Rewiring head and heart: An investigation into the efficacy of a clinical psychotherapeutic modality for the treatment of depression

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Rewiring Head & Heart: An Investigation into the Efficacy of a Clinical Psychotherapeutic Modality for the Treatment of Depression

A thesis submitted to fulfil the requirements of the degree

of

Doctor of Philosophy

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No. 967960

Bachelor of Education
Master of Arts - Counselling
Bachelor of Psychology
Master of Applied Psychology - Clinical

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Date of Submission:
May 2010
Use of Thesis

The identities of persons described in any case studies have been removed and permission has been gained from the respondents to use the material in this way.
Abstract

This is a presentation of the psychotherapeutic treatment modality, ‘Rewiring Head & Heart (Rewiring)’ that combines cognitive therapy (‘head’) with psychodynamic exercises (‘heart’) into an evidence-based clinical treatment modality for use by therapists. This study extends previous research conducted by Milnes (1998). Descriptions of the origins of the treatment modality, the underpinning theoretical framework, and practical application in the Rewiring Manual are followed by an empirical investigation of its efficacy on a sample of adults with depressed mood, before discussing case studies and issues of clinical application of Rewiring. Rewiring consists of two contributing elements – Cognitive Fluency (CF) and Psychodynamic Therapy (PDT). The efficacy of each element and the combination of both were subjected to separate clinical trials. After assessment using the depression subscale of the Depression and Anxiety Stress Scales (DASS), the Beck Depression Inventory – II (BDI-II) and a clinical interview, 47 participants sharing elevated scores of depression were randomly allocated to four conditions: Cognitive Fluency (CF), Psychodynamic Therapy (PDT), Cognitive Fluency combined with Psychodynamic Therapy (CF+PDT) and a control condition. During the 4-session treatment based on Rewiring all participants were measured on Self-Ratings of Belief (SRBs). Case-studies from the efficacy trial and single subject case-studies from clinical practice were also examined. Although the n was inadequate to test the hypotheses, it did indicate a direction for treatment. It was found that both the CF and the PDT treatments were efficacious and the combined condition (CF+PDT) provided still more robust results. The empirical and case study evidence supported Rewiring as a cost-effective, short-term, psychodynamic and cognitive combination therapy that can be used in a variety of settings, and as a psychotherapeutic modality available for use by trained clinicians.
Declaration

I certify that this thesis does not, to the best of my knowledge and belief:

(i) incorporate without acknowledgement any material previously submitted for a degree or diploma in any institution of high education;

(ii) contain any material previously published or written by another person except where due reference is made in the text; or

(iii) contain any defamatory material.

I also grant permission for the Library at Edith Cowan University to make duplicate copies of my thesis as required.
Acknowledgements

I acknowledge help given by my supervisors, Professor Craig Speelman and Associate Professor Lisbeth Pike and thank them for their encouragement, helpfulness and expertise.

Also, I wish to thank Val Morton and Rochelle Masters who gave enthusiastically and freely of their time as clinicians for the empirical investigation, and the many staff at Belmont Counselling Clinic and Psychology Australia who assisted me at various stages.

Thanks are due to my family who have shown love and understanding during these years of study. I also thank my husband Dr Peter Milnes for his enthusiasm, support and encouragement to finish the project.

To the many students who have assisted in the collation of data for the empirical study I wish to thank, in particular, Nathanael Sobejko, Hannah Potter, Lemuel Tan and Monica Jakovich.
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Preface: The Creation of Rewiring Head & Heart

The basic concepts underpinning Rewiring Head & Heart (Rewiring) first occurred to me in 1997 while listening to a lecture by Associate Professor David Leach during my studies in the Masters of Applied Psychology program at Murdoch University in Western Australia. He described Applied Behaviour Analysis (ABA), a teaching method developed by Lovaas for autistic-spectrum children, where, on completion of the ABA programme, 47% of the children were indistinguishable from their peers outside the autism spectrum (Lovaas, 1981, p.29; Lovaas, 2003, p.17). ABA worked on the “fluency” premise that behaviours could be broken down into basic elements, mastered by the child through constant fluent repetition and chained together into more complex skills. I wondered whether fluency could be combined with spoken sentences representing rational thoughts to treat disorders such as depression and anxiety. I also wondered whether a treatment could be devised to target irrational thoughts, substituting rational sentences and building them one by one into a whole, bringing them to fluency by repeating them out loud, with speed, over a period of time.

I devised cognitive fluency exercises to treat depression in adolescents based on Milnes’ Believing & Doing Inventory (see Appendix A) and Ellis’ 10 Irrational Beliefs (see Appendix B). This became the basis for my Master’s research project “Adolescent Depression: The Use of Generative Instruction to Increase Rational Beliefs and Decrease Irrational Beliefs and Depressed Mood” (Milnes, 1998). The results supported the efficacy of two variations of cognitive fluency group treatment for adolescent depression - that is, active reading-aloud with increasing speed; and to a lesser extent, repeated silent-readings. The reading aloud group maintained and increased their gains at the 6-week follow-up assessment after the completion of treatment, whereas the silent-reading group decreased their gains without further reinforcement.

After the completion of studies for the academic qualifications and supervision required for the title of Clinical Psychologist, I found that day-to-day practice required less dependence upon the scientist-practitioner approach than I had thought.
Apart from analysing and reporting test results, the process of therapy was often unmeasured and progress reports were often subjective rather than objective. Hatfield and Ogles (2007, pp. 283-294) reported a survey in the use of outcome measures by psychologists in clinical practice that found only 37% of psychologists “indicated some form of outcome assessment” and that they were likely to be “younger, have a cognitive-behaviour orientation, conduct more hours of therapy per week, provide services for children and adolescents and work in institutional settings”. When analysing the outcomes of my therapeutic practice, there was little incentive to strive for a scientist-practitioner model, so, in order to gain further insight into private practice, I became an active member in several psychologist and psychotherapist associations. While there was an academic division between cognitive and psychodynamic therapists, I observed that the majority of practitioners with whom I spoke used a little from both fields when they deemed it to be appropriate but not necessarily in a logical or coherent order. My academic training had emphasised “evidence-based therapy” and “consistent therapeutic modalities” whilst refraining from “labelling” but there was little to assist or guide me in the practical maintenance of these ideals. Similarly, while the ideals of a “collaborative process” between clinician and client were emphasised during my training as vital to therapy, I gathered that clients did not always have an input into therapy, did not necessarily understand the therapeutic process being used, and had little evidence to show their improvement. I wanted to use evidence-based therapy but found it difficult, particularly when psychodynamic therapy was not particularly suited to measurement. This has led me on a quest that has lasted over a decade and the final result is *Rewiring Head and Heart* – a positive therapeutic modality that combines psychodynamic therapy with cognitive behavioural therapy; a combination of fluency and its generative effects with psychological practice; a measured approach to therapy that satisfies the requirements of a scientist-practitioner approach to psychotherapy; a therapy that produces progress reports for each client; and a therapy that informs the client about what is going to happen, what is happening and what has happened during the collaborative intervention.

At the start of this quest I had already observed the successful outcomes of using verbal fluency with rational cognitions in combating depressed mood (Milnes, 1998) and so I decided to adapt the concept into a treatment modality for a clinical
environment. The frequent testing required by the fluency method fitted in well with evidence-based therapy. Each case became an empirical study because of the frequent and consistent testing regime. Over the next few years I used this linguistic approach to treat over 1000 adult and adolescent clients in my private practice, treating depression and other conditions. Initially I called the treatment modality *Accelerated Behavioural & Cognitive Therapy (ABCT)* and shared this with over 60 clinicians in workshops over several years. Many of these clinicians continue to use the treatment modality in their therapeutic practice. *ABCT* consisted of an average of five sessions for each client. I administered a *Minnesota Multi-Phasic Personality Inventory-2 (MMPI-2)* (Hathaway & McKinley, 1989) before and after treatment to measure all aspects of client character so that I had empirical evidence of the change. The results continued to prove efficacious as the *MMPI-2* demonstrated positively altered profiles for those who completed the treatment.

“Praxis” has been defined as the combination of action with reflection. Without reflection, actions become meaningless and repetitious so that people “go through the motions”. Without action, reflection becomes “fantasized consciousness” where people “live in an ivory tower”, divorced from reality (Freire, 1972. pp.41-42). For me, praxis led to further reading of early psychoanalysts such as Freud, Adler, Maccoby and Coué and contemporary psychodynamic therapies that could be added to the cognitive model so that the emotional (“heart”) issues were treated as well as cognitive (“head”) issues. The original cognitive treatment had worked very well with the majority of clients, but like Maccoby (1980) found, in spite of profound and recent influence from the cognitive-developmental theory, Freudian theory still contributes to our understanding of the individual and socialisation process. I observed that some clients were unable to participate because their emotional state was too labile to enter cognitive treatment. Hunsley & Di Giulio (2002, p.11) reported from meta-analyses conducted in the 1990s that psychodynamic therapy is more appropriate in the treatment of patients exhibiting more severe and more diffuse symptoms. When their emotional states were stabilized by psychodynamic therapy, clients were then able to access the cognitive benefits of the therapy. Furthermore, I noted that the addition of psychodynamic therapies enhanced the gains made by the cognitive models. To incorporate the addition of psychodynamic elements to the therapy, the name was changed to *Rewiring Head & Heart*. The new name reflected...
the linguistic qualities of the theory of “rewiring” (Doige, 2007, p.xiv; Bermudez, 2005, p.294) with emphasis on both Cognitive Fluency (CF) and Psychodynamic Therapy (PDT). The therapy seemed effective in clinical practice in regulating the thoughts and emotions of adults, adolescents and children. While the clinical trials in this study consisted of only four sessions, most Rewiring clients in clinical practice continue to 6-12 sessions to achieve higher ratings and longer-lasting effects. The praxis of therapy – theory and practice - has resulted in the development of this efficacious treatment modality and the final form of Rewiring has been adapted and refined to produce an evidence-based structure for the scientist-practitioner.

I have found that the treatment does not replace my professional expertise as a Clinical Psychologist, rather it forms an undergirding structure to ensure continued empirical therapy. Rewiring usually does not begin in the preliminary interview session where clients present their problems, issues or concerns and the clinician gains as much information as possible. When commencing the treatment modality, usually in the second session but maybe later, the clinician takes charge, explains the process to the client and then acts in consensus with the client to devise a program containing achievable and predictive goals. This is one of the few therapies I have encountered that treats issues of both “head” and “heart” in a concentrated, short-term program of approximately four to six sessions (with an option to extend). For me, it has become a treatment of choice for many psychological problems because it is an all-encompassing, short, effective and dynamic plan that integrates cognitive and psychodynamic elements for professional clinicians to use.

This thesis is a presentation of the psychotherapeutic modality, Rewiring. It traces its beginnings from 1997, describes the theoretical and practical development over twelve years, presents clinical trials of the process and discusses implications for clinical use. Chapter 1 contains a description of the theory and development of Rewiring. Chapter 2 contains a description of the elements included in the Rewiring manual. Chapter 3 contains the presentation and analysis of three case studies where Rewiring was used in clinical practice. Chapter 4 contains a description of the considerations for investigating the efficacy of Rewiring in treating depression. Chapter 5 contains the method and results of Rewiring as well as the presentation of
case studies from each treatment condition. Chapter 6 contains a discussion of the
efficacy of Rewiring as a treatment modality.
Depression is just one of the clinical disorders that could have been chosen and
further investigations are invited to test the efficacy of Rewiring with other disorders.
Following a pilot study, 47 clients with symptoms of clinical depression were treated
in an empirical investigation. Although the n was inadequate to test the hypotheses, it
did indicate a direction for treatment.

Case-studies of the efficacy of Rewiring have also been included and
discussed because ultimately the therapeutic process occurs with individuals rather
than with statistical evidence. Clients present with a unique set of issues and therapy
is not an automatic process because the content of each case differs. It is the job of
the clinician to evaluate the presenting issues and apply appropriate therapy in a
professional manner. The case studies allow the reader to explore the various issues
that may be presented in the therapeutic process, follow the therapy for particular
client issues, and view the way individuals are assisted by the process. By including
case studies as well as statistical evidence, clinician confidence in application of the
therapy to individual cases is increased.

**Definitions Used in this Report**

Unless it is obvious from the context, gendered pronouns use the convention
that he/she and his/her are used alternately and should be read as applying to either
gender. The word “clinician” has been used in this report and can denote other
professional titles such as “therapist”, “psychologist” and “psychotherapist”. Also,
the term “client” has been used and this can be read as “patient” or “subject”. A
number of case studies have been included and names have been changed to protect
the individuals.

“ABCT” is the acronym for *Accelerated Behavioural and Cognitive Therapy*
based on the Milnes study (Milnes, 1998) that used cognitive fluency to treat
depression in adolescents.

“Celeration” is a graph that predicts how a child should progress from day to
day in order to reach his aim (White & Haring, 1980, pp.120-125). This idea was
adapted to graph the progress of clients in therapy.
“Clinical treatment” refers to the “idiographic” (individualised psychotherapy) that occurs when a client voluntarily seeks treatment and commits to carrying out the requirements of the program set by a professional clinician. Clinical treatment can occur in both private and public clinic facilities.

“Cognitive fluency” (CF) is a term coined for this research that refers to the exercise and practice of repeating a set number of statements aloud until an appropriate level of belief is reached. (See for example, Milnes’ Believing and Doing Inventory, 1998, Appendix A).

“Cognitive Restructuring” (CR) in Rewiring begins with the discovery of the debilitating effects of poor Locus of Control (LOC) and then in a process similar to that used by Rational Emotive Therapists (RET) (Albert Ellis, 1974; and see Appendix B), a depressed individual is taught how to refute their own cognitive distortions, their irrational, faulty thinking and self-talk, and replace them with more accurate, rational and helpful ones.

“Comparative outcome study” refers to a process of contrasting alternative treatments.

“Consensus and commitment” refers here to the collaboration between clients and the clinician in devising and implementing a treatment regime and the client’s commitment to completing the requirements of the program by daily practice and return to subsequent sessions of therapy.

“Depression” refers to “a period of at least two weeks during which time there is either depressed mood or the loss of interest or pleasure in nearly all activities” (DSM-IV). In this project, “depression” was measured by the Beck Depression Inventory-II (BDI-II) (Beck, 1996) and the Depression, Anxiety and Stress Scale (DASS) (Lovibond & Lovibond, 1995), and verified at the first interview.

“Ego-States” refers to the concept that each person has three fully-functioning ego-states of Parent, Adult and Child, each one with a structure as well as a function.

“Generative Instruction” (GI) refers to the name given to the “fluency” approach of verbalizing answers, practising them as fast as possible from the outset without worrying about understanding new concepts or words, not being afraid of errors, taking on new concepts all at once rather than one at a time, and learning the facts without sequence (Potts, 1993, pp. 179-189). GI was successfully tested in the
Great Falls Precision Teaching Project and also formed the basis of the Milnes (1998) study in treating depression in adolescents.

“Locus of Control” (LOC) is a theory that refers to internal and external forces acting upon an individual that can result in degrees of emotional turmoil and includes an individual’s perception of the reasons and causes underlying the events of their life, and whether their life is controlled by themselves, or by external forces (Rotter, 1966, pp.1-28).

“Manualization” refers to “standardised operational treatment manuals as the specification of the principles of a given psychotherapeutic treatment and what is actually done, in a way that can be verified” (Lis, 2001, pp.36-54). Manuals include guidelines for clinicians regarding behaviours or symptoms to target. They outline the strategies for treatment.

“Mastery Learning” (ML) and “fluency” refer to elements of generative instruction such as the REAPS method (Haughton, 1980, pp.3-20) and “Direct Instruction” (Engelmann, 2007) to identify strengths and “fluent practice” exemplified by a method called SAFMEDS - Say All Fast a Minute Every Day Shuffle (Lindsley, 1980, 1996, pp.199-210) which are adapted here and used to achieve “cognitive restructuring”.

“Personality development theories” propose that each stage of development is marked by a particular set of conflicts that should be resolved by the individual. Freud’s theory of personality development (Freud, 1947, p.910; Westen, 1998, pp.333-371; Westen 1999, pp.727-746; Westen, 2000, pp. 217-242) has been modified in psychosocial and human development theories such as Fowler (1981); Erikson & Erikson (1987); Hendrix (1992); Kohlberg (1981); Piaget (1955, 1983); and Vygotsky (1962). “Fixations”, “arrested development” and “wounds” from each stage can affect the individual’s emotional state later in life.

“PDT” is the acronym used for Psychodynamic Therapy in this study that included contributions about the subconscious, ego-states, personality development and the senses, particularly visualisation. In Rewiring, PDT refers to a set of dynamic exercises detailed in the Treatment Manual.

“Psychotherapy” refers to a modality of treatment in which the clinician and the client work together to address psychological distress, reduce maladaptive behaviour, and assist adaptive behaviour through counselling, training programs, treatment plans and structured and unstructured interventions (Weisz et al., 1987,
There are three major psychotherapeutic orientations – psychodynamic, client-centred and cognitive-behavioural approaches (Roth & Fonagy, 1996; Kazdin, 1986, p.19-36). *Rewiring* is both psychodynamic and cognitive-behavioural in orientation.

“*Rewiring*” is based on a machine metaphor of the brain as computer hardware (“hardwired”) and “rewiring” through the “neuroplasticity” of the brain and its implication that psychotherapies can “change the brain.” (Freud, 1895; Doige, 2008, p.xiv). *Rewiring* also refers to “the intentional use of language to create and integrate mental objects that are available for scrutiny and are not doomed to alter every time there is exposure to new input” (Bermudez, 2007, p.294) so that the individual can remain “rewired”. *Rewiring* refers to the psychotherapeutic modality named *Rewiring Head & Heart* that has been subjected to clinical trials, and described and discussed in this thesis.

A *Rewire* refers to both an *I-wire* (a list of ten positive existential statements usually beginning with the words “I am” to counteract negative self-talk) and a *Be-wire* (a list of ten positive imperative statements often beginning with the word “Be” and directed to the subconscious). “*Me-wiring*” refers to the “homework” that clients do between clinical sessions, and after termination of face-to-face therapy at their discretion.

“*Subjective Ratings of Belief*” (SRBs) are an adaptation of Subjective Units of Disturbance Scales (SUDS) developed by Joseph Wolpe in 1969. SRBs measure “units of belief” rather than “distress” and graph the client’s progress towards their goals.

“*Subconscious*” refers to the idea that we are the sum of our thoughts which are the products of life’s experiences. Our subconscious is the screen of space expressed as conditions, experiences and events, habitual thinking and behaviour. The subconscious is morally neutral and ready to do the individual’s bidding.

“*Therapy*” is a broad term referring to a range of beneficial psychosocial interventions including traditional psychotherapy as well as behavioural and cognitive therapies (Kazdin, 1998, p.19-36). In this thesis the words “therapy” and “treatment” are used alternately.

“*Visualization*” can be used as a process to reshape the images held by the subconscious (Coué, 1923, p.125; Gawain, 1985, p.174; Paivio, 1991, p.255-287).
Chapter 1: The Theory and Development of *Rewiring Head & Heart*

*Why create another therapeutic modality?*

In 1936, Rosenzweig used the Dodo bird’s exclamation taken from Lewis Carroll’s *Alice in Wonderland* that “everyone has won, and all must have prizes” to support his view that “common factors” in various psychotherapies were equivalent in efficacy. This Dodo bird verdict lacked supporting data until meta-analyses conducted in the latter part of the twentieth century beginning with Luborsky et al (1975) and followed by others such as Wampold et al (1997) found evidence to support the Dodo bird verdict of psychotherapeutic equivalence while others demonstrated that the Dodo bird verdict is lacking (Smith, Glass and Miller, 1980; Norcross, 1995; Roth & Fonangy, 1996; Weisz et al, 1995; Reid, 1997; Shandish & Sweeney 1991, Hunsley & Di Giulio, 2002). Nevertheless, it became “commonplace to see sweeping statements about the veracity of the Dodo bird verdict in the literature, with little attention paid to the possible conceptual and methodological constraints of this verdict” (Hunsley & Di Giulio, 2002). Implicit in this claim is that evidence-based, *bona fide* psychotherapies are equivalent for all possible types of client conditions, have already been found and are all “winners” that should be used for all treatments while other treatments should be discarded.

Smith, Glass and Miller (1980) argued that *bona fide* treatments were overwhelmingly Cognitive Behavioural Therapy presented as different therapies but really very similar treatments producing similar results and could not be used as a basis to argue for psychotherapeutic equivalence. Moreover, the Taskforce on Promotion and Dissemination of Procedures of the American Psychiatric Association (1995) recognised that there was a need for a variety of therapeutic approaches:

Cognitive behavioural therapy and interpersonal therapy are the psychotherapeutic approaches that have the best documented efficacy in the literature for the specific treatment of major depressive disorder, although rigorous studies evaluating the efficacy of psychodynamic psychotherapy have not been published. When psychodynamic psychotherapy is used as a specific treatment, in addition to symptom relief, it is frequently associated with broader long-term goals.
Even after the meta-analysis which they claimed as upholding the Dodo bird verdict, Wampold et al. (1997, p.210) admitted that:

There are about 250 types of therapy and 300 disorders (Goldfried & Wolfe, 1996) which clearly indicates that the comparisons reviewed for this meta-analysis were not sampled from a Types of Therapy X Types of Disorder matrix. A perusal of studies reviewed indicates an overrepresentation of behavioural and cognitive behaviour treatments.

Cautioning their readers not to extrapolate from therapeutic equivalence that the same therapies should be used all of the time, Wampold et al. (1997, page 210-211) stated that in the “real world”, psychotherapists used a variety of therapies that were not necessarily *bona fide* - some were specific to disorders (e.g. exposure to phobias) and others were more appropriate for a wide variety of disorders (e.g. cognitive therapies) and, conversely, some disorders are amenable to many treatments (e.g. depression), whereas others may not be (e.g. obsessive compulsive disorder) - so it would be unwarranted to conclude that all therapies were equally effective with all disorders.

It is unreasonable and irresponsible to claim that all therapies are equal in their clinical effects, creative clinicians are always endeavouring to develop more effective and efficient forms of treatment ... if psychotherapies are not equivalent in their theories, techniques, and, for most conditions, treatment outcomes, then attempts to force the issue of psychotherapy equivalence, for all conditions, or for any sub-set of conditions, are misplaced” (Hunsley & Di Giulio, 2002, pp.4&12).

After completing their review of the meta-analytic evidence, Hunsley and Di Giulio (2002) concluded that when the evidence is critically examined, there is “no support whatsoever for the Dodo bird verdict” and “what is necessary is that people receive the treatments that have the greatest likelihood of helping them”.

Born in the “real world” of clinical practice, *Rewiring* is an attempt to devise an efficacious therapy that helps people. In this thesis, it a unique therapeutic combination of fluency from educational psychology combined with effective elements of cognitive therapy into “cognitive fluency” to treat the “head” aspects of therapy (Milnes, 1998) has then been combined again with specific psychodynamic exercises to treat the “heart”. Using the strategies of cognitive therapy, repetition and speed that appear to heal, *Rewiring* provides the client with a formalised set of
cognitive instructions. These statements are repeated by the client each day over the period of treatment until degrees of belief and action are reached. At the same time, clinicians assist clients to explore psychodynamic aspects of their subconscious, visualise certain favourable pictures as a means of establishing inner mental health, begin an authoritative inner dialogue between their own ego-states, and measure their progress on an SRB scale. As a result, a psychodynamic clinician may choose to use Rewiring as a foundation measurement tool that provides evidence and documentation.

Rewiring

A machine metaphor of the brain as computer hardware often led conventional medical practitioners to claim that difficult or resistant problems were deeply “hardwired” into an unchangeable brain (Doige, 2008, p.xiv). In his book The Brain that Changes Itself, Doige (2008, p.xv-xvi) presented evidence for “neuroplasticity” whereby the brain can change its own structure and function through thought and activity and suggested that the “neuroplastic revolution has implications for psychotherapies that can change our brains.” Doige (2008, pp. 223-225 & 375) traced the idea of neuroplasticity back to Freud’s Project for a Scientific Psychology (1895) that is still admired for its sophistication. Freud’s four “plastic concepts” were: the technique of free-association that results from two neurons firing simultaneously which then facilitates ongoing association; the “sexual plasticity” which occurs when the individual passes through the phases of organisation that are developed in the critical periods and affect later relationships; the “permanent memory traces” from life’s experience that can be retranscribed or rearranged by the remodelling of memory; and the process of therapy that creates a “blank screen” that allows a patient to relive rather than merely remember past memories (transference). The patient is assisted in understanding early traumatic scenes, retranscribing neuronal networks and associated memories, changing their thinking, and improving their relationships (Doige, 2008, pp.117-118, 125). Rewiring is an extension of the machine metaphor that describes the use of the brain’s neuroplasticity to facilitate changes in its structure and function.
**Language**

Language is central to clinical psychotherapeutic practice. Bermudez (2005, p.294) postulated that propositional thinking involved manipulating public language sentences. Central to the “rewiring hypothesis” is the claim that speaking-creatures and non-speaking creatures are fundamentally different and that the development of language in pre-history has rewired the brain. This “rewiring” occurs as each child learns a language and then shapes the “cognitive architecture” of the brain through continuous language learning. The “rewiring hypothesis” holds that the brain is a complex structure with overlaid mechanisms and circuits within the three basic structures: the proto-reptilian, the limbic system and the neo-cortex. With each “rewiring”, the brain creates new representations and computations. In this way, flexibility and plasticity are fundamental to the “rewiring hypothesis”.

The “rewiring hypothesis” acknowledges language as the principle vehicle of public discourse and private thought to change the way the brain functions. As a result of “rewiring”, public language has emerged as a medium for recoding domain-specific representations in a way that allows them to be integrated with each other:

- By “freezing” our own thoughts in the memorable, context-resistant, modality-transcending format of a sentence, we thus create a special kind of mental object – an object that is amenable to scrutiny from multiple cognitive angles, is not doomed to alter or change every time we are exposed to new inputs. (Clark, in Bermudez, 1997, p.293)

“Rewiring” also changes the way the brain processes information at a sub-personal level. The “inner speech hypothesis” holds that humans engage in intentional thinking through spoken sentences because the neural architecture needs language as a medium (Carruthers, 2002, pp, 225-249). So, inner thoughts can be represented by words which are available for consideration in the psychotherapeutic process. The “rewiring hypothesis” uses this representation of language to influence basic inner thinking.

**Spoken Language**

The intentional use of both “public language” and “inner speech” can provide opportunities for positive therapeutic clinical interventions because of the power of reason (“head”) and the power of feelings, creativity and imagination (“heart”):
First, they (rewiring hypothesisers) think that natural language is the vehicle for characteristically human thought and reason. And second, they think that the flexibility, recursive power and creative potential of natural language are what underpin the creativity of human thought and imagination. (Carruthers, 2002, p.225)

Luo (2008, pp.141-144) suggested that the replacement process of the “innate language-of-thought style architecture” with ontogenetic rewiring through the use of language, can create lasting mental objects that “are not doomed to alter every time there is exposure to new input” (Bermudez, 2007, p.294). The Rewiring clinical treatment modality emphasizes the centrality of the spoken language. Carruthers’ argument that “natural language sentences may be the vehicles of conscious propositional thinking” (2002, p.8) makes the “rewiring hypothesis”, emphasising the power of language as a natural fit for a therapeutic intervention that insists on linguistic expression to change (or “rewire”) both cognitive and psychodynamic facets of the client. Rewiring utilises the linguistic expression of the rewiring hypothesis to attain Cognitive Fluency (CF) to “rewire the head” by relaxing the client, gaining client commitment through consensus, engaging in mastery learning and automaticity to produce cognitive restructuring by the repetition of an I-wire (repeated statements). Rewiring also utilises language to express subconscious and conscious processes, identify client ego-state functions and arrested personality development before visualising Be-wires that “rewire the heart” through exercises that encourage dialogue between the “Inner Parent” and the “Inner Child” in psychodynamic therapy (PDT). The I-wires and the Be-wires are combined in a Me-wire that is practised by the client at home between sessions and before measurement and evaluation in subsequent therapy. The goal of Rewiring is efficacy in treatment. The Rewiring process is represented in Figure 1 in diagrammatic form. Both CF and PDT contribute to the Rewiring process to produce therapeutic efficacy.
Rewiring Head and Heart

Cognitive Fluency
- Cognitive consensus, relaxation & commitment
- Mastery learning and automaticity
- Cognitive restructuring
- Producing I-wires

Psychodynamic Therapy
- Subconscious / conscious explorations by therapist and client of the client’s ego-state function & structure
- Personality development & identification of “stuck points”
- Visualisation
- Producing Be-wires

Figure 1: Diagram of the Rewiring Process
Principles Underlying the Cognitive (“Head”) Aspects of Rewiring

The primary force behind the development of Empiricism, John Locke (1632-1704) noted:

Let us suppose the mind to be, as we say, white paper, void of all characters, without any ideas; how comes it to be furnished? Whence comes it by that vast store, which the busy and the boundless fancy of man has painted on it with an almost endless variety. Whence comes all the materials of reason and knowledge? To this I answer in one word; from experience; in that all our knowledge is founded, and from that it ultimately derives itself. (Cited in Russell, 1974, p.589).

The “white paper” or tabula rasa (empty slate) given to humans at birth is filled in by experience and forms the basis of behaviourist theoretical orientation in psychology. Based on the notion that behaviour is learned, Pavlov’s Classical Conditioning showed that a pairing of events conditioned the same response to either event, Watson demonstrated how behaviour could be stopped by not reinforcing it over a period of time (extinguishment) and Skinner was able to demonstrate modification in behaviour as a result of reinforcement or punishment (Operant Conditioning) (Black, et al, 1992, p.19). In 1941, Miller and Dollard proposed that children learn and imitate behaviours from people who are close to them (social learning theory) and this has been demonstrated in research by Bandura (1977) showing that children learn from observation (Slee, 1993, p.54). Although Mahoney’s treatment of cognition as a modifiable behaviour (Mahoney, 1974) was initially rejected by Skinner and many in the behaviourist psychological fraternity as “mentalistic speculation” (Mahoney, 1985), cognitive behavioural therapy (CBT) has become widely accepted within the behaviourist school. Rewiring has grown out of behaviourist research that combined cognitive treatment with fluency (Milnes, 1998) and was adapted to clinical practice incorporating the cognitive aspects of client consensus, relation and commitment, cognitive restructuring, fluency and measurement.

Early Development (1998)

The Milnes’ (1998) empirical study in “The Use of Generative Instruction to Increase Rational Beliefs and Decrease Irrational Beliefs and Depressed Mood in Adolescents” combined psychological elements with learning elements in a single
Rewiring Head and Heart

treatment modality. The psychological elements consisted of cognitive therapy (CT) and Rational Emotive Therapy (RET), using a Beliefs Inventory (Eshelman et al., 1998) to assess the participants’ beliefs according to Ellis’ ten irrational beliefs (Ellis, 1974, see Appendix B; for Milnes Believing and Doing Inventory, 1998, see Appendix A). The educational elements consisted of “Mastery Learning” (ML) with its generative instruction (see REAPS method, Haughton, 1980) to identify strengths and “fluent practice” (as exemplified by a method called SAFMEDS - Say All Fast a Minute Every Day Shuffle, Lindsley, 1980, pp.199-210) to develop contingency adduction with “cognitive restructuring”. The empirical investigation showed significant results in increasing rational beliefs and decreasing irrational beliefs and depressed mood in adolescents. Seventy-three students aged 14 and 15 years from a co-educational private college participated in the study, forming two experimental groups using cognitive treatment, and a control group. Thirty of these participants met the criteria for clinical depression. Students in the generative-instruction, reading-aloud “fluency” group (n=24) and students in the “silent reading” group (n=23) underwent seven 30-minute training sessions over six weeks. The generative-instruction “fluency” group significantly reduced levels of depression to normal, in comparison to the “silent-reading” group and the no-treatment control group. The “silent-reading” group significantly reduced levels of depression in comparison to the no-treatment group. A clinically depressed sub-group of the generative-instruction “fluency” group (n=12) significantly reduced levels of depression in comparison to a clinically depressed sub-group of the “silent-reading” group (n=7) and a clinical no-treatment control sub-group (n=11). Fluency of rational statements resulted in significantly increased beliefs in rational statements compared to repeated silent readings of rational statements. After six weeks, the reading aloud “fluency” group increased their gains while the “silent-reading” group gains fell away.

This study empirically informed the development of a clinical psychotherapeutic treatment modality which evolved into Rewiring Head and Heart (Rewiring). It was used with a wider range of adolescents, younger children, and adults in clinical settings. Rewiring became an effective therapeutic framework that resulted in diminished depression and changed thought patterns. Rewiring also offered diagnostic options, had a regulatory effect on affect, offered the ability to monitor the participants over time, and achieved quick, effective results that endured.
The Cognitive Issues of Consensus, Relaxation and Commitment

“Clinicians who work toward a consensus and agreed upon set of goals with clients have a better outcome” (American Psychological Association, 2002, pp.1060-1073). A clinical therapeutic treatment modality is dependent upon the commitment of the clients to attend subsequent sessions and commit to their own therapeutic treatment. Rewiring is a structure that allows clients to have direct input into their own healing program. At a significant point, the client is asked, “What do you want to achieve in therapy?” and “If you could think, feel and be the person you want to be, even if you thought it was impossible, how would that be?” These questions allow the clinician to work with the client in setting their own goals and the Rewiring clinician’s role is to encourage the client to achieve them.

Relaxation is an essential component for any cognitive behavioural therapy and should be addressed alongside any treatment. Relaxation exercises decrease the speed of the brain rhythms to speeds appropriate for therapy:

There are four major brain rhythms – Beta (13 to 26 cycles per second) associated with active thinking; Alpha (8 to 13 cycles per second) associated with daydreaming or watching television commercials without organised thought; Theta (4 to 8 cycles per second) associated with deep reverie or consciousness slipping towards unconsciousness; and Delta (0 to 4 cycles per second) associated with deep sleep (Neville, 1989, p.54). Neville (1989, p.54) suggested that the alpha cycle is the optimal level for therapy. Bourne (1995, pp.7-25) suggested ways clients can decrease their heart rate, respiration rate, blood pressure, muscle tension, metabolic rate, oxygen consumption and ruminative thinking. Regular, daily practice, as well as in-therapy exercises of deep relaxation, is appropriate. Breathing is a reflection of tension in the body and therapists need to pay attention to the way in which clients are breathing. When one is stressed or tense, breathing often becomes shallow and rapid and occurs high in the chest. When relaxed, clients breathe deeply and fully from their abdomen thereby increasing the spread of oxygen throughout the body, stimulating the parasympathetic nervous system, increasing feelings of connectedness between the body and the mind, excreting bodily toxins and quietening the mind. Relaxation can be introduced, or returned to, at any point during treatment.
Commitment is essential in a clinical setting. Attendance is voluntary and compliance to do homework is completed on the volition of the client. No therapeutic treatment modality that relies on force or control is going to work in a clinical setting, nor is it ethical. *Rewiring* builds on the client’s own commitment and the clinician’s role is to demonstrate the key therapeutic qualities in working with the client: warmth, empathy, acceptance and developing a significant relationship (Goldstein, 2005). Commitment to treatment is a cornerstone of the treatment modality because without it there is little likelihood of improvement. On the other hand, when clients are brought to appropriate levels of commitment, the efficacious elements of *Rewiring* are heightened.

