## Constructs predicting outcome

With some of the studies, particularly those looking at distance, it was possible to infer what might have resulted in worse outcome. For example a victim strongly identifying with an abuser (Clarke and Person, 2000), or a greater initial distance between self and ideal self (e.g. Large, 1985a) might reasonably be inferred to reflect a more difficult clinical journey to travel. However, these issues are rarely explored in the articles, or an explicit attempt made to establish the link.

One important exception was Large (1985b). This study focussed on clients with chronic pain, and the effect of biofeedback (EMG feedback, through a poorly described process) on their reporting of

pain. This was included as a psychological therapy as, though more medical, the focus was essentially on challenging client's construal of pain. 18 participants were included in the study, of which eleven reported a (statistically significant) improvement in their pain compared to two control conditions (the study was within – subjects, each participant subject to a three week waiting list, a three week 'neutral' group, and three weeks of biofeedback). Seven, therefore, reported no improvement. Reported improvement did not always correspond with rated improvement on scales, indicating a change of construal of the pain, rather than the pain itself. Clients also completed a repertory grid, whose main focus was on illness constructs (this was, unfortunately, not described well in the article).

Large attempted to investigate if there were any aspects of construing that predicted a better reaction to the biofeedback. The results of this highlighted the danger in making assumptions such as those suggested in the paragraph above. Large's prediction, supported by the finding, was that a greater self-ideal self distance was predictive of *better* outcome. As Large discusses, that might have been due to wanting to change because of self-dissatisfaction, or clients being less defensive, facilitating progress. This potentially clashes with other findings on self-esteem such as Davis, Hooke and Page (2009).

Large (1985b) therefore highlighted the need for greater focus on constructs that predict outcome, as simplistic assumptions about what may predict better outcome do not necessarily apply.

Another study investigating prediction of outcome and chronic pain was that of O'Farrell, Tate and Aitken (1993). Eighteen participants with chronic lower back pain were involved in this study. Like Large (1985b) the principal way that constructs were investigated was through the repertory grid, and in particular comparing self and ideal-self with elements around pain. One particular element associated with later positive outcome in therapy was the meaningfulness (i.e. close to self and ideal self elements) of the "self in pain" element.

Like with Large (1985b), this finding suggested that care should be taken in making a-priori assumptions about improvement. Again, initial expectation might have suggested that if self in pain was more meaningful, it might have reduced the chance of positive outcome. That it had the opposite effect may have indicated a greater awareness, or acceptance, of that pain. This may therefore have facilitated clients being able to understand and work with these constructs.

Winter et al. (2006) and Winter et al. (2007) both examined predictors of clients achieving positive outcomes in therapy. Winter et al. (2006) specifically investigated agoraphobics, contrasting group-based supportive therapy with an exposure/PCP approach. A repertory grid was used, with elements both elicited and supplied from previous research. Twenty-seven clients were placed in each treatment condition, and overall no significant difference in outcome was determined between conditions. However, analysis of covariance between repertory grid measures and the Agoraphobia scale used indicated that clients who did well, tended to construe their fathers as less idealised, and show greater anger and jealousy.

These constructs demonstrated that for different clinical presentations, different constructs may be relevant. Winter's findings suggested that a greater level of access to constructs around negative emotions such as jealousy and anger was associated with better outcome. Therefore a greater ability to access constructs around infidelity, and construing conflictual emotions as being 'acceptable', might have facilitated change in the individual.

Winter et al. (2007) focussed on PCP therapy for individuals who self harmed. In their study they compared a six session, manualised, PCP intervention compared to a 'normal clinical practice' route for individuals who presented with self-harm at an A&E department. This study again utilised a repertory grid as the principal investigative method. They found that the PCP intervention reduced measures of suicidal ideation, depression, and hopelessness. They found a shift in client construal

towards an increase in self-esteem, improvement in how they construed their future self, a decrease in self-destructiveness and 'being controlled' constructs.

When Winter et al. (2007) performed a principal components analysis they found that positive outcome in therapy on some measures were associated with a high percentage of the variance accounted for by the first principal component, and a low percentage by the second. They theorised that this suggested clients with a more chaotic view of the world were less responsive to therapy. Of the five articles looking at constructs predicting outcome, this was the only one that indicated that the wider pattern of an individual's construct system (their overall 'view' of the world), might influence therapeutic progress.

One final paper that looked at predictors of outcome was that of Baily and Sims (1991). They investigated 50 alcoholics undergoing alcohol treatment. Although they looked at both distance-relationships between elements and the degree of tightness of construing, they were not able to identify anything predicting outcome (though a tightening of construing was associated with continued drinking at follow-up). However, this study focussed on very narrow aspects of 'outcome' (completion of the course, any reported incidence of drinking) and it was possible that these outcome measures were too blunt.

### Summary

One of the major omissions in the literature appears to have be the dearth of articles investigating what aspects of an individuals construct system predict outcome in therapy. Five articles (Large, 1985b; Winter et al., 2006; Winter et al., 2007; Baily and Sims, 1991; O'Farrell, Tate and Aitken, 1993) investigated this. There was an indication that simplistic assumptions about what may positively influence therapy outcome were not always supported. Although constructs very specific to a therapeutic problem may help explain improvement in therapy, there was also some indication that

wider patterns of construing beyond constructs focussed around the ‘problem’ may have also influence outcome. This area appears to be one under-researched in the literature.

## Discussion

### Overview

In overview, the articles reviewed were mixed, containing a number of case-reports (Viney et al., 1997; Stewart, 1996; Green, 1988; Willi, Frei and Limacher, 1993). Although case reports, it was felt that they offered sufficient new material to warrant inclusion. This reliance on case-report was a weakness of this review, though reflects the nature of the articles published. The lack of larger scale studies was indicative of the relative lack of attention this area has received.

Of those articles specifically designed as research articles, many were either qualitative in nature, or had low numbers (only eight in total having participant numbers greater than twenty – see appendix 2). Given that this was a relatively unexplored area, only tentative conclusions could be drawn from the literature. PCP concepts such as distance between elements, constriction, and sociality were all useful in studying outcome in therapy. Changes in distance between elements were often related to therapeutic outcome. This would correspond to one way a PCP approach would predict that changes in therapy would occur. Thus, despite the relative lack of articles, there did appear to be a definite relationship between construal change and outcome.

Given that the wider literature on therapy has investigated the therapeutic relationship (e.g. Langhoff et al., 2008), there was little direct focus on this important aspect of outcome within the reviewed literature. In PCP terms, the basis for a strong therapeutic relationship would be sociality, and several articles in general looked at that concept (Willi, Frei and Limacher, 1993; Lane and Viney, 2005).

The decision to categorise the articles along three constructs was a useful approach in understanding the literature. As with all constructs they were personal to the author, and other constructs could have been used. However, each was useful in highlighting particular themes in the literature: firstly, the role that a PCP approach can play in allowing comparison between different therapies and outcome measures; secondly, that PCP can provide a good framework for demonstrating what has changed in the psychology of an individual during therapy; and finally that specifically investigating construing predicting outcome is an area that has received little attention in the literature.

In addition to these more general findings, it was felt that there were three main themes that arose from the literature. These are discussed in more detail below.

### Main Themes

#### Ideal self

One noteworthy aspect of the literature was the frequency with which the element of ideal self was central to therapeutic change. This was most obvious in studies that explicitly looked at self-esteem, for example Winter et al. (2007) and Large (1985b). However, understanding how the ideal self related to other elements was important in a range of different ways through the literature, specifically covered by 13 of the reviewed articles. Table 1 summarises these differences.

The use of the ‘ideal-self’ as an important element in therapeutic change covered a range of different clinical areas. One of most common were articles focussed on chronic pain. These demonstrated that ‘ideal-self’ was used both as a measure of self-esteem, but also to understand how clients related to their pain. This was done by comparing distance between ideal-self elements and various illness or pain-self elements.

Table 1: Summary of studies involving the ‘ideal self’

<b>Authors</b>	<b>Date</b>	<b>Elements contrasted with ideal self</b>	<b>Clinical area</b>
Large	1985a	Self, and elements around illness and hypochondria	Chronic Pain
Clarke and Pearson	2000	Abuser and abused child self	Childhood sexual abuse
Large	1985b	Self (Self-esteem)	Chronic pain
Winter et al.	2007	Self (Self-esteem)	Self-harm
Winter et al.	2006	Self (Self-esteem), idealisation of fathers	Agoraphobia
Stewart	1996	Ideal self easy to obtain, closeness to fluent self	Stammering
Green	1988	Role as daughter	Sexual abuse
O’Farrell, Tate and Aitken	1993	Self in pain	Chronic pain
Baily and Sims	1991	Sober and drunk self	Alcoholism
Bassler and Krauthauser	1996	Self and therapist	Eclectic in-patient
James, Large and Beale	1989	Physical illness	Chronic pain
Large and James	1988	Physically ill self	Chronic pain
Sheehan	1985	Self (Self-esteem)	Depression

The implication was that underlying a variety of different clinical presentations was the importance of how people compared themselves and others to an idealised self. Caution should be taken, as ‘ideal-self’ is a key element, particularly in repertory grid studies. There may, therefore, be a selection effect bias (i.e. ideal self was the clinical concept looked at). Nonetheless, the fact that a role for ideal-self elements was frequently found was a good indication of its clinical utility. Indeed, it suggests that investigating people’s ideal self might be a productive approach to take whatever a particular presenting difficulty, even if not immediately apparent.

Danger of *a-priori* assumptions in therapy

One issue that the literature highlighted was the danger of clinical assumptions dominating therapy direction. This was most obvious for the studies around chronic pain. The focus of these was around moving the participants away from illness-based elements. In essence, the model adopted was psychosomatic. However, more recent treatments for chronic pain emphasise the complex interaction

between pain, client beliefs, and environment (e.g. see Main, Sullivan and Watson, 2008), rather than a simple psychosomatic approach.

In this sense, the changes in the construct system noted by Large and others represented, to some degree, a shift towards participants adopting a construct system ‘acceptable’ to the therapist. Given that chronic pain is now known not to be psychosomatic in origin, some question remains over the usefulness of the technique. Nonetheless, the studies showed that some clients did benefit from these approaches.

This highlighted one further difficulty with these distance studies regarding a lack of explanation about *why* the shifts noted would have been associated with clinical improvement. This was not the case with ‘self-esteem’, as clear links can be made between distress and distance between ideal and current self. However, for distance between ideal and other elements, it was much less clear. Indeed, for the pain studies, the implicit assumption is that this helped because clients came to realise (to some degree) that they didn’t have a ‘real’ illness. Yet, given that this view would be rejected nowadays, the mechanism linking clinical improvements with changes in distance remains obscure. If nothing else, this problem cautions careful individual formulations by clinicians to avoid suppositions about *what* is wrong and *why* things have changed. It was notable that articles focussing on PCP therapy were, perhaps understandably, better at making these links (e.g. Stewart, 1996).

#### Awareness of clinical difficulty

One possible theme highlighted, particularly by studies looking at prediction of outcome, was the greater the awareness that a client has of their “problem”, the better the outcome in therapy. This was most notable in the pain studies by Large (1985b) and O’Farrell, Tate and Aitken (1993). In these, a counter-intuitive finding, that of increased self/ideal-self distance, or an increased meaningfulness of ‘self in pain’ was associated with better outcome.

Similarly, Winter et al. (2006) suggested those better able to experience negative emotion, or access constructs around infidelity did better in therapy. In all three studies those better able to construe their construct system associated with the difficulty, and have more elaborate constructs about it, do better in therapy. This has face validity, as it might be more difficult to elicit constructs, and help people reconstrue, if they find it more difficult to construe their initial construct system!

Though tantalising, more work would need to be undertaken in this area before a definite link could be established.

### Areas for Future Research

One of the primary foci of the literature reviewed was on ‘clinical’ constructs, those felt to relate directly to the clinical problem presented (such as self esteem), or on aspects of construing such as rigidity/looseness associated with clinical difficulty. There was little attempt to investigate wider patterns of construing associated with outcome, though Winter et al. (2007) had partially investigated this.

The wider PCP literature has attempted to address wider aspects of construing, including a number of papers suggesting choice of therapy by therapists and clients might be related to wider ‘world-views’ that they hold (see Winter, Tschudi and Gilbert, 2006 for an overview). Ideally, studies investigating wider, non-clinically focussed construing and its impact on outcome would need to be undertaken. This is not claiming a sharp divide between clinical and non-clinical. Rather, like all constructs, this represents a continuum. For example, in looking at self/ideal-self, how people construct these will depend on wider construal of the world, at least in part. There will also be aspects of construing for individuals that *are* completely separate (fragmented) from ‘clinical’ constructs.

Despite this fragmentation for the individual, it would be interesting, nonetheless, to see if they still impacted on therapeutic progress.

## Conclusion

Articles investigating client's personal constructs and outcome have highlighted several important factors, despite a limited number of well-powered experimental studies. The ideal-self was found to be an important element across a range of different clinical problems. A greater ability to construe a clinical difficulty may help a client achieve positive outcomes in therapy. Also, the dangers of *a-priori* assumptions forcing a direction of change in therapy were highlighted. Two important omissions in the literature were found. These were the absence of research into constructs that predict outcome and the effects of wider (i.e. non-clinical) aspects of the construct system on therapy outcome.

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## Appendix 1: Extraction Template

<b>Reference</b>	Title:  Date:  Journal:  Authors:
<b>Type</b>	
<b>Study Details</b>	Clinical Area: Therapy approach: Study tools:  Elicited/provided:  How outcome measured:
<b>Study Design</b>	
<b>Results</b>	Participants (uptake): Constructs identified & effect:  Significance/effect size:  Categorising/grouping used?:
<b>Rating</b>	Replicability/clarity: Clinical population: Appropriate population size: Clinical implications explained:
<b>Comments</b>	

Appendix 2: Summary of Reviewed Articles

Authors	Year	Clinical area	Participant numbers	Constructs studied	Outcome	PCP vs Other	Construct vs Structure	Prediction vs with outcome	Rating
Will, Frei, and Linschier	1993	Couples' therapy	1	Power, tenderness, freedom & sociability	Qualitative: Improvement in relationship	Other	Structure	With outcome	1,2,1,1
Green	1988	Best survivor	1	Guilt/core role as daughter	Qualitative: Ambiguous	PCP	Structure	With outcome	0,2,0,1
Stewart	1996	Stammering	2	Tightness/looseness, construal of ideal self	Quantitative: improvement in measures of speech fluency	PCP	Structure	With outcome	1,2,0,1
Viney, Truncolora, Weales, and Oades	1997	Fish taking	180*	Trust, closeness, sexuality, power	Qualitative: Moving towards less risk-taking behaviour	PCP	Construct	With outcome	1,2,1,0
Winter, Gourney, Metcalfe, and Rossotti	2006	Agoraphobia	54	Faithful, able to go out, tightness and superiority of infidelity	Quantitative: Battery of agoraphobic psychometrics	PCP	Structure	Prediction	2,2,2,2
Winter, Stelling, Riley, Metcalfe, Quake, and Ebandari	2007	Self-harm	64	Distances, constriction, PCA	Quantitative: improvement in variety of outcome measures	PCP	Structure	Prediction	1,2,2,2
Lane and Viney	2005	Cancer survivors	42	Threat, commonality, and sociability	Quantitative: improvement in variety of outcome measures	PCP	Structure	With outcome	1,2,2,1
Féixas, Saul, Avila-Espada	2009	Mixed - mainly mood/anxiety	606	Implicative dilemmas	Quantitative: improvement in symptom severity	Other	Structure	With outcome	2,2,2,1
O'Connor and Gareau	1993	Tics	12	Construct mean scores	Quantitative: Decrease in frequency of tics	Other	Construct	With outcome	0,2,0,0
Large	1985b	Chronic pain	18	Ideal self & distance	Mixed: Various pain scales and client report showing decrease in pain	Other	Construct	Prediction	1,2,1,2
Clarke and Pearson	2000	Childhood sexual abuse	4	Distance - self identification with abuser	Qualitative (low number): reduction in psychometric	Other	Construct	With outcome	2,2,1,2
Large	1985a	Chronic pain	4	Distance - self ideal self	Qualitative (low number): reduction in psychometric	Other	Constructs	With outcome	1,2,0,1
Luk and Shek	2006	Mixed	19	Constructs around self-being	Qualitative: improved visualisation of significant others	PCP	Constructs	With outcome	1,2,1,1
Stein	2007	Attachment	2	Constructs as images	Qualitative: improved severity and attitude to disability	PCP	Constructs	With outcome	1,2,0,1
O'Farrell, Tate and Aitken	1993	Chronic pain	18	Distance - self, ideal self, and self in pain	Quantitative: improvement in severity and attitude to disability	Other	Construct	Prediction	1,2,1,1
Baily and Sims	1991	Alcoholism	50	Distance - ideal self from sober and drunk self, tightness of construing	Quantitative: how many completed treatment	Other	Structure	Prediction	1,2,2,1
Bassler and Krauthauser	1996	Mixed	155	Distance - ideal self and physical therapist, cognitive differentiation	Qualitative improvement	Other	Structure	With outcome	1,2,2,1
James, Large and Beale	1989	Chronic pain	5	Distance - self ideal self and physical illness elements	Quantitative single case design: variety of outcome measures	Other	Constructs	With outcome	2,2,1,2
Large and James	1988	Chronic Pain	5	Distance - self ideal self and physical illness self	Quantitative single case design: variety of outcome measures	Other	Constructs	With outcome	2,2,1,2
Sheehan	1985	Depression	12	Self esteem, level of conflict, self isolation	Quantitative: improvement in variety of outcome measures	PCP	Structure	With outcome	1,2,1,1
Faz-Daryshani	1986	Psychoneurotic	27	Cognitive complexity and differentiation	Qualitative improvement	Other	Structure	With outcome	1,2,1,1

Noted in order of: Reliability/clarity, Clinical population, Appropriate population size, clinical implications explained  
 \* Session reports, not individual clients

Can a client's construal of personality development be used to predict outcome in Cognitive  
Behavioural Therapy (CBT)? Part II:

Is outcome in group Cognitive Behavioural Therapy associated with client's personal constructs about  
influences on personality development?: A research report

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## Abstract

This research study investigated the relationship between outcome in group Cognitive Behavioural Therapy (CBT) and client construal of factors impacting on personality change. Constructs of factors influencing personality development were identified using dyadic elicitation from a sample of 10 participants. A three person participant group then categorised these constructs, producing a final list of sixteen. 23 participants then ranked these constructs using a modified resistance to change methodology. A cluster analysis was performed, which indicated there were five main clusters, one of which included constructs around education. A comparison was then made between participants with good or poor outcomes, using a Mann-Whitney analysis. This showed that participants who rated education constructs as unimportant in personality development tended to have poor outcome. It was hypothesised that this was due to them construing the psycho-educational CBT groups as unhelpful. This may have been particularly the case for participants whose low ranking of education was related to negative experiences of education. It was suggested that assignment to therapy on the basis of clinical problem might not be as useful as on what the client would construe as useful.