**Cognitive Restructuring**

In the *Rewiring* treatment, cognitive restructuring begins with the discovery of the debilitating effects of poor Locus of Control (LOC) and then discusses the way in which the ensuing negative feelings, thoughts and emotions can be formally reconstructed into a positive script. Locus of Control (LOC) theory refers to internal and external forces, acting upon an individual that can result in degrees of emotional turmoil, depending on the intensity and duration of the force.

People with an internal locus of control believe that their own actions determine the rewards that they obtain, while those with an external locus of control believe that their own behaviour doesn't matter much and that rewards in life are generally outside of their control (Rotter, 1966, p.5). LOC is a continuum ranging from external control of the individual to internal control within the individual. LOC includes an individual’s perception of the reasons and causes underlying the events of their life, and whether they believe that their life is controlled by themselves, or by external forces. Rotter (1966, pp.1-28) purported that people came to hold beliefs about what causes their actions, through rewards and punishment, and this in turn guided their attitudes and behaviours. An introductory exercise in *Rewiring* is designed to gauge the extent of the individual’s external control. For example, the client is asked to identify happenings, events or people that have contributed to their condition. These assist the client to identify negative thoughts and feelings associated with the external elements. *Rewiring* introduces the process of obtaining an internal LOC and shifts the client from a state of reacting to
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external forces to contemplation from an internal stance. Although the client may not believe, or, only weakly believe in their own LOC at first, Rewiring is designed to lead the client from external to an established internal control.

Cognitive Restructuring (CR) teaches a depressed individual how to refute their own cognitive distortions, their irrational, faulty thinking and self-talk, and replace them with more accurate, rational and helpful ones. The theory behind cognitive restructuring is that a person’s unrealistic beliefs are responsible for producing unbalanced affect in themselves, resulting in behaviours such as depression, stress and anxiety, and that by reformulating their own thoughts and self-talk they can get rid of the underlying disabling beliefs and, in turn, the disabling unregulated affect. Albert Ellis, a pioneer in Rational Emotive Therapy (RET), postulated that thoughts such as “Everyone must love me” or “I should succeed in everything I undertake” prepare us to take failure badly because we fear such failure, or prepare us to be disappointed when we find out that someone doesn’t approve of us (Ellis, 2002; see also Appendix B). The distorted and erroneous cognitions that currently maintain one’s problem behaviours can be substituted by more healthy cognitions which subsequently impact one’s behaviours in a healthy way. Cognitive Behavioural Therapy (CBT) has been used to treat many psychological disorders such as post-traumatic stress disorder (PTSD) (Feather & Ronan, 2006; Zayfert & Becker, 2007), anxiety (Zinbarg & Barlow, 1996; Bourne, 1996) and depression (Beck, 1976; Herbert, 2003; Jacobsen, et al, 1996). Similarly, the Rewiring treatment is designed to replace irrational cognitive distortions that lead to depression, stress and anxiety with positive self-talk and healthy cognitions.

Studies empirically confirm that the following contribute to depression: negatively-based cognitions about self, hopelessness, specific content of themes, mood-congruent recall and cognitive vulnerability (Beck & Alford, 2009). Studies continue to identify genetic markers leading to individualised pharmacologic treatment of depression. There are various theories explaining the genetic basis of mood disorders with research in changes in the hippocampal neurons and amygdala enlargement, and neurotrophic and neurogenesis theories (Kempermann, G., Kuhn, H.G. & Gage, 1998, p. 3206-3212; Delegado & Moreno, 2000, p. 5-12). However, there is no single explanation of what causes depression though research is still
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progressing and researchers continue to look into alterations in various monoamine brain systems. A major theory regarding the biological basis of depression, the monoamine hypothesis, viewed depression as being due to the deficiency of monoamine neurotransmitters norepinephrine (NE) and serotonin (5HT). Tricyclic antidepressants block the neurotransmitter re-uptake pump so that neurotransmitters accumulate and reverse the deficiency, thereby relieving depression (Stahl & Muntner, 2008). A study for the National Institute of Mental Health (Sharot, et al., 2007, p.102-105) using the aid of functional magnetic resonance imaging (fMRI) found that a bias for optimism and a bias for depression occurred in the same brain circuitry as depression. This circuitry known as the cingulated-amygdala circuit actuates when the brain is deprived of the mood-regulating chemical messenger serotonin. In a recent study (Roiser, 2007, p.8) healthy volunteers lost their optimism when they lacked tryptophan, a precursor to serotonin. Twenty healthy participants with an optimism bias took capsules containing amino acids, without the tryptophan, which deprived their brains of serotonin and the positive bias disappeared. A “moderate optimistic illusion” is seen as essential to the maintenance of good mental health. Rewiring makes use of this faculty of the brain by providing a steady stream of positive thoughts so that the brain is constantly producing serotonin and the participant constantly feels good. In practice some clients experienced a dystonic reaction to the new thoughts at the start of the treatment. However, the script is created in a way that establishes itself behind the client’s defences so that the syntonic responses soon follow.

Cognitive Fluency

Cognitive Fluency (CF) refers to the formulation, practice and acquisition of relevant positive and rational statements, the ease and automaticity of their recall, and the resulting positive behaviour, indicating that the participant has adopted them into their belief structure and intention (Milnes, 1998; and Milnes’ Believing and Doing Inventory, see Appendix A). Using principles and techniques from Mastery Learning and Fluency, which is a process whereby acceleration of accurate performance leads to a permanent, useful and successful skills base (Johnson, 1992, pp.1475-1490; 1994, pp.173-198), new and complex repertoires can emerge from fluently learned material (Binder, 1993, pp.8-14). In Rewiring, the participant’s progress is recorded in graph form loosely based on White and Haring’s Precision Teaching principles (White &
Haring, 1976). Through practice, the participant progressively and spontaneously makes sense of component parts of the script and combines them in new and complex ways. Other similar models include Engelmann’s “Direct Instruction” (1980; 2007) which was recently recommended by Noel Pearson (2009, pp.42-3) for implementation in Aboriginal education in Australia. Direct instruction features evidence-based methods, data-driven decisions, efficient use of time, foundational skills, sequenced material that is carefully articulated, paced so that it is not too hard and not too easy, clear directions, student accountability with inbuilt positive reinforcement and remediation, and repetition so that mastery is achieved. It may be said that fluency has occurred when it is possible to predict the automatic completion of a performance without error, retaining the skill even after significant periods without practice (Milnes, 1998, p.15).

Once a skill has been acquired and brought to some level of fluency, the question becomes whether or not the child will remember the skill and retain the necessary level of fluency once his instruction is terminated. Obviously no skill can be considered fully mastered unless we can expect the child to maintain at least some of his competency in that skill over the years ... If a child passes through the phases of learning described up to this point, he will be accurate and fluent in the skill, he will maintain that skill even without continued formal instruction, and he will be able to apply that skill in whatever situations require it. What’s left? Simply the ability to adapt that skill and perform a set of movements that he has never before performed - without being told what modifications might be required. Ideally, a child who has fully acquired a skill will never make a mistake in that skill. The most commonly recommended procedure for the maintenance of a skill is over-learning: repeated drill beyond the point where acceptable fluency and accuracy have been achieved (Travers, 1967, p.57).

In Rewiring, the term “cognitive fluency” refers to the process of repeating statements aloud, over-learning them to the point of achieving acceptable fluency and learning, until they are stored and reproduced in the participating individual as automatic thoughts, or automatic self-talk, and the speaker comes to believe them and practice the outworking of them, fluently and automatically.
The immediate goal of CF is to produce automatic completion of spoken performances, at speed and without error. One study involved a practice assessment procedure called SAFMEDS and involved reading aloud from flashcards as rapidly as possible in daily one-minute sessions to achieve fluency in instructional material and increase academic performance (Lindsley, 1980; 1996, p.199). The strength of the programme appeared to be in verbalizing answers, practising them as fast as possible from the outset without worrying about understanding the new concepts or words, not being afraid of errors, taking on new concepts all at once rather than one at a time, and learning the cards without sequence (Potts, 1993, p.177-189). In Rewiring, the fluency aspect is retained but the sequential element has been found to complicate the procedure. It may well be that flashcards work in an educational environment, while a sequential script facilitates memory in much the same way as a poem or song is recited or sung.

The Great Falls Precision Teaching Project used one-minute daily assessments of basic academic skills and showed that 15 out of 19 precision teaching groups were significantly superior at post-test. The rapid change that resulted was referred to as contingency adduction (Andronis, Goldiamond & Layng, 1983). An unintended outcome of the fluency programme was the emergence of new and complex repertoires, appearing as if by synergy (Andronis, Goldiamond & Layng, 1983). In Rewiring, the treatment uses the shortest time possible to complete the verbalization of the script and this has produced a synergistic effect which was tested in the Milnes’ study (1998). Clients are instructed to read the statements aloud in the same order every time in order to attain a linked sequence for ease of memory. Clients are also instructed that they may repeat each of the statements separately. Cognitive fluency is one of the key process elements of the treatment modality but the speed element is only required when practised during the therapy sessions under the therapist’s supervision. In Rewiring, fluent cognitions are the aim of the “homework” that underpins the success of the treatment modality.

The repetition of statements required by the cognitive fluency aspect of Rewiring has led some to question whether or not it is “brainwashing” - a term coined by journalist, Edward Hunter, in an article that appeared in the Miami Daily News in 1950. During the 1950s, Ewen Cameron, the architect of a form of brainwashing
allegedly designed to treat anxiety and other disorders, described his process as “Psychic Driving”, (1956, p. 502-509) – a “therapy” that was being researched at the McGill College and Allen Memorial Institute. A few years later he outlined the theoretical concepts that underpinned his practice. Cameron began with the premise that:

In order to maintain a time and space image, we ordinarily rely on two major patterns: a) our continued sensory input, and b) our memory (1960, p.226).

In his view, the “time and space image” that allowed us to know where we are and who we are (Klein, 2007, p.36), needed to be depatterned by Psychic Driving.

Psychic Driving involved the use of daily electroshock on patients to erase memory; and drugs, isolation and environmental manipulation to curtail sensory input so that the individual regressed to the tabula rasa of infancy. The regression became evident by infantile behaviour such as thumb sucking, loss of manual function and double incontinence. When this state was achieved, sensory stimuli in the form of taped loops such as “You are a good mother and wife and people enjoy your company” were used to supposedly encourage patients to absorb the message and start behaving differently (Klein, 2007, p.32). In a paper entitled “The Effects Upon Human Behavior of the Repetition of Verbal Signals” (Cameron, 1962, pp.210-221; Weinstein, 1990, ch.9), identified the following contents of Psychic Driving as:

~ The breaking down of ongoing patterns of the patient’s behaviour by means of particularly intensive daily series of electroshocks (an average of 4 x 6 ECTs of 150-200 volts) delivered by a machine called the Page-Russell to achieve depatterning.

~ The intensive repetition (16 hours a day for 6-7 days) of the prearranged verbal signal (the obligatory taped messages).

~ The partial sensory isolation during this period of intensive repetition.

~ Putting the patient into continuous sleep for 7-10 days after the conclusion of the period to repress the driving period.

There was no evidence to suggest that listening to tapes in this state was effective and subsequent studies on the patients showed that the Psychic Driving was harmful and succeeded only in shattering lives (Weinstein, 1990) and the research has been declared unethical and immoral (Klein, 2007, p. 36). After this treatment many of the patients continued to endure the effects of depatterning – memory loss, incontinence,
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inability to function and flashbacks. In the 1990s, former patients were able to win large compensation claims in court (Klein, 2007, p.28). Weinstein (1990, ch.9) demonstrated that Cameron’s Psychic Driving methods of isolation, monopolization of perception, induced debilitation, threats, occasional indulgences, demonstrating omniscience and omnipotence, degradation, and enforcement of trivial demands were all part of Biderman’s (1957, p.619) Chart of Coercion that reported on “brainwashing techniques employed by Communists”. These horrendous brainwashing techniques were subsequently refined into a handbook entitled Kubark Counterintelligence Interrogation and have been used by the Central Intelligence Agency for hostile purposes during the latter part of the twentieth and into the twenty first century. There is a need for the difference between CF in Rewiring and Psychic Driving to be established.

The CF component of Rewiring differs from Cameron’s brainwashing in the following ways:

~ In contrast to Cameron’s Psychic Driving patients who did not know what the treatment was going to entail, Rewiring clients are fully informed of the CF process beforehand and there is no coercion.

~ Unlike Cameron’s attempts to de-pattern the individual by eliminating memory and applying sensory deprivation, the CF component of Rewiring starts with valuing the individual’s life experiences and includes relaxation exercises designed to heighten sensory awareness. There is no memory repression and no sensory deprivation in CF.

~ The distortion of reality that was central to depatterning Cameron’s Psychic Driving is absent in Rewiring. In contrast to sensory deprivation, Rewiring introduces clients to the realities of everyday life, to living in the moment and to establishing positive, realistic beliefs about oneself and the world.

~ In Cameron’s Psychic Driving, the individual is forced to become passive before hearing piped messages, whereas in CF the individual is an active participator, reading statements aloud at whatever time of day is convenient.

~ In Psychic Driving, the piped messages were designed by Cameron and his colleagues, whereas in Rewiring the CF statements are made in
collaboration with the client and the therapy relies on individual initiative in completing homework. Statements are only read by the client a maximum of three times in the sessions with the therapist. Clients can stop the therapy at any time or can continue to practice the techniques after the end of therapy.

~ *Psychic Driving* was imposed on patients as the only form of treatment, whereas in *Rewiring*, the CF therapy is not used in isolation but is combined with other psychodynamic elements to form an holistic treatment.

~ Unlike Cameron’s *Psychic Driving* that produced negative results, shattered lives and confused people, the present research into the efficacy of the *Rewiring* therapeutic modality found positive results and participant case study material includes reports of clients having positive feelings and satisfaction with the process. There were no participants who reported negative feelings about *Rewiring* in the present study.

A comparison of *Psychic Driving* “brainwashing” and the CF components of *Rewiring* showed that the two programs were entirely different in concept, practice and outcome.

**Measurement of Cognitive Restructuring**

In *Exceptional Teaching*, White and Haring (1980) repeatedly state that a child’s performance and progress must be measured:

“We must maintain a constant vigil on the effects of our instruction and the materials we provide to determine if they are meeting the individual needs of the child” (White & Haring, 1980, p. 13).

This is also true for psychotherapy. In the same way that teachers and lecturers are held accountable for student results, a clinician should be held accountable for therapy results by the measurements of improvement. In Precision Teaching, probes are used to take a sample of the child’s progress. White and Haring (1976, p.25) describe the minimum “celeration” line that establishes how a child should progress from day to day in order to reach his aim. But to learn from our experiences we need to know not only what we wanted him to do but also what he actually did. Some children will
have far exceeded their minimum “celeration” lines and others will have barely scraped by. It is necessary to find the mid-rate of a set of performance measures and then a line can be drawn through a set of charted performance measures indicating the increase or decrease over the course of the program. This is the line of prediction.

In the same way, a line can be drawn on a graph at the beginning of the therapy to predict the slope of the line of progress based on evidence from clinical practice. Each session the line of progress can be replotted depending upon the previous week’s progress. If performance is not as predicted, modifications to the treatment are required. It may be that a client did complete sufficient homework or may have missed a session. It may also mean that there are other events happening in the client’s life, or it could be evidence of underlying undiagnosed conditions. The evidence of progress revealed by the points on the graph can be used to inform the scientist-practitioner to investigate other hypotheses regarding the client’s treatment. Goldstein (2005) suggested on the basis of ninety studies of psychotherapy that “Clinicians who provide consistent feedback are more successful”.

One system of measurement is the Subjective Units of Discomfort Scale (SUDS) developed by Joseph Wolpe (1969) within the process of systematic desensitisation to overcome fears, phobias and anxieties. SUDS has become widely used in psychotherapy such as Eye Movement Desensitization and Reprocessing (EMDR), Trauma-focused Therapy (TFT), Emotional Freedom Technique (EFT), Anxiety Disorders (Hope et.al, 2000, pp.50-52), and for research purposes. Zayfert and Becker (2007) have, in their adaptation of SUDS for use in the treatment of PTSD, recommended the graphing of results to give feedback to clients. In the same way, Rewiring uses Subjective Ratings of Belief (SRB) by measuring “units of belief” rather than “discomfort” to graph the client’s progress towards their goals. The clinician is able to predict the level of belief or “celeration” a client will achieve depending on the amount of repetitions in a day and over a period of time, and indicate this prediction on the graph in the first and subsequent sessions.
Principles Underlying the Psychodynamic ("Heart") Aspects of Rewiring

In contrast to the mechanistic behaviourist view of the human interacting and learning from the environment, psychodynamic therapy (PDT) involves a conflictual view of both the "iniquitous child" born with original sin (Wesley) and the "virtuous child" (Rousseau) (Slee, 1993, pp.17-20). Freud (1948, p. 906) wrote that three factors determine the result of analysis: "the effect of traumas, the constitutional strength of the instinct, and the modification of the ego" and developed methods of detecting the motives behind behaviour and rendering them conscious. In a collection of essays on Freud, Wolheim (1974, p.ix) stated that "we all nowadays lie in the shadow of Freud so powerful indeed has his influence been.” Within the psychodynamic school, there are now a number of distinguishable approaches. The Bowlby-Ainsworth theory (Bowlby, 1969;1973) emphasizing genetic programming in attachment behaviour and the evaluation of the quality and implications of that attachment and Gesell’s (1974) maturation theory has been described by Slee (1993, p.17) and Berk (1991, pp.20-21) as ethological; feelings, personality, self-concept and relationships are emphasized in the psychoanalytic-humanist approaches of Freud (1938), Erikson (1963), Maslow (1970) and Rogers (1961); thinking processes are analysed and categorised in the cognitive approaches exemplified by Piaget (1969) and Kohlberg (1981); and analysis of the system of which the individual is a part is the basis of Bateson’s (1972) constructivist social systems theory.

While the Dodo bird verdict may have been used to insist that only bona fide therapies, Wampold et al (1997) admitted that these were more likely to be cognitive behavioural therapies suited for patients with more focused and less severe conditions while the less empirically-supported psychodynamic therapy was more likely to involve clients with more diffuse and severe conditions. The PDT element of Rewiring draws upon an eclectic mix of theoretical positions to act upon the conscious, linguistic examination of the psychodynamic elements that apply to the subconscious, examine personality development, and modify ego-state function and structure by visualisation in order to re-educate the ego. The Rewiring process of PDT is to discover past subconscious traumas and their effects on the individual and then use instinctual survival strength to modify the ego.
The Subconscious Rendered Conscious

In his description of the methods by which the unconscious motives behind behaviour were rendered conscious, Freud was careful to distinguish the “conscious psychoanalytic suggestion” from the “unconscious process” of hypnosis:

The difference between hypnotic and psycho-analytic suggestion may be described as follows: The hypnotic therapy endeavours to cover up and as it were to whitewash something going on in the mind, the analytic to lay bare and remove something. The first works cosmetically, the second surgically. The first employs suggestion to interdict the symptoms; it reinforces the repressions, but otherwise leaves unchanged all the processes that have led to symptom-formation. Analytic therapy takes hold deeper down nearer the roots of the disease, among the conflicts from which the symptoms proceed; it employs suggestion to change the outcome of these conflicts. Hypnotic therapy allows the patient to remain inactive and unchanged, consequently also helpless in the face of every new incitement to illness. Analytic treatment makes as great demands for efforts on the part of the patient as on the physician, efforts to abolish the inner resistances. The patient’s mental life is permanently changed by overcoming these resistances, is lifted to a higher level of development, and remains proof against fresh possibilities of illness. The labour of overcoming resistances is the essential achievement of the analytic treatment; the patient has to accomplish it and the physician makes it possible for him to do this by suggestions which are in the nature of an education. It has been truly said therefore, that psycho-analytic treatment is a kind of re-education (Freud, 1948, p.901).

This concept of conscious and subconscious was taken up by others such as Freud’s contemporary, Emile Coué (1923, p.118) from the Nancy school of psychoanalytic analysis (Neville, 1989, p.42). Coué suggested that humans have two “beings” within:

The first one is the conscious, voluntary being which we know and the second one, behind the first being, is the subconscious or imaginative being, or imagination as you call it. We don’t pay attention to this being, and we are perfectly wrong, because it is this second being which runs us entirely if it is
the second being which runs us, and we learn how to run it, through it we learn to run ourselves.

Murphy (1995, p.24) suggested that “whatever is impressed in your subconscious mind is expressed on the screen of space … (and) whatever you feel as true subjectively is expressed as conditions, experiences and events.” Murphy went on to depict the subconscious as responding to habitual thinking and behaviour such as repetition. He saw the subconscious as morally neutral but ready to do the individual’s bidding. He stated that negatives that happen to the individual are already in him because when he lets negative thoughts drop into his subconscious mind they will find expression in every-day life. Allen (1998, p.59) asserted that the individual attracts not only what he loves but also what he fears, and the thoughts that are sent to the subconscious become hardwired.

Based on Coué’s proposition (1923, p.118) that “when we learn how to run our subconscious, we learn to run ourselves” and Allen’s assertion (1998, p.59) that “we are the masters of our thought, the moulder of our character, and the maker and shaper of our condition, environment and destiny”, individuals such as Murphy proposed that the individual can remake himself by controlling his thoughts and images and make new pictures in his subconscious to replace the old. He maintained that whatever the individual gives to his subconscious it is registered as fact because the subconscious is both a literal entity and a faithful one:

> When a thought becomes an emotion, and imagination becomes desire, your subconscious will give you what you envisage quickly and plentifully.

(Murphy, 1995, p.29).

The idea that the individual is the sum of his thoughts that are the products of life’s experiences, is fundamental to understanding the workings of the subconscious. **Rewiring** uses these aspects of the way the subconscious works to facilitate the remoulding of the character through speech. In other words the therapeutic process of **Rewiring** seeks to change the impact of past, hidden embedded thoughts and other resultant actions by using language as a change agent. By committing the speaker to a new reality, the action of speech or language prepares the way for the therapeutic process. As the explorer W.H. Murray wrote:

> Concerning all acts of initiative (and creation), there is one elementary truth that the moment one definitely commits oneself, then providence moves too.
A whole stream of events issues from the decision, raising in favour all manner of unforeseen incidents, meetings, and material assistance, which no man could have dreamt would have come his way” (W.H. Murray in Murphy, 1995, p.35)

The generative effect of language gained from practicing fluency, here put into psychodynamic terms, supports the notion that one has to commit to a new and positive path in order for the benefits to flow.

**Ego-state Structure and Function**

Freud’s basic concept of intrapsychic conflict depicting the conscious self (super-ego) responding to the unconscious self (id) have been adapted into theories of ego-state structure and function (Freud, 1948, pp.907-8). Helen Watkins (Watkins, 1993, p.232-240; Watkins & Watkins, 1997) traced the development of the concept of segmentation of personality and the specific theory of ego-state therapy from Federn and Weiss in the 1950s. Federn believed that the personality was organised into clusters which he called ego states, being organized systems of behaviour, bound together by a common principle. When an ego state is invested with ego energy it becomes “the self” in the moment, having executive power, and experiencing the other states as a third person or object (Federn, 1952, p.170). John G Watkins (Watkins, 1992, p.235) has been attributed with a psychodynamic approach that treats a family of self within an individual, with family therapy elements such as behavioural, cognitive, analytic and humanistic techniques to engage normally covert ego states of the individual. Watson and Clark (1992, p.489-505) wrote that ego states may be large and include various behaviours and experiences, or small, such as emotions and behaviours experienced in school at a young age. So, an ego-state may represent current modes of being or may include clusters of memories, postures and feelings that belong to a previous and often very early age. In *Rewiring*, ego-state therapy is used to identify ‘stuck-points’, or ego clusters.

Eric Berne (1961) published *Games People Play* in which he outlined ways in which interactions between people could be analysed. He identified three ego states:

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1 This quotation is often erroneously attributed to Goethe.
parent, adult and child as the main components of personality which have both positive and negative aspects. He called this system *Transactional Analysis (TA)* because it attempted to analyse the interactions or transactions between the ego-states of the parties involved. These ego states are manifest in different ways depending on the situation. TA helps us to identify the ego states in ourselves and others so that we can become aware of the dynamics of relationships. Behaviours often trigger unintended feelings and responses in others. The *Parent Ego State* develops from parenting messages received throughout childhood and Berne identified two separate roles: 1) the *Nurturing Parent*: helpful, loving, supportive and caring to others and self, and 2) the *Critical Parent*: which is a) critical, fault-finding, threatening, ridiculing, aggressive, and putting down, and b) limit setting, establishing values, being positive and assertive. Together a) and b) encompass both the negative and the positive aspects and both of these are at times directed towards self and others (Harris, 1967, p.126).

According to Berne (1961), the *Child Ego State* is developed from our feelings and not from our reasoning. The *Free Child* is associated with the spontaneous, natural, fun-loving role in which we can enjoy our emotions. It is associated with sexuality and enjoyment of life including creativity and laughter. It allows us to express fear and frustration openly and deal with such negative emotions in a healthy way. The *Adapted Child*, according to Berne, has two distinct behaviours – firstly, the good child, doing what is right and expected, being compliant and obedient; and secondly, the adapted child who is aggressive and defiant, saying ‘no’ to orders and requests. The *Adult Ego State* uses reasoning, facts, and decisions rather than emotions (Child) or rules (Parent). It involves decision-making but is not involved in humour, or passion and enjoyment. The adult ego state often stands by and observes the interaction between the Inner Parent and the Inner Child, or analyses the relationship between them.

Ego-state therapy has facilitated the speedy resolution of complex psychodynamic problems. Through teaching the client to talk to his “maladapted Inner Child” from his “nurturing Inner Parent” he can add into his life-experience something that he may never have received in the appropriate developmental stage. For instance, a child may not have received love and affection at the attachment stage.
so a sense of attachment was not developed, something which is extremely important for an adult in order to make sense of life in a healthy way. A remedial way is to receive this from ‘within’, so clients are taught to re-parent themselves, in other words, to develop a strong, caring, parent voice to support and nurture themselves (Forgash & Copeley, 2008; Pace, 2005). Illsley-Clarke (2004) constructed self-parenting affirmations for being, doing, thinking, structure and sexuality, and four ways of parenting. She developed a model for utilising the voice of the Inner Parent as well as scripted some of the most meaningful affirmations for parents to give their growing children. These have proved to be extremely helpful in teaching clients about their inner states and how they can attain peace within themselves through spoken communication with their inner selves.

In Rewiring, the Parent, Adult, Child (PAC) model fitted well into a discrete component that could be taught through a psycho-educational approach in a short period of time. There were some adaptations made to the TA approach for the therapy. Firstly, in Rewiring, the parent ego state was assigned the task of being the nurturer and the structurer and was represented as having two faces: the natural face of the Inner Parent and the adapted face of the Inner Parent. The natural face of the Inner Parent contained all the positive parenting ability including both nurturing and structuring. Illsley-Clarke describes nurture as, “all the soft needs; love, touch, warmth, attention, support, stimulation, recognition, and response. True nurture is about one’s being, one’s right to exist and to have one’s needs met” (Illsley-Clarke, 2004, p.89) and structure as, “the firm side, the ‘how to’ of care, reasonable rules that are consistently enforced, mastery of skills, and learning family values are all part of firm structure (that) makes life more secure and predictable for the child. Children learn good boundaries and good self-care” (Illsley-Clarke, 2004, p.144). The adapted face of the Inner Parent contained all the maladaptive strategies of poor parenting such as abuse, conditional care, overindulgence, neglect, and criticism. The child ego state was originally developed by Berne to represent our feelings. In Rewiring, this has been extended to encompass feelings, emotions, questions and cravings summing them up in the word “emotions”. In Rewiring, the happy, relaxed state of the child is the Natural Child and the unhappy, rebellious, compliant or silent child is the Adapted Child. In Rewiring, the Adult ego state is called the Adult. All interactions in Rewiring involve the Inner Parent and the Inner Child in constant dialogue and the Adult in
dialogue with the clinician. For example, in *Rewiring* the Adult Ego State interacts with the clinician to arrive at the wording for the exercises that treat the adapted behaviours.

**Theories of Personality Development**

Freud’s psychosexual theory of personality development (Freud, 1948, pp.15-24) proposes that each stage of development is marked by a particular erogenous zone or organ and each of the stages “effect the child’s evolving quest for pleasure and growing realisation of the social limitations on this quest” (Westen, 1999, p.217). Freud’s theory of personality development has been modified into a plethora of psychosocial and human development theories (Fowler, 1981; Erikson & Erikson, 1987; Hendrix, 1992; Kohlberg, 1981; and Piaget, 1955, 1983). Three of these theories will be outlined here – Freud, Piaget and Hendrix – as particularly helpful to the *Rewiring* clinician.

**Freud’s Psychosexual Stages**

Freud (1948, pp.15-24) described the psychosexual stages as oral, anal, phallic, latent and genital. The *oral stage* of the newborn baby sees the child limited to sucking and drinking. Their instinctual drive is focused around the mouth and later in biting and chewing. Thumb sucking, cigarette smoking, fixations to oral sex and addiction to alcohol may be manifestations of arrested development that occurred in the oral stage. The *anal stage* of the toddler has two phases, the expressive period in which the child derives pleasure in expelling faeces and the retentive period in which the child derives pleasure in storing faeces. This stage coincides with toilet training and is marked by conflicts about compliance and defiance (Westen, 1999, p.333-371). During the *phallic stage* children discover that stimulation of their sexual organs creates pleasure and in the Oedipal phase of the phallic stage a child identifies first with the opposite-gender parent and later, giving way to identification with the same-gender parent. Then there is the *latency stage* of the prepubescent when sexual drives are dormant and drives are channelled into more socially acceptable ways. Lastly, there is the *genital stage* of the adolescent at puberty, when there is a conscious return to sexuality as experienced in the genitals, and a development of emotional maturity.
Freud’s concept of the conscious self (super-ego) responding to the unconscious self (id) in intrapsychic conflict still has relevance to modern psychodynamic theory. According to Freud, the unconscious produces defence mechanisms, or *repressions*, activated by the ego to reduce anxiety or increase and reinforce pleasure. However, analysis of past repressions enables the correction of inappropriate and unthinking instinctual behaviour:

All repressions take place in early childhood; they are primitive defensive measures adopted by the immature, feeble ego. In later years there are no fresh repressions, but the old ones persist and are used by the ego for the purpose of further mastering instinct. New conflicts are resolved by what we call “after-repression.” To these infantile repressions our general statement applies that they depend entirely on the relative strength of the various psychical forces and cannot withstand an increase in the strength of the instincts. But analysis enables the mature ego, which by this time has attained a greater strength, to review these old repressions, with the result that some are lifted, while others are accepted but reconstructed from sold material. These new dams have a greater tenacity than the earlier ones, we may be confident that they will not so easily give way before the floodtide of instinct. Thus the real achievement of analytic therapy would be the subsequent correction of the original process of repression, with the result that the supremacy of the quantitative factor is brought to an end (Freud, 1948, pp.907-8).

*Denial*, another defence mechanism, involves refusing to acknowledge certain things in order to avoid anxiety. *Reaction formation* involves believing or doing something diametrically opposed to what one actually believes, wants or needs. For example, hating the drinking of milk as an adult because an individual was deprived of mother’s milk as a child, the one thing they really desired, or again, campaigning against paedophilia in order to suppress an obsession about it. *Displacement* may occur when an individual transfers her emotions to new outlets; however, the emotion remains the same (Freud, 1958, pp.814-818). For instance, when drawing a picture, a child may displace their fascination, fear or anxiety with genital organs by drawing pretty heart-shaped flowers, reminiscent of vaginas, or long phallic submarines reminiscent of erect penises (Freud, 1956, pp.838-840). *Sublimation*, another defence mechanism, will divert unacceptable drive energy into acceptable drive energy. For
example, the man with a high sex-drive living with a woman with a low sex-drive, will become active and productive in other spheres in order to stay faithful to his partner thereby sublimating sexual energy into creative (Freud, 1956, p.851).

*Rationalisation*, another defence mechanism, involves creating a socially acceptable reason for unacceptable behaviour, such as a person rationalising why they might smoke, for example, or why they might gamble their pay-packet (Freud, 1950, pp.940-944). Another defence mechanism, called *isolation*, allows individuals to dispassionately describe distressing events in which they were involved, such as rape or concentration camps (Freud, 1958, pp.808-814). All of these defence mechanisms become damaging when they arrest or fixate development.

**Piaget’s Thinking Stages and Gesell’s Maturation Theory**

Piaget presented *cognitive* stages in which he believed all children must pass, based on his observations of children learning to deal with the environment (Piaget, 1983, p.183). A child approaches problems differently depending on their age and stage. In the *sensory-motor stage* (birth to 2 years) infants begin to organise their experiences into ‘schemes’ and by the end of this stage develop the concepts of object permanence and self-recognition. In the *pre-operational thought stage* (2 to 7 years) behaviour is action-oriented and thoughts are bound to experiences. Gradually, children use symbols such as words to represent people and objects. At this stage they cannot distinguish between themselves and the outside world and they cannot put themselves in someone else’s place. They believe that objects have feelings just like them. They can only concentrate well on one aspect at a time, and they are unable to mentally retrace their steps to reach a new conclusion or reverse an old one. In the *concrete-operations stage* (7 to 11 years) children become more flexible in their thinking, can retrace their thoughts, correct themselves, start over again and consider more than one aspect at a time. By the age of ten a child is able to infer what another person is thinking and understands that they also may know what he is thinking. In the *formal-operations stage* (11 to 15 years) adolescents begin to think in abstract terms and use logic to test ideas internally. They can make comparisons and cross comparisons, they can understand cause and effect, consider possibilities and develop concepts. In line with Gesell’s (1974) *maturation theory* that individuals learn and develop as a result of maturation rather than teaching and the environment and so are
able to predict norms of developmental behaviour, *Rewiring* recognises that fixated clients often use the logic of the age at which they fixated. For example, a person who has been sexually abused as a four year old and whose development was arrested at that time will display not only the behaviours and emotions of a four year old but also the logic appropriate to that age. Piaget’s theory of *cognitive development* is helpful in explaining client thought and behaviour.

**Hendrix’ Stages of Psychosocial Development**

Based on the Erikson’s stages of psychosocial development and Bowlby’s *ethological* approach to attachment, Hendrix (1992) viewed individuals as gathering “wounds” which remain unresolved until they consciously deal with them at later stages, up into adulthood. In confronting them they find themselves to be *Minimisers* or *Maximisers*, to withdraw from situations or explode them. Unconsciously, they are trying to get their needs met, seeking healing, constantly driving themselves on towards wholeness. To achieve this goal they choose partners who they believe will help them. However, their partners contain the positive and negative traits of their own caregivers and so they continue struggling to get their needs met. Only by becoming *intentional* and seeking to understand their wounds that were inflicted during childhood stages are they able to understand the patterns of relationship they now find ourselves maintaining. If they were wounded in the *attachment stage*, from birth to 18 months when their emotional security was being formed, they will be fearful of abandonment and rejection. Maximisers will cling onto loved ones, demanding that their needs be met while Minimisers who were wounded in this stage will avoid anything that might lead to emotional and physical rejection, feeling that they do not have the right to exist and that they will get hurt if they initiate contact. In relationships they find that their partners are too demanding and smothering. During this stage the developmental behaviour is *reaching* as the child begins to reach out to the mother, and the existential (being) mode is *existing* as the child enjoys the mother’s presence. The intact child experiences emotional security if no severe wounding has taken place in this stage. Wounds may also be sustained during the *exploration stage* from 18 months to 3 years, when children either isolate themselves from others (carers) because they cannot say “no” and be loved, or they pursue others
with the idea that they cannot rely on them at all. During this stage the developmental behavior is exploring and the existential mode is becoming. If a child successfully completes this stage then she experiences differentiation and intact curiosity. In the identity stage from 3 to 4 years, Maximisers try to diffuse themselves and be all things to all people. On the other hand, Minimisers feel they cannot be themselves, and also be accepted and loved. They become dominant in relationships, fearing that loss of control means loss of love from a partner. During this stage the developmental behavior is asserting and the existential mode is being. If a child manages to survive this stage intact she will develop a secure sense of self. In the competence stage from 4 to 7 years, Maximisers are good and cooperative for fear of becoming too powerful and unlovable. The Minimiser believes she has to be perfect in everything for fear of failure. She feels that she has to be the best in order to be loved. During this stage the developmental behaviour is competing and the existential mode is doing. A child that successfully completes this stage intact develops a sense of personal power to achieve.

Use of Personality Development in Rewiring

In Rewiring, the clinician is encouraged to become a detective looking for clues of when the clients became fixated or arrested within the Freudian model: the type of logical behaviour will be evident in a client’s thinking processes in the Piaget model; and the wounds that have yet to be healed within the Hendrix model. Other personal developmental models can also be used to assist the clinician in their diagnoses. Clients, who present with emotional problems have often been fixated, arrested or wounded at some stage of their development and have used one or more defence mechanisms in order to survive the trauma or incident. One of the aims of therapy is to free a sufferer from the effects of arrested development and encourage them to confront difficulties in a realistic and adult way (Schmidt, 2006). The exercises chosen for the psychodynamic component of the treatment are aimed at freeing the participant from the disabling defence mechanisms that were originally adopted as a survival mechanism, but which have since outgrown their usefulness and now cause far more problems than benefits for the sufferer. In other words, the disadvantages of using a defence mechanism now outweigh the advantages. The
defence mechanism keeps the person entrapped or locked within the original predicament, thereby locking them into a developmental stage. The defence mechanisms that were adopted to survive the situation now hinder the user from moving forward, impeding their progress in life, preventing them from day-to-day problem-solving. One of the primary aims of the psychodynamic component of *Rewiring* is to locate and overcome the defence mechanisms.

By listening to the client and observing their behaviour, the clinician is able to locate fixations, arrested development and wounds within the stages of development so that appropriate interventions and treatment can be devised. When Ego-state therapy is being used the age of the Inner Child may be an indication of the wounding that has occurred at that particular age, either just before the visualised event or just after it. For some people memories may be so painful they will avoid the actual age in which wounds occurred so the absence of the memory may be more relevant here than the actual time chosen. For example, using Hendrix’s theory, the *Rewiring* clinician is able to place the “Inner Child” within a *self-development* context so that if there is a problem with reaching and existing (attachment), with exploring and becoming (exploration), with asserting and being (identity), or competing and doing (competence), or with the later stages of caring and sympathising (concern), loving and integrating (intimacy) or creating and generating (responsibility to self and society), then it is indicative of the age or stage at which the wounding occurred. The *Rewiring Manual* assists the clinician through a series of activities and explanatory devices to look for clues of when these “wounds” or “fixations” took place.

**Visualisation and the Senses**

In the 1920s, a group of medical hypnotists that included Emile Coué working within the framework of science in Nancy, found that two assumptions underpinned their work:

All suggestion is auto-suggestion, and auto-suggestion is nothing but the action of the imagination (Coué, 1923, p.118).

However, it was the second element that interested Coué more - as he said, “It is the imagination that is the most important quality of man” (1923, p.118). In research conducted in Eastern Europe, Romen found that the time required to master the autogenic training procedure was reduced when patients “actively submerge
themselves in a special state of calm and muscular relaxation” before motivating clear visualisation (mental picturing) of desired self-suggestions (Romen, 1981, p.118) and therapists such as Silva (1977, p.28) recommended “dropping the brain into the relaxed alpha or meditative level before entering into the process of “creative visualisation”:

Creative visualization involves understanding and aligning yourself with natural principles and learning to use these principles in the most conscious and creative way (Gawain, 1985, p.174).

In this way, visualisation can be used as an aid to reshape the images held by the subconscious (Paivio, 1991, p.255) and complete the paradoxical task of using suggestion to increase individual freedom.

Creative visualisation preceding auto-suggestion was central to the psychodynamic therapy developed by Coué in the 1920s where he trained patients to take charge of their own imagination or unconscious through verbal self-suggestion. His prescription was:

As long as you live, every morning , before getting up, and every night, as soon as you are lying in bed, shut your eyes, and repeat 20 times, with your lips, loud enough to hear your own words, without trying to think of what you are saying – if you think of it , it is well – counting on a little string, providing yourself with a little string of knots, “Day by day, in every way, I am getting better and better.” Try it like this, in a monotonous manner, without any effort, as they recite litanies in church (Coué, 1923, p.125).

Other more recent methods dependent on auto-suggestion include The Power of Positive Thinking (Peale, 1970) and The Silva Mind Control Method (Silva, 1977). The auto-suggestion processes are different to developing mind control over clients and conditioning them to do things against their will. Rather than conditioning, suggestopedic techniques make clients aware of their own potential and give them more choices (Neville, 1989, p.42). Although Coué obtained remarkable results, he tried very hard to turn his over-dependent patients’ faith in him into faith in their own power to heal themselves (Neville, 1989, p.31). Rewiring uses visualisation to picture early childhood memories, interpret the client’s early style of life, visualise therapeutically satisfying scenarios, and then send rewires to the subconscious mind. Earliest childhood memories (Adler, 1931; Adler, 1998) may assist the clinician to
interpret a client’s understanding of what life was meant to be. The clinician is not necessarily looking for truth but an indication of an early prototype of the client’s present lifestyle. For example, if an earliest memory involves falling over or going to hospital, that might indicate a belief in continuing poor health to get attention, or an early memory of competitive behaviour may suggest sibling rivalry. The visualization principle is utilised in the Rewiring process by having clients imagine themselves as a young child representing their “Inner Child” encountering their grown-up Inner Parent. So there are the two parts of them, the Inner Parent and the Inner Child, having a conversation, telling each other everything they have needed to hear, “accessing what is really best for them” (Gawain, 1985, p.175). These exercises sow the seeds for future positive outcomes and allow the participant to consciously choose what she wants to bring about in her life.

**Measuring Psychodynamic Therapy (PDT) in Rewiring**

The “Rewiring the Head” process makes the psychodynamic element short-term and quantifiable. Instead of using formula repeated phrases such as recommended by Coué’s (1923, p.118), a particular script is developed that is aimed at overcoming fixations, wounds and arrested development identified by the psychodynamic therapy and is repeated by the patient who is instructed to imagine the inner nurturing parent speaking to the inner maladjusted child. The patient is instructed to repeat the statements in a firm and clear manner once a day. The effectiveness of PDT is measured and recorded by the level of client belief (SRBs) in an imperative command script that summarises the path forward.

**Combining Cognitive and Psychodynamic Elements**

In the formative development of Rewiring, the therapy only consisted of the accelerated cognitive restructuring exercises. Although very successful with many, it became evident that accelerated, cognitive fluency of rational statements alone was not sufficient for some clients. Some were emotionally fixated and unable to focus on the rational statements while others had little executive control over their thoughts and emotions. Dynamic exercises assisted them to gain sufficient emotional freedom and executive faculty to then be able to engage in fluency of rational statements and show similar gains to the others. So, two aspects of the therapy evolved - the CF exercises
Rewiring Head and Heart

(“head”) and the PDT exercises (“heart”), both using the power of language through “rewiring”. Figure 2 depicts a comparison between the process used in Rewiring from cognitive fluency (CF) and psychodynamic exercises (PDT).

<table>
<thead>
<tr>
<th>“I-Wire” – CF</th>
<th>“Be-Wire” - PDT</th>
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<tbody>
<tr>
<td>• An existential statement of desired identity</td>
<td>• A motivational script in the imperative voice to induce a favourable response</td>
</tr>
<tr>
<td>• Based on fluency, mastery learning, cognitive restructuring and contingency adduction</td>
<td>• Based on self-discovery through psychodynamic process</td>
</tr>
<tr>
<td>• Uses automaticity, fluency and repetition</td>
<td>• Uses dynamics of voice, emotion and deliberation</td>
</tr>
<tr>
<td>• Measured and recorded</td>
<td>• Measured and recorded</td>
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Figure 2: A Comparison between Cognitive Fluency (CF) and Psychodynamic (PDT) Exercises

Although psychodynamic and cognitive therapies are usually offered separately and by different clinicians in traditional modalities, Rewiring has combined the two, because each stream has a valuable and necessary contribution. Cognitive therapies accentuate the role of the adult thinking mind while the psychodynamic therapies work with emotional states. Humans combine these two streams effortlessly even though psychology has a tradition of separating them into two schools of thought and therapeutic practice. Rewiring emulates the natural human inclination to combine these two elements. Emphasis on cognitive exercises and theory can lead to detachment and mental compliance for the sake of it which does not represent the whole person. On the other hand too much emphasis on feelings and psychodynamic elements skews the treatment in the other direction where it can become merely subjective. Contrary to the artificial division between psychodynamic and cognitive therapies, Rewiring draws both elements into a holistic approach.

By combining psychotherapeutic approaches, Rewiring provides a means through which a person can “reclaim the past, enjoy today, and master tomorrow” (Zimbardo & Boyd, 2008, p.20). Although all psychotherapy works from the present,
Zimbardo and Boyd argued that different psychological schools stress the importance of different time dimensions:

Psychoanalysis stresses the importance of the past; existential psychotherapy stresses the importance of the present; and humanistic psychotherapy stresses the importance of the future. (Zimbardo & Boyd, 2008, p.20)

By using a present-centred combination psychotherapy to explore and rewrite the past (PDT) and set future goals in existential statements (CF), Rewiring facilitates the person to define who they were, who they are and who they will become.

In its final form, the cognitive and psychodynamic theory informing Rewiring is combined with rigorous testing of a fusion of mastery learning and cognitive and psychodynamic theories into a seamless, evidence-based psychotherapeutic treatment modality for the scientist-practitioner. The efficacy study in this research, together with case studies, maintains the rigor required by the scientist-practitioner clinician.
Chapter 2: The *Rewiring* Manual

The contents of the *Rewiring Manual* (Milnes, 2008) are described here although the full manual is a separate publication. This description is not in the same sequence as the *Manual* but shows how the CF and PDT theory inform the practice and contains a description of the appropriate exercises. The *Manual* itself contains further explanations, clinician scripts and explanatory diagrams for use in clinician training sessions and with clients. The scripts used in the clinical trials have been adapted from the *Manual* to conform to research conditions (see Appendices F, G, H). Here, the description of the *Manual* shows the process of *Rewiring* as well as the way theoretical, cognitive and psychodynamic principles are adapted to practice. A series of “pivotal questions” are key to this process.

1. Pre-treatment

The *Rewiring Manual* contains instructions concerning pre-treatment measurement and client induction. It is essential that the scientist-practitioner gathers baseline data so that the effectiveness of treatment can be measured. As well as collecting personal client data and obtaining the client’s aims in seeking therapy, it is important that, at the pre-treatment stage, pre-treatment measurements of psychological conditions be administered. The DASS is recommended because it divides the three scales - Depression, Anxiety and Stress - and is free for use by the public. However, other measures are necessary, for example, the Minnesota Multiphasic Personality Inventory – II (APA, 2000), 16PF (Cattell, 1946), Millon Multi-Axial-MCMIIII (Bivens & Craig, 1998), Symptom Checklist (Derogatis, 1994) and SCL90 (Derogatis, 1979) and many more. This baseline measurement can be used to diagnose levels of treatment and objectively review results after clinical treatment.

2. Gaining Commitment

The *Rewiring Manual* contains advice to clinicians in gaining the client’s confidence and commitment. Clients come to a clinic for a wide variety of reasons in a variety of psychological conditions. In a clinical setting, attendance is usually
voluntary although there may be some external pressures upon the client to attend. The key clinician qualities of warmth, empathy and acceptance are essential in building the sort of therapeutic relationship recommended by the *American Psychological Association* (2002, p.1060) that “adapts therapy to specific client characteristics”. Usually clients want to tell their story and it is helpful to the development of a therapeutic relationship for the clinician to engage in active listening. Sometimes, it is necessary to spend time building the therapeutic relationship and gaining trust rather than introducing treatment in the initial sessions. The skill of the clinician is to know how to gain client commitment to the process to the point where treatment can be introduced.

*Pivotal Question 1:*

“What do you want to achieve in therapy?”

By noting the answer to this question the clinician is able to adapt the therapeutic process to the client’s desires so that the client begins to trust. Trust is the precursor to commitment. The *Rewiring Manual* suggests that one of the ways that clients can be helped in the early sessions is to do a relaxation exercise involving breathing (Bourne, 1995) so that the client experiences some immediate relief and gains increasing trust in the clinician.

### 3. The Subconscious.

The *Rewiring Manual* contains diagrams and explanations to assist the clinician to explain the workings of the subconscious. The clinician shows the client how we are products of the experiences of life and how the voice of the subconscious presents life scripts to the conscious mind continually. The explanation of the subconscious is then connected to the concept of “wiring” in the manual to assist understanding of the way we are “wired”:

*Pivotal Question 2:*

*How can we change the way that we are “wired”?*

With the assistance of appropriate diagrams and explanations, the clinician explains that the treatment creates a new script to *rewire* their thoughts and emotions by using language as a medium (Coué, 1923, p.125; Carruthers, 2002, p.225) to stimulate the natural “feel-good” chemical serotonin. It is also pointed out that by completing spoken homework one is able to record a new script in the subconscious which
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influences the conscious mind. This becomes a whole new cycle. New habits are created and constant reminders set up to motivate the client to new rewired behaviours.

**4. Building an Existential Rewire**

The *Rewiring Manual* emphasises the use of consensus and collaboration in developing a series of *Rewires* through explanatory diagrams, scripts and the provision of forms including individualised words and phrases which prompt the client. These documents allow the clinician to work with the client in setting their own goals and the *Rewiring* clinician’s role is to encourage the client to achieve them. The *Manual* leads the discussion to Rotter’s (1966) concept of “Locus of Control” (LOC).

*Pivotal Question 3:*

*What are some of the reasons you have come to therapy?*

From the CF perspective *rewires* are created to change the way in which clients think about themselves. The existential *rewire* (*I*-wire) usually begins with the words “I am”. For example, “I am happy.” An introductory exercise is designed to gauge the extent of the individual’s external control by asking the client to identify several reasons, events or people that have contributed to them presenting for therapy.

*Pivotal Question 4:*

*What are some of the thoughts and feelings you have had as a result of these forces on your life?*

The client is asked to identify the negative feeling words that represent some of the thoughts and feelings that surround each of those major “events or causes” that have brought them to therapy. A list is used to assist the identification. The client chooses all “feeling” words by themselves, with the aid of the list if needed, such as “anger”, “sadness”, and “I want to give up”. These are all noted down on a specific ready-made form under the heading “How I am, think and feel right now”.

*Pivotal Question 5:*

*If you could think, feel and be the person you want to be, even if you thought it was impossible, how would that be?*

After asking this pivotal question, the clinician suggests that about 30 positive words need to be identified so that an *I*-wire can be created to take home. The client is asked
to provide some words that describe how she would like to be. Sometimes, a list is given to assist her, or if she is having a lot of difficulty to think of someone else who is happy (or substitute other word) ask, “What might they feel?” or “What might they think?” So, instead of feeling “depressed” and “sad” the client is directed to substitute other positive words instead like “elevated” and “happy”, and a substitution of “upset” might be “relaxed” and “carefree”. These are written down on a specific ready-made form under the heading “How I would like to be.” Ten positive, present, affirming I-wire statements that fit on one page are created in a prosaic style - making sure that all the words are included and that similar words are grouped together. For example:

I am happy, contented and successful  
I like myself, I accept myself  
I feel good about myself  
I put the past in the past and move on  
I don’t dwell on things  
I enjoy myself  
I am enthusiastic and energetic  
I choose good responses  
I take time for myself  
I’m hopeful. I look forward to the future.

5. Setting the I-wire Homework (“Me-wiring”)

The Rewiring Manual shows how the eclectic mix of theories justifying the use of fluency homework (“me-wiring”) can be combined into a seamless product and how the I-wires work. It explains how the research informs the process so that if the clients are diligent in completing the me-wiring, they will improve. Even after completion of therapy, Milnes (1998) indicated that they will maintain their levels and even improve, all other things being equal. It is very important that the client is committed to the homework program because, as the empirical study shows, the efficacy of the treatment process is based on the client’s diligence in completing the exercises. The key therapeutic qualities of warmth, empathy, acceptance and developing a significant relationship (Goldstein, 2005) are needed to elicit compliance to do so.
The Manual motivates the client to complete *me-wiring* through a self-competitive timing regime similar to the Great Falls Precision Teaching Project (Andronis, 1983, p.180). The Manual establishes a protocol for each session and provides charts and graphs to record results. Practising and timing *I-wires* during the clinical sessions encourages the client to feel confident about repeating the statements aloud in other settings, and the speed of reading or speaking squeezes out distractions. There is a motivational surge by the client to move forward as he makes an all-out effort to ‘beat’ his last score and this is particularly beneficial for depressed clients who find it difficult to move past apathy. Sometimes the speed factor produces levity and excitement. An auxiliary benefit in having clients repeat *I-wires* in session to speed is that shallow breathing becomes more obvious to the clinician and may lead to further exercises outlined in the Manual. Clients should be encouraged to breathe sufficiently as well as be comfortable and relaxed when repeating their *I-wire*. As an added motivation, clients are provided with “*I-wire Rep Sheets*” to record the number of times the *I-wire* was repeated each day. Clients are instructed that they do not have to believe or even pretend that the statement is true but are to just treat it as a reading exercise so that both their subconscious mind and their conscious minds are influenced.

6. Recording the Progress

The Rewiring Manual utilizes an inverted version of the Subjective Units of Distress Scale (SUDS) (Zayfert & Becker, 2007), the “Subjective Ratings of Belief” (SRB) to facilitate graphing of results and provides the client with feedback about their progress towards the goals. At the first session, the client is invited to rate the *I-wires* in answer to the question, “How much do I put my *I-wires* into practice?” on a scale between 0 and 10, where 0 equals a low score (“No, I don’t practice/believe this yet at all”) and 10 equals a high score (“Yes, I practice this all the time”). The clinician averages the ratings for all of the ten *I-wires* and then transfers the result to a specially devised Rewire SRB graph showing date and score. The beginning scores will probably be below 5 and the clinician makes a prediction of improvement that the client will make, provided *Me-wiring* is completed every day. At each subsequent
session, the client is timed and asked to rate the statements on the basis of practice and belief, and the results are recorded on the graph.

7. Building an Imperative Motivational Rewire

The Rewiring Manual shows the clinician how to guide the client’s “Conscious self” in talking to his “Subconscious Mind” so that he can add into his life-experience something that he may never have received in the appropriate developmental stage. The Manual borrows from Coué’s (1923, p.125) verbal self-suggestion process and Illsley-Clarke’s (2004) constructed parenting affirmations for being, doing, thinking, structure and sexuality to create a script for utilising the “Conscious Adult” voice to encourage the “Subconscious”. From the I-wire statements, ten instructional and encouraging Be-wire statements are made in the imperative tense to fit on one page. For example, if the I-wire statement said ‘I am happy’, it is changed to make a Be-wire as if speaking to someone else. The Be-wire statements usually start with “Be …”, for example, “Be happy”. This is done for each of the I-wires. Here is an example of a Be-wire:

Be happy! Be contented! Be successful!
Like yourself, accept yourself
Feel good about yourself!
Put the past in the past and move on!
Don’t dwell on things
Enjoy the moment and the day
Be enthusiastic and energetic
Choose good responses in life
Take time for yourself
Be hopeful. Look forward to the future!

The clinician reads through the Be-wire in a firm, loud and deliberate manner. The Be-wire should be read by the client in the same deliberate way. The Rewiring Manual shows the clinician how to explain Me-wiring to the client, the importance of repeating each Be-wire twice a day when they are at home, and feeling relaxed. They should say them slowly, loudly and deliberately to themselves – emphasizing the words. The client needs to be focused and serious about talking to themselves. The
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imperative and executive voice should be used. The Be-wires are rated by using one score only for the whole script and recorded on the graph.

8. Returning to the Subconscious

The Rewiring Manual contains charts, diagrams and explanatory scripts to assist clients to understand the concepts of “fixation”, “arrested development” and “wounding” in personality development theories that impede progress. The Manual also contains a series of developmental charts from Erikson and Erikson (1987), Fowler (1981), Freud (1973), Piaget (1955, 1983), and Kohlberg (1981) for use when the clinician believes they are appropriate. It is explained that the defence mechanisms that were once adopted to survive in a past situation now hinder the user from moving forward, impeding their progress in life and preventing day-to-day problem-solving. One of the exercises to treat fixations is a combination of “Creative Visualization” (Gawain, 1985, pp.174) of past images with Hendrix’s (1994) notion of “wounding” and ego-state theory (Watkins, 1993, pp. 232-240). The Rewiring Manual contains an exercise where the “Child” is visualised and the clinician asks the client to describe the place, time and feelings in the past.

Pivotal Question 6:
“About how old are you? And where are you?”

In the visualisation exercise, a client is asked to imagine themselves as a child at any age, to state where they are and about how old they are. While the age may not represent a “fixated age”, it does allow the client to visualise an objective self with whom she can begin a conversation or interaction. An alternative script in the Rewiring Manual asks the client to imagine a child in a box, unable to enjoy the wonderful sunshine outside, forever condemned to live in a box and then imagining the loving parent-self coming along, tapping on the box, making themselves known, and opening the door of the box, gently leading the young child out into the sunshine and into the loving arms of the parent. Both these exercises sow the seeds for future positive outcomes and allow the client to consciously choose what she wants to bring about in her life.
9. Intrapsychic Conflict

The *Rewiring Manual* shows the clinician how Freud’s intrapsychic conflict model was the precursor of the concept of segmentation of personality and Ego-state Therapy (Weiss, 1960, p.171), Berne’s (1963) Transactional Analysis, and Watkins (1993, pp.232-240) Ego-state Structure and Function, which is a psychodynamic approach that treats a “family of self” within an individual. This conflict provides the basis for a number of *Rewiring* techniques that use behavioural, cognitive, analytic and humanistic elements to engage normally covert ego states of the individual. With the aid of diagrams, charts and explanatory scripts, the *Rewiring* manual explains to the client about three ego states - the Parent, Adult, Child – within every individual. A Parent Ego State is the part that structures or nurtures the self, an Adult Ego State is the logical, rational self - the part that goes out to do adult things like work, or meet with other adults and talk and function in an adult way, and a Child Ego State is when one acts from the emotions to get needs met. According to this theory it is the Child that has all the feelings and emotions. The Natural Child is the part that has fun, enjoys life and is eternally happy and childlike, and has positive feelings and emotions. The Adapted Child is the part that has been wounded or hurt somewhere in life and feels sad, neglected or angry about what has happened and has negative feelings and emotions. The clinician encourages the client to identify some emotions and feelings as the “Natural Child” and as the “Adapted Child”.

The *Rewiring Manual* also contains charts and explanatory scripts for the clinician to explain that the Parent Ego State also has two parts to it. The Adapted Parent is like the uncaring, critical, neglectful person inside us saying things like “Don’t be stupid. You’re pathetic. You’re hopeless” and the Natural Parent cares and loves, is strong and takes responsibility, and helps to structure the child’s world. Some people do not seem to have a kind Parent voice inside them, for themselves, so *Rewiring* teaches them that they can have one. A *Rewiring* psychodynamic exercise using a process of visualization asks the client to imagine themselves as a young child encountering their grown-up Inner Parent and having a conversation. Another exercise in the *Manual* encourages the client to deviate from the script and learn to talk to her Inner Child in a more extempore fashion, thereby encouraging her to continue “talking to herself” kindly, with firm authority, over her Inner Child with all
its needs and demands. These exercises create an audible conversation between a
caring executive self, the Inner Parent, and the needy or damaged Inner Child.

The client’s Inner Parent should also be given the ability to quieten the Inner Child and to encourage him to be childlike and happy:

It’s OK. I’m in charge now. I care for you because I love you. You belong to me, you’re my inner child. You can be angry for a little while but then I want you to stop being angry. I don’t want you to be sad anymore. I am the grown-up and I will take care of all your needs. You belong to me. You are safe. You don’t need to go to anyone else for help because I am here now. Just talk to me and I will look after you. I am your caring parent. When you are upset you can come to me and I will make it better. I want you to be a happy little child. Laugh and enjoy life.

The clinician should also guard against the client’s Adapted Child arguing with the Inner Parent. For example, the clinician teaches the client to say from the Inner Parent, “No, there will be no arguing. I am the parent and I’m in charge. You must do what I say now. I’m kind and I love you, but I’m in charge.” The clinician should ensure that the Inner Parent has authority over the Inner Child. Sometimes the client’s Inner Adapted Child is very insecure and has never had a strong parent voice so the clinician should encourage the client to speak with more authority to still the child’s voice while still retaining kindness. On the other hand, some clients may have an Adapted Parent Voice which is harsh and critical that needs to be discouraged. The *Rewiring* manual contains a script to assist the clinician to coach the client’s Inner Parent by speaking to a toy representing their Inner Child and to use the imperative and executive voice. All of this is related back to the motivational Be-wire.

10. **Further and Supplementary Exercises**

The *Rewiring Manual* contains scripts, explanatory tools, diagrams and charts for a series of six basic sessions that cover the above contents and an optional six sessions to consolidate gains. Also there are a number of supplementary exercises and processes that can be used in conjunction with the therapy to treat a range of conditions.
Chapter 3: Case Studies from Clinical Practice

Three case studies from private clinical practice are presented below to show that Rewiring forms an undergirding framework while more complex issues are dealt with. Clark was experiencing high levels of tension, Liam had excessive amounts of stress and Kim was battling with sexual addiction.

Case Study from Clinical Practice (Clark)

Clark was the last of six children, born nine years after his brother. His mother passed away from breast cancer when Clark was four years old. His fourteen year old sister left school to look after the family and became his surrogate mother. Four years later his father remarried a 40 year old spinster who had a “dislike for boys” and all of his older brothers and sisters were placed in other homes except for Clark and an invalid older brother. Clark’s new step-mother emotionally abused and belittled him in the following years and he began wetting the bed. Clark started to believe his step-mother’s message that he was “dumb”. He did not do well at school after his step-mother moved in and later left and eventually began a bricklaying apprenticeship. At 16, he was diagnosed with a chronic duodenal ulcer and recalls sitting on the edge of his bed thinking about waking up in a wet bed with the smell of urine and having to wash his sheets. He was so distressed that he shouted “That bitch can go to hell!” Bedwetting stopped that night. At 19 years of age, Clark went to a singing group practice and then to his sister’s place. He never returned. At 23 he married and three years later turned to radio announcing. Clark became involved in the establishment of a radio station. Although it gave him a sense of purpose, when the station finally got to air he felt as though he had been abused all over again because of the personality clashes and in-fighting at the station. During the difficult pioneering days he found that a minority of those he had thought would be supportive turned on him. In 2005 he discovered that he had a prolactinoma, a tumour in the pituitary gland. He was told by his specialist that this had been there for decades and explained his lack of energy and difficulty getting out of bed. In August 2008 he heard in a news report that ‘Cabergoline’, the ‘wonder drug’ he had been prescribed to cure the tumour had significant side affects of obsessive compulsive disorder (OCD) and paranoia. The drug increased disposition towards gambling, shopping sprees, and pornography. At the same time, Clark was in the process of building new premises for the radio station and organization, fighting a protracted settlement of rental occupancy of the old...
building, handling a national media project, chairing a national organisation, managing staff issues and handling the move to a continuous 24/7 operation.

In 2009, after 24 years in the organization and ten years as manager, Clark was told by his managing Board that his position was to be placed on the open market. Clark felt suicidal, felt like “death” and went on sick leave for five weeks and finally came to see the Rewiring clinician in June 2009. Clark scored 34 on the depression subscale of the Depression Anxiety Stress Scales (DASS) which is in the 99th percentile, registering in the “extremely severe” range. Clark had been severely depressed for some time. He attended therapy for 19 sessions over two months. In the second session, Clark was given Rewiring and committed himself to the consistent practice of repetitions – in the first partial week he averaged 45 repetitions per day and then made a commitment that if 200 repetitions per day were needed then he would do it. He had by now committed the entire sheet to memory and the time taken had dropped from 36 seconds to 13 to complete the entire script. Clark commented:

I’m still facing some significant personal issues but am not daunted by them. I am able to live in the now much more readily and leave the past behind and the future where it belongs.

Clark completed all of the psychodynamic exercises and was particularly affected by doing the Inner Child exercise where he learnt how to nurture himself as a fixated four year old. He learned to be his own advocate and to engage in a dialogue with his Inner Child. When asked what he thought was the most powerful part of the therapy, he replied, “It’s a DIY, you learn to do it yourself.” At the end of treatment, Clark scored 2 on the depression subscale of the Depression Anxiety Stress Scales (DASS) which is in the “normal” range, and his SRBs were consistently on a 10.

**Analysis of Case Study (Clark)**

Clark was in the highly stressful position of being a head of an organisation that wanted to replace him. His identity and purpose in life had been defined by his commitment to the radio station and his position. Now that he was facing the humiliation of replacement and unemployment, Clark suffered doubts about his own esteem and this was accompanied by severe depression. Clark found the I-wires to be a solid, foundational exercise to regain his sense of identity and self-esteem. He was
taught Be-wires towards the end of the therapy and found them to be deeply healing and resonating. He liked the “executive power” of the Inner Parent voice and felt that when he spoke the Be-wires it gave him strength to endure difficulties. With regard to the I-wires, he felt that he believed it five weeks into Rewiring and memorised it two days later. Personal pressures were mounting throughout the treatment; however, with each threat he found he was able to increase his inner strength. The I-wire that impacted him very strongly was “I’m happy, cheerful and playful. I know who I am; I’m free to be me.” He felt that this confronted his inability to be a fun-loving, happy and carefree child at heart. Rewiring in this case was successful in treating self-esteem and identity issues while living through a stressful situation.

**Case Study from Clinical Practice (Liam)**

Liam was a 32 year old married man with three grown up step children and at the time, he and his wife were trying IVF for another child. Liam was trained as a classical pianist and as a competitive young man, he wanted to be the best in everything. He felt that he had to prove himself in all situations and became a high performing, ambitious and driven individual. Liam became an accountant, a property investor and ran a family company. He presented as a perfectionist with pedantic mannerisms. By the time he came for therapy he had overcommitted himself in investments, and his company was servicing his personal mortgages. He faced daily financial pressures, was over-weight, and had isolated himself socially. Liam took his stress home from work every day, so to escape the mounting pressures at home and at work he travelled extensively. At home he found that he was getting angry at his step children and could not stop complaining. He scored 27 on the stress subscale of the DASS at his initial consultation, placing him in the “severe” range.

Liam began Rewiring in the second session and recorded his subjective ratings of belief in the I-wires as 1.2/10. He attended therapy for eight sessions; seven of them were on the Rewiring program. He described his initial emotions as angry, perfectionist, anxious, burdened, tightly wound, demanding, totally impatient, stubborn, negative, judgemental and preoccupied with his own thoughts. He wanted to be calm, accepting of other people and their faults, able to overlook trivial things, to enjoy being himself, be carefree, humble, positive and sociable. He was
conscientious in doing the set exercises for homework. At first he exhibited quick, shallow breathing while repeating his statements to the clinician. However, he soon learned how to breathe deeply and slowly from his diaphragm. Liam also completed all of the psychodynamic exercises in *Rewiring* and found relief from his cruel, harsh and demanding Inner Parent. Liam’s SRBs in his *I-wires* went from an average of 1.2/10 to 9.1/10 and lowered his stress scale to the “normal” range. Liam continued to repeat his exercises until the follow-up session.

**Analysis of Case Study (Liam)**

Liam’s case represents the efficacy of *Rewiring* for disorders other than depression. For Liam, stress was the major factor. He was able to achieve his goals and to reduce his stress levels. Liam needed assistance with his breathing because his normal pattern of breathing was shallow and fast which became obvious when he was asked to repeat his “I Am’s” at speed. When a client is insufficiently relaxed, breathing in a shallow and fast manner, this may reveal the client’s life-style (viz. agitated and inefficient demonstrating little patience). In this case, Liam was hyperventilating and working in short sharp bursts so that he was exhausting himself and the manner that he read his statement was indicative of the manner in which he conducted his life. Engagement in relaxation exercises enabled Liam to change his breathing patterns so that he breathed more deeply and slowly with enough air at the beginning of the passage for the journey to the end. This also indicated the necessity for Liam to emotionally prepare for a longer journey in real life. For Liam it was also important that the treatment modality be effective. As a businessman, Liam did not tolerate ineffective or impractical solutions and so when he presented at the clinic he wanted results from the therapy. In this case, *Rewiring* proved an effective means of delivering the desired outcomes.

**Case Study from Clinical Practice (Kim)**

Kim was a 21 year old male student who was referred by a doctor for depressed mood, thought rumination, suicidal ideation, loss of confidence and lack of self-worth manifesting in internet pornographic viewing. Kim was the youngest of four boys. His sexual addiction began in Year 8 (at the age of 13) and centred on
heterosexual fantasies. A serious relationship with a girl came to an end because of his inability to stop viewing internet pornography. In an attempt to stop the addiction, he began to attend a church. However, he was unable to break the internet pornography cycle. When Kim came to therapy, he identified the reasons for his addiction as being brought up in a household that did not mention sex, combined with his shy personality, and culminating in being rejected in a relationship. He felt that he was shy, quiet, insecure, disconnected, embarrassed, foolish, uncomfortable, and worried about what others thought, isolated, lonely, addicted and afraid. On the depression subscale of the DASS, he scored 34 which placed him in the 99th percentile which is in the “extremely severe” range.

Kim began the Rewiring treatment in the second session and continued for ten sessions. Through the Rewiring process he identified how he would like to be: confident, relational, sociable and communicative, connected, internally controlled, and pleased with himself. At this stage he rated his beliefs in the I-wires as 1.6/10. He began the program on 20 repetitions per day and this was raised to 50 in the fourth session of Rewiring. By the second last session, he was driving to university instead of catching the train so that he had time to Rewire, constantly revising his memorised “I-wires” aloud as he drove.

When Kim completed the psychodynamic exercise to visualise his earliest memories, his first memory was of himself playing in the sand for hours with matchbox cars, cowboys and Indians and Tonka trucks, fantasizing and imagining all kinds of adventures. The second memory depicted him at school on a sports day when he was not feeling well. A kind teacher told him that he could stay and rest in the sick room. He commented that he felt cared for, looked after and noticed. The clinician investigated the meanings that Kim had attached to these memories. Kim also found that the Inner Child exercises were particularly relevant as his over-thinking, obsessive and ruminating self was deeply embedded and flowing from his childhood.