## Introduction

Cognitive Behavioural Therapy (CBT) is a therapeutic approach that has, in recent years, been cited as a treatment of choice for many mental health difficulties within the NHS (e.g. NICE, 2004). CBT has a large, and expanding, evidence base to support claims for its efficacy (for example Kingdon and Dimech, 2008; Hunot, Churchill, Teixeira and Silva De Lim, 2007), though not necessarily superior outcomes to other therapeutic approaches (for example, see Speilmans, Pasek, and McFall, 2007).

Broadly, CBT has a number of components (Ahn & Wampold, 2001). The cognitive component refers to the concept of beliefs, thoughts, or schemas (rules) that an individual develops to understand the world. Sometimes these are felt to be 'defective' or untrue (e.g. "If I go outside I'll have a heart attack and die"). Clients are encouraged to understand their thoughts and challenge them, through a variety of techniques such as the cognitive diary. Behavioural components target activities that help maintain dysfunctional styles of thinking, and clients are encouraged to do behavioural experiments to reality test their beliefs. Central to many CBT approaches is linking thoughts, feelings, and behaviours of clients. For a thorough overview of different CBT approaches, see Barlow (1993).

Despite a good evidence base, the outcome of CBT is not always successful. Trying to isolate what positively influences outcome in CBT is an area of ongoing research, though some areas have received much greater attention than others.

### What Influences Outcome in CBT?

A wide variety of factors contribute to outcome in therapy. One of the most immediately obvious is the method and approach of CBT itself. Unfortunately, attempting to differentiate between therapies

has met with very limited results. Many different therapies produce successful outcomes (e.g. Alexander, 2007; Metcalfe, Winter and Viney, 2007).

It has been difficult to establish the superiority of one therapy over another (Speilmans, Pasek and McFall, 2007), or identify if particular components of CBT are more useful than others (Ahn & Wampold, 2001). It is therefore hard to evidence how and why CBT works, or what differentiates this from other therapies.

One of the most common alternative concepts as to what mediates therapeutic change has been the therapeutic relationship itself. Although the therapeutic relationship is considered more central to other therapy approaches, such as psychodynamic, it also remains important in CBT (Langhoff, Baer, Zubraegal and Linden, 2008; Barber, Connolly, Crits-Christoph, Gladis and Siqueland, 2000). In forming therapeutic relationships, there is some evidence to suggest that similarities in personality between therapist and client (Anchor, 1977; Nelson & Stake, 1994) promotes positive therapeutic outcome.

The extent to which therapist characteristics influence outcome has also been investigated, although not extensively (Lambert and Baldwin, 2009). It is known that different therapists can vary in outcomes, but identifying what causes this has proved problematic (Okiishi, Lambert, Eggett, Nielsen, Dayton and Vermeersch, 2006). There is some evidence that characteristics such as interest in human affairs, geniality, and being self-aware (Aveline, 2005) are associated with therapists who have better outcomes across a range of therapies. This finding could be linked to the need for a strong therapeutic relationship, as therapists displaying interest and affability might reasonably be expected to be good at forming relationships. It is difficult to escape the conclusion that the evidence so far indicates that ‘nice’ therapists do better therapy, a concept that might be expected to have high face validity.

Wider family and social effects have also been investigated, and mental health difficulties have been found to be more prevalent the worse the socio-economic circumstances of individuals (for one example see Grant, Hasin, Blanco, Stinson, Chou, Goldstein, Dawson, Smith, Saha, and Huang, 2005). In addition, even if therapy is successful, clients from more disadvantaged demographic backgrounds may still experience poorer mental health (Roy-Byrne, Sherbourne, Miranda, Stein, Craske, Golinelli and Sullivan, 2006).

Therefore, the characteristics of the therapist, therapeutic relationship, therapy, and client demographics all influence outcome in CBT (and other therapies as well). One further area that has been investigated is the characteristics of the clients themselves.

### Client and Personality Factors

Individual client factors have tended to focus on either personality disorders (e.g. Keeley, Storch, Merlo and Geffken, 2008) or describing characteristics associated with particular mental health difficulties (for example ‘lower self-directedness’ in Dalle Grave, Calugi and Marchesini, in press, and ‘self-esteem’ in Davis, Hooke and Page, 2009). There has been a focus on ‘maladaptive’ personality as opposed to wider, less pejorative aspects of ‘adaptive’ personality within the CBT literature (Merril and Strauman, 2004).

Although a number of studies have investigated ‘adaptive’ personality, it was difficult to draw any definite conclusions from this literature. A particular problem was the multiple different approaches to personality, for example the NEO-Five Factors (Costa and McCrae, 1992a & 1992b; McCrae and John, 1992) or psychodynamic perspectives such as introjection (Blatt and Felsen, 1993). This made comparing and generalising findings from the literature difficult.

These differences in approach reflect the lack of a universal definition of ‘personality’, which then impacts on the ability to compare different studies.

### Defining ‘Personality’

A number of definitions of personality are used, the most common being ‘factor’ models such as the NEO-Five, though it is unclear how this relates to other models of personality. Psychodynamic models of personality focus on unconscious drives and defences, and this is a very different conception compared to factor models. There has been some limited attempt in the literature to utilise both factor and psychodynamic approaches (in particular, three studies from the same research group Ogrodniczuk, Piper, Joyce, McCallum, & Rosie, 2003; Piper, Joyce, McCallum, and Azim, 1998; Piper, McCallum, Joyce, Rosie, & Ogrodniczuk, 2001). However, even in these studies the authors found it impossible to compare models directly.

Even within factor approaches, there are separate models utilising different basic traits, and it is difficult to know to what extent they are comparable. One example of this is the comparison between ‘conscientiousness’ (Ogrodniczuk et al., 2003) and ‘perseverance’ (Jimenez-Murcia, Alvarez-Moya, Granero, Aymami, Gomez-Penfa, Jaurrieta, Sans, Rodriguez-Marti and Vallejo, 2007). It is unclear to what extent someone being conscientious is different to them persevering, and in what sense these two factors capture those differences.

This inability to compare various models makes drawing conclusions from an already sparse literature difficult. What evidence there is suggests that client traits possibly connected to greater skill at forming relationships are associated with improved outcome in therapy. For example, extroversion (Nelson & Stake, 1994; Ogrodniczuk, 2003), attachment (Visintini, Ubbiali, Donati, Chiorri and Maffei, 2007) and amenability (Hopwood, Ambwani, and Morey, 2007) have all been positively associated with outcome. Unfortunately, studies specifically examining CBT are rare. In general, there

is little replication of studies (barring the Piper and Ogrodniczuk studies mentioned above) making conclusions even more uncertain.

Although in general the literature agrees that personality plays a role in therapy outcome, this is not universal (Cemalcilar, Canbeyli, Sunar, and Learned, 2003; Sexton, Littauer, Sexton, Tommeras, 2005). It should be noted, however, that these articles had methodological difficulties. There also were contradictory findings between articles, for example whether ‘defensivity’ worsened (Bohme and Teusch, 1999) or improved (Firestone and Witt, 1982) therapy outcome.

Given that using ‘personality’ approaches proves problematic, both in terms of practicality and the lack of clarity of definition, an alternative approach was thought useful. This was the model of psychology provided by George Kelly (1955). This is discussed in more detail below, highlighting the advantages over personality approaches.

### Personal Construct Psychology (PCP)

Kelly (1955) conceived of his theory of personal constructs as a new approach to psychology. Since its inception, his work has been developed (for example see Fransella, Bell and Bannister, 2004; Winter, 1992). Kelly viewed a person’s psychology as consisting of a series of bipolar constructs (e.g. good vs. bad, tasty vs. horrid, happy vs. sad). Constructs were fundamentally about discriminating between differences in the world, both internally and externally. Each construct had a range of convenience – the array of ‘things’ (called elements) for which that construct applied. This was not necessarily a sharp divide, however.

Although often viewed as ‘cognitive’ (see Kelly, 1967), constructs also refer to non-cognitive discriminations, such as basic biological functions. Constructs are also arranged in a hierarchy, each tending to have both super- and sub-ordinate constructs. Broadly, the more superordinate a construct,

the more 'central' it is to an individual. At the top of the hierarchy are core constructs, representing fundamental and wide-ranging beliefs about the world. Typically these constructs are self-defining (for example, people will typically respond 'because it is', or repeat the construct when asked to explain).

Individuals will tend to select courses of action that, according to their constructs, will give the greatest chance to extend that system. When individuals construe a threat to the construct system, where for example a cherished belief is proven false, they can react in various ways. Sometimes individuals will be able to extend the construct system, or modify it, to encompass the new ideas. However, often this prospect will cause anxiety, fear, or anger (what Kelly called the professional constructs). People may then choose to try to negate the factors threatening that change (for example, by ignoring them).

It should be noted that verbal labels are, as in the examples above, often placed at the poles of constructs. However, the label is not the construct, and not all constructs have verbal labels. Often people are mainly aware of one pole of the construct and often the opposite pole is more difficult to access and may be non-verbal.

One of the most frequent tools used to investigate personal constructs is that of laddering (ascending the hierarchy) and pyramiding (descending the hierarchy). A typical way of laddering would be to identify the pole of a construct where clients would want to be and asking 'why?' One of the most widely used methods of eliciting constructs is a repertory grid. This consists of a number of columns representing elements. Elements are then presented in threes, and participants asked in what way two of those elements are similar to each other (the similarity pole) and different from the third (difference pole). Each element is then rated on each construct (usually on either a five or seven point scale), with the score indicating how 'close' each element is to each construct pole. For a more extensive description of repertory grids and their use, see Fransella, Bell and Bannister (2004).

PCP has a number of advantages over theories of personality when investigating therapy, and is explicitly not a 'personality theory' (see Kelly, 1967 for his discussion on the various labels PCP attracted). First, personal constructs can be used to describe psychological processes from different disciplines. For example, beliefs and schemas can be considered as constructs (often one pole). Alternatively, psychodynamic processes such as transference would be conceptualised as someone using an existing construct system to understand a relationship, rather than re-construing to understand a new relationship.

### Construing and therapy

Although there is no large research base for construal and outcome, nonetheless there has been a number of studies investigating patients' construct systems and outcome. The primary focus of the literature was on PCP-based therapy. These studies broadly investigate construal change and outcome. One common approach is to measure how the 'distance' between elements changes (Large, 1985a & b; Clarke and Pearson, 2000). Distance is defined as the sum of the magnitude of difference in rating between two elements on all constructs. Typically, for example, a Kellian definition of low self-esteem is a high distance between the 'ideal self' construct and the 'current self' construct.

Broadly, outcome in therapy is associated with change in distance between elements (although no formal statistical measures of association are used). So for example, increases in self-esteem were noted with positive outcomes in Large (1985a & b) and Leach, Freshwater, Aldridge and Sunderland (2001), and in a case of sexual abuse by a father, distance in the client between self and father construct increased (Clarke and Pearson, 2000).

Attempts to investigate wider patterns of construal have also been attempted, for example the 'constriction' of construing (Winter, Sireling, Riley, Metcalfe, Quaithe Bhandari, 2007), how 'monolithic' the constructs were (e.g. Stewart, 1996), or how 'tight' or 'loose' they were (Winter,

Gournay, Metcalfe, and Rossotti, 2006). Monolithic is the extent to which the construct system is 'dominated' by a few constructs (typically the first component of a principal components analysis). Tightness and looseness refers to how 'strongly' an element is anchored to a particular construct pole. A pattern of loosening and tightening is considered one way that people extend and change their construct system (the creativity cycle). Other studies investigated the role of other PCP concepts, such as 'guilt' (Green, 1988). Guilt refers to an individual experiencing dislodgement from a 'core role', for example 'being a good mother'.

These studies looking more at structure found results broadly in line with what would be predicted by PCP theory, for example cycles of tightness and looseness or changes in distance between constructs.

There are very few studies that specifically try to investigate if there are constructs associated with better outcome in therapy (Large, 1985b; Winter et al., 2006; Winter et al., 2007). Large (1985b) investigated the effect of biofeedback in helping with pain management. Interestingly, he found that initial low self-esteem predicted better outcome. This was possibly because individuals that construed being further away psychologically from where they wanted to be, were more motivated to change.

Winter et al. (2006) found that for agoraphobics, fathers being less idealised, and a more elaborated construct system around negative emotions predicted better outcome in treatment. This suggested that those agoraphobics who were better able to access negative emotions (and therefore, potentially, aid in re-construing or understanding the influence they had) did better in therapy. Lesser idealisation for the father reflected factors important to agoraphobia, such as the super-ordinancy of constructs around infidelity and relationships.

Winter et al. (2007), when investigating self-harm, found that construct systems indicating a more chaotic (derived from a Principal Components Analysis) construal of the world performed more poorly

in therapy. This suggests that wider construal about the world, in this case how chaotic it is, may influence therapeutic interventions.

It is difficult to draw firm, generalisable conclusions from these three studies, as each investigated very different clinical areas, and aspects of the client's construal systems. Nonetheless, these studies demonstrate that PCP can be a powerful tool for investigating what can predict outcome in therapy.

### Summary and Areas for Research

There were a number of points highlighted in the literature. First, those studies investigating the influence of personality on therapeutic outcome are rare. Those that have been completed have tended to focus on personality disorder, or aspects of personality directly connected to clinical presentation (such as self-esteem).

Secondly, although PCP can be used to study CBT, only a small number of studies have actually looked at CBT. Given the usefulness of PCP as a method for investigating personality characteristics, and its adaptability to other therapies, it should be a useful tool for both investigating and understanding how personality factors influence therapy outcome.

Like much of the literature on CBT, the PCP literature concentrates on 'clinical' aspects of personality, again such as self-esteem. The PCP literature attempts to look at wider patterns of construing in therapy, such as tightness, or 'guilt'. However, these are broad descriptions of a construct system, and therefore arguably miss the details of the wider construct system and the impact on therapy. In addition, they tend to be derived from investigating constructs associated with particular mental health difficulties.

There appears to be a dearth of literature investigating how the impact of an individual's construct system may impact on therapy outcome. What was particularly striking was the lack of studies investigating the client's construal of the basic process of change in therapy: broadly, how clients construe construal change. Although PCP professional constructs (e.g. anxiety) describe how an individual can experience an awareness of impending change to the construal system, these constructs are superordinate, and potentially miss out the detail of individual construing.

This study, therefore, was designed to investigate CBT using personal constructs, and investigate if clients' construal of therapeutic change influenced outcome in therapy. However construal change is not limited to therapy, but is an everyday process. As such clients' constructs about what influences construal change in general may affect how they respond to therapeutic change. Therefore the study aimed to investigate these broader constructs of change. As the language of personal constructs is somewhat technical, the idea of 'personality' was used with participants. Specifically, the focus was on the clients' constructs about what could influence change in someone's 'personality'.

## Method

### Research Questions

This study investigated participants' constructs (Kelly, 1955) of what influences personality change and if they impacted on the outcome of group cognitive behavioural therapy (CBT). The principal aim was to identify constructs that might be useful in distinguishing between participants who were more or less likely to do well in a group CBT setting. As the constructs used were elicited during the study, no *a-priori* prediction could be made about the relationship between certain constructs and outcome. As such, the hypothesis was broad in scope.

Hypothesis: There is a relationship between construal of factors influencing personality development and outcome in treatment for clients undergoing group CBT for a variety of psychological problems.