During the therapy, Kim revealed that he often ruminated about injustices in the world and wondered how unscrupulous people could defraud the poor. He read a book when he was 19 which described how some conscientious soldiers had protected
and saved a poor village and surrounding noble families and led them all into freedom. After arriving at the new location, the nobles accused the soldiers of mistreatment even though the soldiers had saved them. The theme of the book was still vivid in Kim’s memory and the clinician identified that Kim often reached a point of anger that was so consuming that he felt as though his blood was boiling. He described it as being so painful that he could not think. He appeared to turn his anger in on himself stating that he was disgusted with himself. This self-punishment also took the form of pornographic viewing and masturbation. The psychodynamic exercises included identifying current trigger points for his anger. At the last session, his score on the depression subscale was 13 which was in the “mild” range and his self-ratings of belief in his I-wires was 8.5/10. He will continue therapy until he maintains 10/10 for four consecutive weeks.

**Analysis of Case Study (Kim)**

Kim presented at the clinic to overcome his addiction to sex and sexual dysfunction. In this case, there was a need for a therapy that would work on his conscious and unconscious cravings for sexual satisfaction. *Rewiring* provided a therapeutic modality that allowed him to understand his problem and a methodology to overcome his addiction. Kim’s Progress Graph was somewhat erratic as it did not form a perfect curve. This graph became a symbol of his condition and his struggle to overcome his addiction. There were weeks of gain and then relapse. However, the general direction was upwards towards freedom from this habit.

Regarding the early memories, Alfred Adler believed that we attach meaning to early occurrences and then fulfil those meanings throughout our lives (Adler, 1931; Adler, 1998). Kim’s first memory of playing in the sand depicts a carefree existence in an unreal world. His belief was that life should be easy and fantasy-filled and that hardships should be non-existent or magically resolved. This meaning was incorrect and Kim had misunderstood his first memories as Adler explained. His second memory of being allowed to escape from the sports day and be cared for and noticed by a kind teacher symbolized his desire to be indulged and to escape hardship. As the fourth and last child in his family, he clung on to the idea that he should be indulged and that life should be easy. Part of his therapy was confronting him with the need to
build character and endurance in the face of hardship. He had misunderstood his school memory because the meaning he attached was that someone would make life easy for him and he craved care. *Rewiring* is not in itself sufficient to gain insight into Kim’s early memories even though there are exercises that “take the client back” to former developmental stages. In this case, the clinician’s professional training and experience allowed insights above and beyond the framework of *Rewiring* and as such highlights the limitations and undergirding of *Rewiring*.

**Conclusions from Case Studies**

The case studies demonstrate that *Rewiring* can be adapted to successfully treat other psychological difficulties - Clark was living through a time of considerable tension, Liam was struggling with stress and Kim was attempting to overcome sexual addiction. In private practice I have had success in using *Rewiring* in treating anxiety disorders, borderline personality disorder, chronic fatigue, panic disorder, schizophrenia, somataform disorders, stress disorders, sexual addiction, as well as depression. I have successfully used the process (with some modifications) for children as young as five years old and with people in their eighties. Further, I have experimented with presenting *Rewiring* in groups of up to eight participants and institutional settings such as detention centres with some success. This thesis only tested the efficacy of *Rewiring* in the treatment of depression and so further studies and trials are needed to treat the other disorders listed. Furthermore, further investigation into the use of *Rewiring* for various age groups and with groups rather than individuals.

*Rewiring* has been used to treat hundreds of clients and, because of the testing and recording regime, each case becomes an individual clinical trial. *Rewiring* is a unique therapy that combines the positive aspects of fluency with therapy, combines psychodynamic therapy (PDT) with cognitive behavioural therapy (CBT), a manualised, instructional and systematic approach, is collaborative and tailored to the individual and yet capable of being generalised, while the predictive aspects provide clients with evidence of progress and incentive to complete the program and comply with further treatment.
Chapter 4: Investigating Rewiring in Treating Depression

In this part of the thesis I describe an empirical investigation into the efficacy of Rewiring as a clinical psychotherapeutic treatment modality that is followed by a discussion of case study evidence. Depression was the disorder chosen for this investigation, although other conditions could also have been chosen for the testing of this psychotherapeutic method as Rewiring has been utilised in the clinical treatment of a range of disorders: anxiety, eating, adjustment, substance-related, personality, impulse-control, Post Traumatic Stress and Obsessive Compulsive disorders. The empirical investigation begins with a short discussion of the contemporary treatments for depression followed by methodological considerations, a description of the pilot study and clinical trials, a discussion of the results and some case studies of participants in the investigation.

Depression

Depression is now an important global public-health issue, and has been rated as the fourth leading cause of disease burden in 2000, the greatest proportion of disease burden attributable to non-fatal health outcomes, and accounting for almost 12% of total years lived with disability worldwide (Moussavi et al., 2007). Depression has also been found to be “the leading cause of disability among all health conditions for both sexes” in Australia (Mathers et al., 2000, pp.592-596) and in 1999 cost over $3 billion annually in direct and indirect costs (Mathers et al.,1999, p.25) and “around $14.9 billion annually in 2006 costing us as a nation more than 6 million working days lost each year … second only to heart disease as the leading medical cause of death and disability within 20 years” (Mathers & Loncar, 2006, pp.2011-2030). Sixty-one per cent of Australians in 2002 reported that they or someone close to them had experienced depression (Hickie, 2004, pp.4-5) and at least 15% of the Australian population will suffer from substantial depression at some stage in life (Mitchell, 1998). The Australian Bureau of Statistics reported that persons who met criteria for diagnosis of a lifetime affective mental disorder and had symptoms in the 12 months prior to interview numbered 995,900, that is, 6.2% of the population (Australian Bureau of Statistics, 2008.) Clearly the issue of depression cannot be
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ignored. Depressive disorders are highly prevalent in Australia, causing impairment to social, occupational and role functions of men and women alike. It is imperative that we find better ways of dealing with this issue in the medical and social sense.

The incidence of depression is often linked to suicide. Based on figures from the Coroners’ database between 1986 and 2002, 3,773 people completed suicide in Western Australia which represented 122,557 years of potential life lost (Youth Suicide Advisory Committee, 2006). Without treatment, depression has a tendency to assume a chronic course, be recurrent, and over time be associated with increasing disability.” (Moussavi, et al., 2007). The State Coroner in Western Australia wrote: I expect to see a Mortuary Admission Form relating to a death by suicide in this State on almost every working day with precipitating factors that have operated on an already existing state of depression and low self-esteem (Hillman, 2000, p.13).

The Coroners’ database also reported that, in the period 1986-2002, 34% of males and 57% of females who completed suicide were found to have suffered, in the 12 months prior to death, from a diagnosed psychiatric disorder such as depressive disorder, schizophrenia, substance misuse, personality and other adjustment disorders (Youth Suicide Advisory Committee, 2006, p.17). Draper reported that about 90% of older people in Australia attempting to, or dying by, suicide have a mental disorder, usually depression (Draper, 1995, pp.533-534). Clearly, there is a need to treat depression to decrease the awful consequences.

Providing successful treatments for the alleviation of depression is paramount to the health of Australian society. And yet, prior to their suicide in 2002, 55% of males and 80% of females had sought some form of help in the previous 12 months, and of them, this help was sought from a General Practitioner (male 39%; female 57%), a psychiatrist (male 23%; female 45%) or some other health worker or counsellor (male 80%; female 26%) (Coroners’ Database, unpublished, in Youth Suicide Advisory Committee, 2006, pp.17-19). A Western Australian study (Hillman, 2000, pp.13-17) highlighted the need for treatment for seriously depressed men and women who are taking their lives as a result of being depressed. A study of national trends in the out-client treatment of depression showed that most people did not receive treatment for their symptoms. There was very little known about access to
treatment, and treatment outcome (Olfsen, 2002, pp.203-209). It seems, in fact, that most individuals with depression do not receive any form of treatment for their symptoms (Narrow, 1993, pp.95-107). This was surprising as, according to the Global Burden of Disease Study, depression is the fourth leading cause of worldwide disability and is expected to become the second leading cause by 2020 (Murray & Lopez, 1996, pp.740-743).

**Treatment Modalities**

Depressive disorders are among the most common health problems and are associated with high costs to society and high rates of use of services and yet most of the treatments received by those who are depressed do not have an established efficacy (Sturm, 1995, pp.51-58). The American Psychiatric Association’s Taskforce on Promotion and Dissemination on Psychological Procedures (1995) emphasized the strength of a variety of psychotherapies of proven efficacy, and developed criteria to identify empirically validated treatments (Taskforce on Promotion, 1995, p.21). Eighteen therapies were identified by the taskforce and approved as empirically validated. Influenced by the Dodo bird verdict. Wampold et al (1997, p.204) stated that the efficacy of a treatment based on the results of a single study would be unjustified and they described the process of deciding which therapies were superior to others by looking at the effect size compared to the control group within certain categories of therapies. However, Hunsley and Di Giulio (2002) examined the claims of general equivalence for all forms of psychotherapy and came to the conclusion that the Dodo bird verdict was incorrect and pointed to substantial differences between psychological treatments. They concluded that the “weight of evidence is clearly and consistently on the side of differential treatment effects”.

The national Australian depression initiative “beyondblue” was established in 2000 and funded for ten years by the commonwealth and state governments. One of the difficulties with the beyondblue funding for the treatment of depression was “the inevitable rise in the level of prescribing antidepressant medication” (Hickie, 2004, pp.4-5) and many prescribed treatments did not rely on published patient outcomes in the formal literature, were difficult to identify, had poorly disseminated results, and
Rewiring Head and Heart

gave little information about their effectiveness (Whiteford (2008, pp.101-102). Also, there was a variety of treatments offered to people suffering from depression. One study (Horvitz-Lennon, et al, 2003, pp.720-726) reported that the most frequently used interventions for depression were psychotherapy alone (four to nine visits), despite its inadequate research base; then pharmacotherapy of Selective Serotonin Re-uptake Inhibitors (SSRI) treatment alone; or a combination of psychopharmacology (SSRIs); and then psychotherapy. In another study (Horvitz-Lennon, et al., 2003, pp.720-726) the most effective high volume treatments for moderate to severe major depressive disorder were:

1. SSRI≥60 days with four or more psychotherapy visits,
2. 10-24 psychotherapy visits,
3. SSRI≥60 days with one to three psychotherapy visits.

The researchers in this study estimated that only 23% of depressive episodes managed with the ten most frequently utilized treatments would be in remission after 16 weeks compared to a 15% rate given no treatment. One study that used interpersonal psychotherapy (IPT) (Horvitz-Lennon et al., 2003, pp.720-726) as the psychological treatment, trained its therapists and conducted 16 weekly sessions at a health centre and compared interpersonal psychotherapy to psychopharmacology using a physician’s usual care. They concluded that pharmacotherapy and psychotherapy effectively treated major depression among primary care patients (Schulberg, 1996, pp.913-919). Wampold et al (1997) stated that the field of empirically supported therapies has been dominated by cognitive-behavioural treatments. However, there is also a need for an on-going search for creative and practical psychotherapeutic approaches. Rewiring is a novel approach which combines aspects of learning theory, cognitive behavioural therapy and psychodynamic approaches into a brief and effective therapeutic modality to help people.

The Measurement of Depression.

When choosing measures for the present study it was initially decided to use DSM-IV based measures. However, Westen (2004, pp.293–303) maintained that DSM-IV diagnoses were not originally formed by empirical methods but rather by
Rewiring Head and Heart

consensus committees. So, although these definitions have guided research for up to twenty years there is a possibility that DSM-IV definitions may be empirically unsupported (Goldfried, 2000, pp.1-16). Further, there is a question about whether “Major Depression” is a single disorder or whether it exists on a depressive e continuum. Consideration is also required as to whether anxiety and depression have overlapping criteria or of the possibility of a common diathesis for negative affect. Up to 50% of patients in clinical practice present with problems that cannot be diagnosed using DSM-IV categories (Howard, et al., 1996, pp.106-110; Persons, 1991, pp.99-106; Westen, 1998, pp.333-371). For this project the gold-standard measures recommended by the World Health Organisation, the Depression Anxiety Stress Scale (DASS) (Lovibond & Lovibond, 1995) and the Beck Depression Inventory-II (BDI-II) were employed to measure symptoms of depression (WHO, 2000). By using both scales and conducting a clinical interview with each participant, the levels of symptomatology could be verified and checked for congruency.

**Methodological Considerations.**

In conducting a clinical trial it is necessary to explain the *randomly controlled treatment* that was used. When assessing treatments in private practice the randomisation imperative complicates the process because private clinical practice is neither random nor randomised. Patients attend private clinics because they can choose their own treatment, although it is acknowledged that randomly controlled trials are far superior to effectiveness studies in determining causal inference in psychotherapy (Robinson, Berman & Neimeyer, 1990, pp.207-228). In private practice, the diagnosis does not necessarily determine the therapy and diagnostic precision is not emphasised. It is also recognised that psychotherapy patients are not as diagnostically homogenous as subjects in randomly-controlled treatments. They often have additional disorders that would exclude them from efficacy studies (Margison et al., 2000, pp.123-130). It is fair to say that a double blind approach is not possible in psychotherapy research because patients cannot be blind to the treatment in which they are actively participating. In the study, participants were randomly allocated to a therapist, and to a condition, in order to compare the Cognitive (“Head”) treatment to the Psychodynamic (“Heart”) treatment, and both of these treatments to the full-treatment (“Cognitive Head” and “Psychodynamic
Rewiring Head and Heart

Heart”), and to a Wait-list. As it would have been unethical to omit treatment for the Wait-list participants or make them wait for treatment longer than normal, it was decided to request them to wait four weeks before they were treated, a normal waiting period for patients attending that particular clinic. They were pre and post-tested at the beginning and end of the wait period.

**Intent-to-Treat Analysis (ITT)**

A widely accepted method for the analysis of controlled clinical trials is Intent-to Treat (ITT) Analysis, a process of comparing study groups in terms of their randomly allocated treatment notwithstanding deviations from protocol, compliance to treatment or withdrawal from the study (Schwart & Lellouch, 1967, pp. 637-648). Chakraborty & Gu (2009, pp.2-9) performed simulations in longitudinal studies that showed that as missing percentages rise the power of the test decreased. Therefore studies with missing values will lose power and when there are a few missing values investigators are free to select any method to impute them. They found “no adequate strategy exists for ITT analyses of longitudinal controlled clinical trial data with missing values” (Chakraborty & Gu, 2009, pp.2-9). However, they found that a mixed model approach was more powerful if there was a high percentage of missing values. As this is a longitudinal study the percentage of missing values will be estimated to determine whether to use *ad hoc* imputations or a mixed model approach.

**Comparative Study.**

This investigation makes comparisons between elements of the treatment and examines the psychotherapeutic model *Rewiring Head and Heart* to determine, not just its efficacy, but also to postulate reasons for the success or otherwise of its elements to the overall effect. Some investigators have suggested that it was important to know whether psychotherapy worked better than its absence, and also, how it compares with alternative interventions (e.g. Castelnuovo, et al., 2004, pp.208-224; Smith & Glass, 1977, pp.752-750). Some think that it is not necessary to know *how* something worked, or whether it works for specific or non-specific reasons, but just to know the benefits from its effects (Smith & Glass, 1977, pp.752-750). After comparing a number of research projects in regards to efficacy, one (Castelnuovo et al., 2004, p.208) remarked, that according to current criteria indicating a treatment as “probably efficacious”, one needed only to show that the treatment was superior in
comparison to a no-treatment condition or a waiting list. They thereby concluded that virtually any intervention would fit the criteria and that prayer and a placebo could be included in the Empirically Supported Therapies list. So it was important to show how and why this treatment, *Rewiring Head and Heart*, was efficacious above and beyond the placebo effect.

**Therapist Variable.**

There has been much discussion in the literature as to why therapists should be included as a random design factor in the nested analysis of covariance (ANCOVA) design commonly used in psychotherapy research. Crits-Christoff and Mintz (1991, pp.20-26) asserted that therapists should be included in randomisation on three counts: to avoid an incorrect estimation of the error term; to avoid overly liberal F ratios; and to avoid an unacceptably high risk of Type I errors. They proposed that bias was introduced by not specifying therapist as a random term. With more recent studies there was apparently less variance due to therapist because of better controls. They asserted that a serious distortion of tests of statistical significance could occur if researchers failed to include the therapist as a blocking or stratification factor in the statistical design and results could not be generalised to a larger population of therapists. Using the greatest number of therapists possible maximises the degrees of freedom of treatment effects. Smaller ratios minimize Type I error rates. However, the optimal ratio of 1:1 (one therapist to one client) would do away with having to test for therapist effects but it is not feasible as there would need to be, say, 50 therapists to treat 50 participants.

The typical sample size used in comparative outcome studies is only slightly larger than ten per group (Kazdin & Bass, 1989, pp.138-147; Shapiro & Shapiro, 1983, pp.17-23). For example the mean number of patients per group in the 414 treated groups included in Shapiro and Shapiro (1983, pp.17-23), was 11.98. Researchers also found it difficult to standardise procedures and techniques as each therapist was unique in their training and personality and their approach to therapy varied considerably. For this study, it was concluded that approximately ten clients per condition and per therapist was a reasonable number for the clinical trials.
For treatment fidelity, each therapist is required to complete an evaluation form after every session. They respond to a series of questions designed to elicit qualitative responses so that the supervisor can monitor treatment fidelity, in discussion with the therapist, after the session. The questions asked after every session are:

- How did you rate this session (in terms of success)?
- How much did you deviate from the script?
- Do you think this treatment suits this participant?
- What are your predictions for this participant’s success?
- Did you establish and maintain rapport with this participant?
- How comfortable were you with this session?
- How compliant was the participant with the fluency training (H/W)?
- Is there anything unusual to report from this session?

Therapists are required to rate each answer on a scale of 0 to 10. The questions are designed to alert the supervisor to deviations from the session norms. If there are anomalies the therapist is interviewed to discuss the impact their responses had on the project. In this way there is a constant monitoring of treatment fidelity and therapists maintain standardised principles.

**Manuals**

Patients presenting with one disorder are the exception in clinical practice and 50%-90% of patients present with co-morbid disorders (Kessler et al., 1996, pp.17-30; Kessler et al., 1999, p.555-567; Newman et al., 1998; Oldham et al., 1995; Shea et al., 1992, pp.857-868), so rather than using manuals as laboratory tools, manuals would be used for standardizing treatment in clinical practice. Research guidelines suggest that manuals deal with only one condition with pure, discrete cases. However, these treatments, although well tested in the laboratory could not be generalised to the wider public. Westen (2004, pp.294-303) observed that clinicians would have to become familiar with many manuals to treat many problems. Seligman saw the problem in terms of ideographic (practitioners tailoring treatment to patients) versus nomothetic (treatment manuals specifying particular protocols for certain diagnoses) (Seligman & LeVant, 1998, pp.211-212). A mixture of ideographic and nomothetic approaches could possibly produce treatment manuals that allowed for individualization. Indeed, in the *Rewiring* therapy, there is a template that allows for individualisation as well as
specifying protocol for a number of conditions thereby satisfying both criteria of ideographic and nomothetic components.

Measures

There were four measures used in the present investigation – the BDI (Beck, 1996), the DASS (Lovibond & Lovibond, 1995), a clinical interview and Self Ratings of Belief (SRBs). Evaluation sheets (see Appendices G, H, I & J) and client information were used to inform individual case studies. It was planned that the relevant outcomes would include recovery at post-treatment (cut-off point of 13 on the DASS, cut-off point of 13 on the BDI-II), mean change in symptoms from baseline, and mean difference in symptoms.

Self Ratings of Belief

The project utilized an inverted version of the Subjective Units of Discomfort Scale (SUDS) (Zayfert & Becker, 2007) using “Subjective Ratings of Belief” (SRB) to measure “units of belief” to facilitate graphing of results and provide the participant with feedback about their progress towards the goals. To assist participants in the quantification of their beliefs, they were asked how much the new concepts were affecting their behaviour, feelings and thoughts. The linkage between belief and practice was made explicit in the question, “How much do I put this concept into practice?” on a scale between 0 and 10, where 0 equals a low score (“No, I don’t practice this yet at all”) and 10 equals a high score (“Yes, I practice this all the time”). This linkage assists participants in self-assessment by gauging the evidence of their internal processes by external data, that is, changes in beliefs should result in changes in behaviour (Ellis, 1974, Beck & Alford, 2009). The clinician averaged the ratings for all of the ten concepts and then transferred the result to a specially devised rating chart showing date and score.

The Depression Subscale of the DASS

The DASS (Lovibond & Lovibond, 1995) is a 42-item self report instrument designed to measure the three related negative emotional states of depression, anxiety and stress. The DASS questionnaire is in the public domain. The DASS is based on a
dimensional conception of psychological disorder and not categorical so that differences between the three states are of degrees. The DASS manual recommends cut-offs for conventional severity labels (normal, moderate, severe). The Depression scale assesses dysphoria, hopelessness, devaluation of life, self-deprecation, and lack of interest/involvement, anhedonia and inertia. Clients are asked to use a 0-3 point severity scale to rate the extent to which they have experienced each state over the past week. There are 14 items measuring depression and it is possible to score between 0 and 42 on the depression scale. There is a 21-item version but the longer version was used for this project. The scales of the DASS have been shown to have high internal consistency and are useful to measure current state or change in state over time, such as in the course of a treatment (Brown, 1997, pp.79-89; Lovibond & Lovibond, 1995). Anthony et al (1998) found that the factor structure, reliability and validity of the DASS in non-clinical and clinical patients distinguished well between depressive features, physical arousal, psychological tension and agitation, with internal consistency in the acceptable to excellent range, replicating previous findings.

**The Beck Depression Inventory-II**

The BDI-II (Beck, Steer & Brown, 1996) is a revised version of the BDI-IA (Beck & Steer, 1993). It is a 21-item self-report measure designed to assess the severity of depression in persons over 13 years (Osman et al., 1997, p.360). It is widely accepted and used as a self-administered depression inventory with well-researched psychometric properties in adult populations. It is frequently used in normal adult populations as a screening tool. Each item is rated on a 0-3 scale with total scores ranging from 0-63. Diagnostic discrimination has been established and content and factorial validity demonstrated (Beck et al., 1996; Dozois et al., 1998, pp.83-89). The cut-off points recommended by Dozois et al. (1998, p.83) are 0-12 for nondepressed, 13-19 for dysphoric and 20-63 for dysphoric or depressed depending on other criteria that had to be met. The BDI-II requires a fifth or sixth grade reading level for comprehension. In a factor analysis two factors accounted for 46% of the variance, the first factor representing the cognitive-affective dimension of self-reported depression including past failure, worthlessness, self-dislike, pessimism, self-criticalness, indecisiveness, guilt feelings, suicidality, punishment feelings and sadness, and the second factor representing the Somatic Vegetative dimension.
Rewiring Head and Heart

including changes in sleep, fatigue, loss of energy, irritability, agitation, loss of interest, loss of pleasure and changes in appetite.

As an instrument that has been used for over 35 years to assess and identify depressive symptoms it has been shown to be reliable regardless of the population. Its high coefficient alpha (.80), its established construct validity and its ability to differentiate between depressed and non-depressed patients has made it an instrument of choice for therapists. In comparison to the BDI-1A coefficient alpha (.86) the BDI-II had higher coefficient alphas(.92 for outpatients and .93 for college students) and correlations for both outpatient and college student samples for the corrected item-total were significant at .05 level with a Bonferroni adjustment. Test-retest reliability in 26 outpatients tested one week apart rendered a correlation of .93 (p<.001) and the mean scores of both tests were comparable with a paired t (25)=1.08 (no significance) (Beck, Steer & Brown, 2006). This newer version of the BDI conformed more closely to the diagnostic criteria for depression as listed in the DSM-IV which increased the content validity of the measure. Two subsamples of outpatients (N=191) were assessed by the BDI-II and the BDI-1A to test construct validity and showed a correlation of.93 (p<.001) and a mean for the BDI-II being 2.96 points higher than the BDI-1A. Calibration results are available in the manual. Factorial Validity was established by inter-correlations from the above responses (Beck, Steer & Brown, 2006).

Clinical Interview

A clinical interview was conducted with each participant to as to the length and severity of the depression. Participants were observed for symptoms reported in the DASS and the BDI-II such as mood, insomnia, agitation, anxiety and weight loss required by Hamilton (1980, pp. 21-24) for veracity and evidence of depression.

Research Questions and Hypotheses

The research question “What is the efficacy of Rewiring Head and Heart (Rewiring) as a psychotherapeutic treatment modality?” was addressed by two separate studies:
1. A pilot study was conducted to provide the opportunity for the psychotherapeutic model *Rewiring* to be tested, to provide initial data on its efficacy, and to observe and document the main effects of the combination therapy before making a comparative study of its components.

2. An efficacy study was conducted to address the following question and its sub-questions: “What is the efficacy of Rewiring as a psychotherapeutic treatment modality?”
   - How do the two main components of *Rewiring* contribute singly and together to the overall impact of the treatment?
   - What is the effect of four sessions of Treatment One (CF), four sessions of Treatment Two (PDT) and four sessions of the combined treatment (CF+PDT) on depression in adult volunteers?

The efficacy study was directed by the following additional questions:

1. Which treatment condition was superior on the BDI, the DASS and the SRBs at Post and at Follow-up?
2. Did any of the therapists have a different result on the BDI, the DASS or the SRBs at Post or at Follow-up?
3. Did the CF group improve over time on the BDI, the DASS or the SRBs?
4. Did the PDT group improve over time on the BDI, the DASS or the SRBs?
5. Did the CF+PDT group improve over time on the BDI, the DASS or the SRBs?

It was hypothesised that:

1. *Rewiring* was an efficacious psychotherapeutic treatment modality.
2. The combined treatment (CF+PDT) was superior to the two individual components CF and PDT.
3. CF was more efficacious than PDT
4. All groups improved over time on the BDI-II, the DASS and the SRBs.
5. There was no differentiation between therapists’ results on the BDI-II, the DASS and the SRBs.
Rewiring Head and Heart

Pilot Study of the Efficacy of Rewiring as a Treatment Modality for Depression

A pilot study was conducted to gather initial data on the efficacy of Rewiring, and to observe and document the main effects of the combination treatment before making a comparative study of its components. A mixed qualitative and quantitative design was used to address the rationale. A randomised controlled clinical trial was conducted comparing the treatments to a wait-list.

Participants for the Pilot Study
After receiving approval from the Ethics Committee at Edith Cowan University, participants were enlisted through advertisements in the West Australian newspaper in the “Health and Well-being” section (see Appendix C). They were self-referred adults between the ages of 18 and 65 who had responded to the advertisement. Volunteers were excluded if they had any other diagnosed psychiatric disorder, including Bi-Polar Affective Disorder. To begin there were 12 participants and 12 wait-lists but only eight completed the treatment, and of that eight, four were disqualified after their results were collated, leaving four actual participants and seven wait-list participants. The participants were treated at no charge.

Method – Pilot Study
Before the treatment began the participants were required to attend an interview where they were screened, given measures to complete, filled in forms with demographic information, answered questions in relation to their moods, and signed an informed letter of consent (See Appendix D). They were asked to express their reasons for seeking treatment and to ask any questions about the process. They were also requested to express their expectations regarding the treatment (see Appendix E). This interview lasted approximately 30 minutes. On the basis of this interview and the results of the depression measures (BDI-II, cut-off point of 13, and the DASS, cut-off point of 13), applicants were designated as ‘depressed’ and able to enter the treatment or ‘not depressed’ and unable to participate further. The first treatment session lasted up to an hour following the scripts outlined for session 1 (Appendix H), which was followed by an evaluation by the participant and the therapist (see Appendices I & J).
The second, third and fourth sessions lasted approximately 15-30 minutes for which evaluation sheets were completed by the therapists and the participants, and the follow-up session also lasted about 30 minutes and required the completion of evaluation forms (see Appendix K). A thank-you letter was sent to all participants (see Appendix L). The treatment totalled less than three hours participation for the whole therapy, spread out over four weeks for the treatment phase and a follow-up session six weeks later.

The intervention consisted of a combination treatment of Rewiring (CF+PDT) for four sessions. The principal researcher provided therapy for all of the pilot study participants and followed the manual throughout the treatment so that any defects could be ironed out in the full clinical trials. With no further treatment, a six-week follow-up assessment was conducted. There were 12 participants, male and female, over the age of 18 and under 65, satisfying the exclusion criteria. However, only 8 completed the treatment. The period of waiting was a minimum of four weeks, similar to a client waiting-period for treatment at a private clinic. An independent assessor was appointed to administer all self-report measures before treatment, on termination of therapy, and at the six week follow-up. Qualitative participant data was also collected at every session and at pre, post and follow-up. The Wait-list was assessed on all measures at the same time as the active treatment group, then again on all measures four weeks later, on termination of treatment and at six week follow-up.

Participants were required to complete approximately 10-20 minutes home exercises per day between sessions. Treatment was free of charge. There was no physical discomfort or inconvenience involved. There were no physical risks. Participants were not required to explain traumas in detail.

In the pilot study, the treatment condition was the same for all participants and the same therapist was used. It contained all the elements of the therapy including cognitive and psychodynamic aspects. In the first session participants were assisted to make an “I statement” and a “Be statement”. Self Ratings of Belief (SRBs) were taken on each occasion and participants were directed to complete homework by repeating the “I statement” 50 times each day and the “Be statement” twice a day. A participant evaluation was completed after all sessions. In the second and subsequent
sessions homework was checked and subjective ratings taken. In the second session the participant was invited to imagine a place where he met his Inner Child and spoke to him. In the third session the concepts of Parent, Adult and Child were introduced along with the idea that the participant could talk to his Inner Child. In the fourth session the therapist established a dialogue between the Inner Parent and the Inner Child and sought to reduce the percentage that the participant acted out of Adapted Inner Child. In the follow-up session 6 weeks later, all measures including subjective ratings were taken.

**Results of the Pilot Study.**

The outcomes were analysed for recovery at post-treatment (cut-off score of 13 on the DASS and the BDI-II), the mean change in symptoms from baseline, mean difference in symptoms and an examination of some of the critical characteristics of clients that contributed to outcomes following the therapy. Only four participants out of eight completed the treatment. The four participants who completed the whole treatment decreased their BDI and DASS scores and increased their SRBs. In summary, of the four participants whose tests could not be counted, one was progressing well but did not attend the follow-up session, another dropped out halfway through, a third did not complete the compulsory homework and a fourth did not attend the second and subsequent sessions because of family health reasons.

**Wait-list – Pilot Study**

From Table 1, it can be seen that there was a mean difference of 1 between pre-test scores and post-test scores on the depression scale of the BDI for the no-treatment wait-list. From Table 2, it can be seen that there was a mean difference of -2.7 between pre-test scores and post-test scores on the depression scale of the DASS for the no-treatment wait-list.

**BDI – Pilot Study**

From Table 3 it can be seen that the four participants were measured at three times and that the mean score was reduced from 34 at the pre-test to 12 at the post-
test. It should also be noted that the mean difference between the pre and the post test showed a reduction of 17 points on the BDI. For the corresponding period of time the no-treatment group’s mean difference was 1. This meant that the no-treatment group’s scores changed negligibly compared to the treatment group who averaged a total of 17 points reduction on the BDI scores from pre-test to post-test. It can also be seen from Table 3 that two out of four participants had recovered by post-test and that three out of four had recovered by follow-up.

**DASS – Pilot Study**

From Table 4 it can be seen that four participants entered treatment with varying results on the DASS in the pre-test. They were tested again at post-test and at follow-up. The mean was 23 in the pre-test compared to 13 in the post-test and 9 in the follow-up. The difference between the mean scores of pre and post tests was a reduction of 10 points on the depression scale of the DASS. For the corresponding period of time the no-treatment group’s mean difference was -2.7. It was noted that one participant had recovered on the DASS by the end of therapy and that three had recovered by follow-up.

**SRBs – Pilot Study**

All four participants in the pilot study were given a set of unique statements written in the present, affirmative style, and were asked to practice those statements 50 times every day for homework. During each treatment session they were rated on their practice (belief) in those statements. From Table 5 it can be seen that all participants increased their SRBs over the four sessions and again at follow-up. The mean difference between pre-treatment and follow-up was 4.35 which indicated that they were beginning to practice what they were saying aloud. Three participants scored seven and above on the SRBs. The fourth participant improved from 2.6 to 4.3 by the end of therapy.
Table 1. Pilot Study: The BDI Scores from the Pre-test Compared to the Post-test for the Control Condition.

<table>
<thead>
<tr>
<th>Control</th>
<th>BDI Time 1</th>
<th>BDI Time 2</th>
<th>BDI Difference</th>
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</thead>
<tbody>
<tr>
<td>1</td>
<td>21</td>
<td>19</td>
<td>2</td>
</tr>
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<td><strong>27</strong></td>
<td><strong>1</strong></td>
</tr>
</tbody>
</table>

Time 1=Pre-treatment  
Time 2=Post-treatment  
Time 3=Follow-up  
BDI=Beck Depression Inventory II  
Control=Participants in the Wait-list Control condition  
Difference=Difference between Time 1 and Time 2
Table 2. Pilot Study: The DASS Scores from the Pre-test Compared to the Post-test for the Control Condition.

<table>
<thead>
<tr>
<th>Participants in the Pilot Project</th>
<th>DASS Time 1</th>
<th>DASS Time 2</th>
<th>DASS Difference</th>
</tr>
</thead>
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</tr>
<tr>
<td>7</td>
<td>14</td>
<td>22</td>
<td>-8</td>
</tr>
<tr>
<td>Average</td>
<td><strong>20</strong></td>
<td><strong>22.7</strong></td>
<td><strong>-2.7</strong></td>
</tr>
</tbody>
</table>

Time 1=Pre-treatment  
Time 2=Post-treatment  
Time 3=Follow-up  
DASS=Depression subscale of the Depression Anxiety and Stress Scales  
Control=Participants in the Wait-list Control condition  
Difference=Difference between Time 1 and Time 2
Table 3. Pilot Study: The BDI Scores from the Pre-test, the Post-test and the Follow-up Test for all Participants also Showing Difference Scores Between Pre and Post, Post and Follow-up, and Pre and Follow-up Tests.

<table>
<thead>
<tr>
<th>Participants in Pilot Project</th>
<th>BDI</th>
<th>Diff 1&amp;2</th>
<th>Diff 2&amp;3</th>
<th>Diff 1&amp;3</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time 1</td>
<td>Time 2</td>
<td>Time 3</td>
<td></td>
</tr>
<tr>
<td>1</td>
<td>27</td>
<td>10</td>
<td>10</td>
<td>17</td>
</tr>
<tr>
<td>2</td>
<td>33</td>
<td>29</td>
<td>18</td>
<td>4</td>
</tr>
<tr>
<td>3</td>
<td>42</td>
<td>11</td>
<td>8</td>
<td>31</td>
</tr>
<tr>
<td>4</td>
<td>25</td>
<td>19</td>
<td>4</td>
<td>6</td>
</tr>
<tr>
<td>Mean</td>
<td>34</td>
<td>17</td>
<td>12</td>
<td>17</td>
</tr>
</tbody>
</table>

Time 1=Pre-treatment
Time 2=Post-treatment
Time 3=Follow-up
BDI=Beck Depression Inventory
Diff=Difference scores
Table 4. Pilot Study: The Depression Anxiety Stress Scales Scores (Depression Scores Only) from the Pre-test, the Post-test and the Follow-up Test for all Participants also Showing Difference Scores Between Pre and Post, Post and Follow-up, and Pre and Follow-up tests.