## Design

There were three principal stages to the study. The first stage used dyadic elicitation to obtain participants' constructs around influences on personality development. The second stage consisted of a group exercise, where participants categorised the constructs.

Participants then ranked the constructs using a resistance to change methodology (Fransella, Bell and Bannister, 2004). The distribution of rankings was analysed using a chi-squared test, comparing it with expected (even distribution) values. A hierarchical cluster analysis was used to investigate relationships between constructs across all participants. Ideally regression analysis would have been used. However, it was unlikely that sufficient participants would be recruited for this to be sufficiently well powered.

For the third stage of the study a comparison of the rankings was made between participants who had either experienced successful or unsuccessful therapy. This used a Mann-Whitney test, and was a two-group independent sample design. Although outcome was defined in terms of change in measures before and after treatment, only one change score per participant was used in the analysis. A Spearman-Rho correlation was also undertaken, comparing the ranking of constructs with the measure of change score.

## Choice of Research Tool

### Personal Construct Psychology (PCP)

There are a number of common tools used in PCP to elicit personal constructs. One of the most common research tools in PCP is the Repertory Grid (Kelly, 1955), used to elicit constructs and investigate the relationship between them. However the study focus was on the contents of a participant's construct system and the 'strength of influence' of each construct, not their interrelationship. Therefore, it was decided to utilise dyadic elicitation to elicit constructs, followed by a modified resistance to change methodology (Fransella, Bell and Bannister, 2004) to rank constructs according to strength of influence.

### Advantages of dyadic elicitation

The PCP approach and the eliciting of constructs, had several advantages. Unlike researcher-devised rating scales or questionnaires, elicited constructs more directly access participants' construing, and are therefore less influenced by *a priori* beliefs. Compared to other qualitative methods such as grounded theory, involving a process of coding and categorising client interviews (Strauss & Corbin, 1998), eliciting constructs directly is less reliant on the researcher's opinion of the participants' data, rather being directly obtained from the participant. It is also quicker to analyse allowing a larger number of participants and quantitative analysis.

## Elicitation design

A record sheet was designed to record constructs, and track from what element comparison they were elicited (Appendix 1). This was based on a repertory grid design provided in Fransella, Bell, & Bannister (2004). However, it was for recording purposes only, and a repertory grid was not administered to participants. The elements used to elicit constructs were pre-supplied by the investigator, and included eight pictures of people from various backgrounds (Figure 1) which were chosen to prompt the construal of different personalities for each photo.

Figure 1: List of visual elements.



The pictures were selected from images within the public domain, using Google Images. A number of broad criteria were set for selecting pictures. A balance of gender, ethnicity and age was attempted. A range of activities and occupations from potentially different socio-economic backgrounds was included. Although representing a range of cultural diversity, the images were restricted to those from contemporary western society, as this was most relevant to the clinical setting. It was not, however, intended that the elements represented a comprehensive sample of society. A shortlist of pictures was found, and the eight best fitting the range of backgrounds required were chosen by the principal investigator in agreement with two of the investigator's research supervisors. Only pictures that all three researchers agreed on were included, providing a check of validity.

Picture elements were used to allow a participant to draw freely upon constructs of personality and personality development, with minimal direction by the researcher. By providing elements of strangers, participants needed to draw upon constructs that were relatively super-ordinate and general, rather than specific life events of people well known to them.

### Analysis and Scales

The Clinical Outcome in Routine Evaluation (CORE), and the Depression Anxiety Stress Scales (DASS) (Evans, Mellor-Clark, Margison, Barkham, Audin, Connell & McGrath, 2000; Lovibond & Lovibond, 1995) were used routinely by the host service to rate participants' progress through treatment, and were utilised in this study. Both the CORE and the DASS contain a series of questions answered by the participant using a Likert scale. The DASS specifically concentrates on anxiety and depression, whereas the CORE contains items related to wider psychological distress and risk. Utilising these scales had two advantages. First, they both provided a validated measure to monitor client progress, and secondly the participant would not have to complete additional questionnaires.

The CORE was designed as a single questionnaire that was valid with a range of different psychological problems, of different severity. In addition to focussing on clinical symptoms, questions also relate to broader aspects of a client's life, referred to as 'well-being'. There is also a measure of risk. The CORE has good reliability and validity compared to other published measures, large differences between clinical and non-clinical populations, and demonstrates good sensitivity to clinical change.

The DASS includes ten questions, designed to assess level of depression and anxiety within clients. It has been cross-validated with other published measures, showing a good level of agreement. In

comparison, the DASS is short, simple to complete and focuses on factors most directly related to anxiety and depression symptoms.

In order to provide a single measure of outcome score, the CORE and DASS were combined. This 'outcome score' was obtained by taking the change in the score between the pre and post measure for both the CORE and DASS each, and converting this into a percentage change (from the pre score). The percentages were then combined and averaged, to give the final combined outcome score. If only one of either the DASS or CORE was known, that score was used alone.

## Participants

### Selection of participating organisations

A community based CBT Service was selected as the primary participating organisation. As this organisation used a single, specific therapeutic framework, this reduced the impact of confounding clinician effects such as the use of mixed 'eclectic' or 'integrative' therapies.

The CBT service provided a range of therapy groups organised around different core difficulties for clients. These included groups on panic/anxiety disorder, social phobia, obsessive-compulsive disorder, depression, low self-esteem, generalised anxiety disorder, agoraphobia, and health anxiety. Although treating a range of problems, a core psychoeducational CBT approach was used in each group. Each group ran for one and a half hours weekly, for ten weeks. The CORE and DASS were used as pre- and post-measures (see above), and there was a one month and three month follow up for each client. Though take-up rates varied between groups, on average the service had ten to twelve individuals participating in each group. Group work commenced largely in tranches every three months, with groups running more or less concurrently. This allowed for a wide pool of potential participants to be accessed, who would all be at roughly the same stage of treatment at each point.

### Inclusion criteria

Participants were recruited from clients consenting to attend one of the therapy groups offered by the CBT service. Participants were adults between the ages of 18 and 65, representing the age range seen by the CBT service.

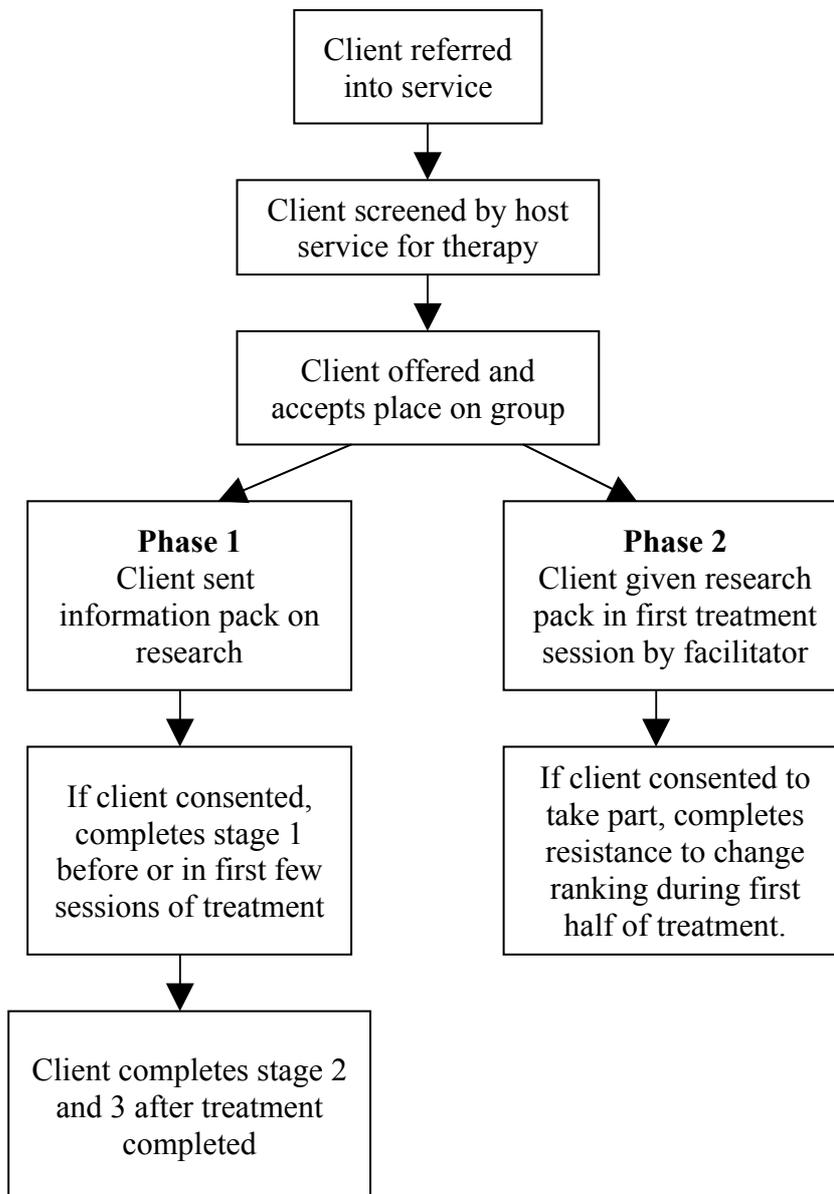
Non-English speakers were excluded from the study, to prevent the risk of obtaining the interpreter's construal of the participant's constructs, rather than the participant's constructs themselves. As groups run by the CBT service were primarily for English-language speakers, nobody attending the groups was excluded as a participant.

### Participant recruitment

Potential participants were identified by the CBT service from clients meeting the inclusion criteria. They were also assessed by the service for any clinical reason for excluding participants (for example, high levels of distress). The CBT service made initial contact with potential participants, giving them the participant information and consent form. No disruption to participants' therapy occurred, nor too their time on the waiting list.

Participants were given details of their right to withdraw at any point and of confidentiality. Clients dropping out of treatment were still offered the opportunity to be included within the study. Figure 2 summarises the recruitment process.

Figure 2: Flowchart of participant recruitment



### Participant numbers

There were two main phases of recruitment. The first phase recruited participants for stage one and two of the study. After the group exercise had been completed, the second phase of recruitment occurred. There was little guide in the literature as to what would constitute ‘enough’ participants for the initial elicitation, and it was decided to aim for ten to fifteen, within the range of published PCP based studies (see for example Lewith & Chan, 2002; MacCormick, Macmillan, & Parry, 2004).

For the third, quantitative, stage of the study it was difficult to determine required participant numbers. As the methodology was not a replication of existing studies, there was no pre-existing guide to required numbers or effect size estimate.

A power analysis was used to estimate the level of recruitment needed, but proved problematic due to difficulties determining anticipated effect size as there was no comparable study. Also, there was no *a-priori* guidance to anticipate the expected differences in rank on each construct between good and poor outcome. Small differences in rank (of two or less) were not deemed *clinically* significant, as it would be hard to interpret what this meant practically and clinically. Differences in rank of more than three were felt to give a better indication of a clinically significant difference.

Statistical advice was obtained from a medical statistician and the G\*Power computer package (Faul, Erdfelder, Lang and Buchner, 2007) was used to generate a range of participant numbers anticipated to provide sufficient power. Assumptions were two independent means, an expected  $p$  value of 0.05, an expected power value of 0.8, and an assumption the two groups would be equal in size. Effect size was determined using the assumption of a standard deviation of three (given that the data were ranked, the use of standard deviation was problematic though unavoidable for the package). A difference in means of 3 and 5 was used, giving effect sizes of 1 and 1.7. Using the calculation for a t-test yielded total required sample sizes of between 14 and 34. Since Mann-Whitney tests have less power than t-tests, this resulted in slightly lower sample sizes than would be needed.

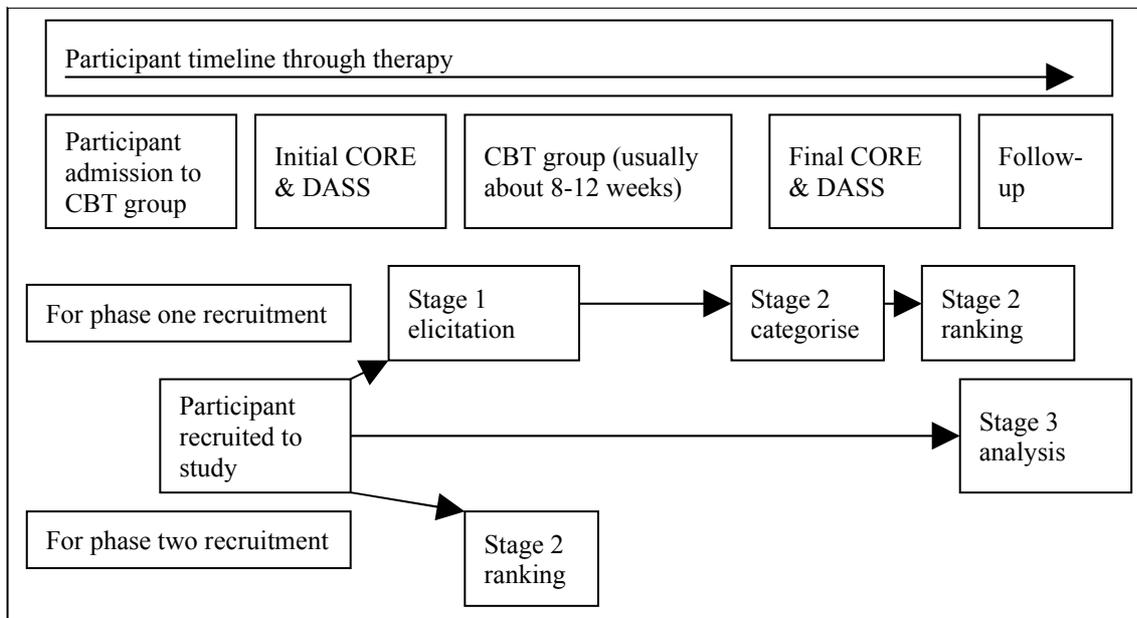
As this range was so wide a minimum sample size of twenty was adopted and *post-hoc* power analysis used as data collection progressed.

## Procedure

This study was reviewed and granted approval to continue by both an LREC and the NHS Trust R&D department (Appendix 2).

On obtaining consent the participant was seen individually by the investigator for the first part of the study, either prior or within the early stages of therapy. The participant was able to choose whether to see the investigator within the host service, at home, or in a neutral setting (the University of Leicester).

Figure 3: Schematic summary of research process for participants



The study was conducted in three main stages. The first stage involved eliciting the constructs, the second stage categorised those constructs, and the third stage involved quantitative analysis of the ranking of constructs between good and poor outcome groups. Each of these stages is described in more detail below. Each represented, in essence, a mini-project with its own aims, goals and outcomes, and these are described for each section. Figure 3 summarises the study stages for both recruitment phases.

Unless otherwise stated, all statistical analysis was carried out using the SPSS (SPSS, 2009) package, and all power analysis using G\*Power (Faul et al., 2007).

### Stage one of study

Aim one: To elicit participants' individual constructs around factors influencing personality development.

Aim two: For each participant to narrow their initial list to the five strongest influences, to be used in stage two.

The elicitation of constructs followed the suggested procedure in Fransella et al (2004) for dyadic elicitation. It was explained that the elements represented people from different walks of life (Figure 1). The investigator presented two of the elements (using a laptop), and asked the participant 'Are there any differences in how these two people came to be as they are?' An example was given if necessary.

If the two elements were described as different, the differences were noted on the poles of the construct (e.g. Element A was '*lucky*', B '*unlucky*'). If after prompting the participant was unable to elicit a difference they were asked to select another element different to the two initially presented in how that person came to be as they are. If the investigator was unclear on the meaning of either pole, clarification was sought from the participant. The similarity and differences were noted at the respective poles. Each dyad of elements was presented in a randomised order to each participant, with different combinations presented each time. This presentation continued until all elements had been included (28 presentations).

The participant was encouraged not to give superficial/descriptive answers through a process of ‘laddering’ and ‘pyramiding down’, accessing constructs higher up and lower down the participant’s hierarchy. To ladder, the participant would be asked to provide more details of a construct (for example, why do you prefer to be at that pole of the construct?). To pyramid down, the participant is asked to elaborate on each pole of a construct (for example, what kind of person is like that pole characteristic?). This was a dynamic process, called ordinancy within the PCP literature. In addition, participants were encouraged not to give personality characteristics as answers, but focus on the influences that helped form people’s personality. However, the decision about whether a construct was an influence or a characteristic was ultimately left to the participant, to minimise investigator bias.

### Resistance to change

After presentation of all dyads, participants were asked to select the five constructs deemed the most important in influencing how people come to be as they are. This used a modified ‘resistance to change grid’ methodology (Fransella et al, 2004). Each construct was paired with each other construct. The participant was then asked if an individual moved from one pole of the construct to the other (that is, the influence on them changed from one pole to another), for which of the two constructs would that move have a greater influence on personality development. An example was provided if necessary. The selected construct was given a score of 1. This was then repeated for all pairings, the score for each construct totalled, and then the constructs ranked in order of their total scores. After the rankings had been established, the top five ranking constructs were selected.

Ranking the constructs in this way was done for two reasons. First, as elicitation often produced twelve (or more constructs), this made categorising the constructs (see below) very time intensive, with potentially upward of 180 different constructs across the whole sample. Reducing the number eased that problem, and secondly this also allowed the participant to effectively select the most relevant higher-level constructs within their construct hierarchy. Once all individual eliciting was

completed, the principal investigator conducted an initial categorisation of the elicited constructs, combining all constructs that were identical in phrasing.

When noting the construct poles what is being recorded are the *labels* assigned to the poles of a construct, and not the construct themselves. This is a fundamental confusion that can occur with PCP. Labels are not the constructs and vice versa. They are necessary for allowing communication and mutual understanding of constructs, however the same labels may be used by different people for fundamentally different constructs.

### Stage two of study

Aim one: For a participant group to take all the individually elicited constructs and categorise them, producing a final selection of constructs usable by all participants.

Aim two: For all participants to rank the categorised constructs in order of how important each was felt to be in personality development.

Aim three: When all constructs had been ranked by all participants, to see if any of the constructs were related to each other using a cluster analysis.

When participants completed treatment, a new meeting was arranged in which participants were involved as a group. Participants could opt out of this part of the study. The principal investigator facilitated the participant group in categorising constructs together. Each construct was presented in turn, and participants were asked to state if it fitted an existing category or was in a new one. This enabled the principal investigator to compile a final list of constructs upon which all participants agreed. Where no consensus was reached, decisions on categorisation were decided by majority vote.

During this categorisation, the principal investigator was not directive about categorisation of constructs. This was to allow the process to be directed by participants as much as possible. This decision was influenced by Kelly's focus on collaborative meaning-making in therapy, applied to research. The principal investigator essentially became a research assistant to the participants, rather than vice versa.

Having obtained the categorised constructs, all participants from both phases of recruitment were asked to rank them as to their importance in determining how people come to be as they are. This used the modified 'resistance to change grid' methodology again, as detailed above (Fransella et al, 2004). A hierarchical cluster analysis was then performed to examine the pattern of relationships of constructs across all participants. This compared the similarity in ranking of each construct across all participants.

### Stage three of study

Aim one: To compare good and poor outcome groups to see if there was a difference between them in how constructs were ranked.

Aim two: To see if there were constructs where there was agreement about the ranking between participants.

Aim three: To see if there was any correlation between the ranking of a construct and the outcome score.

On treatment completion, the CORE and DASS scores were collected. Apart from age, gender and type of group attended, no other information was retrieved from the client's notes. The combined percentage outcome score from the CORE and DASS was then found.

All participants (from both recruitment phases) were ranked according to the outcome score, and were then divided into ‘good’ and ‘poor’ outcome groups. The good outcome group was defined as all participants whose outcome score showed an improvement. The poor outcome group was defined as all participants who either failed to show an improvement, deteriorated, or who were non-completers.

The ranking of constructs was then compared in the good and poor groups. This comparison was made using a Mann-Whitney non-parametric test. Further, if there were sufficient numbers in different clinical problem groups, a Mann-Whitney was used to compare them. Groups shown not to have differences between them were combined, excluding clinical areas that either didn’t have sufficient numbers to compare, or that had shown differences. The good and poor comparison was made again with this sample.

If no differences between groups in construct ranking was found this implied one of two possibilities. Either that variation in ranking was not related to outcome, or there was general agreement between participants on the rank. To investigate the latter possibility ranks were divided into four categories: high (ranks 1-4), medium-high (ranks 5- 8), medium-low (ranks 9 – 12), and low (13 – 16). A frequency count for each category was made for every construct. A chi-squared analysis was then performed, comparing actual to expected (even-distribution) frequency. If a zero frequency count was found in a category, then categories would be combined into two: high (ranks 1-8) and low (9-16).

Caution was taken in interpreting results. The chi-squared provided only the probability that a distribution deviated from the expected values, not if this distribution indicated agreement. Therefore cases were only considered to indicate agreement if the majority (> 80%) of rankings were in the same, or adjacent categories, and where  $p < 0.01$ .

For constructs found to be significantly different between good and poor outcome groups, a comparison of their frequency distribution was made using the high, medium-high, medium-low, and low categories. This was not analysed statistically, as this was to provide more detail on what the difference between the two groups was.

Finally, a Spearman-Rho correlation analysis was made between the outcome score and the ranking of each construct for each participant. As, by definition, drop-outs would not have an outcome score, these were excluded from this analysis.

## Results

The study was conducted over a period of around 18 months. Below, the results are presented in a number of sections. First information about the participants is presented, followed by each of the three stages, and finally a brief summary of the process of the study and additional relevant information.

### Participants

For the first recruitment phase of the study, ten participants were recruited. Four different CBT groups were approached: two for the treatment of Obsessive Compulsive Disorder (OCD), and two for low self-esteem (LSE). All 48 clients attending the groups were approached (See Table 1 for a summary of recruitment from the groups). In total, therefore, there was a 21% uptake.

The second recruitment phase resulted in an additional sixteen participants (out of 102 approached), a 16% uptake. The following groups were approached for this second phase: one mindfulness, two for obsessive compulsive disorder (OCD), two for depression, three for low self esteem, one on panic, and one on social phobia. See table 1 for a summary of recruitment from the different groups.

Over both phases 150 clients were approached giving an overall uptake rate of 17%. All participants were white British in ethnicity. There were 10 men, and 16 women, with a mean age of 42.

Table 1: Summary of recruitment from different therapy groups

Phase	Group	Number recruited
1	OCD	5
1	OCD	2
1	LSE	3
1	LSE	0
2	OCD	1
2	OCD	0
2	Mindfulness	2
2	Depression	2
2	Depression	0
2	LSE	4
2	LSE	3
2	LSE	1
2	Social Phobia	3
2	Panic	0

#### Stage One: Elicitation of Constructs

All ten participants recruited for stage one successfully completed the dyadic elicitation of constructs. Five participants started by eliciting constructs about personality before eliciting the influences. Participants elicited between 8 and 20 constructs, with a mean of 10.3. The resistance to change method was successfully utilised to select the five most important constructs (see appendix 3) by participants.

#### Stage 2: Categorisation of Constructs

Three participants attended the second stage categorisation group task. Prior to commencing this exercise, the principle investigator had combined several near-identical constructs from the initial list (for example, Free culture/country valuing people's rights vs Culture/country that is oppressive and restrictive; Biologically male vs biologically female). Participants could successfully categorise most constructs without any prompting from the principle investigator.

The final list of constructs are shown in Table 2 below. Appendix 4 lists which of the initial constructs were placed in each category.

Table 2: List of constructs obtained from group categorisation exercise.

Being born with talent	Going out and getting a job
Community	Individuals
Conflict between immediate family (culture) and wider community	Knows where came from with no divided loyalties
Culture of violent crime	Less of a culture of violent crime
Education*	Inexperience
Enthusiastic parent skills	Not exposed to creativity and parents not pushing things at him
Freedom	Repression
Guidance	Self sufficient
Having a close-knit family	People having to make their way on their own
Motivated to get education (trait)	No motivation/ambition for education
Nature	Nurture
Positive early years experience	Negative early experience
Positive influences	Negative influences
Violence /neglect	Nurture/Respect
Wealth	Poverty
Well educated	Not as well educated

\*Meaning practical, 'school of life' education.

### Resistance to change

Using the elicited categorised constructs, a total of 23 participants from both phase one and phase two recruitment completed the 'resistance to change grid' (full results given in appendix 5).

Unfortunately, three participants from phase one were unable to take part in this due to other commitments, and so were not included in the rest of the study.

### Model

While sorting the constructs into groups, the participants spontaneously started to arrange constructs into hierarchies within their groups. Additionally, they attempted to arrange the cards on which the constructs were written to physically represent what they felt were connections and

relationships between them. In particular, they decided that there was a circular continuum of meaning, from individual to societal based influences.

Figure 4 below schematically represents the model that the participants built up. Not all constructs were merged into overall categories. The positioning of the constructs reflects how the participants physically positioned them in the exercise. The “community/society vs family/self” arrow at the top represented participants’ attempts to align constructs along this continuum. “Positive influences vs negative influences” were felt to be superordinate to the other constructs. The next row represents ‘mid-level’ constructs in the hierarchy, with lines indicating to which constructs they were superordinate. Participants viewed them as ‘bridging’ those sub-ordinate construct concepts. (1) and (2) represent two constructs that were superordinate to constructs within those categories, but not the whole category itself (expanded in the box in the bottom right).

The ‘strange’ and ‘random’ constructs were not felt to fit into this overall hierarchy by the participants. ‘Strange’ referred to constructs they felt they did not quite understand, and ‘random’ referred to constructs they found difficult to fit into the wider hierarchy. Note that the ‘categories’ were, in effect, super-ordinate constructs to those constructs in them.

As this detailed model had not been anticipated, it was decided to explore the relationship between the constructs in the hierarchy and the participant’s resistance to change ranks. Two groups were used for this. First there was the average ranks of the three participants in the group categorisation section of study. Secondly, the average ranks for all twenty-three participants who completed the resistance to change grid. The average ranks are presented in Table 3 below. These ranks were then compared to the hierarchy in Figure 4, and this comparison is shown in Figure 5.

Figure 4: Schematic representation of participant model

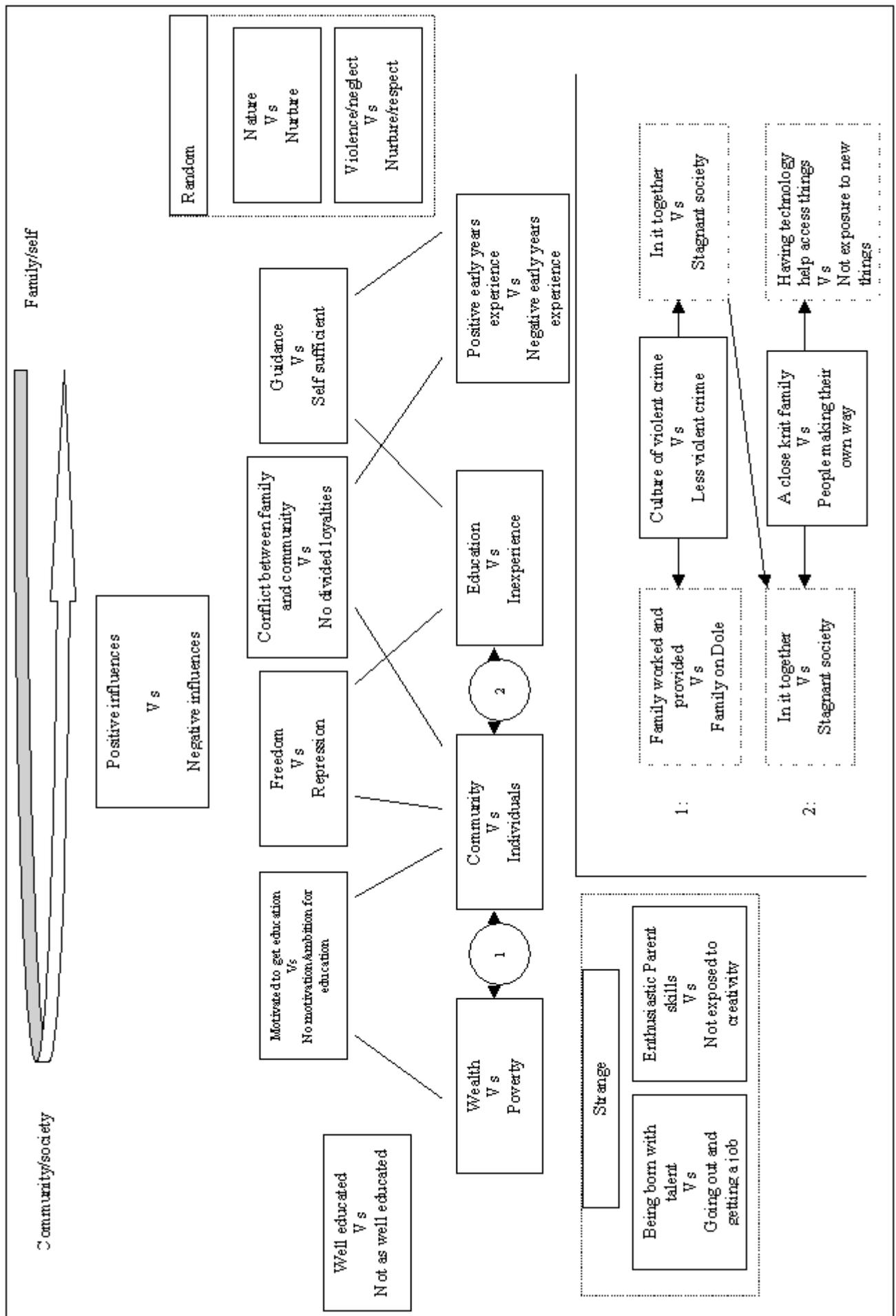
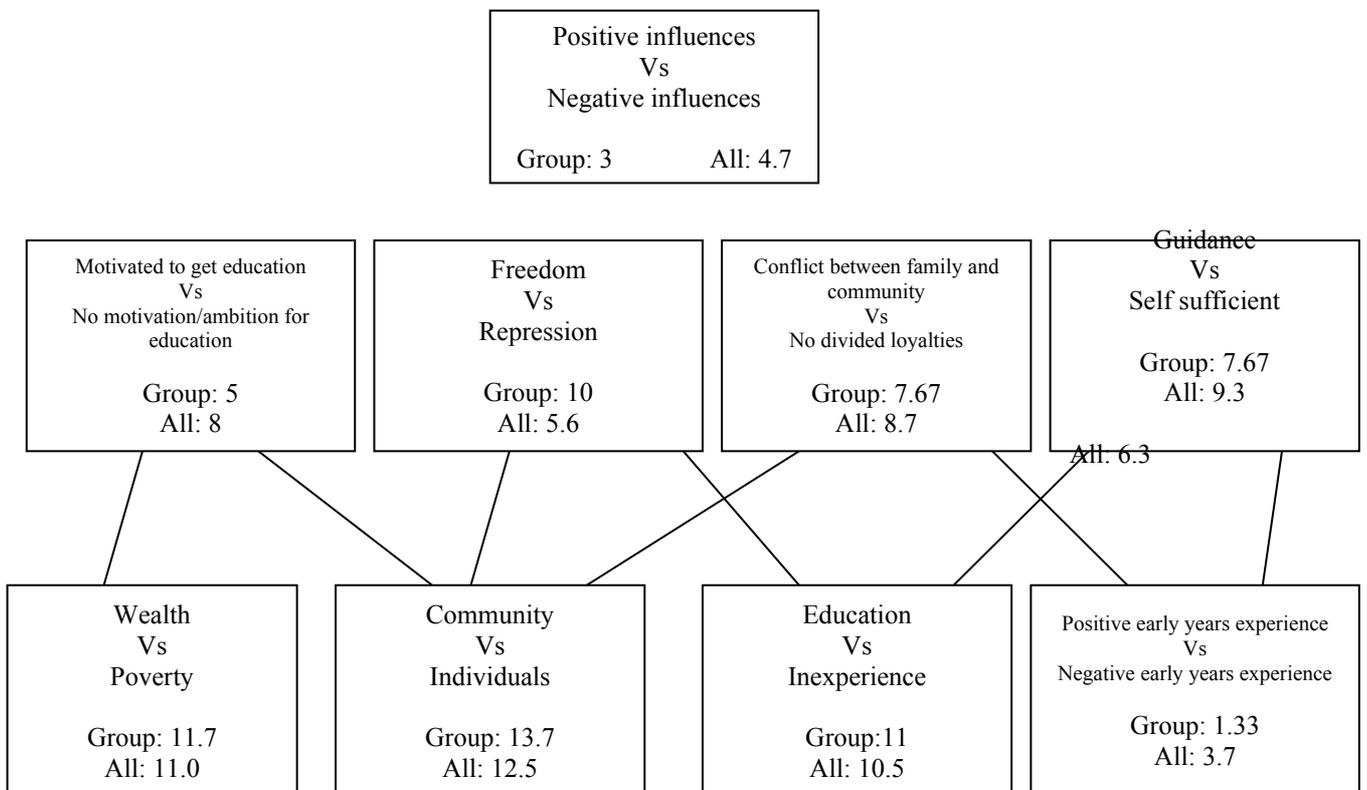


Table 3: Average ranking for categorisation group and all participants

Construct	Group	All
Born with talent	11.3	12.7
Community	13.7	12.5
Conflict family/comm	7.67	8.7
Violent crime	11.3	7.2
Education	11	10.5
Enthusiastic skills	8	7.8
Freedom	10	5.6
Guidance	7.67	9.3
Close-knit family	4.33	6.9
Motivated education	5	8.0
Nature	3.33	7.3
Positive early experience	1.33	3.7
Positive influences	3	4.7
Violence / neglect	6.33	2.7
Wealth	11.7	11.0
Well educated	11	10.5

Figure 5: Hierarchy of constructs, including ranking for Group exercise and All participants



Cluster Analysis

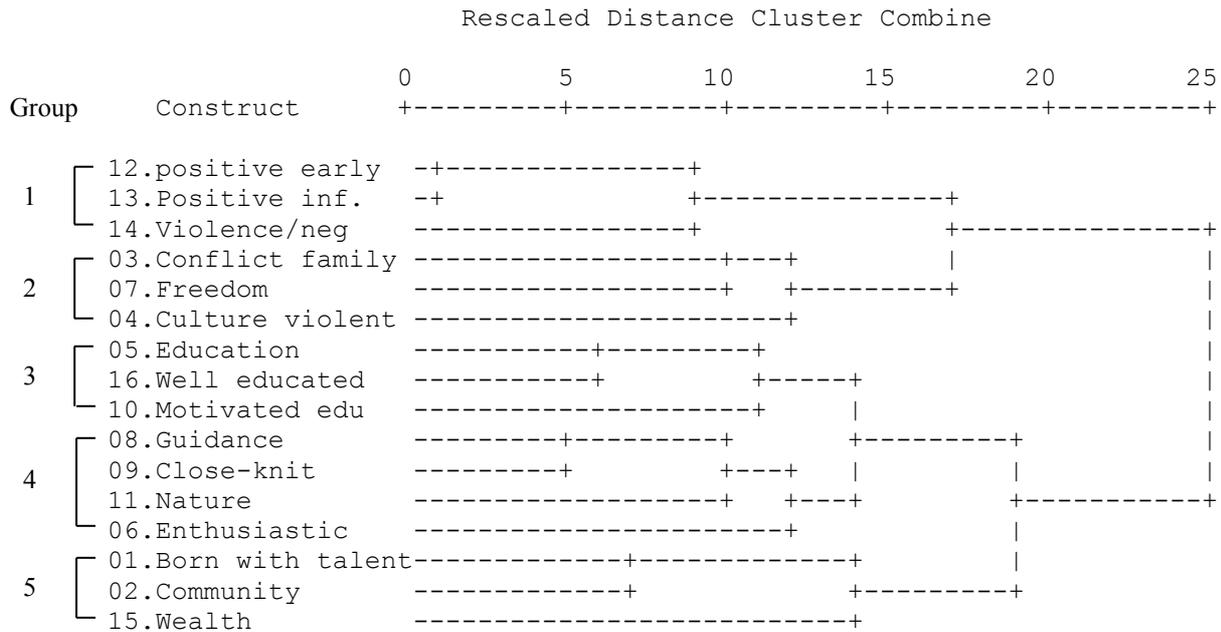
Finally, using the ranks provided by all 23 participants, a hierarchical cluster analysis was performed. The agglomeration schedule is presented in Table 4, and the dendrogram in Figure 6 (modified from the SPSS output). There appeared to be five main groups, as can be seen in Figure 6.