<table>
<thead>
<tr>
<th>Participants in Pilot Project</th>
<th>DASS</th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Time 1</td>
<td>Time 2</td>
<td>Time 3</td>
<td>Diff 1&amp;2</td>
<td>Diff 2&amp;3</td>
<td>Diff 1&amp;3</td>
</tr>
<tr>
<td>1</td>
<td>28</td>
<td>16</td>
<td>13</td>
<td>12</td>
<td>3</td>
<td>15</td>
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<tr>
<td>2</td>
<td>20</td>
<td>16</td>
<td>3</td>
<td>4</td>
<td>13</td>
<td>17</td>
</tr>
<tr>
<td>3</td>
<td>30</td>
<td>8</td>
<td>7</td>
<td>22</td>
<td>1</td>
<td>23</td>
</tr>
<tr>
<td>4</td>
<td>13</td>
<td>13</td>
<td>14</td>
<td>0</td>
<td>-1</td>
<td>-1</td>
</tr>
<tr>
<td>Mean</td>
<td>23</td>
<td>13</td>
<td>9</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>10</td>
<td>4</td>
<td>14</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Time 1=Pre-treatment
Time 2=Post-treatment
Time 3=Follow-up
DASS=Depression subscale of the Depression Anxiety and Stress Scales
Diff=Difference scores
Table 5. Pilot Study: SRB for the Four Participants over Four Sessions of Treatment and at Follow-up.

<table>
<thead>
<tr>
<th>Participants in Pilot Project</th>
<th>Time 1</th>
<th>Time 2</th>
<th>Time 3</th>
<th>Time 4</th>
<th>FU</th>
</tr>
</thead>
<tbody>
<tr>
<td>1</td>
<td>2.6</td>
<td>2.9</td>
<td>3.2</td>
<td>3.6</td>
<td>4.3</td>
</tr>
<tr>
<td>2</td>
<td>1.4</td>
<td>3.7</td>
<td>5.6</td>
<td>7.2</td>
<td>8.3</td>
</tr>
<tr>
<td>3</td>
<td>2.7</td>
<td>6.8</td>
<td>7.2</td>
<td>6.5</td>
<td>7.0</td>
</tr>
<tr>
<td>4</td>
<td>3.1</td>
<td>4</td>
<td>5.1</td>
<td>6.7</td>
<td>7.5</td>
</tr>
<tr>
<td>Mean</td>
<td>2.45</td>
<td>4.35</td>
<td>5.30</td>
<td>6.00</td>
<td>6.80</td>
</tr>
</tbody>
</table>

Time 1=Pre-treatment  
Time 2=Post-treatment  
Time 3=Follow-up  
FU=Follow-up  
SRBs=Self Ratings of Belief
Discussion of Pilot Study

The Pilot Study was conducted so that the process for conducting the clinical trials could be perfected. Each element of the subsequent clinical trials was to be conducted by the principal researcher in the Pilot study in order to iron out any of the faults in the process. The way the participants were recruited, the administration of the BDI-II and the DASS, the clinical interview to verify the depression for inclusion and exclusion, the initial information session outlining the therapeutic process and the participant requirements, the therapist script for each of the conditions (CF, PDT, CF+PDT), the testing regime (T1, T2, T3) and thankyou letters were all elements of the Pilot Study. The Pilot Study was used to reveal corrections that were required for the Clinical trials.

Of the eight participants that started the treatment, four participants who completed the whole treatment decreased their BDI and DASS scores and increased their SRBs. Three out of four participants had recovered by follow-up on both the DASS and the BDI. Participants improved an average of 22 points on the BDI and 17 on the DASS from baseline to follow-up. These results, although small, showed some positive indication for the clinical trials (see Tables 3, 4 and 5) and provided confidence that the working hypotheses were appropriate.

Of the eight participants that started the treatment four did not finish or did not complete requisites and were disqualified. Of the four that were disqualified, Participant 5 came to four sessions but did not return for follow-up. She could not be contacted, so the results could not be used even though they were impressive – her BDI reduced from 25 to 3 points at post-test, and her DASS from 11 to 3 at post-test – indicating that she was no longer depressed, and her self-ratings of belief in her “I statement” increased from 0.9 to 6.8 indicating that she believed strong positive statements about herself. She may have felt improved so that she believed she did not need to return; however, the non-return was a loss to the study. Whether her improvements continued to six weeks following the final session is unknown.

Participant 6 began the treatment and completed the first and second sessions and did not return after that due to changed family circumstances. Over the two weeks that she received treatment her subjective ratings had increased from 1.7 to 4.2 (1.2 points
above the predicted score for that session) and she reported that she was better “some of the time”. This was a good indication that the treatment was working for her. She reported that she had completed all the homework, reading one script for 50 times a day and the second script twice a day. After the second session she reported that she still expected the treatment to work for her. She felt that her behaviour (practice, the way she did things) was more disciplined, she was more committed and more active, and she felt that she was tending not to let a day go by when she was not active. She thought that the lines that she was saying were prompting her to make the changes and that the thoughts were becoming automatic. When asked to rate the treatment on a scale of 0=low to 10=high, she rated it an 8/10 because she said she “noticed the difference”. Even though this participant’s prognosis was excellent, her results could not be included in the overall results for the pilot study. Participant 7 attended all the sessions but did not complete the full homework required on any day of the treatment. His case raised some issues for the study. He was very depressed and had been so for some years. He was referred to the program by a friend who was concerned for his safety. He felt that the causes of his depression were the death of his mother on Christmas Eve in 1990, the death of his father two years previously from cancer and the death of his aunt, his only surviving relative, soon afterwards. At the beginning of the treatment he commented, “This is pointless, why bother doing things, they’re not going to work out”. He described his attitude, “Could not care less, and feel as if I’ve lost everything”. He described his emotions as “Fragile and sad”. His score on the BDI at pre-test was 42 (clinically depressed) and his score on the DASS was 39 (extremely severe). On the subjective ratings his scores increased from 1.3 to 3.1 over four sessions. At follow-up his score was 3.1. When asked how he rated the effectiveness of the treatment on a 0=low to 10=high he replied “four because I know what I should have done”. When asked why he did not do the homework set he replied that he found it too much of an effort. His approach to the study was negative and he was unable to participate fully in the exercises. He completed some of the repetitions for home work and he did not ever complete the amount required, and then stopped doing the exercises all together as he considered that it was not helping him. He continued to come to the face-to-face sessions. The dilemma faced by the therapist was that he was receiving treatment that was not suitable for his stage of illness even though he had volunteered to receive this treatment. So the treatment continued even though the participant said he was not being helped and even though he had declined
to complete the home exercises which were a requisite of the study. His results were disqualified. Participant 8 did not attend after the first session so her scores were not included in the Pilot Study. She contacted the Pilot Project manager and asked to be excused from the study as she was having some family health issues.

The major concerns emanating from the Pilot Study were administrative and practical. As this investigation involved testing a complex therapy and not a simple exercise, there was an increase in the amount of particulars that had to be in order for the results to be valid. From the Pilot Study it became evident that there were going to be many factors that could contribute to a disqualification of results for the individuals in the study:

1. One of the issues in this longitudinal study was that all sessions, all daily fluency training and all measurements were necessary for the completion of the process which lasted over ten weeks (four sessions at one per week and a follow-up six weeks later). It became evident from the Pilot study that the attrition rate of participants in the clinical trials was going to be high, based on the 50% attrition rate of the Pilot Study participants. Participant 5 attended all sessions except the follow-up while Participant 6 and Participant 8 did not complete the first four sessions. There are a variety of reasons why a person may not be able to fulfil their obligations to the program such as a change in family circumstance experienced by Participant 6 and Participant 8. The case of Participant 5 demonstrates that circumstances can make the ten week commitment difficult to fulfil and the reasons for dropping out cannot be fully explained.

Chakraborty and Gu (2009, p.2) have stated that high rates of attrition can have important implications to a longitudinal study – the dataset can become unbalanced over time which complicates the choice of analysis; the missing data reduces the efficiency of the study; and can introduce bias that can cause misleading inferences. Intent-to-treat (ITT) has become a widely accepted method for the analysis of controlled clinical trials but there are no adequate strategies for ITT analyses for dealing with missing values of longitudinal controlled clinical trial data (Chakraborty & Gu, 2009, p.2). One issue that arose from the Pilot Study was the potential loss in research power through
attrition from the clinical trials which were to follow. The Pilot Study demonstrated that it was necessary to stress the obligation to attend the full program during the preliminary session and extra effort would have to be made to collect full contact details of each participant so that follow-up could be made.

2. It also became apparent that the fluency training given as homework was paramount and those who did not complete it could not be part of the study as the experiment was designed to measure the effect of fluency. Similar ITT issues could arise from failure to complete the integral element of the therapy – the daily repetition of the statements. The effectiveness of the therapy depended on this element even though it was incumbent upon the participants to fulfil it. Furthermore, the dilemma was that participants who were not doing their homework, such as Participant 7, continued to take up limited time allocated to the therapists and ethically they had to continue to receive the treatment for which they had volunteered but could not be included in the analysis. It was decided that participants in the clinical trials would have to be well-informed at the first session that they had to do the home exercises as it was an integral part of the therapy. As the American Psychiatric Association (2010) suggests that it appropriate for people entering therapy to discuss specific goals of therapy and that the therapist and patient should work together to monitor the progress toward the goals.

3. Because the therapists were required to follow a manual, it was important that errors were detected and changes made to the manual. Most of these changes involved rewording the scripts so that they flowed more naturally in spoken language, and the correction of grammatical and spelling. These changes were minor and no major changes such as the order of presentation, the therapeutic exercises and the process of statement creation were necessary. The therapist scripts remained basically unchanged.

The Pilot Study did not reveal any major changes that were required in the experimental design.
Chapter 5: Clinical Trial of the Efficacy of *Rewiring* in Treating Depression

Method

**Participants**

The participants in this research project were three therapists, and 67 volunteers. Regular advertisements were placed in the *West Australian* newspaper inviting participants for the study (Appendix C). All participants signed an informed letter of consent (see Appendix D). The sixty-seven participants were male and female, over the age of 18 years and under 65 years, and satisfied the exclusion criteria. The participants were assessed for levels of depressive symptomatology through self-rated measures (BDI-II, cut-off point of 13, and the DASS, cut-off point of 13). All volunteers received treatment through a system of randomisation that combined time availability of participants and therapists, and a process to ensure that equal numbers for each experimental condition. The period of waiting for the Wait-list volunteers was a minimal four weeks, similar to a client waiting-period for treatment at this private clinic.

Twenty participants were lost to the study through in-attendance and disqualification. Reasons for discontinuance included: distance to be travelled, partial completion of the program, no homework completed, and moving out of the district - 6 participants from the CF condition, 7 from the PDT condition and 7 from the combined (CF+PDT) condition were lost. There were a sufficient number of sessions (four) to complete the treatments. A check was made for concurrent mental health treatments. There were continuous checks made for internal and external threats to validity. The daily homework was added to the time taken to complete the therapy. Results were generalised to the treatment of depression in adults in other settings.

Forty-seven people completed the full therapy and their results were analysed. The demographic and clinical characteristics of participants indicated that the mean age of the participants was 47.5 years, of these 17 (38%) were male and 27 (62%) were female. They were randomly assigned to one of three therapists and one of four conditions: Treatment One (CF) with a treatment script (see Appendix F), Treatment
Two (PDT) with a treatment script (see Appendix G), Treatment Three (CF+PDT) with a treatment script (see Appendix H) or a Wait-list control condition. In the Cognitive Fluency (CF) condition there were 13 participants, in the Psychodynamic (PDT) condition there were 15 participants and in the combined Cognitive Fluency and Psychodynamic (CF+PDT) condition there were 11 participants. There were eight participants in the Wait-list control condition. An independent assessor was appointed to administer all self-report measures before treatment began, on termination of therapy, and at the 6 weeks follow-up (see Appendices E, I & K). Therapists were also asked to complete evaluation forms after each session (see Appendix J). All participants were thanked (see Appendix L). The Wait-list was assessed on all measures at the same time as the active treatment group.

**The Therapeutic Intervention**

The interventions consisted of Treatment One (CF), Treatment Two (PDT), and Treatment Three (CF+PDT). All treatments lasted four sessions, the first session lasted one hour in the first week, and the three subsequent sessions lasted between 15 and 30 minutes, over three subsequent weeks. There were three therapists involved in the clinical trial. All therapists had received training in delivery of the treatment required by the clinical trials. One therapist was a Clinical Psychologist and registered psychotherapist with over twenty years experience in psychotherapy. One of the therapists was a trained counsellor with ten years of psychotherapeutic experience and the other therapist was a trained counsellor with five years experience. All therapists received two days of training and supervised practice over a period of twelve months prior to participating in the project. Detailed manuals for all conditions ensured protocol adherence and all sessions were supervised. The therapists were instructed to carry out the four sessions with the participants as set out in the manuals in order to ensure conformity of treatment. Immediately before the project the therapists were given revision in how to use the treatment manuals. A check was kept on treatment fidelity during supervision. The therapists followed the manual throughout (see Appendices F, G & H). Homework was completed by participants for a period of approximately 15 to 30 minutes per day. With no further treatment a six-week follow-up assessment was conducted.
Results

During the analysis period the researcher used within-conditions and between-conditions analyses to examine the treatments and directly compare and contrast the four conditions.

The first step in the analytic process was to explore the characteristics of the data. All data were checked for incorrect entries. Twelve missing values were replaced by mean substitution. The Wait-list statistic for the follow-up period was obtained through mean substitution of the Pre and Post statistics as the participants could not ethically be asked to wait longer than four weeks for treatment. Normality was explored through observation of the skewness statistic, and stem and leaf observations. The three assessment measures were computed to obtain mean difference scores in order to examine change statistics. Descriptive statistics using the mean as central tendency and the standard deviation as dispersion were obtained for the three variables (BDI, DASS and SRBs) and are presented in Tables 6-12.

Baseline

A one-way ANOVA was conducted on the baseline data for the BDI, the DASS and the SRBs to ascertain equivalency of conditions (See Table 6 for baseline data on all measures). With an alpha level set at .05, there were no statistical differences found between the experimental groups and the control group $\eta^2 = .01, 0.2$. An independent samples t-test was conducted on the SRBs between the three experimental groups. With an alpha level set at .05, there were no statistically significant differences between the conditions. From Table 6 it can be seen that baseline data is evenly distributed over the conditions.
### Table 6. Clinical Trial: Baseline Data for All Measures

<table>
<thead>
<tr>
<th>Measure</th>
<th>CF (n=13)</th>
<th>PDT (n=15)</th>
<th>CF+PDT (n=11)</th>
<th>WL (n=8)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>BDI 0-63</td>
<td>28.00</td>
<td>10.38</td>
<td>30.13</td>
<td>10.86</td>
</tr>
<tr>
<td>DASS 0-42</td>
<td>21.46</td>
<td>9.62</td>
<td>24.40</td>
<td>9.27</td>
</tr>
<tr>
<td>SRBs 0-10</td>
<td>2.76</td>
<td>1.06</td>
<td>3.03</td>
<td>1.59</td>
</tr>
</tbody>
</table>

SRBs=Subjective Ratings of Belief  
DASS=Depression Subscale of the Depression Anxiety and Stress Scales (0-42)  
BDI=Beck Depression Inventory-II (Ratings from 0 to 63)  
CF=Cognitive Fluency Condition  
PDT=Psychodynamic Condition  
CF+PDT=Cognitive Fluency Condition+Psychodynamic Condition  
WL=Wait-List Control Condition  

Note: There were no SRBs for the control condition as they did not participate in the clinical trial.
**Therapist Variable – Clinical Trial**

Mixed ANOVAs were used to examine the impact of the three therapists on the DASS, the BDI and the SRBs. All assumptions were tested indicating support for normality and homogeneity. The ANOVAs indicated that there was no difference in results between therapists at Post-test $F(2,38) =1.183, p = .318, \eta^2 = 0.06$ or at Follow-up $F(2,38) = .142, p = .868, \eta^2 = .01$ on the BDI, there was no difference between therapists at Post-test $F(2,38) = .208, p = .813, \eta^2 = .01$ or at Follow-up $F(2,38) = .271, p = .764, \eta^2 = .02$ on the DASS, nor was there any difference between therapists at Post-test $F(2,38) = .932, p = .403, \eta^2 = .05$ or at Follow-up $F(2,38) = 1.60, p = .217, \eta^2 = .08$ on the SRBs.

**Between Conditions Overall – Clinical Trial**

One-way ANOVAs were used to examine the impact of the three conditions (CF, PDT and CF+PDT) on the BDI, the DASS and the SRBs at Post-treatment and at Follow-up. Before interpreting the outcomes assumptions were tested showing support for normality and homogeneity of variance.

**BDI Between Conditions – Clinical Trial**

For the BDI (Table 7) there was found to be a significant effect at Post-test $F(3,46)=9.206, p = .000, \eta^2 = .39$ compared to the Wait-list. Post hoc comparisons indicated that all three conditions had a significant effect at Post-test with CF ($p = .003$), PDT ($p = .005$) and CF+PDT ($p = .000$) all showing efficacy. In a comparison of the three conditions there was no significant difference on the BDI at Post-test $F(2,38)=1.193, p = .315$. However, CF+PDT lowered the BDI scores below the cut-off point of 13 both at Post-test (6.55) and at Follow-up (4.09). The CF condition had also lowered the BDI scores below the cut-off point of 13, both at Post-test (12.92) and at Follow-up (11.15), proving to be efficacious. The PDT also lowered the BDI mean score to 13.67 at Post-test and then below the cut-off point of 13 to 12.13 at Follow-up, proving efficacious. However, the condition which led to the greater change was condition 3, CF+PDT, which was 4.09 at Follow-up compared to 11.15 for CF and 12.13 for the PDT.
Table 7. Clinical Trial: The Effect of Three Experimental Conditions on the BDI at Three Measurement Times with Asterisks Indicating Significant Results Between Conditions Compared to a Wait-list.

<table>
<thead>
<tr>
<th>Condition</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
<th>Mean</th>
<th>SD</th>
</tr>
</thead>
<tbody>
<tr>
<td>CF</td>
<td>28.00</td>
<td>10.38</td>
<td>30.13</td>
<td>10.86</td>
<td>28.46</td>
<td>8.04</td>
<td>27.75</td>
<td>9.88</td>
</tr>
<tr>
<td>CF+PDT</td>
<td>11.15</td>
<td>7.56</td>
<td>12.13</td>
<td>11.15</td>
<td>4.09</td>
<td>2.63</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

BDI=Beck Depression Inventory-II (Ratings from 0 to 63)
CF=Cognitive Fluency Condition
PDT=Psychodynamic Therapy Condition
CF+PDT=Cognitive Fluency +Psychodynamic Therapy Combined Condition
WL=Wait-List Control Condition
Time 1=Pre-treatment Measures
Time 2=Post-treatment Measures
Time 3=Follow-up Measures
** p<.01, ***p=.000
**DASS Between Conditions – Clinical Trial**

For the DASS (Table 8) there was a significant effect at Post-test $F(3,46) = 4.068$, $p = .012$, $\eta^2 = 0.2$ compared to a Wait-list. Post hoc comparisons indicated that the combined treatment CF+PDT had a significant effect at Post-test ($p = .008$) compared to the other conditions and all three conditions continued to decrease their scores at Follow-up.

In a comparison of the three experimental conditions on the DASS, two conditions, CF and CF+PDT, had reduced the mean DASS to below the cut-off point of 13 by Post-test and all conditions had reduced the DASS scores to below the cut-off point of 13 at Follow-up. However, a comparison of the reduction of the mean DASS scores showed that CF+PDT (24.36 to 6.73 to 4.91) reduced the depression scores more than the CF (21.46 to 12.00 to 8.69) and PDT (24.40 to 14.53 to 9.87). CF+PDT was significantly better than PDT at the .05 level at Post-test $F(2,38) = 3.259$, $p = .050$. 
Table 8. Clinical Trial: The Effect of Three Experimental Conditions and a Control Condition on the DASS-Depression Subscale at Three Measurement Times with Asterisks Indicating Significant Results Between Conditions.

<table>
<thead>
<tr>
<th></th>
<th>CF</th>
<th>PDT</th>
<th>CF+PDT</th>
<th>WL</th>
</tr>
</thead>
<tbody>
<tr>
<td>n</td>
<td>13</td>
<td>15</td>
<td>11</td>
<td>8</td>
</tr>
<tr>
<td>DASS 0-42</td>
<td>Mean</td>
<td>SD</td>
<td>Mean</td>
<td>SD</td>
</tr>
<tr>
<td>Time 1</td>
<td>21.46</td>
<td>9.62</td>
<td>24.40</td>
<td>9.27</td>
</tr>
<tr>
<td>Time 2</td>
<td>12.00</td>
<td>9.82</td>
<td>14.53</td>
<td>9.86</td>
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<tr>
<td>Time 3</td>
<td>8.69</td>
<td>7.97</td>
<td>9.87</td>
<td>9.34</td>
</tr>
</tbody>
</table>

DASS=Depression Subscale of the Depression Anxiety and Stress Scales (Ratings from 0-42)
CF=Cognitive Fluency Condition
PDT=Psychodynamic Therapy Condition
CF+PDT=Cognitive Fluency +Psychodynamic Therapy Combined Condition
WL=Wait-List Control Condition
Time 1=Pre-treatment Measures
Time 2=Post-treatment Measures
Time 3=Follow-up Measures
*p<.05, ** p<.003, ***p=.000
### SRBs Between Conditions – Clinical Trial

A one-way ANOVA was used to examine the impact of the three conditions on the SRBs at Post-treatment and at Follow-up (Table 9). There were no significant differences between the three conditions at Post-test $F(2,38) = 1.63, p = .209, \eta^2 = 0.08$ although the combined treatment showed a better result than the other two conditions at Follow-up.

A comparison of the three conditions revealed that no condition stood out as being significantly superior than the other two at Post-test $F(2,36) = 1.16, p = .339, \eta^2 = 0.08$. The mean increase of the SRBs from Pre to Post to Follow-up, CF (2.76 to 5.69 to 6.26) and PDT (3.03 to 6.73 to 7.17) and the CF+PDT (2.63 to 6.49 to 7.6) all showed gains. However, CF+PDT showed a higher result.
Table 9. Clinical Trial: The Effect of Three Experimental Conditions on SRBs at Three Measurement Times with Asterisks Indicating Significant Results Between Conditions.

<table>
<thead>
<tr>
<th></th>
<th>CF</th>
<th>PDT</th>
<th>CF+PDT</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n= 13</td>
<td>n= 15</td>
<td>n= 11</td>
</tr>
<tr>
<td>SRBs 1-10</td>
<td>Mean SD</td>
<td>Mean SD</td>
<td>Mean SD</td>
</tr>
<tr>
<td>Time 1</td>
<td>2.76 1.06</td>
<td>3.03 1.59</td>
<td>2.63 1.19</td>
</tr>
<tr>
<td>Time 2</td>
<td>5.69 1.31</td>
<td>6.73 1.67</td>
<td>6.49 1.72</td>
</tr>
<tr>
<td>Time 3</td>
<td>6.26 1.45</td>
<td>7.17 1.25</td>
<td>7.6  1.48</td>
</tr>
</tbody>
</table>

SRBs=Self Ratings of Belief
CF=Cognitive Fluency Condition
PDT=Psychodynamic Therapy Condition
CF+PDT=Cognitive Fluency +Psychodynamic Therapy Combined Condition
Time 1=Pre-treatment Measures
Time 2=Post-treatment Measures
Time 3=Follow-up Measures
  * p<.05
Within Conditions – Clinical Trial

One-way repeated measures ANOVAs were used to investigate the impact of the type of therapy on the DASS, the BDI and the SRBs.

BDI Within, All Conditions CF – Clinical Trial

The BDI was administered pre-treatment, post-treatment and at follow-up to the three conditions. The Shapiro-Wilk and F max statistics were used to test assumptions of normality and homogeneity of variance respectively. Neither was violated. Mauchly’s test of sphericity was significant (p=.002). Consequently, the Huynh-Feldt correction was employed. The repeated measures ANOVA indicated that the BDI ratings did change significantly over time in the condition, $F(1.67, 6028) = 96.04, \ p= .000$. Tabachnick and Fidell (2007) advise against using partial $\eta^2$ (effect size) when the sphericity cannot be assumed they recommend calculating a lower-bound estimate of eta squared instead hence $\eta^2$ in this case is 0.63. A series of pair-wise comparisons revealed that the average pre-treatment BDI score for condition CF ($M=28.00$, $SD=10.37$) was significantly different to the average post-treatment BDI score ($M=12.92$, $SD=8.72$). There was a significant effect between Time 1 and Time 2 ($15.08$ points difference, $p= .001$), and Time 1 and Time 3 ($16.85$ points difference, $p= .001$) but not between Time 2 and Time 3 ($1.77$ points difference, $p=.4$). A series of pair-wise comparisons showed that the average pre-treatment BDI score for condition PDT ($M=30.13$, $SD=10.86$) was different to the average post-treatment BDI score ($M=13.66$, $SD=9.43$). Pair-wise comparisons showed there was a significant effect between Time 1 and Time 3 ($18.00$ points difference, $p= .000$), and Time 1 and Time 2 ($16.47$ points difference, $p=.000$) but not between Time 2 and Time 3 ($1.53$ points difference, $p=.334$). A series of pair-wise comparisons revealed that the average pre-treatment BDI score within condition CF+PDT ($M=28.45$, $SD=8.04$) was significantly different to the average post-treatment BDI score ($M=6.55$, $SD=6.56$). Pair-wise comparisons showed there was a significant effect between Time 1 and Time 3 ($21.91$ points difference, $p= .000$), and Time 1 and Time 2 ($24.36$ points difference, $p=.000$) but not between Time 2 and Time 3 ($2.45$ points difference, $p=.222$). See Table 10.
Table 10. Clinical Trial: Mean Difference Scores Within Conditions on BDI (0-63) for Four Conditions

<table>
<thead>
<tr>
<th></th>
<th>CF</th>
<th>PDT</th>
<th>CF+PDT</th>
<th>WL</th>
</tr>
</thead>
<tbody>
<tr>
<td>BDI</td>
<td>n=13</td>
<td>n=15</td>
<td>n=11</td>
<td>n=8</td>
</tr>
<tr>
<td>T1</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>T2-T1</td>
<td>15.08**</td>
<td>16.47***</td>
<td>21.92***</td>
<td>0.37</td>
</tr>
<tr>
<td>T3-T1</td>
<td>16.85**</td>
<td>18.00***</td>
<td>24.37***</td>
<td></td>
</tr>
<tr>
<td>T3-T2</td>
<td>1.76</td>
<td>1.50</td>
<td>2.45</td>
<td></td>
</tr>
</tbody>
</table>

BDI=Beck depression Inventory II  
CF=Cognitive Fluency Condition  
PDT=Psychodynamic Therapy Condition  
CF+PDT=Cognitive Fluency +Psychodynamic Therapy Combined Condition  
WL=Wait-List Control Group  
**p=.001, ***p=.000

Notes: Difference scores are calculated by subtracting mean scores at post-treatment (T2) from mean scores at pre-treatment (T1), and mean scores at follow-up (T3) from mean scores at pre-treatment (T1) and mean scores at follow-up (T3) from mean scores at post-treatment (T2) to give an overall change statistic.
**DASS Within, All Conditions – Clinical Trial**

The DASS was administered pre-treatment, post-treatment and at follow-up to all conditions. The Shapiro-Wilk and *F* max statistics were used to test assumptions of normality and homogeneity of variance respectively. Neither was violated. However, Mauchly’s test indicated that the sphericity assumption was violated (*p* = .000). Consequently, the Huynh-Feldt correction was employed. The repeated measures ANOVA indicated that the DASS ratings did change significantly over time, *F*(1.6, 55.84) = 80.69, *p* = .000, η² = .6. A series of pair-wise comparisons revealed that the average Pre-treatment DASS score for condition CF (*M* = 21.46, *SD* = 9.62) was significantly different to the average Post-treatment DASS score (*M* = 12.00, *SD* = 9.82) but not the average Follow-up score (*M* = 8.69, *SD* = 7.97). There was a significant effect between Time 1 and Time 3 (12.769 points difference, *p* = .001), and Time 1 and Time 2 (9.462 points difference, *p* = .008), but not between Time 2 and Time 3 (3.31 points difference, *p* = .062). A series of pair-wise comparisons revealed that the average Pre-treatment DASS score for condition PDT (*M* = 24.4, *SD* = 9.27) was different to the average Post-treatment DASS score (*M* = 14.53, *SD* = 9.96) and Follow-up DASS score (*M* = 9.87, *SD* = 9.34). There was a significant effect between Time 1 and Time 3 (14.53 points difference, *p* = .000), and Time 1 and Time 2 (9.87 points difference, *p* = .002), and also between Time 2 and Time 3 (4.67 points difference, *p* = .004). A series of pair-wise comparisons revealed that the average pre-treatment DASS score for the combined condition CF+PDT (*M* = 24.36, *SD* = 8.09) was significantly different to the average post-treatment DASS score (*M* = 6.72, *SD* = 5.00). Pair-wise comparisons showed there was a significant effect between Time 1 and Time 3 (17.63 points difference, *p* = .000), and Time 1 and Time 2 (19.46 points difference, *p* = .000) but not between Time 2 and Time 3 (1.82 points difference, *p* = .165). See Table 11.
### Table 11. Clinical Trial: Mean Difference Scores Within Conditions on DASS for Four Conditions

<table>
<thead>
<tr>
<th></th>
<th>CF</th>
<th>PDT</th>
<th>CF+PDT</th>
<th>WL</th>
</tr>
</thead>
<tbody>
<tr>
<td>DASS 0-42</td>
<td>n=13</td>
<td>n=15</td>
<td>n=11</td>
<td>n=8</td>
</tr>
<tr>
<td>T1</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>T2-T1</td>
<td>9.46*</td>
<td>9.87**</td>
<td>17.63***</td>
<td>1.20</td>
</tr>
<tr>
<td>T3-T1</td>
<td>12.77**</td>
<td>14.53***</td>
<td>23.35***</td>
<td></td>
</tr>
<tr>
<td>T3-T2</td>
<td>3.31</td>
<td>4.67**</td>
<td>1.82</td>
<td></td>
</tr>
</tbody>
</table>

DASS=Depression Anxiety and Stress Scales  
CF=Cognitive Fluency Condition  
PDT=Psychodynamic Therapy Condition  
CF+PDT=Cognitive Fluency +Psychodynamic Therapy Combined Condition  
*<.05, **p<.01, ***p=.000

Notes: Difference scores are calculated by subtracting mean scores at post-treatment (T2) from mean scores at pre-treatment (T1), and mean scores at follow-up (T3) from mean scores at pre-treatment (T1) and mean scores at follow-up (T3) from mean scores at post-treatment (T2) to give an overall change statistic.
**SRB Within, All Conditions – Clinical Trial**

The SRBs were administered pre-treatment, post-treatment and at follow-up to the CF condition. The Shapiro-Wilk and $F_{max}$ statistics were used to test assumptions of normality and homogeneity of variance respectively. Neither was violated. However, Mauchly’s test indicated that the sphericity assumption was violated ($p=.001$). Consequently, the Huynh-Feldt correction was employed. The repeated measures ANOVA indicated that the SRBs did change significantly over time, $F(1.63, 58.51) =178.64, p=.000$, $\eta^2 = .63$. A series of pair-wise comparisons revealed that the average pre-treatment SRB score for condition CF ($M =2.76$, $SD=1.06$) was different to the average post-treatment SRB score ($M=5.68$, $SD =1.3$). There was a significant effect between Time 1 and Time 3 (3.5 points difference, $p=.000$), and Time 1 and Time 2 (2.93 points difference, $p=.000$), and also between Time 2 and Time 3 (.57 points difference, $p=.020$). A series of pair-wise comparisons revealed that the average pre-treatment SRB score for condition PDT ($M =3.03$, $SD=1.59$) was different to the average post-treatment SRB score ($M=6.73$, $SD =1.67$). There was a significant effect between Time 1 and Time 3 (4.13 points difference, $p=.000$), and Time 1 and Time 2 (3.7 points difference, $p=.000$), but not between Time 2 and Time 3 (.43 points difference, $p=.020$). A series of pair-wise comparisons revealed that the average Pre-treatment SRB score for the combined condition CF+PDT ($M =2.63$, $SD=1.19$) was significantly different to the average Post-treatment SRB score ($M=6.49$, $SD =1.72$) and Follow-up SRB score. There was a significant effect between Time 1 and Time 3 (4.97 points difference, $p=.000$), Time 1 and Time 2 (3.86 points difference, $p=.000$), and also between Time 2 and Time 3 (1.11 points difference, $p=.001$). See Table 12.
Table 12. Clinical Trial: Mean Difference Scores for SRBs for Three Conditions

<table>
<thead>
<tr>
<th></th>
<th>CF</th>
<th>PDT</th>
<th>CF+PDT</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>SRBs 0-10</strong></td>
<td>n = 13</td>
<td>n = 15</td>
<td>n = 11</td>
</tr>
<tr>
<td>T1</td>
<td>0.00</td>
<td>0.00</td>
<td>0.00</td>
</tr>
<tr>
<td>T2-T1</td>
<td>2.93***</td>
<td>3.70***</td>
<td>3.86***</td>
</tr>
<tr>
<td>T3-T1</td>
<td>3.50***</td>
<td>4.13***</td>
<td>4.97***</td>
</tr>
<tr>
<td>T3-T2</td>
<td>0.57*</td>
<td>0.43*</td>
<td>1.11**</td>
</tr>
</tbody>
</table>

SRBs=Self Ratings of Belief
CF=Cognitive Fluency Condition
PDT=Psychodynamic Condition
CF+PDT=Cognitive Fluency +Psychodynamic Combined Condition
WL=Wait-List Control Condition
• p< .05, ** p=.001, *** p=.000

Notes: Difference scores are calculated by subtracting mean scores at post-treatment (T2) from mean scores at pre-treatment (T1), and mean scores at follow-up (T3) from mean scores at pre-treatment (T1) and mean scores at follow-up (T3) from mean scores at post-treatment (T2) to give an overall change statistic.
Case Studies

Two case studies from each condition – wait-list, Cognitive Fluency (CF), Psychodynamic Therapy (PDT) and a combination CF+PTD – are presented in this section. An investigation of these case studies is necessary to put a human face to the statistical analysis. Numerical descriptors have been used throughout the empirical clinical trial - all subjects have initially scored at elevated levels on the DASS and BDI-II, asked to score their SRBs after being placed into differing treatments, and been retested with DASS, BDI-II and SRBs at appropriate intervals. Statistical analyses gives clinicians empirical evidence of treatment efficacy, comparison of treatment modalities, levels of client improvement and enables prediction of client improvement. Rewiring utilises the benefits of scientist-practitioner empirical evidence even though the scientist-practitioner also needs to observe and cater for individual client differences. The therapeutic modality was designed to observe and record individual differences at presentation, devise individualised scripts, and react to therapy as unique individuals. In order to capture these individual differences at each stage of therapy, case studies have been included for analysis.

Two Examples of Wait-list Participants

Participant No.8 (Wanda) was a 46 year old female born in 1960 who worked as a neurology clerk at a large hospital. She had been previously married for 6 years, had since divorced and then been remarried for a further 6 years. She was taking 30 mgs per day of Lovan, an antidepressant, and had been on the same medication for three to four years. She reported that she did not self-medicate with any other drugs, did not drink alcohol and was a non-smoker. She had been diagnosed with depression about four or five years previously and had been to psychologists on and off over the past 10 years. When asked why she came for help Wanda replied, ‘I want to feel good without medication and to deal with my emotions. I get depressed about my weight. I have lost enthusiasm and motivation to diet. There are also some family issues at the root of my depression.’ With regard to her emotions, Wanda reported that she was critical of herself, had low self-esteem, felt sad, and was too serious, too critical of others, felt irritable, moody, guilty and indecisive. She felt fat and often did not want
Rewiring Head and Heart

to talk about anything, and in fact, found that most of her thoughts were negative. She felt she had become lazy and recalled how she had been such an obsessive “clean freak”. She felt disappointed with herself, felt she could have done more but did not have the drive and motivation. Wanda scored 8 points for depression on the DASS which put her in the ‘high normal’ scales and she scored 25 on the BDI which put her in the clinically depressed zone according to the questionnaire. After the wait period of four weeks, Wanda was assessed once again on all measures. She scored 11 points for depression placing her in the mildly depressed range on the DASS, and 28 points on the BDI, once again placing her in the clinically depressed range. Wanda’s condition had deteriorated over the wait period.

Participant 15 (Wally) was a 35 year old single male who was currently unemployed; however, he had previously been involved in sales. He reported that he had been taking Arapax, an antidepressant, for years, but was not currently on any medication. He was a cigarette smoker and also smoked cannabis once a week. He had been diagnosed with depression three years previously. He also noted the same depressive symptoms in relatives and would like to be able to give them some advice on how to cope, or share mechanisms and coping strategies. With regard to his emotions Wally reported that he was short-tempered, irritable, angry, despondent and sad. In regard to his thoughts he reported that he was not conscious of what he was thinking and wondered how he got into such a state of unawareness. During the interview he wondered aloud how he was going to get out of the position he was in. He felt that he had become introverted. In the family he had become a mediator for family arguments and more of an observer, trying to work out the dynamics of the family. He had found that he was watching others having interactions but he himself had become socially phobic. Wally scored 34 points for depression on the DASS which put him in the ‘extremely severe’ range. He also scored 37 points on the BDI which put him in the ‘clinically depressed’ range. After the wait period of 4+ weeks, Wally returned to be re-assessed. He scored 40 points for depression placing him in the “extremely severe” range on the DASS, and 44 points on the BDI, once again placing him in the ‘clinically depressed’ range. Wally’s condition had worsened over the wait period.

Both Wally and Wanda were subsequently offered and accepted treatment at the clinic.
Two Examples of CF Participants

Participant 64 (Ann) was a 53 year old single woman working as a fruit-picker who was on no medication. She came for help because she wanted to avoid going back into “being a depressed, anxious mess”. Her relationship had broken up and she wanted some support. She said, “I’ve been depressed and sad since childhood. Hopefully your research can assist others like me and prevent someone from so much sadness. I would like to be more social and have more positive experiences. I’m tired of a sad and misery-focused life. I have wasted too many years. I’m tired of reliving crap from the past and I don’t want to go back to my counsellor.” At pre-treatment, Ann scored 18 out of 63 on the BDI and 17 on the depression subscale of the DASS which is in the 90th percentile, registering in the “moderate” range. She wanted to feel successful, sociable and happy.

Being in the CF experimental condition, Ann was assisted to construct an “I Am” script and was given daily homework to complete over the period of therapy. In the first session, Ann rated her belief in the “I Am’s” as 2.8 average on a 10 point scale. Ann completed all required homework and returned for each of the three remaining sessions. At the completion of the therapy, Ann scored 10 out of 63 on the BDI and 14 on the depression subscale of the DASS which is in the 88th percentile, registering in the ‘moderate’ range. Her self-rating on the “I Am’s” was 5.1/10 which she felt was low because she said “It has been a difficult last ten days. My best friend is away. I have no work and it's lonely but the phrases from my Goal Statement enter my daily thought and guide me.” Six weeks later, having had no further face-to-face therapy she attended the follow-up session and scored 2 out of 63 on the BDI and 4 on the depression subscale of the DASS which is in the 40th percentile, registering in the ‘normal’ range and her ratings of belief in the “I Am’s” as 6.6/10. The aspect of the treatment she found most helpful was talking to the therapist and repeating her scripts. She believed that she had progressed towards achieving her goals.

Participant 35 (Alice) was a 37 year old divorced woman working as a clerk. Up until two years previously, she reported taking speed and ecstasy. She related how she had recently been raped, had been trying to keep away from medication, been depressed for a long time and needed a “push in the right direction because she felt
stuck”. She was sick and tired of feeling miserable and believed she needed an outside perspective. She wanted to feel optimistic, energetic and successful. She scored her emotions and thoughts at 2/10 and described her emotions as unbalanced and her thoughts disordered. At pre-treatment, Alice scored 45 out of 63 on the BDI and 37 on the depression subscale of the DASS which is in the 99.5th percentile, registering in the “severely depressed” range.

As a participant in the CF trial, Alice was assisted to construct an “I Am” script and was given daily homework to complete over the period of therapy. In the first session, Alice rated her “I Am” script as a 1.2 average on a 10 point scale. Alice completed all required homework for three weeks. However, she experienced a trauma and did not complete her full homework in the fourth week and her ratings of belief in the “I Am’s” plateaued during this time. At the completion of the fourth session of therapy, Ann scored 8 out of 63 on the BDI and 6 on the depression subscale of the DASS which is in the 60th percentile, registering in the ‘normal’ range. Her SRBs on the “I Am’s” was 5.3/10. At follow-up, six weeks later, having had no further face-to-face therapy Alice scored 15 out of 63 on the BDI and 10 on the depression subscale of the DASS which is in the 79th percentile, registering in the “mild” range, and her ratings of belief in the “I Am’s” were 7.5/10. Alice commented,

During the last few weeks I have resolved to take my rapist to court so I am facing up to many things, hidden things, which are being dealt with. This therapy is empowering. It has helped with the rest of my life, not just the things on the list.

Alice believed that she was now optimistic and focused and had improved energy. I benefited from this treatment by changing the negative thoughts running through my head into positive thoughts. The words I read every day reminded me to improve myself. I looked forward more towards each day and have been enlightened how to face my fears and stop running and hiding. It has given me a strength and optimism that I needed.

The aspect of the treatment she found most helpful was repeating the scripts and she believed that she had progressed towards achieving her goals.
Two Examples of PDT Participants

Participant 48 (Brenda) was a 56 year old divorced woman who worked as a home help. She had been taking medication for depression since 1998. When asked why she came for help she replied that she wanted to find out more about depression and to get things off her chest because she tended to “bottle things up”. There had been three suicides amongst her siblings, her mother had died of cancer when she was ten and her father had passed away more recently. She said that depression ran in the family. At pre-treatment, Brenda scored 19 points out of 63 on the BDI and 16 on the depression subscale of the DASS which is in the 90th percentile, registering “Moderate”. She wanted to feel energetic, normal and satisfied.

As a participant in the PDT trial, she was given psychodynamic treatment and a “Be” script that she rated as 5/10 in the first session. She completed all the other PDT exercises during the next three sessions and rated her belief as 8/10 in the script at the fourth and final session. At session 4, Brenda scored 11 points out of 63 on the BDI and 6 on the depression subscale of the DASS which is in the 60th percentile, registering in the “normal” range. Six weeks later, at follow-up, Brenda scored 8 points out of 63 on the BDI and 2 on the depression subscale of the DASS which is in the “normal” range and she rated her belief in her statement as 9/10. She commented:

This has helped me so much because six months ago I was going through an awful time and didn’t know where I was and where I was going. I am so much more in control now. I am so much better thanks to this program.

The aspect of the treatment she found most useful was talking to the therapist. Brenda believed her behaviour had changed greatly for the better (10/10) and she had achieved her goals (10/10). She believed the treatment was effective (9/10).

Participant 53 (Betty) was a 34 year-old single female who worked in the YMCA. She attended fortnightly counselling and was not currently smoking, taking drugs, or excessive alcohol. Betty came for help because she was suffering from depression and because her family had a history of depression. Betty reported that she had faced an uphill battle with depression since high-school and used to self-medicate with alcohol. She said, “I know there is a family problem with depression and I am learning that the way I feel is not how everyone else does. I want to stop feeling like every day is a battle to get through. I want to be happy, grateful and to
enjoy life. I would prefer to work without drugs. I feel that I am missing out as life passes by.” At the pre-treatment, Betty rated her emotions at 3/10 and described them as “unbalanced”, rated the ordering of her thoughts at 4/10, and described her attitudes as “negative” rating 2/10. She hoped that this treatment would work for her. Betty scored 13 points out of 63 on the BDI and 26 points on the depression subscale of the DASS which is in the 98th percentile, registering in the “severe” range. Betty reported that she had a very judgemental and negative father and she had suffered with a lot of negative thoughts about herself. She felt stupid, lacked self confidence, felt inadequate, confused, self conscious, indecisive and ashamed. She expressed a desire to be happy, whole and satisfied at the completion of the program.

As a participant in the PDT trial, Betty was given psychodynamic treatment including a “Be” script that she rated as 5/10 in the first session. She attended the next three sessions and in the fourth and final session she scored 5 points on the BDI and 6 points on the depression subscale of the DASS which was about the 60th percentile, registering in the “normal” range. She rated her beliefs in the “Be” script as 8/10. When asked what aspect of the treatment she found most helpful, she replied, “Talking to the therapist.” She rated the change in her behaviour as 8/10, the balance of her emotions as 8/10, the ordering of her thoughts as 8/10 and her attitude as positive. She stated:

I feel this worked well for me as I have already taken part in a fair amount of counselling and it was easy to understand and put the concepts into practice.

Six weeks later, with no further face-to-face therapy Betty scored 2 points on the BDI and 2 points on the depression subscale of the DASS which is in the “normal” range. Her self-ratings of belief in the “Be” script rose to 8.5/10. She stated, “I am able to pull my way out of the down days much more quickly and effectively.”

**Two Examples of CF+PDT Participants**

Participant 41 (Carl) was a 33 year old electro-plater who was in a de facto relationship. He admitted to self-medicating with alcohol as he had been depressed for seven years and had been on a roller coaster of trying new medications to get some relief. He perceived that when he got angry his depression would return and his binge
drinking would increase. He expressed that he wanted to feel fulfilled with himself in mind, body and soul and feel complete and at rest with his thoughts. He commented that he was sick of feeling flat, irritable, angry and frustrated. He felt that his emotions were unbalanced, his thoughts disordered and his attitude negative. He scored 27 out of 63 on the BDI and 36 on the depression subscale of the DASS which is in the 99th percentile, in the “extremely severe” range. He wanted to feel focussed, hopeful and secure.

Being in the combined CF and PDT trial, Carl was assisted to make an “I Am” script, a “Be” script, was given psychodynamic treatment and daily homework to complete over the period of therapy. In the first session, Carl rated his belief in the “I Am” scripts as 3.2 on a 10 point scale and his belief in the “Be” statements as a 5 on a 10 point scale. Carl completed all required homework and returned for each of the three remaining sessions. At the completion of the therapy, Carl scored 16 out of 63 on the BDI and 10 on the depression subscale of the DASS which is in the 80th percentile, registering in the “mild” range. On the “I Am’s” he rated himself as 5.1/10 and on the “Be’s” he rated himself 7/10. Six weeks later, having had no further face-to-face therapy he attended the follow-up session and scored 2 out of 63 on the BDI and 2 on the depression subscale of the DASS which is well within the ‘normal’ range. His self-ratings of belief were 7/10 for the “I Am’s” and 8/10 for “The Be’s”. Aspects of the treatment that he found most helpful were talking to the therapist and repeating his statements. On a 0 to 10 scale, he felt that his behaviour had changed (8/10) and he had progressed towards achieving his goals (8/10). He rated the effectiveness of the treatment as a 9/10 and rapport with the therapist as a 9/10. Carl commented that he was “absolutely rapt” and he felt very positive about the treatment. He believed that his emotions were balanced (8/10), his thoughts ordered (8/10) and his attitude was positive (9/10). Carl commented that the therapy helped him change the way he looked at situations.

Participant 39 (Carol) was a 60 year old married woman on a disability pension. She was taking Lexapro for depression and Zanax for anxiety. Carol said that when she heard about the trial, it sounded like a gift. She liked the idea of being able to help herself and commented, “Life is not meant to be like this”. She wanted to improve her sense of well-being. She wanted to let go of negative thoughts such as
expecting an accident to occur when travelling in a car. She wanted to regain her old self prior to a car accident in April 2005. Carol’s pre-therapy scores were 25 out of 63 on the BDI and 13 on the depression subscale of the DASS which is in the 87th percentile, registering in the “moderate” range. By the end of the treatment she wanted to feel happy, capable and sociable. Carol was very talkative and keen to participate. She rated her emotions at 2/10 and described them as “unbalanced”, her thoughts “disordered” and rated at 1/10 and her attitude as “negative” and rated at 2/10.

Being in the combined CF and PDT trial, Carol was assisted to make “I Am” statements and “Be” statements, given psychodynamic treatment and given daily homework to complete over the period of therapy. In the first session, Carol rated her belief in the “I Am” statements as 1.7/10 and the “Be” statements as 4/10. Carol completed all required homework and returned for treatment in each of the three remaining sessions. At the completion of the therapy, Carol scored 1 out of 63 on the BDI and 0 on the depression subscale of the DASS which is in the “normal” range. Carol commented that she was putting the words into actions and said,

I am amazed at how effective this treatment has been. I truly hope others obtain as much benefit as I have. It has been no problem to come here and I feel so much improved in such a short time.

At post-treatment Carol rated her belief in the “I Am’s” as 6.7/10, and 7/10 on “The Be’s”. Six weeks after the end of treatment, having had no further face-to-face therapy she attended the follow-up session and scored 1.5 out of 63 on the BDI and 0 on the depression subscale of the DASS which is in the “normal” range. She rated her beliefs at 7.9/10 on the “I Am’s” and 8/10 on “The Be’s”. Aspects of the treatment that she found helpful were talking to the therapist and repeating her scripts. She rated her behaviour change as 10/10 and her progress towards achieving her goals as 9/10. She rated the effectiveness of the treatment as 10/10. She felt balanced in her emotions which she rated at 9/10, ordered in her thoughts rated at 10/10, and her attitudes were positive and rated at 10/10. Carol believed that the treatment had been highly effective and commented, “This was one of the most worthwhile things I have ever done in my whole life.”
Chapter 6: Discussion of the Efficacy of Rewiring as a Treatment Modality

This project has a two-fold purpose: To (1) qualitatively examine Rewiring, to discuss its content and merits to observe how the two main components contribute singly and together to the overall impact of the treatment, and to (2) quantitatively assess Rewiring through an efficacy study that seeks to answer the question, “What is the efficacy of Rewiring as a psychotherapeutic treatment modality?” by examining the effect of four sessions of Treatment One (CF), four sessions of Treatment Two (PDT) and four sessions of the combined treatment (CF+PDT) on depression in adult volunteers.

In this section the efficacy and limitations for each of the conditions are discussed and the implications of the results from this study for application in clinical practice are considered. With four groups and a medium effect size, a researcher would require about 150 participants to complete this study. The n was inadequate in this case to answer the test the hypotheses; however, results indicate direction and effective therapy. Also, because “no adequate strategy exists for ITT analyses of longitudinal controlled clinical trial data with missing values” (Chakraborty & Gu, 2009, pp.2-9), there was no option but to exclude participants who did not complete the full course of treatment and to use ad hoc imputations or a mixed model approach.

The results and case studies of wait-list participants showed no improvement in their psychological condition over the four weeks. Wanda, a wait-list participant, deteriorated over the four week waiting period (from 8 to 11 on the DASS and 25 to 28 on the BDI-II) and another wait-list participant, Wally, also deteriorated over the four week waiting period (from 34 to 40 on the DASS and 40 to 44 on the BDI-II). In the clinical trial report on Table 7 it can be seen that the CF and the CF+PDT conditions reduced their BDI scores to below 13 (cut-off) at post-treatment with the CF+PDT condition being more efficacious. By follow-up all three groups were reduced to below the cut-off point, the most efficacious being the CF+PDT condition (Rewiring) which reduced scores from a mean of 28.46 to a mean of 4.09 on the BDI by Follow-up.
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Analysis of Results

The efficacy study was directed by the following additional questions to which the results from the clinical trials have been applied:

- Which treatment condition was more efficacious on the BDI, the DASS and the SRBs at Post and at Follow-up?
  
  o All treatments showed efficacy at Post-test on the BDI and all treatments showed efficacy at Follow-up on the BDI compared to a no-treatment condition (see Table 7.) The CF+PDT condition lowered the mean BDI scores to well below the cut-off point of 13 at Post-test (6.55) and at Follow-up (4.09) which are considered to be non-depressed scores. Meanwhile the CF condition and the PDT condition lowered the mean BDI scores to just under the cut-off point of 13.
  
  o Only the combined condition CF+PDT showed efficacy at Post-test on the DASS and all conditions showed efficacy at Follow-up on the DASS compared to a no-treatment condition (see Table 8.). CF+PDT was significantly better than PDT at Post-test. When comparing the mean DASS scores of the three experimental conditions the CF+PDT reduced the mean scores from 24.36 to 6.73 at Post-test and 4.91 at Follow-up. This was better than either the CF or the PDT conditions.
  
  o No condition stood out as being better than the other two at Post-test on the SRBs, although pair-wise comparisons showed the combined treatment CF+PDT to be superior in comparison of means compared to the other two conditions at Follow-up (see Table 9.).

- Did any of the therapists have a different result on the BDI, the DASS or the SRBs at Post or at Follow-up?
  
  o There was no difference between therapists’ results on the BDI, the DASS or SRBs at Post-test or at Follow-up (See Results).

- Did the CF group improve over time on the BDI, the DASS or the SRBs?
  
  o There was a difference in the CF condition over time on the BDI. At Post-test the participants had significantly improved and had maintained this improvement at Follow-up (see Table 10.).
There was a difference in the CF condition over time on the DASS. At Post-test the participants had significantly improved and had continued to improve without therapist contact by Follow-up (see Table 11.).

There was a difference in the CF condition over time on SRBs. At Post-test the participants had significantly improved and had maintained this at Follow-up. There was also a significant difference between mean scores at Post-test and scores at Follow-up indicating that the CF group continued to improve without therapist contact (see Table 12.).

- Did the PDT group improve over time on the BDI, the DASS or the SRBs?
  - There was a difference in the PDT condition over time on the BDI. At Post-test the participants had significantly improved and had maintained this at Follow-up, (see Table 10.).
  - There was a difference in the PDT condition over time on the DASS. At Post-test the participants had significantly improved and had maintained this at Follow-up. There was also a significant difference between scores at Post-test and scores at Follow-up indicating that participants in the PDT group continued to improve without therapist contact (see Table 11.).
  - There was a difference in the PDT condition over time on SRBs. At Post-test the participants had significantly improved and had maintained this at Follow-up (see Table 12.).

- Did the CF+PDT group improve over time on the BDI, the DASS or the SRBs?
  - There was a difference in the CF+PDT condition over time on the BDI. At Post-test the participants had significantly improved and had maintained this at Follow-up (see Table 10.).
  - There was a difference in the CF+PDT condition over time on the DASS. At Post-test the participants had significantly improved and had maintained this at Follow-up (see Table 11.).
There was a difference in the CF+PDT condition over time on SRBs. At Post-test the participants had significantly improved and had maintained this at Follow-up. There was also a significant difference between scores at Post-test and scores at Follow-up, indicating that participants continued to improve without therapist contact (see Table 12.).

Could the Results be Explained by Non-Specific Effects of Treatment?

Frank (1993, p.142) suggested that “one needs to explore determinants and effects of patient’s positive expectations” when assessing a new treatment. Because patients seek assistance in times of crisis, there is a normal regression to the mean over time and the average distress of any group of patients would be expected to diminish as the crisis receded into the past. Frank also stated that anxiety and depression were the most placebo-responsive conditions. Horvath (1988, pp.214-225) also highlighted the importance of placebo in the treatment response of people with depression and, Andrews (2001, pp. 192-194) suggested 25% of depressed people recover naturally, 25% respond to active treatment and 50% responded to placebos while Kirsch & Sappirstein (1998) in a meta-analytic study found placebo contributed to more than 75% of treatment effect. Khan et al (2005, pp.145-150) meta-analysis found a response rate of 48% to active treatment. There is some evidence that placebo treatment effects have increased (Walsh et al, 2002, pp.1840-1847) and it is likely that publication bias magnifies the effect of active treatment versus placebo (Turner et al, 2008, pp.252-260). In clinical practice, clients are referred to psychologists for treatment for chronic depression. Many of these are at risk of taking their own lives or of making poor decisions whilst they are in a state of depression and negativity. It is up to the clinician to perform some treatment to alleviate the symptoms.

Rewiring may use a placebo effect in part to gain a motivation from the client and in whatever way possible to engage an otherwise despondent and at-risk client in an attempt to overcome the symptoms of depression. Rewiring may be using the non-specific effects of treatment as well as the planned effects to bring about the best outcome in the shortest time. It is acknowledged that, as with any research into
therapeutic approaches, the placebo-effect may have skewed the results of the clinical trials.

**Cognitive Fluency**

Therapy One, Cognitive Fluency (CF), was characterised by the daily repetition (50 times) of positive statements at increasing speeds, targeted at negative beliefs and uncomfortable feelings (see Appendix F). The results show that this therapy was significantly effective in reducing scores on the BDI and the depression scale of the DASS for clinically depressed adults, and was also significantly effective in producing higher subjective ratings of belief in the participants, at the end of the therapy and also at six weeks follow-up. The mean score on the BDI fell from 28.00 points out of a possible 63 to 12.92 points at the end of the fourth session and fell further to 11.15 points at follow-up with no further therapy. The case studies show efficacy is achieved by the end of four weeks of CF therapy (Ann’s BDI fell from 18 out of 63 to 10 out of 63 and Alice’s BDI from 45 out of 63 to 8) and proved resilient after six weeks of no further therapy (Ann’s BDI fell to 2 out of 63 while Alice’s BDI rose to 15 out of 63 in spite of external traumatic events). The DASS scores followed a similar pattern of better results at the end of four weeks of therapy, resilience in scores after four weeks of no therapy, and both subjects reported higher belief ratings in the SRBs both at the end of therapy and at six week follow-up.

**Efficacy of the CF Component of Rewiring**

The Cognitive Fluency (CF) component of the clinical trial showed that it was significantly efficacious. The use of fluency to increase rational beliefs and decrease irrational beliefs and depressed mood, shown by Milnes (1998) to be efficacious among adolescents in a classroom setting, achieved similar results in this trial conducted among adults in a clinical format. The “rewiring hypothesis” (Bermudez (2005, p.294; Carruthers, 2002, pp. 225-249) that links speech with the articulation of inner thoughts and the effect of verbalisation on the definition of the individual was upheld in both the Milnes (1998) study and the present clinical trial (2009). Both trials included verbalisation of positive statements and it would appear that this would have increased serotonin levels (Sharot, 2007, pp.102-105; Roiser, 2007, p.8) to produce positive feelings resulting in significant improvements in BDI-II and DASS
scores. Significant outcomes were observed at the end of treatment (post-test). The case for “contingency adduction” (Andronis et al., 1983), whereby participants in both trials (1998 and 2009) showed significant improvement at follow-up after treatment with no further intervention from therapists was also maintained. It would appear that these follow-up scores uphold the thesis that the CF process had become automatic, internalised and part of the cognitive “wiring” and thus lasting after therapeutic intervention (Clark, in Bermudez, 1997, p.293). In Milnes (1998) there were two conditions that were tested – participants who simply read the statements silently and participants who achieved fluency in reading their statements aloud. Those who simply read the statements silently showed significant improvement in the short-term but their results fell away in the long-term while those who read their statements aloud and to speed, not only maintained but significantly improved after treatment was concluded. Similarly, the present clinical trial showed an improvement based on fluency in reading statements aloud by post-test but it was not until follow-up after six weeks with no further treatment that the full efficacious results are realised.

With regard to Cognitive Fluency there were points of difference between the Rewiring clinical trial (2009) and the original trial in 1998. The population for the Rewiring clinical trial consisted of adults aged between 18 and 65 years who were depressed according to the criteria of depression on the BDI-II and the DASS, whereas the 1998 trial involved an unscreened group of adolescent students at a private school in which BDI-II testing revealed a clinically depressed sub-group. In the Milnes (1998) trial, the participants were treated in a group whereas the present clinical trial treated participants individually. The student participants were given pre-prepared statements that targeted the irrational beliefs they exhibited in the pre-trial BDI-II (see Appendix A). By contrast, the present clinical trial depended upon statements that were prepared in collaboration between the clinician and the participant in a number of stages – identification of external forces (LOC) (Rotter, 1966, p.1-28) that produced negative feelings that were expressed in a list of negative feeling words, questions about “how participants would like to feel” producing a list of positive feeling words - to arrive at personally tailored statements. This meant that the statements in the present trial were more precisely targeted to meet the aims of the participant through a consensus approach which is very different to Biderman’s (1957) descriptions of brainwashing and coercion. While this approach fits in with
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the individualised therapy of a clinic, it would be a valuable exercise to test whether personally tailored statements were any more effective than pre-prepared statements that target problem areas identified by the BDI-II or DASS and administered in a group setting. This is an area that needs further research. However, participants in all conditions reported that they believed that the most helpful elements of the treatment were “talking to the therapist” and “repeating the scripts” – both of which are integral to the personalised combination therapy and on-going recording in the 2009 model of CF.

The efficacy of CF is also demonstrated in the two case studies of Anne and Alice. Anne, by post-therapy had lowered her scores on the BDI and DASS. However, it was not until follow-up six weeks later that the effect of Rewiring became more obvious. Between the end of therapy and follow-up, Anne’s depression scores had dropped to 2 (BDI) and 4 (DASS), down from 10 (BDI) and 14 (DASS) at pre-treatment interview. This was consistent with the rest of the CF group who made gains but it was not until follow-up that the therapy had had enough time to show a significant effect. The Cognitive Fluency (CF) case of Alice provides some points of interest. At pre-treatment, Alice was “severely depressed” and after the four sessions managed to lower these scores to fall within the “normal” range. It is surmised from the scores of those on the wait-list that the severe depression would have continued and perhaps even deteriorated without therapy. The improvement in her condition was even more remarkable given that homework was not fully completed during the fourth week because of a trauma. Her scores plateaued during that time indicating that CF improvement cannot be attained without consistent homework. By resuming the CF homework after therapy, Alice was able to face up to the distress of entering legal proceedings against a person who had raped her. In spite of these events, and after six weeks with no further therapy, Alice’s scores slightly regressed to the ‘mild depression’ range while her self-rated beliefs improved. In the face of these events, it was highly possible that Alice would have returned to a severely depressed state if there was no resilience in the therapeutic modality. As it was, her depression indicators returned only to the “mild” range but the underlying belief in the “I Am’s” increased. It could be argued that the CF treatment modality was keeping her from relapse to former highly depressed levels. Alice found the CF treatment modality effective and the test scores provide evidence of the efficacious nature of CF. Alice, a
rape victim, would possibly have benefitted from some elements involved in the PDT trial where “deeper issues” of the subconscious are treated. The combination treatment of CF+PDT may have been a more appropriate treatment modality.

**Limitations of the CF Component of Rewiring**

The CF treatment does have some limitations. Firstly, the client must be committed to complete all homework and attend all sessions. The drop-out rate for the pilot study was 4 out of 12 (with a further 4 being disqualified) which resulted in a decision to inform participants in the clinical trials at the beginning that they had to do the home exercises as an integral part of the therapy and inclusion in the trial. Greater compliance levels were reached so that 47 out of 67 were qualified for inclusion in the clinical trial by completing their homework and attending all therapy sessions. The CF component requires that clients are individually responsible for completion of the daily exercises, must return to therapy each week for four weeks and comply to the therapeutic model. Failure to do these things will mean that they cannot expect to improve. These figures have repercussions for clients attending therapy in the real world. There is an indication that one in three clients may drop-out of therapy after starting, and a further one in three may not complete their homework and therefore not improve as expected. Greater compliance was completed in the actual trials when participants were informed that they were required to complete all homework or else their results would not be included in the study and they could not expect to improve. This seemed to improve the numbers so that two out of three participants completed the therapy and all homework.

This element of the treatment modality requires skilful encouragement from a therapist. Over time I have developed techniques to encourage the completion of homework. One of the reasons that I persevere is that I know the results are going to be positive. In clinical practice over twelve years and hundreds of cases, I have recorded few cases of depressed clients who have not improved if the exercises are completed in the way specified. If a client has a poor attitude to the treatment and is resistant to the requirements of the treatment including completion of the homework, then the efficacy is limited. Sometimes it can be a question of timing – when a client sees the need to be serious about getting help because of personal crises, events and circumstances, then the CF treatment has a greater chance to be efficacious. There are
times when the client is simply not ready for the introduction of the CF treatment and may need some sessions prior to the introduction of the treatment. The condition of the client presenting at a clinic has to be carefully monitored. I have also found that if I pay less attention to the monitoring and recording of CF results, then clients are more likely to let the homework fall away.

There are some conditions, such as psychiatric conditions, where care needs to be taken in the way that the treatment is introduced, if at all. These conditions include disabling psychiatric disorders including psychotic depression, co-morbid schizophrenia and bipolar affective disorders, which were specified exclusions from this clinical trial. A trained psychologist or clinician needs to know when to refer a client for a specialist treatment other than CF. However, in clinical practice, I have found the CF treatment alone to be successful over a longer time period than 4-6 sessions so that more extended periods up to 12 and 18 sessions can be efficacious with OCD and extremely anxious clients. These results strengthen the contention that a longer exposure than four sessions over four weeks is needed in order to gain maximum benefit from CF.

*Psychodynamic Therapy (PDT)*

Therapy Two, Psychodynamic Therapy (PDT) was characterised by four short psychodynamic exercises and a set of instructions that were read aloud to oneself twice a day in a meaningful way by the depressed adult (see Appendix G). The results show that this therapy was significantly effective in reducing scores on the BDI and the depression scale of the DASS for clinically depressed adults, and was also significantly effective in producing higher subjective ratings of belief in the participants, at the end of therapy and also at six weeks follow-up. The mean score on the BDI fell from 30.13 out of 63 to 13.67 at the fourth session and fell still more to 12.13 after six weeks with no further therapy. The case studies show efficacy is achieved by the end of four weeks of CF therapy (Brenda’s BDI fell from 19 out of 63 to 11 and Betty’s BDI from 13 out of 63 to 5) and proved resilient after six weeks of no further therapy (Brenda’s BDI further fell to 8 and Betty’s to just 2). The DASS scores followed a similar pattern of better results at the end of four weeks of therapy and after six weeks of no therapeutic treatment, and both subjects reported higher belief ratings in the SRBs both at the end of therapy and six weeks later.
Efficacy of the PDT Component of Rewiring

Unlike the CF component which had previous research to guide the trial, the PDT condition was still found to be significantly efficacious at post-trial. The PDT therapy was based on the psychodynamic literature, so that in the clinical trial the therapy included speaking to the subconscious (Freud, 1948, p.901), personality development (S.Freud, 1948, pp.907-8; Piaget, 1983, p.183; Hendrix (1992), visualisation (Paivio, 1991; Adler, 1931; Adler, 1998) and explanations of the ego-states of “Parent” (with the corresponding “Adapted and Natural Parent”), “Adult” and “Child” (with the corresponding “Natural Child and Adapted Child”) with exercises to target negative feelings. The PDT treatment allowed the participants to begin the identification of fixated points in their development and then to learn to speak on a daily basis to themselves in an authoritative and nurturing manner (“The Be’s”) (Watkins, 1993). The recommended PDT treatment was not just about the identification of the past negative events but the way in which those events continue to affect their present daily life. The PDT treatment also invokes positive and affirmative action to replace negative thoughts from the past by positive commands in the present. The “executive self” is strengthened so that participants are able to take more control of their lives. The PDT treatment was generated in a similar fashion to the CF treatment in that external forces (LOC) that produced negative feelings are identified and listed as negative feeling words, before asking questions about “how participants would like to feel” to produce a list of positive feeling words. Unlike the existential “I Am” statements, the PDT statements were set in the imperative mood of “Be” statements and homework consisted of saying the statements twice a day, out loudly, to themselves in a slow and deliberate manner, similar to Clarke (2004). The exercise of saying positive sentences may have increased levels of serotonin and the accompanying “feel good” qualities although this may have been comparatively limited due to the statements only being made twice a day (compared with the 50 required by the CF trial). The Psychodynamic Therapy (PDT) component of the clinical trial showed that it was significantly efficacious. Once again there is evidence to suggest that the “rewiring hypothesis” that links speech with the articulation of inner thoughts can be used for well utilised.
The Psychodynamic (PDT) treatment modality proved successful for both Brenda and Betty. Both participants were suffering from “moderate” to “severe” depression. Brenda came from a background predisposed to depression and suicide and Betty came from a family with a history of depression and suffered self-esteem issues as the after-effects of a very judgmental father. Brenda lowered her BDI-II and DASS at both post-treatment and follow-up and her self-rated belief in “The Be” statements continued to rise. Betty’s results were similar. Both participants found that PDT assisted them in dealing with issues in their daily lives and achieving greater happiness. Without therapeutic intervention, it is probable that their moderately depressed conditions would have remained at these levels, or even deteriorated as suggested by comparison to the participants on the waitlist. The results indicate that PDT was effective in these two cases.

**Limitations of the PDT Component of Rewiring**

The limitations of the PDT treatment include client compliance. Once again the client must be committed to the completion of all homework and attend all sessions. While the PDT was efficacious there was a question raised as to the endurance of the PDT over the longer term. It was thought that the PDT condition may show results similar to the “silent-reading only condition” of the 1998 Milnes study where participants improved up to post-test but then fell away at follow-up. However, this was not the case. The participants continued to hold their improvement or increase improvement. It would appear that the long-term efficacy of face-to-face PDT is superior to the long-term efficacy of reading positive statements (even if they are aimed at personal issues producing depression). Then again, it may be argued that the process of exploration, discovery and verbalisation of issues of the subconscious and the treatment of “stuck points” through ego-state therapy and visualisation may be profound enough to continue for the four weeks after the last therapy session but fall away after. Because PDT is often not quantified, measured and recorded, there is a need for further investigation into the efficacy of the condition of PDT alone.

A greater number of PDT participants compared to CF participants expressed that “talking to the therapist” was the “best part of the treatment” and this indicates that PDT may be dependent upon the skills of the clinician or that participants felt more helped by talking about their inner states. The clinical implication of this
finding is the issue of greater client dependence on therapy. While client dependence may have beneficial effects in the short term, it is clearly not desirable over the long-term. If PDT is more therapist-dependent than CF then there may be further research required.