Table 4: Agglomeration Schedule

Stage	Cluster Combined		Coefficients	Stage Cluster First Appears		Next Stage
	Cluster 1	Cluster 2		Cluster 1	Cluster 2	
1	12	13	184.000	0	0	5
2	8	9	389.000	0	0	6
3	5	16	435.000	0	0	8
4	1	2	474.000	0	0	12
5	12	14	536.000	1	0	13
6	8	11	566.500	2	0	10
7	3	7	604.000	0	0	9
8	5	10	616.500	3	0	11
9	3	4	675.000	7	0	13
10	6	8	680.333	0	6	11
11	5	6	737.417	8	10	14
12	1	15	755.000	4	0	14
13	3	12	898.000	9	5	15
14	1	5	949.190	12	11	15
15	1	3	1246.267	14	13	0

Note: Numbers under cluster 1 & 2 are labels for constructs given by SPSS, see Figure 6 below

Figure 6: Dendrogram using Average Linkage (Between Groups)



Note: the numbers before each construct are the labels assigned to them by SPSS, based on the order from Table 2, e.g. ‘being born with talent...’ is 1, down to ‘well educated...’ as 16.

### Stage 3: Comparison of outcome

#### Grouping

One participant was excluded from the comparison of good and poor outcomes, as he had dropped out of therapy due to an unrelated mental health problem. Therefore there were a total of 22 participants for which a comparison could be made between good and poor outcomes.

There were five clients who were classified as having dropped out of therapy, and automatically included in the poor outcomes group. Four of these dropped out near the end of therapy, and one towards the beginning. Of the remaining seventeen participants, DASS scores were unknown for three of them, and CORE scores unknown for one of them. There were no participants who were missing both CORE and DASS scores, therefore where one was unknown the change score for the other was used to assign them to a group.

The CORE and DASS scores were individually converted into a percentage change then averaged, creating the outcome score (Table 5 below). Participants were then assigned to the good and poor outcome groups based on the outcome score.

Overall, seven participants were assigned to the ‘poor’ outcome group, and fifteen to the ‘good’ outcome group.

Table 5: Pre and Post scores for all participants having completed stage three.

Participant	CORE-OM (Total ex. Risk)			DASS <sup>1</sup>			Ave % change	Group
	Pre	Change	% change	Pre	Change	% change		
1	0.86	0.29	33.7	21	5	23.8	28.8	Good
2	2.96	1.75	59.1	97	72	74.2	66.7	Good
3	1.21	0.32	26.4	17	2	11.8	19.1	Good
4	—	Drop <sup>2</sup>	-	—	Drop <sup>2</sup>	-	-	Poor
5	—	Drop <sup>2</sup>	-	—	Drop <sup>2</sup>	-	-	Poor
6	2.21	0.46	20.8	61	17	27.9	24.3	Good
7	0.79	0.25	31.6	15	10	66.7	49.2	Good
8	1.21	-0.04	-3.3	58	19	32.8	14.7	Good
9	1.18	0.39	33.0	42	29	69.0	51.0	Good
10	U <sup>3</sup>	—	-	39	-10	-25.6	-25.6	Poor
11	1.32	-0.53	-40.2	38	16	42.1	0.98	Good
12	1.87	1.44	77.0	30	19	63.3	70.2	Good
13	1.89	0.5	26.5	63	46	73.0	49.7	Good
14	—	Drop <sup>2</sup>	-	—	Drop <sup>2</sup>	-	-	Poor
15	0.86	0.22	25.6	16	2	12.5	19.0	Good
16	2.71	2.5	92.3	82	80	97.6	94.9	Good
17	1.5	0.93	62	51	48	94.1	78.1	Good
18	3.32	0.39	11.7	34	-34	-100	-44.1	Poor
19	—	Drop <sup>2</sup>	-	—	Drop <sup>2</sup>	-	-	Poor
20	—	Drop <sup>2</sup>	-	—	Drop <sup>2</sup>	-	-	Poor
21	2.89	1.03	35.6	U <sup>3</sup>	—	-	35.6	Good
22	2.18	1.32	60.6	U <sup>3</sup>	—	-	60.6	Good

<sup>1</sup> DASS scores are the combined values for the depression, anxiety, and stress scales.

<sup>2</sup> Drop indicates this client dropped out of therapy.

<sup>3</sup> Score unknown, not completed by participant.

## Constructs with Agreed Rankings

Frequency counts were made for each construct's ranking across all 23 participants, divided into high, medium-high, medium-low, and low scores. A chi-squared analysis was then performed, comparing the observed frequency with an expected, flat distribution. For distributions where a cell contained a count of zero, cells were merged into high and low scores. There were six constructs that differed significantly from the expected distribution ( $p < 0.01$ ) and appeared to indicate agreement (i.e. more than 80% of the frequency count occurs in two adjacent divisions). The results are summarised in Table 6, and Table 7 for the merged cells.

Table 6: Chi-squared analysis of constructs

Construct	Frequency count				Significance (3 d.f.)	
	High	Medium-high	Medium-low	Low	Chi <sup>2</sup>	p
Born w talent	1	1	9	12	16.478	<b>&lt; 0.01</b>
Community	0	2	10	11	-*	-*
Conflict between family/community	5	6	7	5	0.478	0.924
Violent crime	8	7	3	5	2.565	0.464
Education	0	8	7	8	-*	-*
Enthusiastic skills	3	12	4	4	9.174	0.027
Freedom	12	6	3	2	10.57	0.014
Guidance	1	5	14	3	17.17	<b>&lt; 0.01</b>
Close-knit family	4	12	6	1	11.26	<b>0.01</b>
Motivated education	5	10	3	5	4.652	0.199
Nature	7	7	5	4	1.174	0.759
p+ve early experience	15	7	1	0	-*	-*
Positive influences	10	10	3	0	-*	-*
Violence neglect	20	1	0	2	-*	-*
Wealth	2	3	11	7	8.826	0.032
Well educated	3	3	9	8	5.348	0.148

\* Zero frequency count in cell, chi-squared not obtained, see Table 7

Table 7: Chi-squared analysis of constructs with merged cells

Construct	Frequency count		Significance (3 d.f.)	
	High	Low	Chi <sup>2</sup>	p
Community	2	21	15.696	<b>&lt;0.01</b>
Education	8	15	2.130	0.144
p+ve early experience	22	1	19.174	<b>&lt;0.01</b>
Positive influences	20	3	12.565	<b>&lt;0.01</b>
Violence neglect	21	2	15.696	<b>&lt;0.01</b>

The six constructs that participants tended to agree about ranking were:

- Born with talent vs Going out and getting a job (unimportant/ low ranked).
- Community vs Individuals (unimportant/ low ranked).
- Positive early experience vs negative early experience (important/high ranked).
- Positive influences vs negative influences (important/ high ranked).
- Violence/neglect vs nurture/respect (important/ high ranked).
- Guidance vs self sufficient (mid ranked).

The “having a close knit family vs people having to make their way on their own” construct was significant, but did not meet the requirement of >80% of the counts being in two adjacent categories.

#### Comparison between groups

The good (N= 15) and poor (N = 7) outcome groups were compared using a Mann-Whitney non-parametric test. The result for each construct is presented in Table 8.

As can be seen, significant results were obtained for “well educated vs not as well educated” and “Education vs inexperience”. In addition “motivated for education vs no motivation for education” appeared to be approaching significance. It was also possible that “culture of violent crime vs less of a culture of violent crime” was approaching significance.

Table 8: Mann-Whitney comparison of good and poor groups

Construct	Group	Mean rank	U	Z	Significance
Born w talent	Good	11.70	49.500	-.215	.830
	Poor	11.07			
Community	Good	12.77	33.500	-1.367	.172
	Poor	8.79			
Conflict between family/community	Good	11.57	51.500	-.071	.944
	Poor	11.36			
Violent crime	Good	13.00	30.000	-1.593	.111
	Poor	8.29			
Education	Good	9.43	21.500	-2.208	<b>.027</b>
	Poor	15.93			
Enthusiastic skills	Good	11.27	49.000	-.249	.803
	Poor	12.00			
Freedom	Good	11.17	47.500	-.357	.721
	Poor	12.21			
Guidance	Good	11.87	47.000	-.396	.692
	Poor	10.71			
Close-knit family	Good	11.03	45.500	-.497	.619
	Poor	12.50			
Motivated education	Good	9.77	26.500	-1.845	.065
	Poor	15.21			
Nature	Good	11.47	52.000	-.035	.972
	Poor	11.57			
p+ve early experience	Good	11.40	51.000	-.107	.914
	Poor	11.71			
Positive influences	Good	11.83	47.500	-.359	.720
	Poor	10.79			
Violence neglect	Good	12.00	45.000	-.572	.567
	Poor	10.43			
Wealth	Good	12.40	39.000	-.960	.337
	Poor	9.57			
Well educated	Good	9.37	20.500	-2.272	<b>.023</b>
	Poor	16.07			

The frequency distribution for “well educated vs not as well educated” and “education vs inexperience” was also compared between the good and poor outcome groups (Table 9).

Table 9: Frequency count for significant constructs

Construct and group	Frequency count			
	High	Medium-high	Medium-low	Low

Well educated	Good	3	3	6	3
	Poor	0	0	2	5
Education	Good	0	6	6	3
	Poor	0	1	1	5

In addition, the largest number of participants were recruited from the OCD (6 participants) and LSE groups (10 participants). The ranking of constructs were compared using a Mann-Whitney analysis to see if there were differences between these two groups. No significant difference was found between the ranking of any of the constructs. See table 10.

Taking the OCD and LSE participants only, the comparison between good (11 participants) and poor outcomes (5 participants) was made (Table 11). “Well educated vs not as well educated” again showed the most significant difference between groups, at the  $p = 0.03$  level. In addition, “culture of violent crime vs less of a culture of violent crime” neared significance.

Unfortunately, other treatment conditions (social phobia, depression, and mindfulness) did not have sufficient participant numbers to enable statistical comparisons to be made.

Though numbers in the study had remained low, some significant results had been found. A more in-depth analysis of power and effect size for the good and poor groups and the chi-squared analysis can be found in Appendix 5.

Table 10: Mann-Whitney comparison of OCD and LSE groups

Construct	Group	Mean rank	U	Z	Significance
Born w talent	OCD	9.33	25.000	-.560	.575
	LSE	8.00			
Community	OCD	7.25	22.500	-.826	.409
	LSE	9.25			
Conflict between family/community	OCD	9.25	25.500	-.491	.623
	LSE	8.05			
Violent crime	OCD	10.25	19.500	-1.146	.252
	LSE	7.45			
Education	OCD	7.00	21.000	-.990	.322
	LSE	9.40			
Enthusiastic skills	OCD	6.50	18.000	-1.314	.189
	LSE	9.70			
Freedom	OCD	10.33	19.000	-1.211	.226
	LSE	7.40			
Guidance	OCD	6.67	19.000	-1.254	.210
	LSE	9.60			
Close-knit family	OCD	8.58	29.500	-.055	.956
	LSE	8.45			
Motivated education	OCD	8.67	29.000	-.110	.912
	LSE	8.40			
Nature	OCD	7.83	26.000	-.435	.664
	LSE	8.90			
p+ve early experience	OCD	7.67	25.000	-.549	.583
	LSE	9.00			
Positive influences	OCD	8.00	27.000	-.333	.739
	LSE	8.80			
Violence neglect	OCD	9.17	26.000	-.500	.617
	LSE	8.10			
Wealth	OCD	10.00	21.000	-.987	.324
	LSE	7.60			
Well educated	OCD	6.92	20.500	-1.036	.300
	LSE	9.45			

Table 11: Comparison of good and poor groups for OCD and self-esteem

Construct	Group	Mean rank	U	Z	Significance
Born w talent	Good	8.45	27.000	-.059	.953

	Poor	8.60			
Community	Good	8.64	26.000	-.172	.863
	Poor	8.20			
Conflict between family/community	Good	8.77	24.500	-.342	.732
	Poor	7.90			
Violent crime	Good	10.05	10.500	-1.937	.053
	Poor	5.10			
Education	Good	7.27	14.000	-1.551	.121
	Poor	11.20			
Enthusiastic skills	Good	8.50	27.500	.000	1.000
	Poor	8.50			
Freedom	Good	8.32	25.500	-.230	.818
	Poor	8.90			
Guidance	Good	8.73	25.000	-.298	.766
	Poor	8.00			
Close-knit family	Good	8.36	26.000	-.172	.864
	Poor	8.80			
Motivated education	Good	7.36	15.000	-1.440	.150
	Poor	11.00			
Nature	Good	8.41	26.500	-.114	.910
	Poor	8.70			
p+ve early experience	Good	7.95	21.500	-.688	.491
	Poor	9.70			
Positive influences	Good	8.77	24.500	-.348	.728
	Poor	7.90			
Violence neglect	Good	9.09	21.000	-.848	.397
	Poor	7.20			
Wealth	Good	9.23	19.500	-.916	.359
	Poor	6.90			
Well educated	Good	6.14	1.500	-2.961	<b>.003</b>
	Poor	13.70			

### Spearman's Rho comparison

Including 17 participants, a Spearman's Rho correlation was performed comparing the ranking of each construct and the outcome score. The result for each construct is shown in Table 12. As can be seen "Community vs Individuals" was highly significant, and "wealth vs poverty" mildly significant. It

is worth noting that these were positive correlations between ranking and score. This means that the higher the outcome score, the *lower* ranked the construct.

Table 12: Spearman’s Rho correlation between ranking and outcome score

Construct	Significance	
	Correlation Coefficient	Sig. (2-tailed)
Born w talent	-.293	.254
Community	.875	<b>.000</b>
Conflict between family/community	-.169	.517
Violent crime	-.193	.457
Education	.331	.194
Enthusiastic skills	.063	.811
Freedom	-.029	.913
Guidance	.266	.302
Close-knit family	-.081	.756
Motivated education	.001	.996
Nature	-.173	.506
p+ve early experience	-.065	.803
Positive influences	-.015	.954
Violence neglect	-.123	.637
Wealth	-.562	<b>.019</b>
Well educated	.395	.117

### Process of Research

Overall, participants didn’t express any difficulty in eliciting constructs using the images. During the elicitation stage, five of the participants were noted to describe the elements first in terms of who they were.

Two of the participants who later dropped out of therapy commented to the principal investigator that they had not found CBT useful. One stated that this was because it had reminded him of school, particularly the “homework”, and he had not had a positive experience at school. The other had become distressed when thinking about his educational background, and the negative impact it had on him.

## Discussion

### Summary of Findings

The original research hypothesis stated there was a relationship between construal of factors influencing personality development and outcome in group CBT therapy. The results indicated some support for this hypothesis.

The first main finding of the study was that, when comparing good and poor outcome groups, constructs relating to education (“Well educated vs not as well educated” and “Education vs Inexperience”) appeared to distinguish between them. In general, participants who ranked these constructs as less important tended to have poorer outcome (dropping out, or showing a worsening of outcome score). The three constructs relating to education appeared to cluster strongly together.

The second main finding used a Spearman’s Rho correlation comparing ranking of constructs and outcome score. This showed a significant correlation between the constructs “wealth vs poverty” and “community vs individuals” and outcome. Broadly, the lower ranked in importance these constructs were, the higher the outcome score.

A number of constructs appeared to show wide levels of agreement between participants, and did not appear to be useful in distinguishing between good and poor outcome groups. These were: “Born

with talent vs Going out and getting a job”; “Community vs Individuals” (potentially contradicting the correlation found); “Guidance vs self sufficient”; “Positive early experience vs negative early experience”; “Positive influences vs negative influences”; “Violence/neglect vs nurture/respect”. The latter three were all clustered together, as were “born...” and “community..”.

The cluster analysis showed that there might be a number of distinct clusters of constructs. However, it was unclear just how independent each of these clusters were.

This study demonstrated that taking a PCP approach and eliciting information directly from participants could produce novel ways of understanding factors that could impact on therapy. Indeed, arguably it demonstrated the limits of studies, such as those by Piper et al. (1998), Piper et al (2001) and Ogrodniczuk et al. (2003), that relied on pre-existing, inflexible, highly generalised, traits. To some degree, by adopting the trait approach, there would always be a greater degree of direction given by investigators, limiting new information from being revealed.

Broadly, this study attempted to explore constructs that might predict outcome in therapy, and in that sense follows on from research by Large (1985b), Winter et al. (2006) and Winter et al. (2007). Although it should be noted that this study did not specifically investigate prediction, but produced constructs that might be investigated for predictive power.

The Large and Winter papers focussed on the change in construal, and how that related to elements of the self, ideal self and others. This study did not focus on construal change in the same sense. Rather, it implicitly examined what participants believed would *facilitate* these changes.

The role of the ideal-self has been particularly prominent in the PCP literature investigating therapeutic outcome, particularly the self/ ideal-self distance (see for example Large 1985a & b; Clarke and Pearson, 2000; Leach et al, 2001). An individual’s construing of this distance would

potentially include how it occurred, possibly drawing upon constructs of what forms identity and personality. Thus, though there was no explicit link between this research and self / ideal-self studies, the constructs found may well interact in some way with a client's sense of self-esteem, such as what would allow a change in the construal of the self and ideal-self?

The educational constructs might have suggested a link to studies more focussed on demographic impacts on therapy outcome (e.g. Grant et al, 2005). However, demographic factors were *not* explicitly examined in this project. In addition the education-based constructs did not, *necessarily*, communicate any information about a participant's actual education experience.

Both the therapist (Lambert and Baldwin, 2009; Okiishi et al., 2006) and the therapeutic relationship (Barber et al., 2000; Langhoff, 2008) are important to outcome in therapy. Though this study did not explicitly investigate these factors, it is possible that the degree to which there is similarity between a therapist and client in views of what influences personality development may impact on the therapeutic relationship. For example, should a substantial difference exist between client and therapist construal of factors influencing personality development, it might hinder the ability for them to communicate, understand, or even empathise with each other. This might reflect, and be strongly related too, the theoretical orientation of the therapist and therefore the type of therapy engaged in. This is discussed in more depth below.

This study probably most closely followed those groups of studies investigating client/therapy effects (e.g. Dalle et al., in press; Davis, Hooke and Page, 2009). There was no comparison with other types of therapy, nor an attempt to investigate what 'active components' of therapy interacted with constructs. However, the apparent interaction between constructs on education and a psycho-educational format suggested a potentially interesting effect.

## Critique of Methodology

The methodology used in this study to elicit constructs had not, to the author's knowledge, been attempted in previous research. It combined the use of purely photographic/visual elements, followed by the initial analysis and categorisation of these being undertaken by participants themselves.

The use of photographs to elicit constructs is rare but not unheard of, dating back to Bannister (1962). For this study, there appeared to be two stages of construct elicitation. Initially participants had to construe the personalities of the people in the photographs, *then* to elicit the constructs about what formed these personalities. The process was made explicit by some participants, who would first discuss the "personalities" of elements before stating the influences. Using this method of elicitation produced a range of constructs that were general enough to be used across all the participants.

One final critique of the methodology could be that it was overly complex, and similar results could have been found by asking participants more directly about their attitudes to personality change or CBT. However, a particular advantage of using the rigorous dyadic elicitation was that there was a much better chance of getting a comprehensive overview of the participant's constructs. In addition, by not asking the client directly about their 'beliefs', it reduced the chance that they felt pressured to give an 'acceptable' answer.

### The model

In some ways, the group categorisation (Figure 4 & 5, pgs 78 & 79 above) produced the richest and most interesting results of the study and represented an innovative approach to research methodology. Although participants were only prompted to categorise the constructs obtained, they spontaneously started to develop a far more complex model, in which they formed constructs into hierarchies,

including more subtle subordinate ones, such as the “In it together vs stagnant society”, which linked constructs together.

This model fitted well within the paradigm of Personal Construct Psychology (Kelly, 1955), in which constructs are organised together in sub- and super-ordinate hierarchies. Participants developed this model despite the fact that no discussion of the underlying Personal Construct Psychology theory had occurred.

It should be noted that “community/society vs family/self” was never explicitly given as a categorising construct by participants, and so was not included. However, this was probably an error, and should have been included as it represented a super-ordinate construct.

The comparison between the ranking of each construct and their position in the hierarchy in the model were broadly in agreement, with the exception of “Positive early years experience...”. The agreement on the model rankings between all participants and the group-exercise participants suggested that it had validity.

It was unclear why for “Positive early years experience...” there was consistently no match between where it was placed in the hierarchy and its ranking. One possibility was that it was actually superordinate to “Conflict between family...” and “Guidance...”, but had been placed in the subordinate position in the model by error.

It may also have been that although super-ordinate constructs affect many aspects of construing personality development, this effect is diffuse and therefore overall has less impact. For example, “community/society vs family/self”, is highly super-ordinate, yet it may be the details (i.e. subordinate concrete construing) of different parts of the community and in what way these affect personality development that remain more important for determining how useful CBT would be for

that participant. Conversely, therefore, although “Positive early experience...” may have been low in the hierarchy, it could still have been perceived as affecting personality strongly.

### Recruitment and statistical power

One criticism of the study was the relatively low number of participants that were included. This negatively impacted on the power of the study, increasing the risk of a type II error, particularly with whether the “culture of violent crime...” construct did discriminate between groups.

With sixteen constructs being compared at a probability of  $p < 0.05$ , there was a risk of a type I error. Caution in interpreting the “culture of violent crime...” construct was therefore taken, as one construct would, by chance, be expected to show  $p < 0.111$ . On the other hand, it was unlikely with 16 constructs that four would have a probability less than this by chance, although this was partially confounded by the clustering of the ‘education’ constructs.

One reason for the small sample size was the unexpectedly low proportion of people approached agreeing to participate. Alternatively a wider potential criticism was that the low numbers reflected a methodological flaw in the choice of using one particular host service with limited access to potential participants. However, this approach was taken to avoid the difficulties of comparing results from different services and therapeutic approaches that might have confounded the data analysis.

One potential impact of the low take-up rate was the possibility of systematic bias in the population recruited, of it being an unrepresentative sample. Indeed, a willingness to take part in a study may have indicated a difference from the rest of the population, though this would be a problem for most research. Though impossible to rule out systematic differences in the constructs or outcome of clients who did not contribute to the research, there was nothing to particularly suggest that this had occurred.

Nonetheless a better recruitment rate would have been desirable, particularly with a greater ethnic diversity, to reduce this risk.

## Analysis

### Agreement

When examining which constructs participants generally agreed upon, caution was taken in interpreting the results. The chi-squared test did not explicitly determine agreement, but deviation from a flat frequency distribution. The significance of the results had to be compared to the actual frequency distribution. The decision to use an 80% cut-off was arbitrary. However, it proved useful in investigating the constructs, providing a high threshold for interpreting agreement.

The comparatively low participant numbers may still mean there was a possibility of a type two error. This could occur if there were only small differences in ranking between groups, that is a small effect size. However small differences would probably not have been *clinically* useful. A second possibility would be that a small number of clients would differ significantly in their rankings. However, it was difficult to conceive an *a-priori* reason for this.

Three constructs, specifically “positive early experience vs negative early experience”, “Positive influences vs negative influences” and “violence/neglect vs nurture/respect” were considered important by most of the participants. These were very general superordinate descriptions. There was a degree of face validity to this. When looking at changes in personality, it would be hard to disagree with influence and experience affecting it. Equally violence or nurturing would appear to be very general descriptions, and difficult to theorise why these *would not* influence personality.

The constructs “born with talent vs going out and getting a job” and “community vs individuals” may have been low ranked as the labels for the poles were more difficult to interpret. Several participants were noted to have asked for clarification about “community vs individuals”. The “talent..” construct had poles that were perhaps not obviously contrasts, and when categorised had been placed in the “strange” category. This emphasised again the difficulty of distinguishing between a construct and its label, and the potential confusion this can cause.

The construct “guidance vs self-sufficient” was mid-ranked, perhaps simply because participants agreed it did influence personality development, but was less important than other influences.

### Cluster analysis

Interpreting the cluster analysis was difficult to undertake at more than a superficial level. Perhaps unsurprisingly, the “positive early years experience...” and the “positive influences...” constructs appeared to be highly related, and to some degree was related to the “violence/neglect...” construct. In general, then, these appeared to link to broad aspects of upbringing and life experience.

Three constructs that appeared to relate to broader, more cultural influences were clustered together: “Freedom vs repression”, “conflict between family...” and “culture of violent crime...”, though perhaps more weakly than other clusters.

Constructs relating to education, namely “education vs inexperience”, “Motivated to get education...” and “well educated...” also seemed to cluster together. Motivation appeared to be more distant from the other two, perhaps reflecting the emphasis on motivation. However, the relationship between the other two education constructs was interesting as they nominally related to two very different concepts, one academic, the other life experience. This might have been another example of the confounding effect of the construct label. It was interesting to speculate if relabelling the

“education vs inexperience” construct as “life experience vs inexperience” would have altered participants’ construal of it.

Another major grouping appeared to be those constructs centred broadly around the family or equivalent close relationships. These were “enthusiastic parent skills...”, “Nature vs Nurture”, “Close-knit family”, and “Guidance vs self-sufficient”.

The final three constructs seemed to represent a miscellaneous set, difficult to interpret. These were “Born with talent...”, “Community vs individuals” and “wealth vs poverty”.

### Comparison of groups

The two constructs for which a significant difference was found between good and poor outcomes was “education vs inexperience” and “well educated vs not as well educated”. “Motivation for education...” was also approaching significance. The degree to which these three constructs are independent was unknown, although the inference from the cluster analysis was that they were reasonably strongly related.

Although the possibility of a type 1 error exists it was felt unlikely that this result represented an error. The format of the CBT groups was strongly along formal educational lines. There was homework, and a large degree of psycho-education delivered by group facilitators. There was, therefore, face validity to the theory that if individuals found education unimportant in personality formation, it would be harder for them to benefit from an educational setup. In addition, two of the participants who had stopped therapy had discussed unpleasant experiences of school.

Care, however, was taken in interpreting a low ranking. The ranking indicates simply that individuals did not believe education was important in influencing personality development. There was

no *a-priori* reason for asserting that low ranking was equivalent to a construct representing something disliked.

The frequency distribution of ranking for “well educated...” and “education vs inexperience” indicated a more complex picture than good outcome participants ranking education highly. The distribution showed that the good outcome group had a range of rankings of education. In short, poor outcome appeared to be associated with low ranking of education, but low ranking did not, necessarily, associate with poor outcome.

It would have been interesting to explore why education was ranked relatively low. One possibility was that low ranking of education in the poor outcome group might have been related to poor experiences of school. Alternatively, low ranking of education in the good outcome group may simply have signified construed irrelevance of education to personality development.

There were, however, several important caveats to the above finding. These results were essentially correlational, an association between education constructs and outcome. However, they were not necessarily causative. For example, socio-economic factors influence the severity and prevalence of mental health difficulties (Grant et al., 2005; Roy-Byrne et al., 2006) and might also have mediated the attitudes to education (e.g. perhaps not going to a ‘good’ school). Therefore socio-economic and wider demographic factors are something that ideally would need to be controlled for before definite conclusions could be drawn.

Another assumption was that the aspect of the groups the constructs interacted with was the psycho-educational component. There was no mechanism within the project for investigating individual components of the therapy, however. Although ideally this could be investigated, it has proved difficult to breakdown therapies into active components in previous studies (Ahn & Wampold, 2001).

## Spearman's Rho

The result for the Spearman's Rho analysis was intriguing, though harder to understand how it fitted with other findings. This was particularly as "community vs individuals" was a construct identified as being agreed upon by all participants. The same difficulty with type I and II errors as discussed above was an issue, though the high significance of "community vs individuals" makes a type I error less likely.

Both of these constructs arguably related to wider, cultural, influences on personality. Therefore, if an individual rated these influences as important, they might not respond as well to the more individualistic assumptions about change in CBT. This may have fitted with the "culture of violent crime..." construct that approached significance.

However, if this was the case, it was unclear why these constructs did not cluster with the other 'cultural' constructs like "culture of violent crime...", nor why there was a contradiction between participants appearing to agree about the construct and yet it still being significant for determining differences in outcome score. In short, this finding would have to be replicated and examined with a much larger participant uptake (potentially allowing some degree of regression analysis) before these questions could be resolved.

## Clinical Implications

Group based CBT is a treatment choice that is backed by a good evidence base in the literature. However as with all therapies not everyone benefits from this intervention (see Kingdon and Dimech, 2008 for a comprehensive review of CBT effectiveness). The implication of the findings of this study was that there is an interaction between the client's construal of education, and the psycho-educational

format of CBT groups. Further research would be merited around this relationship: for example, whether the underlying cause of ranking education low was due to education being construed *negatively* (had a bad time at school), or with indifference.

If such a relationship could be identified, this would have implications for how clients are assessed and assigned to therapy. For example, if it were to be established that a client had a poor experience of school and education, assigning to a group based psychoeducational therapy might not be advised. Whether there would be a need for a formal assessment tool to be developed, or instead whether a relatively simple and qualitative approach would suffice (for example, 'how did you find school?') would also need to be investigated.

Though there is some evidence that clients better able to construe the nature of therapeutic problems do better in therapy (Large, 1985b and Winter et al., 2006), this study may indicate that having this insight is not sufficient for progress. So, for example, a client may have a good understanding of his clinical difficulties, but if they fundamentally do not think that the therapy will be useful in effecting change, they might find it more difficult to use that insight to make changes.

Though much more tentative, the potential interaction between how important wider, cultural, factors are to an individual might also play a role. In this case, rather than the format (group vs individual), the underlying therapeutic approach might need to be different. It would, for example, be interesting to compare community psychology based approaches (for example Smail, 2005) which emphasise wider, cultural influences, and CBT.

This raises a final, wider, question about how clients are allocated to treatment. There remains a tendency to divide clients on the basis of 'problem' (for example low self-esteem, OCD and so on). However this study may indicate that what is more important is what the client's construal of effective ways of causing change is. Therefore, rather than assigning clients to treatment on the basis of

‘problem’, perhaps assigning to treatment should be based on matching a therapeutic approach to the clients’ potential construal of how *meaningful* and *useful* that therapy is.

Tantalisingly, that may suggest one explanation for why it has been difficult to separate the effectiveness of different therapies (Speilmans, Pasek and McFall, 2007), despite very different techniques and theory behind them. What may underlie this is clients being semi-randomly assigned to treatments from the point of view of their underlying construal of useful ways of changing. Therefore, there may be similar proportions of clients in different treatment options who regard the approach as either beneficial or ‘useless’.

This idea that there is something important in how participants construe how to change and therapy was something that Kelly specifically discussed (Kelly, 1955, Vol 2, pgs 8 – 14). He noted that clients come with their own constructs about therapy that might be different to the therapists. Kelly specifically cautioned about limiting psychotherapy to the complaint. It is curious that despite the potential importance of how clients construe therapy, and the potential disadvantages of focussing on ‘the complaint’, having been known about for over 50 years, these issues still do not seem to be addressed in modern therapeutic settings.

## Conclusions

This study investigated participants who had attended a CBT therapy group. Participants elicited 16 constructs around factors that influences personality development. Although participant recruitment was low the study still produced some interesting results. It was found that poorer outcome groups had a lower ranking of constructs associated with education. This might have indicated that the psychoeducational format of CBT groups might have been less useful for them. This suggested that

treating clients on the basis of what they would construe as useful might be a fruitful addition to a diagnosis-based approach.

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## Appendix 2: Ethics Approval

Copy of original consent

North Nottinghamshire Local Research Ethics Committee  
1 Standard Court  
Paul Row  
Nottingham  
NG8 4GR

Telephone: 01159123344 Ext: 38948  
Facsimile: 01159123300

04 December 2007

Mr Christopher Cudde  
Trimes Clinical Psychologist  
Dept Clinical Psychology  
University of Leicester LE1  
104 Regent Road  
Leicester LE1 7LT

Dear Mr Cudde:

Full title of study: Can a client's control of personality development be used to predict outcome in Cognitive Behavioural Therapy?  
REC reference number: 07/E040758

Thank you for your letter of 20 November 2007, responding to the Committee's request for further information on the above research and submitting revised documentation.