**Cognitive Fluency Plus Psychodynamic Therapy (CF + PDT)**

Therapy Three, Cognitive Fluency plus Psychodynamic Therapy (CF+PDT), was characterised by combining all the elements of Therapy One and Therapy Two so that depressed adults completed their daily repetitions (50 times) of the Cognitive Fluency statement as quickly as possible, as well as completed four short psychodynamic exercises in the therapy session, then read aloud a set of instructions twice a day to themselves in a meaningful way (see Appendix H). The results show that this therapy was significantly effective in reducing scores on the BDI and the Depression scale of the DASS for clinically depressed adults, and was also significantly effective in producing higher subjective ratings of belief in the participants, at the end of therapy and also at follow-up. The mean scores of the BDI fell from 28.46 out of 63 to 6.55 at the end of therapy and still further to 4.09 after six weeks with no further therapy. The case studies show efficacy is achieved by the end of four weeks of CF therapy (Carl’s BDI fell from 27 out of 63 to 16 and Carol’s BDI from 25 out of 63 to 1) and proved resilient after six weeks of no further therapy (Carl’s BDI further fell to 2 and Carol’s BDI rose slightly to 1.5). The DASS scores followed a similar pattern of better results at the end of four weeks of therapy and after a further six weeks with no therapeutic intervention, and both subjects reported higher belief ratings in the SRBs both at the end of therapy and six weeks later.

**Efficacy of the CF+PDT Rewiring**

The seamless integration of both CF and PDT is made possible by the introduction of the “rewiring hypothesis” because both rely on language as the expression and treatment of inner pain. Language involves many different types of expression and so combining the CF existential, repeated and fluent language with the imperative, thoughtful and meaningful language of PDT allows for more human aspects to be affected by the treatment process. The way the conscious self speaks to the subconscious self in PDT assists the therapeutic effect of the existential CF
repetitions and fluency. The combination CF+PDT places both cognitive therapy and psychodynamic therapy into the one treatment modality. Rather than seeing them as separate approaches, the combination follows the natural human condition that attaches thoughts to feelings, the conscious to the subconscious, and rational to the non-rational. This holistic approach allows for simultaneous treatment at both levels – the head (cognitive) and the heart (psychodynamic) without ignoring either or placing one above the other. While CF may be very effective in “rewiring” the thoughts, it may not always be appropriate especially when observed in one of the participants in the Pilot Study who was very depressed and had been so for years. He was so negative about the process he was unable to participate fully in the exercises even though he had volunteered to participate. In his case, it was obvious that other preconditions had to be met prior to engaging in treatment. In a clinical setting and outside of test conditions, more pre-treatment based on PDT may have brought him to the place of introduction of the full treatment. Similarly, Alice (CF trial case study) may have benefited from some PDT and this may have allowed her to build still further on the gains she made in CF. While PDT may be effective in bringing understanding to the inner working of the human personality, the treatment may not have the long-lasting effects without the “rewiring” of CF.

The efficacy of CF+PDT was significant and achieved greater gains in all three measures DASS, BDI-II and SRB at both post and follow-up tests. This would indicate a synergy in combining CF and PDT (similar to studies by Andronis et al, 1983; Johnson & Layng, 1992). While CF is centred on the conscious “rewiring” of negative thoughts, replacing them with positives into a state of fluency and automaticity, and increasing the serotonin levels, PDT assists the examination and rewiring of negative feelings from the past, the subconscious and outmoded fixated strategies. While PDT appears to have a more immediate effect and brings improvement while the participant remains in treatment, CF has greater effect post-treatment so that the depression continues to be reduced and positive attitudes to be increased.

The case study evidence points to the effectiveness of the combination PDT+CF treatments. Both Carl and Carol found it helpful to talk to a therapist but both also added how valuable it was to repeat the statements. This is in line with
other comments made by the combination CF+PDT group. Carl was able to reduce his BDI-II scores over the three assessment times and on the DASS from the “extremely severe” (99th percentile) to 2 points which is well within the “normal” range. Without therapeutic intervention, it is probable that his condition would have remained at these high levels, or even deteriorated, given the results of the wait-list participants. Carl lifted his ratings of belief in the “I Am” statements and his belief in the “Be” statements. The fragility of his earlier emotional, thought and attitudinal life was replaced by solid scores which changed the way he looked at things.

Similarly Carol’s results showed the downward trend of BDI-II and DASS scores from moderate depression to negligible scores by follow-up. Carol’s case is also interesting for other reasons. She was taking anti-depressants during the trials showing that a combination CF+PDT can be used in conjunction with medication. Although she was taking Lexapro for depression, she was still suffering moderate levels of depression on the BDI and the DASS. While the medication may have been helpful, the therapy assisted her in significantly lowering her depression scores. From this case it can be argued that medication should be combined with an efficacious treatment modality. Carol was also suffering from co-morbid anxiety for which she was prescribed medication. While use of Rewiring in these clinical trials was limited to the treatment of depression, it has been stated that Rewiring has also been found to be effective in treating other disorders such as anxiety. Carol’s scores on the anxiety subscale of the DASS improved from “mild” to zero and her stress scores from “moderate” to zero. These improvements give some weight to this argument. Carol was also suffering as an automotive accident victim and had been declared an invalid. The consequences of invalid lists, pensions, compensations, and loss of functional ability costs society dearly and financial cost is compounded by the emotional effects. Similarly, the financial and social cost of depression to society is documented elsewhere in this thesis. The improvement to Carol’s ability to function should be of interest to those agencies involved in the care and support of those on disability pensions. As Carol said, she was amazed at how effective this treatment had been and hoped that others would be able to obtain the same benefit in such a short time.
Limitations of the CF+PDT Component of Rewiring

The limitations of the treatment modality concern the condition and attitude of the client and the training and skill of the clinician. Clinicians who are unable to listen appropriately and effectively, fail to evaluate the information that is being passed to them by the client and lack professional training and skill in introducing and maintaining treatment, will probably not be successful in the administration of Rewiring in spite of its manualized format. At the same time, there are some disabling psychiatric conditions such as psychotic depression, co-morbid schizophrenia and bipolar affective disorder that require specialist intervention. A trained clinician needs to know when to refer a client for specialist treatment. Also, some clients may need treatment to bring them to a level where Rewiring may be introduced. For still other clients there may be a need to build the clinician-client trust relationship so that the client is sufficiently relaxed to enter a treatment program.

Nevertheless, while the treatment of depression was chosen for the clinical investigations, Rewiring has also been used to treat other conditions that are encountered in clinical practice, such as anxiety disorder, eating disorder, suicidal ideation, stress, panic, psychosis, obsessive compulsive disorder (OCD), Post Traumatic Stress Disorder (PTSD), substance-related disorder, personality disorder, impulse-control disorder and adjustment disorder. The challenges posed by these disorders led to the inclusion of the psychodynamic (PDT) elements to the CF treatment modality. Although Rewiring has been developed and tested in clinical surroundings, there is a need for further investigation to test its efficacy in other cultural and social settings and on a variety of other disorders.

Therapist Variable

Norcross and Hill (2002, pp.15-16) have highlighted the value of the clinician – they are not “personless”, disembodied professionals performing procedures, but rather “evidence indicates that the qualities of the psychotherapist are better indicators of successful treatment than the type of therapy. The largest percentage of outcome variance involves individual clinician difference and protocols do not seem to provide much insight into explaining differences in outcome among individuals with similar diagnoses” (Norcross and Hill, 2002, pp.15-16). While they may be correct in their
view that the therapist is the best “indicator of successful treatment”, the results of this study showed that *Rewiring* was not just based on the personality or enthusiasm of the therapist. In line with modern empirically supported or evidence-based treatment, the clinical trial used three therapists in an effort to diminish the therapist confound and the results showed that there was no significant difference between the results from the three therapists and could be taken to indicate that manualization of the *Rewiring* treatment meant that the clinician was unimportant. However, there are a number of modifying issues regarding the role of the clinician in the delivery of *Rewiring* – pre-requisite professional training, training in the delivery of the modality, skill in introducing the program and ability to maintain the program.

The therapists who participated in this trial were all competent therapists with tertiary qualifications and experience, albeit to different levels and with different professional experience. Clinicians should have appropriate professional training of a tertiary degree (or equivalent) in the social or medical sciences in order to deliver the *Rewiring* treatment modality. PACFA, the Psychotherapists and Counsellors Federation of Australia, recommends that psychotherapists and counsellors have the equivalent of a tertiary degree in either counselling or psychotherapy, or two years of a post-graduate degree in counselling or psychotherapy added on to a relevant primary degree, including 200 face-to-face hours of client contact to be completed in their training, then, after training and over at least two years, 750 hours of psychotherapy attached to 75 hours of supervision by an accredited supervisor. Psychologists should be registered and preferably have completed a Master’s degree before undertaking training in *Rewiring*. This background enables understanding of the client’s disorder and the empirical basis for the treatment. The *American Psychological Association* (2002) recommended that “the concurrent use of empirically supportive relationships and empirically supported treatments tailored to the client’s disorder and characteristics is likely to generate the best outcome.” By holding prerequisite qualifications the clinicians can receive training to administer *Rewiring*. By having tertiary trained mental health therapists following a manual, the benefits of both therapist expertise and standardization are optimized.

Without sufficient training in the delivery of *Rewiring*, the clinician may not have the skills to diagnose the client or to tailor the program accordingly. Previous
experience in training the therapists involved in the trial and others (in ABCT) has suggested that incomplete training in the therapy model can result in changes that adversely affect the efficacy of the treatment. However, in this case, the results showed that the therapist factor made no significant difference to the outcomes which means that the therapists had sufficient training to learn the therapy and administer it. The training consisted of two days of lectures and workshops and the completion of ten case studies over twelve months to two years. The trial also indicated that the therapeutic treatment modality could be used by therapists with a variety of experience and training backgrounds. The Manual standardised the treatment and succeeded in minimizing differences between therapists involved in the clinical trials. The presence of a standardised Manual should not be taken to mean that the Manual replaces appropriate professional training. The findings of this research support the effectiveness of Rewiring as a treatment modality for depression provided the therapists delivering the program have a professional skill level and training in the administration of Rewiring equal to, or above, the therapists who participated in this trial.

While the level of professional training and particular instruction for administering Rewiring are very important, the personality and dedication of the clinician are vital to the success of the treatment modality. The clinician needs to make the treatment seem like fun (for some) or vital to improvement (for others) while still requiring skills in constant evaluation of the information gathered from observation and testing, and in the dialogue with the client. Active listening needs to be followed by appropriate professional reflection so that the best course of treatment is selected and then applied. Goldstein (2005) from over 90 studies of psychotherapy found that:

There is a significant relationship between therapeutic alliance and therapy outcome and clinicians who provide empathy, work toward a consensus and agreed upon a set of goals with clients, warmly accept their clients without conditions, are genuine and communicate their personality to clients, provide consistent feedback and are willing to accept responsibility in part when things do not go as planned have better outcomes.

It is the clinician who keeps the client on track, keeps up the measurement regime and provides feedback. Consistent measuring and visual graph evidence encourages the
Rewiring Head and Heart

client to keep up with the homework as they see their own improvement. Also, through the visual evidence, the clinician is able to modify the treatment program to make an appropriate regime for the presenting symptoms. *Rewiring* is sufficiently flexible to allow the clinician to modify the treatment modality to suit the individual requirements of the client. While there was limited scope allowed to the clinicians in this trial for modification to minimise the therapist confound, clinical administration outside of a trial condition may reveal greater difference. The trial kept the clinicians to a strict time regime and strict treatment program whereas clinicians in an open, uncontrolled environment may choose to modify timing, content, order and application. The process is flexible enough to allow for these modifications but the therapist confound could become more significant in uncontrolled environments.

**Further Issues in Clinical Practice**

My own experience in making the transition from university and supervisory training to private clinical practice was that there was little to guide me in maintaining a scientist-practitioner’s commitment to evidence-based therapy. As a professional I found that I was left to develop my own approach to therapy. While liberty is a necessary component of professional practice, it seems that there is a need for models to assist the clinician to develop outcome measures. Hatfield and Ogles (2004, pp. 283-294), in their survey in the use of outcome measures by psychologists in clinical practice, found that users and non-users of outcome measures alike were interested in “client progress since entering treatment, current strengths and weaknesses, and determining if there was a need to alter treatment”. Although this trial has added to my confidence in the efficacy of this treatment modality, it should be noted that normal clinical settings of professional therapeutic practice were modified to conform to test conditions required for clinical trials. So, the question remains whether *Rewiring* is an effective treatment modality in normal clinical settings and outside the treatment of depression.

In most clinical practice, the client either pays or has a fee paid for service. This means that the client, or those paying for the service, wants improvement in their psychological condition. This puts pressure on the clinician to “perform” in order to live up to the client’s expectations. People presenting at clinical settings can be
suffering from a wide variety of disorders. The clinician is required to perform the difficult task of testing, diagnosis and formulation of treatment and implementation of the treatment modality as well as completing records and reports, while keeping the client “happy” or at least believing that the service is value for money. Analysis of the completion rates for participants in the trial and my own experience underline the importance of consensus and commitment if a client is going to be assisted by this treatment modality. While the treatment has been tailored to fit the individual, target their negative thoughts and replace them with personally chosen positives, the client must be committed to complete homework and attend sessions. The frequent reassessment of progress allows clients, or those who are paying for the service, to see value for money. In the end, the trial emphasised the client responsibility for the completion of daily exercises, return to therapy each week and compliance to the therapeutic model. Commitment to the program will affect the efficacy of the treatment modality.

The clinical trials centred on the treatment of depression and while this presentation is common in clinical settings, it is not the only disorder encountered by professional psychologists. Further trials are needed to test efficacy for other morbidities even though there were cases from normal clinical practice to show that the Rewiring process can be used to treat many of the common conditions while continuing to diagnose and treat co-morbidities.

Clinics usually do not have a lot of backup personnel and resources and so most of the work has to be undertaken by the clinician. Any treatment modality needs to be easily implemented whilst maintaining high professional standards in treatment and reporting. Clinical treatment must be able to satisfy these heavy demands of professional practice and be easily implemented using only one professional staff person who is given a manualized and procedural structure to maintain the scientist-practitioner basis of service while still allowing the clinician to work collaboratively with the client in devising an individualised therapy. While some clinicians may welcome a manualized and prescriptive therapeutic approach to their professional practice, there are others who may not appreciate this intervention in spite of efforts made in the construction of the Rewiring to retain flexibility. Others may not appreciate the direct nature with which “problems” are confronted. While these
objections can be considered there are many others who will welcome a flexible but manualized and prescriptive therapy that promotes clinician/client collaboration and a scientist-practitioner basis for therapy.

**Overall Conclusions and Future Directions**

In this research *Rewiring* has been shown to be efficacious on a small scale as a manualized, combined therapy of cognitive fluency and psychodynamic exercises, and also singly as cognitive fluency alone, and psychodynamic exercises alone, for the treatment of depression in adults. It can be recommended to the qualified therapist or clinician as a treatment of choice for depression in clients and it can also be recommended to the client as a viable alternative to either CBT or psychodynamic therapy. However there is more work to be done on a larger scale to show conclusively that these therapies do significantly contribute to the treatment field. A replication study involving over 150 participants would present better data to showcase this innovative approach. The combination of CBT with psychodynamic therapy is unique and makes good, holistic and therapeutic sense. Its uniqueness stems from the interweaving of learning theory with cognitive therapy, making it a valuable tool in both educational and clinical settings. It makes a worthwhile contribution to the field of therapy by extending the choice of available and manualized psychotherapeutic modalities for the treatment of depression.
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Appendix A: Milnes Believing and Doing Inventory (1998) revised

One Hundred Rational Statements

Here are 100 rational statements. Tick the ones you would like to believe AND put into action. For each irrational belief there are ten rational statements. They have helped many people overcome depression and anxiety. Choose some or all of them as your own rational statements. The more you choose the better for the therapy. Put a line through the ones that are not applicable to your situation and tick the ones that you would like to put into action.

Rational thoughts to combat Ellis’ Irrational Belief I ("It is an absolute necessity for an adult to have love and approval from peers, family and friends."). ‘I would like to be able to say that…

1. I like my friends but I don't lean heavily on other people.
2. I am a strong person who doesn't always look to others for support.
3. I don't depend on others for help and advice.
4. I am satisfied with myself, my own company and my own decisions.
5. I concentrate on my own self-respect rather than try to please others.
6. It's better to spend my energy on loving others - than waiting to be loved.
7. I can survive without love and approval.
8. I'm OK without the approval of other people.
9. I don't need the approval of other people - no matter how important they are to me.
10. My opinions are as valid as anyone else's.
Rational thoughts to combat Ellis’ *Irrational Belief 2* (“You must be unfailingly competent and almost perfect in all you undertake.”). ‘I would like to be able to say that…

1. I will be happier if I attempt to achieve at a realistic level.
2. If I do what I want and what I enjoy as well as I can, I'll feel happier and perform better.
3. If I'm not successful I may be unhappy but not depressed and miserable.
4. There are many ways to be successful. Success is working towards my goals.
5. Working towards my goals is a good process.
6. Failures show me where I can learn to be strong.
7. I would like to do well at things but it is not the end of the world if I don't.
8. What I do doesn't have to be perfect in order to be good.
9. I don't have to succeed at things to show my worth.
10. The point of failure is the best place to rise again.

Rational thoughts to combat Ellis’ *Irrational Belief 3* (“Certain people are evil, wicked, and villainous, and should be punished.”). ‘I would like to be able to say that…

1. People's poor behaviours do not make them rotten individuals.
2. I can separate people from their behaviours.
3. Behaving badly doesn't make someone a bad person - it just shows that they behave badly.
4. Humans are not perfect - my getting upset doesn't help.
5. Some people behave badly and need help to change.
6. No-one is evil but their deeds may be.
7. I am not the judge of other people - I only judge myself.
8. People do wrong things but I'm not responsible for their punishment.
9. Doing something wrong doesn't make a person evil.
10. I'm happy when I don't worry about bad things that others do.
Rational thoughts to combat Ellis’ *Irrational Belief 4* (“It is horrible when people and things are not the way you would like them to be.”) ‘I would like to be able to say that…

1. It's not the end of the world when something goes wrong.
2. It's frustrating and disappointing when something doesn't go the way I planned but never awful.
3. There is a positive side to everything. It depends how I look at it.
4. Nothing is horrible or terrible even though it may be frustrating.
5. I can work at changing a bad situation into something positive.
6. There is no law which says things have to be the way I want.
7. Sometimes plans go wrong but I can still have a good time.
8. When things go wrong there is always something positive I can learn.
9. I can laugh when things go wrong.
10. I am a cool calm and collected person.

Rational thoughts to combat Ellis’ *Irrational Belief 5* (“External events cause most human misery - people simply react as events trigger their emotions.”). ‘I would like to be able to say that…

1. I can control my reaction to things around me.
2. When bad things happen I can choose to stay calm.
3. When things go wrong I don't have to react badly.
4. When something bad happens I don't have to become emotionally involved.
5. When things go wrong I don't have to be hurt, angry or miserable.
6. External events do not control my inner feelings.
7. My misery is caused by the way I react to things.
8. I can choose to be happy even though lots of things around me go wrong.
9. I keep my head in the midst of disaster.
10. I choose how I am going to respond to difficult circumstances.
Rational thoughts to combat Ellis’ Irrational Belief 6 (“You should feel fear or anxiety about anything that is unknown, uncertain, or potentially dangerous”). ‘I would like to be able to say that…..

1. I am in control of my thoughts.
2. I breathe slowly and deeply when I start to worry.
3. I can shift focus.
4. I stay calm and logical when something seems dangerous.
5. I can stop my thoughts whenever I choose.
6. I don't fear the unknown.
7. I'm caring but I don't worry too much about others' problems.
8. I'm not anxious about the future.
9. Instead of worrying I can think constructively.
10. It doesn't help to think of past bad experiences.

Rational thoughts to combat Ellis’ Irrational Belief 7 (“It is easier to avoid than to face life's difficulties and responsibilities.”). ‘I would like to be able to say that…

1. In the long run it's easier to face life's problems than avoid them.
2. I have to face up to things sometime so it's better to do it now.
3. When I put problems off they just get bigger.
4. I am a responsible person.
5. A responsible person faces up to life's difficulties.
6. I am in control of my reactions.
7. It's better to walk through the problem than circle around it.
8. I can confront and resolve life's difficulties now.
9. If I put things off they only get worse.
10. No-one causes me to feel hurt, angry or miserable - I create my own moods.
Rational thoughts to combat Ellis’ *Irrational Belief 8* (“You need something other or stronger or greater than yourself to rely on”). ‘I would like to be able to say that…

1. It’s OK to seek help but I trust myself and my own judgment.
2. I don't depend on other people to make my decisions for me.
3. My thoughts are as valid as anyone else's.
4. I am strong in myself - I don't lean on other people.
5. I make my own decisions.
7. Having friends is cool but I can stand up for myself.
8. I don't hide behind my friends.
9. I have a mind of my own; I don't need to follow the crowd.
10. I am responsible for my own choices.

Rational thoughts to combat Ellis’ *Irrational Belief 9* (“The past has a lot to do with determining the present.”). ‘I would like to be able to say that…

1. I can change how I think about things.
2. The past cannot control me.
3. I can create positive projects which will give me a hope and a future.
4. The past does not determine the future.
5. Past experiences may have been frustrating but they are not awful or terrible.
6. Today is a new day with new choices to make.
7. Today is the first day of the rest of my life.
8. The past is past and I determine the future by choice.
9. Today I can choose who I am and who I want to be - regardless of anything bad that has happened in the past.
10. I can overcome the influence of the past.
Rational thoughts to combat Ellis’ *Irrational Belief 10* (“Happiness can be achieved by inaction, passivity, and endless leisure.”). ‘I would like to be able to say that…

1. Doing nothing doesn't make me happy.
2. I like to become involved with other people.
3. Doing nothing is boring.
4. It's better to be active and happy than lying around depressed.
5. Hard work brings a sense of accomplishment.
6. The more skills I learn the more options I will have.
7. I'm happier when I'm relating positively to other people.
8. I am creative, productive and happy.
9. I live life to the full.
10. Life is living and doing.
Appendix B: Ellis' 10 Irrational Beliefs

1. It is an absolute necessity for an adult to have love and approval from peers, family and friends.

2. You must be unfailingly competent and almost perfect in all you undertake.

3. Certain people are evil, wicked, and villainous, and should be punished.

4. It is horrible when people and things are not the way you would like them to be.

5. External events cause most human misery - people simply react as events trigger their emotions.

6. You should feel fear or anxiety about anything that is unknown, uncertain, or potentially dangerous.

7. It is easier to avoid than to face life's difficulties and responsibilities.

8. You need something other or stronger or greater than yourself to rely on.

9. The past has a lot to do with determining the present.

10. Happiness can be achieved by inaction, passivity, and endless leisure.
Appendix C: Advertisements and Information Letter to Participants

Are You Depressed?
And Between the Ages of 18 and 65?

You may be eligible to participate in therapy for
‘The Treatment of Depression Without Medication’
for an Edith Cowan University PhD Research Project conducted by
Genevieve Milnes.

To receive an application form please telephone 9277 6060 or
send your name, address and phone number
on the back of an envelope to:
Depression Project, PO Box 191, Belmont WA 6984
Applications close on July 31st 2007

All successful applicants will receive treatment free of charge.
Volunteers are invited to participate in the following research project:

Accelerated Treatment for Depression in Adults

Researchers and Contact Details
This research project is being undertaken as part of the requirements of a PhD at Edith Cowan University. The researcher is Mrs Genevieve Milnes, and she may be contacted on 9277 6060. Associate Professor Lisbeth Pike, of the Faculty of Community Services, Education and Social Sciences, of the school of Psychology, is the supervisor of this project and she may be contacted at Edith Cowan University on 6304 2171. This project is funded by the researcher.

Description of the research project
- The aim of the project is to trial a new treatment for depression in adults.
- Participants are self-referred adults with depressive symptoms who have responded to media requests for volunteers, or are referred by their GP or Mental Health practitioner for treatment for depression.
- Volunteers are excluded if they have any other psychiatric disorder including bi-polar affective disorder.
- Before the treatment volunteers are required to attend an interview where they are screened for other disorders, given depression questionnaires to complete and requested to give demographic information, and answer questions related to their reasons for seeking treatment and their expectations.
- Permission is sought from volunteers to videotape the sessions to facilitate supervision of the clinicians who are participating. Only the clinician will be visible on the video. It is possible to participate in the project without the clinician being videoed and you may wish to choose this option.
- All participants receive treatment for depression. There are three types of treatment; participants will be randomly allocated to one.
- All participants will be randomly allocated to participate immediately or to participate within a month of the starting date of the project.
- Participants attend a pre-treatment interview of approximately 30 minutes, one hour of treatment followed by three fifteen minute treatment sessions over the next three weeks, a post-treatment interview of approximately 15 minutes and a follow-up interview of approximately 15 minutes after 6 weeks. This is a total of no more than three hours participation. Participants are required to complete ten minutes home exercises per day over three weeks.
- Treatment is free of charge.
- There is no physical discomfort or inconvenience involved. Participants make times suitable for themselves.
- There are no physical risks. Participants will not be required to explain any traumas in detail.
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- If you would like to participate please sign the Informed Consent Document and return it to the researcher:

Mrs Genevieve Milnes
Belmont Counselling Clinic, PO Box 191, Belmont WA 6984

Confidentiality of Information
The information provided by the participants will assist in the formulation of treatment for other adults suffering from depression. Only the researcher and the researcher’s assistants will have access to the information provided. Participants will be allocated a number which will be used for all documentation. Any materials pertaining to this research will be coded and stored for longitudinal studies after the project is completed in a locked storeroom in a locked building. Videotapes of clinicians in the sessions will be kept in a locked storeroom in a locked building with no identifying data for three years when they will be destroyed.

Results of the Research Study
Results of the study will be disseminated in reports, at conferences and in publications. Participants can be assured that results will not include any information that may identify individual participants unless specific consent for this has been obtained. At the conclusion of the research participants may obtain a one-page report of the results of the study from the researcher.

Voluntary Participation
 Participation is entirely voluntary. Participants who no longer wish to participate do not need to provide any explanation or justification.

Withdrawing Consent to Participate
Participants are free to withdraw their consent to further involvement in the research project at any time. If requested, all material collected will be withdrawn and destroyed.

Questions and/or Further Information
If you have any questions or require any further information about the research project, please contact Genevieve Milnes on 92776060.

Independent Contact Person
If you have any concerns or complaints about this research project and wish to talk to an independent person, you may contact:
   Research Ethics Officer
   Edith Cowan University
   100 Joondalup Drive, JOONDALUP WA 6027
   Phone: (08) 6304 2170    Email: research.ethics@ecu.edu.au

Approval by the Human Research Ethics Committee
This project has been approved by the ECU Human Research Ethics Committee

Genevieve Milnes, ECU
Appendix D: Informed Consent Document

Informed Consent Document

April 2006

Title of Project

Accelerated Treatment for Depression in Adults

Researchers and Contact Details

This research project is being undertaken as part of the requirements of a PhD at Edith Cowan University. The researcher is Mrs. Genevieve Milnes and she may be contacted on 9277 6060. Associate-Professor Lisbeth Pike, of the faculty of Community services, Education and Social Sciences, of the school of Psychology is the supervisor of this project and she may be contacted at Edith Cowan University on 6304 2171.

Statement Indicating Consent to Participate

I have been provided with a copy of the information Letter, explaining the research study. I have read and understood the information provided. I have been given the opportunity to ask questions and have had any questions answered to my satisfaction. I am aware that if I have any additional questions I can contact the research team.

I understand that participation in the research project will involve

• Treatment for depression.
• One hour of treatment followed by three fifteen minute treatment sessions over the next three weeks, a post-treatment interview of approximately 15 minutes and a follow-up interview of approximately 15 minutes after 6 weeks. This is a total of no more than three hours participation.
• Exclusion if I have any other psychiatric disorder (with the exception of anxiety) including bi-polar affective disorder.
• An interview before treatment where I am
  o interviewed regarding my involvement in the project
  o screened for other disorders,
  o given depression questionnaires to complete
  o requested to give demographic information
  o answer questions related to my reasons for seeking treatment and
  o Answer questions related to my expectations of treatment
• Videotaping the sessions to facilitate supervision of the clinicians who are participating. Only the clinician will be visible on the
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video. I am aware that I can still participate in the project if the session, at my request, is not videotaped.

- Random allocation to participate immediately or to participate within a month of the starting date of the project
- Random allocation of treatment modalities. At the completion of the project I may apply for, and receive free of charge, any other treatment modality that was offered during the project.
- Homework exercises that must be completed for approximately ten minutes a day over three weeks.
  - Treatment that is free of charge.
  - No physical discomfort or inconvenience.
  - Making treatment times convenient to me.
  - No physical risks.
  - I will not be required to explain any traumas in detail.

I understand that the information provided will be kept confidential and that my identity will not be disclosed without consent.

I understand that the information provided will only be used for the purposes of this research project, and I understand how the information is to be used.

I understand that I am free to withdraw from further participation at any time without explanation or penalty.

I freely agree to participate in this project.

**Audiovisual Recording**

I agree/do not agree to participate in the audiovisual recording of my treatment. I understand that I will not personally appear in the video, no matter how the treating clinician appears, and the video will be used for supervision of the clinician.

Name

Address

Contact Numbers

Signature and Date

Please send to: Mrs Genevieve Milnes, PO Box 191, Belmont WA 6984
### Participant Evaluation of Pre-Treatment Session

<table>
<thead>
<tr>
<th>Question</th>
<th>Answer</th>
</tr>
</thead>
<tbody>
<tr>
<td>Before you started this process how would you describe yourself in terms of</td>
<td></td>
</tr>
<tr>
<td>Emotions?</td>
<td></td>
</tr>
<tr>
<td>Thoughts?</td>
<td></td>
</tr>
<tr>
<td>Attitudes?</td>
<td></td>
</tr>
<tr>
<td>Do you expect this treatment to work in your case?</td>
<td></td>
</tr>
<tr>
<td>On what do you base your expectations?</td>
<td></td>
</tr>
<tr>
<td>What are the major goals you want to achieve from this treatment?</td>
<td></td>
</tr>
<tr>
<td>How would you like to be (think, feel, act) when you finish this treatment?</td>
<td></td>
</tr>
<tr>
<td>How would you like to think?</td>
<td></td>
</tr>
<tr>
<td>How would you like to feel?</td>
<td></td>
</tr>
<tr>
<td>How would you like to act?</td>
<td></td>
</tr>
</tbody>
</table>

Thank you for taking the time to complete this questionnaire.
Appendix F: Cognitive Fluency (CF) Script

Session One

In session 1 you are going to do a Cognitive Fluency exercise and practice it 3 times today. At the end of the session you will be given some homework to complete each day. It is very important that you do the homework as you will not improve if you don’t.

1. Let’s start with this diagram - Why I Feel the Way I Do and My Current Feelings (Form 1: Causes and Feelings).

2. ‘Let’s say that the black spot in the middle is you’ (point to the black spot with “Self” written in it). (Now point to one of the squares.) ‘These squares represent the major negative events or people in your life. For some they represent sadness’s, losses, difficult relationships or early life experiences. They may represent an illness, a circumstance or a person who has had a negative effect on you’. (Keep pointing to the square/s). ‘What are the major forces, events or circumstances that have brought you to participate in the depression project?’ (Spend some moments gathering these and write them in the squares or next to them. Don’t worry if you only find one or can’t find any, and don’t worry if you find more than four, just draw some extra squares. Stop at about six).

3. ‘We have found some of the possible causes of why you may be feeling the way you are. Now we are going to identify some of your thoughts and feelings. We are going to write them in these spaces in the middle’. ‘What are some of those
negative thoughts and feelings that you have?’ (Write two or three of the client’s feelings in the spaces around the black circle, then give them the list of words to get more).

4. ‘Here is a list of troublesome thoughts and feelings’ (Form 2: How I Am, Think, and Feel Right Now). ‘Silently read through the lists and call out the ones that apply to you’. (Write all words down that the client calls out, quickly and in shorthand if necessary). ‘There is a large heavy line joining the squares around the outside of the diagram. This line represents the external control that the forces in the squares have on your life. When these forces impact you (point to the arrows going into the circle) it feels as if you are on a roller coaster’ (draw up and down wavy lines through the words on the first page). ‘Now, you and I are going on a journey together from this first page (indicate the first page) where all the troublesome thoughts and feelings are, to the second page (draw a long arrow across the middle of the page a few centimetres above the line that is already there) where you feel good about yourself, and you control how you think and feel’ (point to the inner square and circle).

5. (Point to the squares on the new page and make crosses in them) ‘We can’t change what has happened in the past - these stay the same, but with your commitment to do your homework at the end of this session, we can change the way you think and feel about them’.

6. ‘If you could be the person you wanted to be, even if you thought it was impossible, how would that be? I would like you to give me about 30 words so that I can make up an exercise for you to take home’. (Write down the words that they say, on the second page, in the space around the circle. Use free association to get more words). ‘Can you think of any more?’ (Or use opposites from the previous page), ‘What do you think the opposite of ‘sad’ might be? Or, ‘Think of someone else who is happy. How would they think or feel?’)

7. After a while give the client the next list of words ‘How Would I Like to Think, Feel and Be?’ ‘Read through the list and call out the ones that you would like to have.’ Note to Clinician: This is a very important time in the therapy. If you do
not get enough words the whole exercise will not work. When you get about 30 words say, “Now we are going to make a statement for you to read as if you had reached your goals already”. ‘As I write these down I want you to give them a rating. For example if you were to say right now, ‘I am ______’ (use the most important word on their chart, usually their first word), what rating would you give it on this ‘0 to 10 chart’? - with 0 being, ‘I don’t practice this at all’ and 10 being ‘I practice this all the time’? (Use Chart with No Descriptors 0 to 10). We will only keep the ones that rate 5 or less’.

8. (Put all the words into sentences, grouping similar words or phrases together to make ten paragraphs, for example, ‘I am happy, confident and at ease’ or ‘I put the past in the past. I let go. I move forward’) – Involve the client as you arrange each statement and read it to her.

9. Create a well-balanced and prosaic set of ten statements. Write them on to the goal statement page as ‘I Am’s’ with each rating above each salient word. For example, ‘I am happy, confident and at ease’. Put the numbers directly above ‘happy’ ‘confident’ and ‘at ease’). (Average the scores as you go for each numbered goal, putting the averages in the first box under the statement. For example ‘3’, ‘2’ and ‘1’ would add up to ‘6’ which is then divided by 3 (there are 3 words altogether). 6 divided by 3 = 2).

10. 28. (Add the ten averages and divide by 10 to get a grand average for the whole page. Write this average* in the box at the bottom of the page). ‘I am going to put your average score on a graph’ (Graph of Progress - Put the date in the date box and write the average in the box at the top of the first column). (Put a dot on the graph (use a ruler) to represent the client’s score.)

11. ‘If you were to read this page of ‘I Am’s’ 50 times a day over the time that I see you, that is, everyday until we finish therapy, and there were no great differences in your life in the meantime, I would expect you to follow this predicted line of progress from where you are now to an average of 7.5’. (Draw a dotted line to 7.5 in session 4 three weeks hence).
12. ‘One of the ideas behind reading this page is that we want to give your brain a different way of thinking’. ‘By repeating this page of ‘I’ statements we are educating your brain to think more positively’. ‘The positive words have a positive effect on your brain chemistry and your brain starts producing more of the ‘feel-good’ chemicals’. ‘By flooding the brain with these words we do several things: we teach it what to think, we help it to produce good-feeling chemicals, we teach you confidence and self-esteem through saying the words out loud and we give you a script to repeat when things get tough’. ‘We also express positive affirmations out into the world with the expectation that we will receive the same positivity back. In all these different ways we are attracting confidence, good feelings, positivity and self-esteem. We teach you how to put yourself on a healthy frequency’. ‘I want you to treat this as a reading exercise. I don’t need you to pretend that you believe it. You don’t even have to think about it. Just read it aloud confidently’.