The further information has been considered on behalf of the Committee by the Chair.

Confirmation of ethical opinion

On behalf of the Committee, I am pleased to confirm a favourable ethical opinion for the above research on the basis described in the application form, together with supporting documentation as used.

Ethical review of research sites

The Committee has designated this study as exempt from site-specific assessment (SSA). There is no requirement for (other) Local Research Ethics Committees to be informed or for site-specific assessment to be completed at each site.

Conditions of approval

The favourable opinion is given provided that you comply with the conditions set out in the attached document. You are advised to study the conditions carefully.

Approved documents

The final list of documents reviewed and approved by the Committee is as follows:

Document	Version	Date
Application		07 August 2007
Investigator CV	2	01 January 2007
Protocol	2	01 September 2007
Summary/Consent	1	
Letter of invitation to participant	2	
Participant Information Sheet	2	19 November 2007
Participant Consent Form	2	19 November 2007
Response to Request for Further Information		20 November 2007
Letter from Senior Lecturer	2	Feb 2007
CV - Educational Supervisors		01 June 2007

R&D approval

All researchers and research collaborators who will be participating in the research at NHS sites should apply for R&D approval from the relevant organisation, if they have not yet done so. R&D approval is required, whether or not the study is exempt from SSA. You should advise researchers and local collaborators accordingly.

Guidance on applying for R&D approval is available from <http://www.kfom.nhs.uk/r&d/m.htm>.

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committee (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committee in the UK.

After ethical review

Now that you have completed the application process, please visit the National Research Ethics Website - After Review

Here you will find links to the following:

- Provisional feedback: You are invited to give your views of the service that you have received from the National Research Ethics Service on the application procedure. If you wish to make your views known, please use the feedback form available on the website.
- Final Report: Please refer to the attached Standard conditions of approval by Research Ethics Committee.
- Safety Report: Please refer to the attached Standard conditions of approval by Research Ethics Committee.
- Amendment: Please refer to the attached Standard conditions of approval by Research Ethics Committee.
- End of Study Project: Please refer to the attached Standard conditions of approval by Research Ethics Committee.

We would also like to inform you that we consult regularly with stakeholders to improve our service. If you would like to join our Reference Group please email [refgroup@nres.nhs.uk](mailto:refgroup@nres.nhs.uk).

07/E040758 Please quote this number on all correspondence

Copy of amendment consent

North Nottinghamshire Research Ethics Committee  
1 Standard Court  
Paul Row  
Nottingham  
NG8 4GR

Tel: 01159123344 Ext: 38948  
Fax: 01159123300

14 October 2008

Mr Christopher Cudde  
Trimes Clinical Psychologist  
104 Regent Road  
Leicester  
LE1 7LT

Dear Mr Cudde:

Study title: Can a client's control of personality development be used to predict outcome in Cognitive Behavioural Therapy?  
REC reference: 07/E040758  
Protocol number: 2  
Amendment number: Minor amendment 1 - New participants to complete only the third part of the study  
Amendment date: 08 October 2008

Thank you for your letter of 08 October 2008, notifying the Committee of the above amendment.

The amendment has been considered by the Chair who has agreed that this is a minor amendment essentially just increasing the duration of part of the study in order to recruit sufficient participants to permit statistical analysis. As such, the chair has not identified any important ethical issues and sees no ethical reasons why the research should not continue with the amendment.

The Committee does not consider this to be a substantial amendment as defined in the Standard Operating Procedures for Research Ethics Committees. The same advice does not therefore require an ethical opinion from the Committee and may be implemented immediately, provided that it does not affect the approval for the research given by the R&D office for the relevant NHS care organisation.

Documents received

The documents received were as follows:

Document	Version	Date
Notification of a Minor Amendment - New participants to complete only the third part of the study	Minor amendment 1	08 October 2008
Participant Information Sheet	2	08 October 2008
Participant Consent Form	2	08 October 2008

Statement of compliance

The Committee is constituted in accordance with the Governance Arrangements for Research Ethics Committee (July 2001) and complies fully with the Standard Operating Procedures for Research Ethics Committee in the UK.

07/H040758: Please quote this number on all correspondence

Yours sincerely

### Appendix 3: Top Five Constructs from Initial Elicitation

Participant	Explicit pole	Implicit pole	Participant	Explicit pole	Implicit pole
1	Family that worked and provided	Family on the dole & not working	6	Strict upbringing	Not caring upbringing
	Posh	Worker		Free environment (politics)	Restricted environment
	British culture	Traditional (religious) cultures		Being born with talent	Going out and getting a job
	Person growing up with money	Person growing up with less money		Having money	Lost in life
	Being confident (trait/biology)	Low self-esteem		Well educated	Not as well educated
2	Having responsibilities	Not having responsibilities	7	Bad luck	Good luck
	Having support	Someone knocking you down		Encouraging children to do well	About getting the right exams and grades
	Life-learnt lessons	Not having learnt anything		Having a close-knit family	People having to make their way on their own
	Not having someone to look up to	Having someone to look up to		Parents being accepting of the person	Being pushed by parents
	Being bullied	Not being bullied		Sheltered upbringing	Having to fight to get where (they) are
3	Being praised as a child	Being told done things wrong again	8	Motivated to get education (trait)	No motivation/ambition for education
	Strict upbringing	Parents letting you choose for yourself		Following parents & what expected to do	Being passionate about a career
	Parents with strong religious beliefs	Not having strong religious beliefs		Well to do upbringing	Parents not showing an interest or pushing
	Being brought up with an appreciation for things	(Brought up) more materialistic and into things		Opportunities available in the environment	Less opportunity available in the environment
	Having technology that helps access things outside the norm	Not having exposure to new things		Peer influence	Parental influence
4	Strict parenting with mutual respect	Lax parenting and less mutual respect	9	Abusive childhood	Nurtured childhood
	Biological & genetic predisposition to illness (mental & physical)	No genetic/biological predisposition		Material based attitude (in childhood)	Happy, loving and affectionate (in childhood)
	Biological Male	Biological Female		Structured parental guidance	Chaotic parental guidance
	(Society) Being into technology	There not being as much technology		(Family) Button up feelings	(Family) Honest about feelings
	Culture of violent crime	Less of a culture of violent crime		Being brought up in rigid parameters	Being allowed to find own path
5	Culture/country that values people's rights	Culture/country that is oppressive – in the hands of the state	10	Enthusiastic parent skills	Not exposed to creativity and parents not pushing things at him
	Having more experience to draw on	Naivety & lack of experience		Conservative and rigid religious background	Not constrained by a religious outlook
	How men perceived (by society)	How women perceived (by society)		Conflict between immediate family (culture) and wider community	Knows where came from with no divided loyalties
	Coming from a society that helps each other & are in it together	Stagnant society		Not being told they are good (by parents)	Being told fantastic – building confidence
	Biological male	Biologically female		Awareness of health difficulties	World is their oyster

NOTE: Brackets denote text added by the principle investigator to clarify understanding of constructs

#### Appendix 4: List of Constructs Placed in Each Category

<b>Violence/neglect vs Nurture/Respect</b>	
Being bullied vs Not being bullied	Abusive childhood vs Nurtured childhood
<b>Positive influences vs Negative influences</b>	
Peer influence vs Parental influence	Not having someone to look up to vs Having someone to look up to
<b>Freedom vs Repression</b>	
Free culture/country valuing people's rights vs Culture/country that is oppressive and restrictive	Opportunities available in the environment vs Less opportunity available in the environment
<b>Wealth vs Poverty</b>	
Well to do upbringing vs Parents not showing an interest or pushing	Bad luck vs Good luck
Having money vs Lost in life	Posh vs Worker
Family that worked and provided vs Family on the dole & not working	Person growing up with money vs Person growing up with less money
<b>Community vs Individuals</b>	
How men perceived (by society) vs How women perceived (by society)	Conservative and rigid religious background vs Not constrained by a religious outlook
Being brought up with an appreciation for things vs (Brought up) more materialistic and into things	Coming from a society that helps each other & are in it together vs Stagnant society
British culture vs Traditional (religious) cultures	Parents with strong religious beliefs vs Not having strong religious beliefs
<b>Education vs Inexperience</b>	
Having more experience to draw on vs Naivety & lack of experience	(Society) Being into technology vs There not being as much technology
Life-learnt lessons vs Not having learnt anything	Having technology that helps access things outside the norm vs Not having exposure to new things
<b>Guidance vs Self sufficient</b>	
Strict and rigid upbringing vs Being allowed to choose own path	Structured parental guidance vs Chaotic parental guidance
Having responsibilities vs Not having responsibilities	Sheltered upbringing vs Having to fight to get where (they) are
<b>Positive early years experience vs Negative early experience</b>	
Having support vs Someone knocking you down	Being confident (trait/biology) vs Low self-esteem
Being told they are good (by parents) vs Being told fantastic – building confidence	Material based attitude (in childhood) vs Happy, loving and affectionate (in childhood)
Being praised as a child vs Being told done things wrong again	(Family) Button up feelings vs (Family) Honest about feelings
Following parents & what expected to do vs Being told done things wrong again	Strict and caring upbringing vs Lax and uncaring upbringing
Encouraging children to do well vs About getting the right exams and grades	Parents being accepting of the person vs Being pushed by parents
<b>Nature vs Nurture</b>	
Awareness of health difficulties vs World is their oyster	Biological & genetic predisposition to illness (mental & physical) vs No genetic/biological predisposition
Biological Male vs Biological Female	
<b>Remaining constructs not categorised into super-ordinate constructs</b>	
Motivated to get education (trait) vs No motivation/ambition for education	
Culture of violent crime vs Less of a culture of violent crime	
Having a close-knit family vs People having to make their way on their own	
Well educated vs Not as well educated	
Conflict between immediate family (culture) and wider community vs Knows where came from with no divided loyalties	
Enthusiastic parent skills vs Not exposed to creativity and parents not pushing things at him	
Being born with talent vs Going out and getting a job	

Appendix 5: Resistance to change rankings for each participant

Participant	Born with talent	Community	Conflict	Violent Crime	Education	Enthusiastic parent skills	Freedom	Guidance
1	14	14	5	14	8	4	12	5
2	11	16	7	14	11	14	5	9
3	14	14	11	13	9	2	4	16
4	16	10	13	7	15	7	10	5
5	9	11	11	6	14	6	13	9
6	16	12	12	5	5	12	5	5
7	12	14	10	5	15	5	5	12
8	10	10	14	16	10	7	4	9
9	16	15	13	11	11	5	13	9
10	12	8	12	11	15	8	5	5
11	16	10	10	9	8	7	3	12
12	15	16	10	8	13	6	8	10
13	16	11	6	2	11	11	3	10
14	15	16	7	2	14	7	3	12
15	14	9	3	13	7	10	4	7
16	12	16	3	4	15	13	2	9
17	11	16	4	7	10	6	2	15
18	16	9	4	2	8	6	5	9
19	12	16	3	4	15	13	2	9
20	1	8	8	4	11	6	4	13
21	11	9	6	1	5	13	2	4
22	6	16	14	5	6	1	12	10
23	16	11	15	2	6	11	3	11
Participant	Close-knit family	Motivated education	Nature	Early experience	Positive Influences	Violence/neglect	Wealth	Well educated
1	3	5	8	1	2	13	11	8
2	4	8	1	1	5	1	10	11
3	10	6	6	1	6	2	11	4
4	7	10	6	3	1	1	3	14
5	6	2	1	2	2	5	14	14
6	10	1	3	10	5	1	15	4
7	8	8	4	2	2	1	15	11
8	5	1	5	7	2	13	15	3
9	10	8	2	1	3	3	5	5
10	5	16	4	1	3	2	12	10
11	14	3	14	2	3	1	12	6
12	5	13	6	1	2	3	4	12
13	6	6	15	4	5	1	9	11
14	7	11	7	5	4	1	6	12
15	1	14	10	4	6	2	16	10
16	6	8	9	6	5	1	11	13
17	11	7	7	2	5	1	11	11
18	9	12	13	3	7	1	14	15
19	6	8	9	6	5	1	11	13
20	11	15	13	3	7	2	8	15
21	7	13	11	7	9	2	16	15
22	2	2	10	6	9	2	12	15
23	5	8	4	6	10	1	11	9

## Appendix 6: Power Analysis

### Power for Mann-Whitney comparison of good and poor outcome groups

Construct	Power	Effect size	Significance
Born w talent	0.95	0.3	.830
Community	0.69	0.66	.172
Conflict between	0.96	0.05	.944
Violent crime	0.71	0.833	.111
Education	0.70	1.18	.027
Enthusiastic skills	0.81	0.03	.803
Freedom	0.79	0.1	.721
Guidance	0.82	0.18	.692
Close-knit family	0.75	0.17	.619
Motivated education	0.6	0.83	.065
Nature	0.98	0.05	.972
p+ve early experience	0.96	0.17	.914
Positive influences	0.85	0.22	.720
Violence neglect	0.85	0.39	.567
Wealth	0.72	0.46	.337
Well educated	0.75	1.3	.023

Note: Power given by t-test calculation, so will be overestimate

### Power for Chi-squared analysis

Construct	w	Power	Significance (3 d.f.)*	
			Chi <sup>2</sup>	p
Born w talent	0.85	0.60	16.47	< 0.01
Community*	0.83	0.49	15.8	< 0.01
Conflict between family/community	0.14	0.99	0.478	0.924
Violent crime	0.33	0.99	2.565	0.464
Education*	0.30	0.50	2.135	0.144
Enthusiastic skills	0.63	0.63	9.174	0.027
Freedom	0.68	0.62	10.57	0.014
Guidance	0.86	0.60	17.17	< 0.01
Close-knit family	0.70	0.61	11.26	0.01
Motivated education	0.45	0.68	4.652	0.199
Nature	0.23	0.85	1.174	0.759
p+ve early experience*	0.91	0.63	16.45	< 0.01
Positive influences*	0.74	0.50	12.53	< 0.01
Violence neglect*	0.83	0.49	15.81	< 0.01
Wealth	0.62	0.64	8.826	0.032
Well educated	0.48	0.67	5.348	0.148

\* Using just the high and low frequency count, with 1 d.f.

Can a client's construal of personality development be used to predict outcome in Cognitive  
Behavioural Therapy (CBT)? Part III:

A reflexive critique of the process of designing and implementing the research project

Christopher John Cutler

University of Leicester

Doctorate in Clinical Psychology

2009

## Introduction

The following critique was largely based on a research diary that I kept concerning the decisions made throughout this project, though also drawing on wider comments and suggestions that were made. I have also drawn on the knowledge gained while doing this project to make suggestions or comments.

## Background

I had initially become interested in the role of personality while working with sex-offenders. It had appeared to me that those offenders in whom offending behaviour was closely connected to their self-concept were much less likely to do well in treatment, compared to offenders whose behaviour did not link in with core ideas about self-concept. For example, for some child sex offenders having to be around children and interact with them was linked into concepts about who they were, ambitions, and how they saw themselves in the future.

As I came to think about this research, my interest shifted away from offenders, to the more general therapy population. Also, when trying to think about what aspects of personality I wanted to investigate, I was more and more interested in people's 'personality of change' – how they conceived and reacted to change in general, but more specifically how this would interact with therapy.

I therefore decided I wanted to explore how people's general approach to change (which I felt was a core part of personality) could then interact with therapy.

## Resubmission

The single biggest impact on the whole project was that, following my initial submission of the thesis, the examiners felt that more work had to be done. In particular, it was felt that it fell between

the two stools of qualitative and quantitative research. As such, I was told to revise and resubmit my thesis. Therefore, in the appraisal that follows, I will talk both about the original design of the project, and also the process of what happened for the resubmission.

## Literature Review

The literature review proved to be the most difficult aspect of the thesis to complete. Before resubmission, there were a number of re-writes in order to focus more on themes coming out of the literature. This original literature review focussed on 'personality'. The literature for this area was diverse, and often contradictory. One of the most difficult problems was that defining personality was incredibly difficult. As a result, it was hard to extract coherent themes from the literature.

After resubmission, the criteria for changing the literature review had stated that it had not focussed enough on personal constructs and the wider literature on influences on therapeutic outcome. I attempted to expand or alter the original review to fit these criteria, however I was left with the impression that no matter how it was altered, it would fail to meet the examiner's requirements. Therefore, I agreed with my supervisor that an entirely new review was needed, with the focus being on construal, and an introduction that focussed on the CBT literature. The literature review was by far the most stressful aspect of the thesis, not least because of the fragmented nature of the literature itself, and the sheer number of re-writes it involved.

## Design of Tool

Initially the project had been conceived on a far larger scale, enabling statistical comparisons to be made between groups, with between 40 and 50 participants. However, this was rapidly realised to be an over-optimistic assessment of what could be achieved in the time available. The decision to design the experiment as a qualitative pilot was therefore taken, though with the recognition that it would be

impossible to clearly and definitively identify constructs that influenced therapeutic progress, but provide potential indications instead.

For the resubmission, however, the study returned closer to the original idea, though around 30 participants was felt to be a more achievable number (even though this proved to be optimistic). To some degree, this was one of the more frustrating aspects of the whole project. Had I not spent the time redesigning the project to be a pilot, I could have used the time to collect data, which may have prevented the need for a resubmission. Nonetheless, by aiming for a quantitative based study, it would mean I would have been able to arrive at definite conclusions.

Initially, the use of repertory grids as the main research tool had been considered. I had felt there were a number of advantages over other qualitative methods. Firstly, they were a comparatively quicker approach in eliciting the initial information compared, for example, to grounded theory. Secondly, the techniques associated with the repertory grid, principally laddering and pyramiding, offered an effective way of identifying important constructs for the client. This tied in with the third and in some ways most important point in that it was felt to produce data that was directly from the participant. Other qualitative methods I felt had a larger degree of investigator input, potentially reducing the validity, or at least authenticity of the data. Finally, there were various quantitative techniques that could be utilised using personal constructs.

Eventually, though, I decided not to use a repertory grid. Instead, using the ranking of constructs would provide the information I felt was the most useful for this project. Initially, I had thought the ranking would have been quicker than using a full repertory grid (i.e. scoring all elements on each construct). This was not borne out by the length of time it tended to take the resistance to change grid.

The one unfortunate consequence of this initial use of repertory grids was some confusion on my behalf about whether I was doing dyadic elicitation, or using a repertory grid, compounded by the fact I used my original repertory grid design as my main recording sheet for the initial elicitation.

It is important to note that initially I thought of PCP as a research tool, and the broader theoretical framework of Personal Construct Psychology (PCP) was drawn on less. However, as the project progressed, a PCP framework was increasingly used to understand and structure the data. In some ways, therefore, the choice of research tool increasingly influenced and guided the theoretical framework within which the results were understood.

Early on it was clear that there would be a list of constructs for each participant. If there were to be more generalisable results obtained from the data, there would have to be some method of collating and categorising the data. Initially that had been conceived as a task for me, perhaps with one of the field supervisors to check for inter-rater reliability.

However, this would negate, to an extent, the desire to keep the data 'authentic'. This also linked into a wider debate about how it might be possible to include participants as part of the research process. The decision was therefore reached to use a participant group to categorise the initial constructs, producing a final list of constructs that could be compared between participants.

One possible option was to ask each participant to 'score' each construct out of ten on importance. Though this would have been a comparatively quick and easy method to use, it would have potentially left many constructs with the same score (for each participant). The resistance to change method was used instead, as it would force all participants to consider all the information systematically. However, one of the difficulties was that this was a time-consuming method, and some participants later seemed to find it difficult initially to look at the construct as a whole rather than just one pole. Also, some

constructs still ended up being rated the same. However, despite these difficulties, it still felt as if it had been a useful, rigorous approach to take.

The next really big decisions were taken after my initial submission, and the need to resubmit. I had been left with several choices as to how to continue the project. The first of these was whether to go qualitative or quantitative. This was perhaps the easiest choice to make. Attempting a qualitative approach would have meant discarding the work I had already done. Moreover, there were huge risks to doing this. It would mean I had a year in which to re-write a proposal, submit to ethics, get passed by ethics, collect a similar sized data sample to that which I had done already, and analyse. The potential for this to go wrong, I felt, was very high.

However, there were also risks going down the quantitative approach. One of the reasons that this had been rejected before was the difficulty in recruiting large numbers from the host service. After I contacted the host service, they informed me that a tranche of groups was about to start within the next few weeks. I was concerned that if I missed those, that would have significantly reduced my potential participant pool. This fear was vindicated – it would have nearly halved (roughly 50 potential participants) my pool, and meant I recruited six fewer participants. In the end, only one other major tranche of clients occurred during the data collection period, particularly as the service moved geographical location, delaying some groups.

There were three main options to consider. One was continuing to use the same methodology, and simply recruit more individuals to rank the 16 constructs. The two other possibilities had both been suggested by the examiners. This proved to be a very pressured and stressful decision, as I was in danger of missing a tranche of groups starting in the host service.

One of these was to expand recruitment to the pain management service where I was going to be employed. I investigated this, but there were huge problems. For a start, there was a relatively small

pool to access over the time available, reduced more as I would be therapist to roughly half of them. There was already a research study ongoing (which had difficulty recruiting). The approach was multidisciplinary, not just psychological. One final difficulty would have been the need to go through the hospital ethics committee (with a reputation for making amendments) that might then have resulted going back to full ethics. Again, the danger was I would end up with *fewer* participants.

The second suggestion had involved comparing the ranking of construct to some already validated questionnaires. Again, the major difficulty with this was the time-frame. It would have involved going through ethics again. This would have resulted in missing the latest data collection, and being unable to use the rankings I had already got. Again, this fear was supported by what happened (I would have been left with just 10 participants in total!).

A series of e-mails and discussion with ethics also revealed that changing the ranking to some form of questionnaire, or recruiting individual participants would involve going through full ethics, and a change of title for the study. The dangers of this were again too great, with the potential to weaken the study (see the main discussion section).

Undertaking the power analysis proved difficult. As stated in the main thesis, calculating effect sizes was very difficult, resulting in widely different numbers of participants (on one occasion, a mistype resulted in a suggested recruitment level of 10300+). However, the main limiting factor was always going to be the participant pool. Even at the most optimistic expectations of recruitment, it was unlikely that any more than 40 participants could be recruited.

In this sense, the power analysis served to indicate if it was even possible to get meaningful results, despite the small recruitment size. Fortunately the range of participants suggested did fall within a reasonable expectation of how many would be recruited (though this was only just attained). It was unclear how I would have proceeded had the power analysis not shown this, however.

## Participant Recruitment

One of the first difficulties identified was that of how to recruit participants. A number of problems were involved with this decision. The first was whether a specific type of therapy should be focussed on. This was generally thought to be the best approach to minimise systematic errors that may have arisen if what were beneficial influences differed between approaches. One major difficulty was that many clinicians take an eclectic approach, making it impossible to sit with just one therapy. Though there were several specialist services, the difficulty in selecting just one therapeutic orientation was the reduction in the potential size of the participant pool. Eventually, it was felt that the benefits outweighed this disadvantage.

The service chosen – the Cognitive Behavioural Therapy Service – also impacted on how the research would need to be run in a number of structural ways. The majority of the work done was in group format, which tended to be run in tranches (i.e. a whole set of groups would tend to commence at around the same time). The groups were problem-specific (i.e. OCD, low self esteem). A group format helped to reduce differences between clients in how an intervention was administered; however there were other difficulties that this raised.

As groups ran in tranches, this imposed limits on the time-scale of when the project could start, in the sense that if the commencement of one set of groups was missed, several months would pass before a new set of groups would start. Secondly, as detailed in the discussion there was a question of whether to look at one type of ‘problem’ group, or look at several. The final decision taken to open invitations up to different groups improved the chances of getting as many participants as possible, with the acknowledged cost that this could increase heterogeneity of participants and reduce validity.

It was while finalising recruitment processes that another problem was raised. The field supervisor in the host service had expressed concerns that the group exercise might interfere with the therapeutic group dynamics. In addition, the project had been presented to a Service User group at the University of Leicester for feedback about the project. This group had expressed concern about the group exercise. They felt that it would be less stressful for participants if it were held after the therapy had ended. Given these two concerns, the second and third stages were moved to after the main therapy groups had finished.

A final difficulty was that, for the resubmission, the administrators at the host service did not have resources enough to support sending out the research packs, so they had to be given by facilitators in groups. This reduction in timescale, and venue of where they received the information about the research, may have impacted on the relatively low recruitment.

### Preparation of Materials

Once the basic design was decided, one of the first tasks was to design and produce the various measures that would be used. The most important task was what to use as elements, and how many there should be. Eight were settled on, as a pragmatic compromise between the number of potential showings of pairings, and having sufficient numbers of elements to allow a wide enough extent of the construct system to be explored.

The debate about what to use as the constructs was, in many ways, the longest one of the project. The initial idea had been to use vignettes about different ‘personality types’ (as decided by myself). However, in consultation with my field supervisor, the idea gradually changed to use images/pictures of different people as the elements, allowing participants’ to access their own constructs on personality. However, initially it wasn’t clear if this task would be meaningful or too hard for

participants. My academic supervisor also felt that there were issues around whether participants would feel they were being asked to stereotype, and whether this would cause distress to the clients.

Eventually, the compromise was that images would be used, but the back-up of vignettes would be there in case participants either could not do, or felt uncomfortable doing, the task in hand. Eventually, no participant used the vignettes – however several did comment on it feeling like ‘stereotyping’

The specific image selection was influenced by what was publicly available through Google images (care was taken to ensure these were images in the public domain). It was only when a shortlist of pictures had been chosen that, by rearranging and comparing them, a decision was reached about which images to include. This was a highly subjective process by myself (conceivably, participants could have been used at some stage in this process, however time constraints meant that this was impractical). Essentially, this task was accessing my own construct system around diversity in influences on individuals. It was, therefore, not certain that the participants would find this element domain as meaningful for them.

Several other more minor, though useful decisions were taken at this point. Firstly, it was decided that dyadic presentation was going to be used – principally as this was potentially an ‘easier’ task than the usual triadic presentation. With the benefit of hindsight, using a triadic presentation may have made the bi-polar nature of constructs (with a similarity and difference pole) clearer to participants. The decision was also taken to use a laptop to present the images in pairs, ensuring the same presentation to each participant.

#### Presentation to the Ethics Committee

The submission to the ethics committee had been delayed as the ideas presented above had been refined and debated. Unfortunately, the various revisions had meant that the first tranche of groups in

the host service had been missed over summer 2007. However, by the end of the summer, the submission to ethics had been made. Fortunately, only minor clarifications were needed.

However, the re-submission to the ethics committee coincided with a postal strike, and unknown to me had meant the application was lost in the post. Shortly after, I had paternity leave (see below). The result was it took six weeks (rather than one or two) to get full ethical approval. Unfortunately this meant I had just missed another tranche of groups, and would now have to wait for the early February groups. This impacted on timescale (data would now be collected much closer to handing in), reducing the size of my potential participant pool, and not allowing follow-up data to be collected. Though not central to the investigation, this would have allowed another set of analysis to be made.

It was unclear what, specifically could have been done to avoid this problem arising, though bad luck had played a part. If anything, in hindsight, less time should probably have been spent on ‘perfecting’ the proposal, allowing an earlier submission to ethics. As it was, the research involved compromises and not everything worked ‘perfectly’ anyway.

One final factor about the ethics committee was that the participant information sheet that met the criteria was three pages long. There was a general feeling that this was ‘too long’ and unlikely to be read in full. Whether this was ethically necessary I felt was open to debate (as bombarding potential participants with too much information can be as negative as not enough).

### Birth of Daughter

As I alluded to above, in the background of preparing the experiment over this period was that my wife fell pregnant with our first child at the start of 2007. Throughout the majority of the preparation for the submission to ethics, I therefore had all the routine of preparing for a new arrival. In many

ways, this actually reduced the stress of the academic work – providing the feeling that, in the end, there were more important things in life.

Fortunately, my daughter timed her arrival at a good point – my wife going into labour four hours after I had finished my last piece of non-thesis related academic work! Though, as I stated above, the paternity leave and the excitement following the birth prevented me from following up on ethics, in other ways the arrival reduced my stress – for two weeks I forgot about all the stressful preparation, and could concentrate on other things.

Throughout most of my thesis, for all the tired, sleepless nights, my family acted as more of a grounding than as a source of stress. The only time that there really appeared to be a conflict was during the final stages of the write-up, when I was not seeing them enough.

Throughout the process of preparing the resubmission of my thesis, I was aware that it was time taken away from my daughter. On the other hand, it was good to get grounded again from the stresses of resubmission by talking to someone whose principal worry was that, unaccountably, her foolish parents had forgotten to buy enough bananas.

### Contacting Participants

The contacting of participants was done through the host service, as per Ethics request. From the point of view of the researcher, this had several disadvantages. Firstly, I was unable to ‘make a case’ in person to the participants. Secondly I had to contact all facilitators involved and request they raise the research with their clients. It was notable, however, that there were big differences in take-up of participants for different facilitators. Potentially this was due to some facilitators not being as conversant with the project, and highlighted the difficult balance between the need to ‘sell’ the research, yet not to coerce clients.

## Running the Experiment

In general the project ran relatively smoothly. Each participant approached tasks in a different way, however most seemed to find it a stimulating exercise – most clients commented on it having been enjoyable. Indeed, the data collection was one aspect of the study I particularly enjoyed myself.

The running of the group stage turned out, I felt, to be the most exciting part of the project. Not only was using participants at this stage of analysis rare, or indeed unique, but the process itself produced a fascinating response from the participants. The fact that, independently of any direction from myself, they came up with a hierarchical pattern of constructs was, I felt, a sign of the robustness of the PCP model, in this circumstance at least.

The negotiation between the three participants was very constructive, and quickly needed only minimum input from myself. Initially, I had felt it would be better if the majority of participants attended the group. However, with this smaller size it appeared to work well, and the participants were of the opinion that any larger number would have made it difficult. One major difficulty was that this part of the experiment overran considerably by about half an hour – I had underestimated the time needed to go through all the constructs. As such, this part may have become rushed towards the end – particularly the ‘labelling’ of each category. However, the categorisation and construct ‘map’ had already been drawn up by then, so only a small part of the project was negatively affected. The final stage, particularly involving the recruitment of new participants, went relatively smoothly (bar the poor uptake). I used my tentative findings about education and culture of crime to predict how several participants would have fared in therapy (one drop out, one doing well). Gratifyingly my, albeit somewhat unscientific, predictions were correct.

## Analysis of Data

One change in the analysis of data for the resubmission was making the contrast between those who had done ‘badly’ in therapy and those who had done ‘well’, rather than a simple median split. This was partly based on the initial study, which had indicated the most interesting comparison was between those who discontinued therapy, and those who completed. I eventually extended this to cover those who completed and showed a worsening of symptoms. This, I felt, represented a more valid difference than an arbitrary split. Ultimately, had a median split based on scores been used, around 40% of the participants in the poor category would have actually shown good improvement in therapy. In addition, it avoided questions of how to compare changes in mild, moderate, or severe ranges. The use of average percentage changes for the CORE and DASS was hardly satisfactory, but probably the only realistic way to proceed. I experienced an enormous wave of relief when I had finally entered my results into SPSS and started getting significant results. I had been very worried about a null result with a potentially low powered study.

## Overview

The low numbers were something of a disappointment, though at least for resubmission there was now sufficient numbers to allow statistical comparison. On the other hand, I did not feel there was anything realistically I could have done to have boosted recruitment further. I had, at the end, approached every possible participant over the time, and extensively discussed my research with the host service.

I was particularly pleased with the group exercise, which I felt justified the use of a participant expert group at this stage of analysis. Indeed, I felt that they had produced a richer model than an ‘investigator’ group would have done. That being said, it was difficult to incorporate that richer model

into the later stages of the project without, essentially, fundamentally changing the design. However, as I suggest in my conclusions, this model offers an alternative way of investigating construct systems around change.

I felt the study was mixed – some positive results had emerged, though there were still dangers of type I and II errors. However, there was enough data to suggest that this might be an area worth pursuing, and potentially of practical benefit at some point. On the other hand, the small number of participants was disappointing, reducing the validity of the experiment.

#### Lessons Learnt

I think one of the main lessons I would draw from doing this study is – essentially – not to be too perfectionist in planning. No research submission is going to be perfect, and it is often best to get a good enough proposal, and start collecting data. This was perhaps the one aspect of the study I particularly regretted as ultimately it backfired heavily, though I feel quite proud of the research that I did produce.

Perhaps the second main lesson I take away is to be more confident in arguing for something that I want to do, without falling into being stubborn (I tend to slot rattle quite effectively between the two!). One of my main frustrations was that I ended up doing a project similar to an idea that was rejected in the early stages of design, and had I been more assertive in following through with this, then the resubmission may never have had to happen.

One danger that was highlighted for me was of attempting a mixed method design within a restricted timeframe. As I found out, this can result in not having the depth of qualitative or the numbers of quantitative. Choosing one or the other and focussing on it is the safer option. A final lesson I felt I learnt was that it could be a number of little things that can derail a project. Therefore it is always worth making sure to be on top of things – for example realising sooner that there had been a

problem with the post when getting ethics approval. That alone cost me an entire tranche of participants.

If this project were to be run again, therefore, I would have focussed from the start on a quantitative approach. I would have ensured a swift submission to ethics, and not become too picky in refining the project. I would have started collecting data as soon as possible.

When thinking about the basic methodology, though, I think the honest answer to what I would do differently would be not doing this project at all. Rather, I would have focussed either on a qualitative approach, such as grounded theory, with the host service, or I would have looked at taking on a project that could access larger numbers, perhaps a different research area entirely. There were too many risks in the approach I took, within the limits of what could be accomplished on the clinical course

## Appendix: Word count and Journal

Total Word Count (including references and Appendices): 32 109

Literature Review:	7873
With references & tables:	9759
Research Report:	11 763
With references & tables:	16 415
Critical Appraisal:	4632

Potential Submission Journal: Social Sciences and Medicine