13. ‘Now we are going to practice reading the whole page out aloud, just the words, not the numbers’. ‘I want you to read this slowly’. ‘I am going to time how long it takes for you to read from the beginning to the end’. ‘I don’t want you to get involved with your emotions as you read this’. ‘Just treat it as a reading exercise’.

14. ‘You don’t have to believe what you say because obviously from your ratings you don’t!’ ‘I want you to create a new pathway in your brain with these positive words’. ‘OK?’ (Pick up the stopwatch). ‘Ready, set, go!’ (Begin timing, always use a professional stopwatch or mobile phone stopwatch – record seconds and milliseconds). (Give positive reinforcement, if necessary, to complete the reading). ‘It’s OK. Don’t think about it, just get through it! Keep going! You’re nearly there! It’s just a reading exercise! Don’t get involved in it’.

15. (In the first box above the graph there is a space big enough to write three timings. Record the time it took for your client to read the statement the first time in seconds and milliseconds. Do not estimate – use the stopwatch. Do not average the timings). ‘You’ve done well. Can you understand my writing? We are going to read it another time. I want you to go just a little faster’. (2nd Reading). ‘Ready, set, go!’ (Record the time it took and write it under the last timed record).
16. (3rd reading). ‘Now I want you to read this one more time today. See if you can go a little faster still. Ready, set, go!’ (Record the speed. Do NOT average the timings). ‘That’s about the speed I want you to say it at home’.

17. ‘Now I’m going to give you a home work sheet to record how many times you practice it’. (Give the client a home work sheet.). ‘It is important that you fill this in accurately to represent the amount of homework you are doing’. ‘I want you to read your ‘I Am’ page 50 times a day’. ‘If you miss a day I want you to double-up the next day to catch up’. ‘At the end of seven days I want you to have repeated this whole ‘I Am’ page 350 times’.

18. ‘I am going to write today’s date in the first box and all the dates in the boxes for the first week’. ‘I want you to write in the boxes like this: ‘50’. ‘Now remember, you must repeat the whole page 50 times a day and you must record it on the sheet’. ‘If you made up the 50 times in the following day it must be evident from the homework chart that that’s what you did’.

19. ‘You must leave a gap if you forget. You can choose how you are going to practice your homework. You can either read from the top of the page to the bottom 50 times. Or you can read each separate paragraph 50 times a day. It is better to practice this statement in the morning or early afternoon when you are fresh. It is probably better to spread the practice out over that time. However, it is better to do it 50 times in the one sitting than not at all.’

20. ‘How do you think you will be able to practice it?’ (Quickly explore some ways of doing it).’ It will take you approximately ________ minutes to complete’. (Calculate the time for them, i.e. 50 X their fastest time). ‘I want you to go about as fast as you did on the third time you read it through, as that seems comfortable for you. Any speed is fine at home’. The only time we will go faster is in the session. You do not need to time yourself at home.’ (Place the Goal Statements and the homework chart into a plastic sleeve).
Rewiring Head and Heart

1. Participant to fill out ‘Participants Evaluation Form’ (Privately away from clinician and copy for them to take home once complete). Clinician to fill out ‘Participant Evaluation Form’.

Sessions Two, Three, and Four

2. ‘Hello! How did you go with your home work? Let’s see what you did’. (Encourage participant to fill in the home work chart again. Express enthusiasm or disappointment). (Copy clients home work on to your chart by hand.) (In Session Two, and all other sessions, you are to hear the ‘I Am's’ exercise and graph the ratings. ‘OK. Let’s go through our three ‘I Am’s’ and we will rate them’. (Put a date in the second date box). ‘Do you recall how fast we were saying them last time? Let’s see if we can go a little faster today! Ready, Set, Go! ‘(Time with a stopwatch and write in the times on the graph). ’ That was great. You read that in x seconds. Let’s do it again. See if you can go even a shade faster – ready, set, go’

3. ‘Well done, now let’s do it the final time. Ready, set, go! Now we are going to rate them just like last time. Let’s turn your homework over so you can’t see what rating you gave it last time. Here’s the rating chart’ (Form 8: Chart with Descriptors 0 – 10). It’s a little bit different to the rating chart you had last time. This one has some descriptors next to the ratings to help you choose. OK. (Read the first sentence in their chart) e.g. ‘I am happy.’ What rating would you give that this week? (Do all the statements). (Hide the previous ratings so that the participant can’t see them). (Add up the scores in each section like last time). (Add up the total from all the numbers). (Get a grand average)(Transfer the average to the graph). (Write in the average box, and then graph it). ‘I want you to keep up your homework’. ‘Do not miss a day’.

4. For session 1, 2, and 3, participant to fill out ‘Participant’s Evaluation Form’ Clinician to fill out ‘Therapist Evaluation Form’.
Session 4

5. Repeat the same as sessions 2 and 3 then add …

   i. Continue doing your homework for the next six weeks until I see you again.
   ii. Bring your homework sheets back with you when you come.
   iii. This concludes the therapy.

6. Participant to fill out ‘Participant’s Evaluation Form’, Post Treatment Questionnaire, DASS and BDI (Privately away from clinician and copy for them to take home once complete). Clinician to fill out ‘Therapist Evaluation Form’.
Appendix G: Psychodynamic Therapy (PDT) Script

Session One
1. ‘Today we are going to create a script called ‘The Be’s’ for you to read aloud’. ‘I will then ask you to close your eyes and listen while I read ‘The Be’s’ aloud to you’. ‘After you have heard ‘The Be’s’ read to you, I am going to ask you to choose a toy or hand puppet to whom you will read ‘The Be’s’ in this session. ‘The Be’s’ must be read slowly and meaningfully’.

2. ‘Let’s start with this diagram’ (Form 1: Causes and Feelings)

3. ‘Lets say the black spot in the middle is you’ (point to the black spot with ‘Self’ written in it). (Now point to one of the squares) ‘These squares represent the major negative events or people in your life. For some they represent sadness, losses, difficult relationships or early life experiences. They may represent an illness or a person who has had an effect on you’. ‘What are the major forces, events or circumstances that have brought you to counselling?’ (Spend some moments gathering these and write them in the squares or next to them). (Don’t worry if you only find one or can’t find any, and don’t worry if you find more than four, just draw some extra squares. Stop at about six)

4. ‘We have found some of the possible causes of why you may be feeling the way you are. Now we are going to identify some of your thoughts and feelings’. What are some of those negative thoughts and feelings that you have? (Write two or three of the participant’s feelings in the spaces around the black circle) Here is a
list of troublesome thoughts and feelings (Form 2: How I Think, Feel, and Act right now). Call out the ones that apply to you. (Write all the words down that the participant calls out, quickly and in shorthand if necessary). ‘There is a large heavy line joining the squares around the outside of the diagram. This line represents the external control that the forces in the squares have on your life. When these forces impact you (point to the arrows going into the circle) it feels as if you are on a rollercoaster’.

5. ‘Now, you and I are going on a journey together from this first page where all the troublesome thoughts and feelings are, to the second page (draw a line across the page) where you feel good about yourself, and you control how you think and feel’. (Point to the squares on the new page and make crosses in them)’ We can’t change what has happened in the past, but with your commitment to do your homework at the end of the session, we can change the way you think and feel about them’.

6. ‘If you could be the person you wanted to be, even if you thought it was impossible, how would that be?’ ‘I would like about thirty words for the sake of the exercise. (Write down the words that they say, on the second page in the space around the circle) (Use free association) (Or opposites of previous page) (And give list to help after a while. ‘Just call out the ones you would like to have.’) (Form 3: How I Would Like to Think, Feel and Act). (Or think of someone who is happy [or some other word]. How would they think or feel?). ‘Now we are going to make a statement for you to read aloud to yourself’.

7. Psychodynamic Exercise to be done in Session One (Approximately 10 minutes)

8. ‘We are going to create a statement called ‘The Be’s’. (From the Goal Statements make ten positive, present and direct instructions to fit on to one page Clinician takes the initiative and writes the statement in a prosaic style with assistance from the participant).

9. EXAMPLE: Be happy, contented, and successful. Like yourself, accept yourself. Feel good about yourself! Put the past in the past and move on! Don’t dwell on
things. Enjoy the moment and the day. Be enthusiastic and energetic. Choose good responses. Take time for yourself. Be hopeful. Look forward to the future! Stop thinking! Take charge of your life! Talk to yourself! Care for your inner child! You’re amazing. Be strong! (When completed make a photocopy of this statement to keep one in the participants file as spare)

21. ‘Close your eyes and listen to me while I read them to you’. (Clinician includes the client’s name in the statements and reads slowly and deliberately, somewhat louder than usual; emphasizing the words in a safe, warm tone).

22. ‘When you are ready you can open your eyes. Let’s put a toy animal on the table and you can read to it. Which toy would you like?’ (Client to choose a toy). Speak meaningfully to the toy as if it were your inner self”. (Participant reads to animal, slowly and deliberately).

23. ‘Good! Well read! I want you to practice speaking these words to yourself at home. Twice a day will be sufficient, once in the morning and once in the evening. Make sure you are feeling relaxed. Say them slowly and deliberately to a toy or to yourself in the mirror, somewhat louder than usual. Emphasize the words and be focused and serious about talking to yourself.’

24. If you were to give this whole statement a rating out of 10 where 0 is ‘I don’t practice these things at all’ and 10 is ‘I practice these things all the time’, what number would you be today? (Record the score on the graph, using a different colour. In brackets after the recorded score put (PDT). Record the PDT scores every session from now on.)

25. Now just to summarize, you are to read “The Be’s” twice a day slowly and deliberately. Participant to fill out ‘Participant’s Evaluation Form’. Clinician to fill out ‘Therapist Evaluation Form’.
Rewiring Head and Heart

Session Two

26. Hello! How did you go with your home Work? Let’s see how you did.

(Encourage participant to fill in the home work chart again. Express enthusiasm or disappointment). (Copy participant’s home work onto your chart by hand).

(NOTE: In session 2, 3, and 4 you are to hear a reading of ‘The Be’s’)

27. OK. Let’s do a reading of ‘The Be’s’ (Participant reads “The Be’s” out loud in a dynamic fashion with or without toy animal. Check to see the participant is reading it slowly and meaningfully. If not, correct it). What rating would you give this today according to how much you practice it, on a rating out of 10, with 10 being ‘I practice it all the time’ and 0 being ‘I don’t practice it at all’? (Record the rating on the chart and write in brackets after it –PDT).

28. (In session two you are to cover ‘Introducing the Concept of Parent, Adult and Child’)

29. ‘Now we are going to do an exercise to explain a new concept of Parent, Adult, and Child’. ‘Are you familiar with this concept?’ (Explain the Parent/Adult/Child ego states to the client by using the following script). (Draw three circles on top of each other and label the top one Parent, the middle one Adult, and the bottom one Child)

30. ‘I am going to show you a diagram that helps to explain how we function in different roles. Three main roles are Parent, Adult, and Child. We will call this the "Family of you", or the "Family of Participants name". (In the ‘child’ circle write the word ‘Natural’ at the top of the circle and the word ‘Adapted’ at the bottom of the circle). ‘The Child Ego State has two parts, one is the Natural Child and one is the Adapted Child’. ‘According to this theory it is the child that has all the feelings and emotions’.

31. ‘The Natural Child is the part of us that has fun, enjoys life and is eternally happy and childlike and has positive feelings and emotions’. ‘The Adapted Child is the part of us that has been wounded or hurt somewhere in life and feels sad, neglected or angry about what has happened and has negative feelings and
emotions’. ‘Sometimes the Adapted Child has to be a very good boy or girl to please’.

32. ‘Let’s try to identify some of your emotions and feelings. We can write these in the Adapted Child, what do you think they might be?’ (Write these in the lower half of the bottom of the circle, representing the Adapted Child). ‘What percentage of time are you the Natural Child and what percentage of time are you the Adapted Child?’ (Write these percentages next to the words Natural Child and Adapted Child)

33. ‘The Parent Ego State also has two parts to it, one is the Natural Parent and one is the Adapted Parent’. ‘According to this theory the Parent’s function is to care and nurture’. ‘The Adapted Parent is like the uncaring, critical, and neglectful person inside us’. ‘Often we hear our Adapted Parent as a voice that says things to us like, ‘Don’t be so stupid. You’re pathetic. You’re hopeless.’

34. ‘Some people don’t seem to have a kind parent voice inside them, for themselves, so we have to teach them that they can have one’. ‘Often it’s easier to be a good parenting person to someone else than to yourself’. ‘Today I am going to show you how to focus your parenting skills on the one person who needs it the most – your inner Adapted Child’. ‘Your Adapted Child needs help and care and the person who understands him/her the most is you’. ‘Life is difficult when it is lived from the Adapted Child State and life is so much easier when the Natural Inner Parent is taking care of the Adapted Inner Child while the Adult goes out to the world’. ‘The Adult Ego State is like an observer or an analyst, it is the part of us that goes out to do adult things like work, or meet with other adults and talk and function in an adult way’.

35. (Draw a line to connect the ‘nurturing,’ Natural Parent to the Adapted, ‘needy’ Child). ‘I am going to show you how you can occupy your Natural Parent with your Adapted Inner Child one hundred percent of the time, thereby giving yourself the inner comfort that you need and allowing your Adult to get on with life’. ‘Become aware that you have these different roles at work in you and that you can talk nicely to yourself’. ‘Next session we will introduce your Natural
Parent to your Inner Adapted Child so that you can begin this process of changing
your self talk’. ‘Continue doing your homework until you finish the therapy’

36. Participant to fill out ‘Participant’s Evaluation Form’. Clinician to fill out
‘Therapist Evaluation Form’.

Session Three

37. (Psychodynamic exercise for session 3) Do you remember what we were talking
about last week with the Parent, Adult, and Child diagram? Today we are going to
do a visualization exercise to introduce your Natural Parent self to your Adapted
Child. It’s just a short, imagination exercise. Would that be all right to do that?
Close your eyes and imagine yourself as a young child. It could be in your home
where you grew up or somewhere close by. Can you tell me about how old you
are and where you are?

38. So you are about ‘x’ years old and you are sitting (standing) on ………. As you
sit there (stand there) you look up and see someone coming towards you. It’s
someone quite familiar; in fact it’s YOU, all grown up, just like you are today.
And the grown-up You comes right up to the Child You and you smile at each
other because you recognize each other straight away. And the Grown-up You
says, ‘I’m so glad to meet you at last. I’m sorry I didn’t know that you existed.
Now I know that you exist I’m going to be here for you always because I’m your
Inner Parent.’

39. ‘And the Child You feels relieved that at last there is someone to carry all your
heavy loads. You look at this big person who is You, and you trust her (him), and
the two of you sit together for a long time. And the Big You says everything the
Little You has needed to hear. (Pause). Just give yourself some time to let these
two say all the things they need to say to each other. (Pause) And when you are
ready you hug each other and you know that you will never be parted, now that
you have found each other. (Pause). And we leave the two of you together, talking
and hugging and sharing as we come back to the present. When you are ready you
can open your eyes.’
40. What did you see? Can you tell me what happened? How did you experience the Child? How did you experience the Parent? Who did you identify with most? (Give time for participant to answer these questions)

41. ‘That’s all we have to do today’. ‘Continue doing your homework until you finish the therapy’ Participant to fill out ‘Participant’s Evaluation Form’. Clinician to fill out ‘Therapist Evaluation Form’.

Session Four

42. Do you remember what we were talking about last week with the Parent, Adult, Child diagram? Today we are going to do an exercise to show how the Inner Parent can help the Inner Adapted child. Do you remember how we talked about percentages between the Natural Child and the Adapted Child? How much are you Adapted Child? and how much are you Inner Child? (Write the percentages next to each).

43. Let’s go over what the Adapted Child feels and thinks. What are some of your negative feelings or thoughts? (Gather about 3-5 words such as ‘angry’, ‘sad’, ‘hopeless’, ‘explosive’ etc). Let’s get a toy to represent your Inner Child. (Put the toy on the desk in front of the participant). Let’s say that this toy represents your unhappy inner child. What do you think the toy would tell us about your negative feelings? (Elicit things like, ‘I’m angry about what happened’ or ‘I feel rejected and lonely’, or ‘I feel stupid’).

44. What do you think a caring parent would say to a little child who was angry? I want you to be the caring parent and to look after this little child - (coach the participant to speak to the toy. If they have difficulty, get them to repeat words after you). What would that child need to hear the most in order to become happy and childlike? (Make the Inner Parent have authority and the ability to quieten the Inner Child. Encourage the Inner Child to be childlike and happy. The Inner Parent might say, ‘It’s OK. I’m in control now and I will care for you because I
love you. You can be angry but just for a little while, then I want you to stop being angry. I don’t want you to be sad any more. I am the grown-up and I will take care of all your needs. You belong to me. You are safe. I don’t want you to communicate with anyone else. I am your caring parent. When you are upset you can come to me and I will make it better. I don’t want you to go to anyone else because you only belong to me. I want you to be a happy kid, laughing and enjoying life. No more sadness). Don’t encourage the Adapted Child to ‘argue’ with the Parent. Leave the Inner Parent with the ‘last say’.

45. Now what percentage is the adapted child and what percentage is the natural child? (Go back and redo the exercise until the Adapted Child is close to 0% and the Natural Child is close to 100%. You may have to do it several times. If it doesn’t seem to be working, instruct the participant to speak more strongly and with more authority to still the child’s voice. Sometimes the Inner Adapted Child is very wilful and has never had a strong parent voice. The Natural Parent voice must always be strong and kind. Be on the look-out for the Adapted Parent Voice which is harsh and critical. Discourage the Adapted Parent Voice).

46. When you have reduced the Adapted Child as much as possible you may finish the session and do the evaluation sheets. After the 4th session you have to do the BDI and the DASS, also the extra part of the Participant Evaluation Sheet.

47. Instruct the participant to continue with all the homework. Make a session time six weeks ahead.

48. (At end of session, Participant to fill out ‘Participant’s Evaluation Form’, Post Treatment Questionnaire, DASS and BDI. Clinician to fill out ‘Therapist Evaluation Form’). ‘Continue doing your homework for the next six weeks until I see you again. Bring your homework sheets back with you when you come’.
Follow-up Session (6 weeks)

49. (Do not ask participant to read the "Be’s". Simply rate the "Be’s". There is no therapy in this session. Participant to fill out ‘Participants Evaluation Form’, DASS and BDI). (Clinician to fill out ‘Therapist Evaluation Form’).
Appendix H: Combined CT and PDT Script

Session One:
(The Clinician does all the writing. The client does not write anything down).

50. ‘Today we are going to create a fluency script called the ‘I Am’s.’ ‘When it’s done we will practice reading the script three times, here in the session’. ‘At the end of the session you will take the script home with you in a plastic sleeve and you will read the sheet 50 times every day, out loud, until I see you again next session. You will record your homework on a homework sheet’. ‘It is very important that you complete the homework every day as your progress is based on the amount of homework you complete’. ‘After we have finished creating the ‘I Am’s’ I will make up another instruction sheet for you called ‘The Be’s’ ‘I will then ask you to close your eyes and listen while I read ‘The Be’s’ aloud to you, slowly and meaningfully’. ‘After you have heard ‘The Be’s’ read to you I’m going to ask you to choose a toy animal or hand puppet, and to read them out loudly, slowly and meaningfully to your toy, as if to your inner self’. ‘For homework you are also required to read them out loudly, slowly and meaningfully, twice a day and record it on your homework sheet’. ‘Are you clear that there are two documents that we will make in this session that you will take home with you to practice? There is also one sheet on which you can record both sets of homework’. (If unclear go back over the preceding text).

51. Let’s start with this diagram -Why I Feel the Way I Do and My Current Feelings (Form 1: Causes and Feelings).
52. ‘Let’s say that the black spot in the middle is you’ (*point to the black spot with “Self” written in it*). (*Now point to one of the squares.*) ‘These squares represent the major negative events or people in your life. For some they represent sadness’s, losses, difficult relationships or early life experiences. They may represent an illness, a circumstance or a person who has had a negative effect on you’. (*Keep pointing to the square/s.*) ‘What are the major forces, events or circumstances that have brought you to participate in the depression project?’ (*Spend some moments gathering these and write them in the squares or next to them.*) *Don’t worry if you only find one or can’t find any, and don’t worry if you find more than four, just draw some extra squares. Stop at about six.*

53. ‘We have found some of the possible causes of why you may be feeling the way you are. Now we are going to identify some of your thoughts and feelings. We are going to write them in these spaces in the middle’. ‘What are some of those negative thoughts and feelings that you have?’ (*Write two or three of the client’s feelings in the spaces around the black circle, then give them the list of words to get more.*)

54. ‘Here is a list of troublesome thoughts and feelings’ (Form 2: How I Am, Think, and Feel Right Now). ‘Silently read through the lists and call out the ones that apply to you’. (*Write all words down that the client calls out, quickly and in shorthand if necessary.*) ‘There is a large heavy line joining the squares around the outside of the diagram. This line represents the external control that the forces in the squares have on your life. When these forces impact you (*point to the arrows going into the circle*) it feels as if you are on a roller coaster’ (draw up and down wavy lines through the words on the first page). ‘Now, you and I are going on a journey together from this first page (*indicate the first page*) where all the troublesome thoughts and feelings are, to the second page (*draw a long arrow across the middle of the page a few centimetres above the line that is already there*) where you feel good about yourself, and you control how you think and feel’ (*point to the inner square and circle*).
55. *Point to the squares on the new page and make crosses in them* ‘We can’t change what has happened in the past - these stay the same, but with your commitment to do your homework at the end of this session, we can change the way you think and feel about them’.

56. ‘If you could be the person you wanted to be, even if you thought it was impossible, how would that be? I would like you to give me about 30 words so that I can make up an exercise for you to take home’. *Write down the words they say, on the second page, in the space around the circle. Use free association to get more words*. ‘Can you think of any more?’ *Or use opposites from the previous page*, ‘What do you think the opposite of ‘sad’ might be? *Or, ‘Think of someone else who is happy. How would they think or feel?’*

57. *After a while give the client the next list of words ‘How Would I Like to Think, Feel and Be?’* ‘Read through the list and call out the ones that you would like to have.’ *Note to Clinician: This is a very important time in the therapy. If you do not get enough words the whole exercise will not work. When you get about 30 words say, “Now we are going to make a statement for you to read as if you had reached your goals already”. ‘As I write these down I want you to give them a rating. For example if you were to say right now, ‘I am ______’ *use the most important word on their chart, usually their first word*, what rating would you give it on this ‘0 to 10 chart”? - with 0 being, ‘I don’t practice this at all’ and 10 being ‘I practice this all the time’? *Use Chart with No Descriptors 0 to 10*. We will only keep the ones that rate 5 or less’.

58. *Put all the words into sentences, grouping similar words or phrases together to make ten paragraphs, for example, ‘I am happy, confident and at ease’ or ‘I put the past in the past. I let go. I move forward’) – Involve the client as you arrange each statement and read it to her’.

59. *Create a well-balanced and prosaic set of ten statements. Write them on to the goal statement page as ‘I Am’s’ with each rating above each salient word. For example, ‘I am happy, confident and at ease’. Put the numbers directly above ‘happy’ ‘confident’ and ‘at ease’). (Average the scores as you go for each*
numbered goal, putting the averages in the first box under the statement. For example ‘3’, ‘2’ and ‘1’ would add up to ‘6’ which is then divided by 3 (there are 3 words altogether). 6 divided by 3 = 2).

60. 28. (Add the ten averages and divide by 10 to get a grand average for the whole page. Write this average in the box at the bottom of the page). ‘I am going to put your average score on a graph’ (Graph of Progress - Put the date in the date box and write the average in the box at the top of the first column). (Put a dot on the graph (use a ruler) to represent the client’s score.)

61. ‘If you were to read this page of ‘I Am’s’ 50 times a day over the time that I see you, that is, everyday until we finish therapy, and there were no great differences in your life in the meantime, I would expect you to follow this predicted line of progress from where you are now to an average of 7.5’. (Draw a dotted line to 7.5 in session 4 three weeks hence).

62. ‘One of the ideas behind reading this page is that we want to give your brain a different way of thinking’. ‘By repeating this page of ‘I’ statements we are educating your brain to think more positively’. ‘The positive words have a positive effect on your brain chemistry and your brain starts producing more of the ‘feel-good’ chemicals’. ‘By flooding the brain with these words we do several things: we teach it what to think, we help it to produce good-feeling chemicals, we teach you confidence and self-esteem through saying the words out loud and we give you a script to repeat when things get tough’. ‘We also express positive affirmations out into the world with the expectation that we will receive the same positivity back. In all these different ways we are attracting confidence, good feelings, positivity and self-esteem. We teach you how to put yourself on a healthy frequency’. ‘I want you to treat this as a reading exercise. I don’t need you to pretend that you believe it. You don’t even have to think about it. Just read it aloud confidently’.

63. ‘Now we are going to practice reading the whole page out aloud, just the words, not the numbers’. ‘I want you to read this slowly’. ‘I am going to time how long
it takes for you to read from the beginning to the end’. ‘I don’t want you to get involved with your emotions as you read this’. ‘Just treat it as a reading exercise’.

64. ‘You don’t have to believe what you say because obviously from your ratings you don’t!’ ‘I want you to create a new pathway in your brain with these positive words’. ‘OK?’ (Pick up the stopwatch). ‘Ready, set, go!’ (Begin timing, always use a professional stopwatch or mobile phone stopwatch – record seconds and milliseconds). (Give positive reinforcement, if necessary, to complete the reading). ‘It’s OK. Don’t think about it, just get through it! Keep going! You’re nearly there! It’s just a reading exercise! Don’t get involved in it’.

65. (In the first box above the graph there is a space big enough to write three timings. Record the time it took for your client to read the statement the first time in seconds and milliseconds. Do not estimate – use the stopwatch. Do not average the timings). ‘You’ve done well. Can you understand my writing? We are going to read it another time. I want you to go just a little faster’. (2nd Reading). ‘Ready, set, go!’ (Record the time it took and write it under the last timed record).

66. (3rd reading). ‘Now I want you to read this one more time today. See if you can go a little faster still. Ready, set, go!’ (Record the speed. Do NOT average the timings). ‘That’s about the speed I want you to say it at home’.

67. ‘Now I’m going to give you a home work sheet to record how many times you practice it’. (Give the client a home work sheet.). ‘It is important that you fill this in accurately to represent the amount of homework you are doing’. ‘I want you to read your ‘I Am’ page 50 times a day’. ‘If you miss a day I want you to double-up the next day to catch up’. ‘At the end of seven days I want you to have repeated this whole ‘I Am’ page 350 times’.

68. ‘I am going to write today’s date in the first box and all the dates in the boxes for the first week’. ‘I want you to write in the boxes like this: ‘50’. ‘Now remember, you must repeat the whole page 50 times a day and you must record it on the sheet’. ‘If you made up the 50 times in the following day it must be evident from the homework chart that that’s what you did’.
69. ‘You must leave a gap if you forget. You can choose how you are going to practice your home work. You can either read from the top of the page to the bottom 50 times. Or you can read each separate paragraph 50 times a day. It is better to practice this statement in the morning or early afternoon when you are fresh. It is probably better to spread the practice out over that time. However, it is better to do it 50 times in the one sitting than not at all.’

70. ‘How do you think you will be able to practice it?’ (Quickly explore some ways of doing it). ’It will take you approximately _________ minutes to complete’. (Calculate the time for them i.e. 50 X their fastest time). ‘I want you to go about as fast as you did on the third time you read it through, as that seems comfortable for you. Any speed is fine at home’. The only time we will go faster is in the session. You do not need to time yourself at home’. (Place the Goal Statements and the homework chart into a plastic sleeve).

Psychodynamic Exercise to be done in Session One (approximately 10 mins)

71. Now I am going to make the next sheet. These are called The Be’s. (From the ‘I Am’ page, make 10 positive, present and direct instructions to fit onto one page, called, ‘The Be’s’. Clinician takes the initiative and writes a bold set of statements in prosaic style with assistance from participant e.g. ‘Be happy, contented, and successful. Like yourself, accept yourself. Feel good about yourself! Put the past in the past and move on! Don’t dwell on things. Enjoy the moment and the day. Be enthusiastic and energetic. Choose good responses. Take time for yourself. Be hopeful. Look forward to the future! Stop thinking! Take charge of your life! Talk to yourself! Care for your inner child! You’re amazing. Be strong!’).

72. ‘Close your eyes and listen to me while I read them to you’. (Clinician includes the client’s name in the statements and reads slowly and deliberately, somewhat louder than usual; emphasizing the words in a safe, warm tone).

73. ‘When you are ready you can open your eyes. Let’s put a toy animal on the table and you can read to it. Which toy would you like?’ (Client to choose a toy).
Rewiring Head and Heart

Speak meaningfully to the toy as if it were your inner self. *(Participant reads to animal, slowly and deliberately).*

74. ‘Good! Well read! I want you to practice speaking these words to yourself at home. Twice a day will be sufficient, once in the morning and once in the evening. Make sure you are feeling relaxed. Say them slowly and deliberately to a toy or to yourself in the mirror, somewhat louder than usual. Emphasize the words and be focused and serious about talking to yourself.’

75. If you were to give this whole statement a rating out of 10 where 0 is ‘I don’t practice these things at all’ and 10 is ‘I practice these things all the time’, what number would you be today? *(Record the score on the same graph, using a different colour. In brackets after the recorded score put (PDT). Record the PDT score every session from now on. It is expected to be approximately the same as the CT score).*

76. Now just to summarize, you are to read “The Be’s” twice a day slowly and deliberately and you are to read the ‘I Am’s” 50 times a day and compete your homework sheet. *(Write on the top of ‘The Be’s’, ‘Read slowly and deliberately morning and evening. Write on top of the ‘I Am’s (I-wires), ‘Read 50 times every day out loud’)*

77. Photocopy all Participant’s pages to keep in file as a copy- a) Homework Chart with days of the week, b) the ‘I Am’s’ and c) the ‘Be’s’. Participant to fill out ‘participants evaluation form’, Clinician to fill out ‘Clinician Evaluation form’.

Session Two:

78. ‘Hello! How did you go with your Home Work? Let’s see what you did’. *(Spend time looking at the Participant’s homework and encourage them to fill in the Home Work chart. Express enthusiasm or disappointment. Copy participant’s Home Work on to your copy of the Home Work chart in the file, by hand).*
79. OK. Let’s do a reading of ‘The Be’s’ (Participant reads “The Be’s” out loud in a dynamic fashion with or without toy animal. Check to see the participant is reading it slowly and meaningfully. If not, correct it). What rating would you give this today according to how much you practice it, on a rating out of 10, with 10 being ‘I practice it all the time’ and 0 being ‘I don’t practice it at all’? Record the rating on the chart and write in brackets after it – PDT.

80. OK. Let’s go through our three ‘I Am’ readings and then we will rate them. (Put a date in the second date box. Do you recall how fast we were saying them last time? Let’s see if we can go a little faster today! (Reading 1). Ready, set, go! (Time with a stopwatch and write in the time on the graph). That was great. You read that in ___ seconds. Let’s do it again. See if you can go even a shade faster. (Reading 2). Ready, set, go! Well done, you read that in ______ seconds! Now let’s do it the final time. (Reading 3). Ready, set, go! That was ______ seconds! Now we are going to rate them just like last time. Let’s turn your homework over so you can’t see what rating you gave it last time. (Hide the previous ratings so that the participant can’t see them). Here’s the rating chart (take Form 8: Chart with descriptors 0 to 10). It’s a little bit different from the rating chart you had last time. This one has some descriptors next to the ratings to help you choose.

81. OK, (Read out each sentence, rating one concept at a time e.g. I am “Happy”), what rating would you give ___________ (name feeling/concept) this week?’ (Add up the scores in each section like last time. Add up the total from all the numbers. Get a grand average; transfer the average to the graph; write it in the Average box, then graph it. Show the participant the graph and encourage them to keep going or do more consistent homework to keep up with the predicted line of success.) (Example), I want you to keep up your homework. Do not miss a day.

82. Now we are going to do an exercise to explain a new concept of PARENT, ADULT and CHILD. Are you familiar with this concept? (Explain the Parent/Adult/Child ego states to the participant by using the script below. Use the diagram of Parent Adult and Child that has three circles. Always draw your own circles). (Draw three circles on top of each other and label the top one Parent, the middle one Adult and the bottom one Child). I am going to show you a diagram
that helps to explain how we function in different roles or ego states. The three main roles are Parent, Adult and Child. This could be called your Inner Family.

83. *(In the Child circle write the word ‘Natural’ at the top of the circle and the word ‘Adapted’ at the bottom of the circle.)* The Child Ego State has two parts, one is the Natural Child and one is the Adapted Child. According to this theory it is the child that has ALL the feelings and emotions. *(Draw two faces to represent each, one a happy face and one a sad face.)* The Natural Child is the part of us that has fun, enjoys life and is eternally happy and childlike and has positive feelings and emotions. The Adapted Child is the part of us that has been wounded or hurt somewhere in life and feels sad, neglected or angry about what has happened and has negative feelings and emotions. Sometimes the adapted child has to be a very good boy or girl to please others. Let’s try to identify some of your emotions and feelings. We can write these in the Adapted child. What do you think they might be? *(Write these around the lower half of the bottom circle, representing the Adapted child.)*

84. What percentage of time are you the Natural Child and what percentage of time are you the Adapted Child? *(Write these percentages next to the words Natural Child and Adapted Child.)* The Parent Ego State also has two parts to it, one is the Natural Parent and one is the Adapted Parent. *(Draw two faces to represent each, one a happy face and one a sad face.)* According to this theory the Parent’s function is to care and nurture.

85. The Adapted Parent is like the uncaring, critical and neglectful person inside us. Often we hear our Adapted Parent as a voice that says things to us like, ‘Don’t be so stupid. You’re pathetic. You’re hopeless’. The Natural Parent is the one who cares and loves, is strong and takes responsibility. Some people don’t seem to have a kind Parent voice inside them, for themselves, so we have to teach them that they can have one. Often it’s easier to be a good parenting person to someone else than to yourself.
86. I am going to show you how to turn your parenting skills on the one person who needs it the most – your inner Adapted Child (point to the unhappy child face). Your Adapted Child needs help and care and the person who understands him/her the most is you. Life is difficult when it is lived from the Adapted Child State and life is so much easier when the Natural Inner Parent (point to the happy parent face) is taking care of the Adapted Inner Child (point to the sad child face) while the Adult goes out to the world (draw a stick picture of the adult). The Adult Ego State is like an observer or an analyst, it is the part of us that goes out to do adult things like work, or meet with other adults and talk and function in an adult way.

87. I am going to show you how you can occupy your Natural Parent with your Adapted Inner Child one hundred percent of the time, thereby giving yourself the inner comfort that you need and allowing your Adult to get on with life. (Draw a line to connect the Nurturing, natural parent to the Adapted, needy Child). Become aware that you have these different roles at work in you and that you can talk nicely to yourself. Next session we will introduce your Inner Natural Parent to your Inner Adapted Child so that you can begin this process of changing your self-talk. Participant to fill out ‘participants evaluation form’ Clinician to fill out ‘Clinician Evaluation form’.

Session 3

88. Hello! How did you go with your Home Work? Let’s see what you did. (Spend time looking at the Participant’s homework and encourage them to fill in the Home Work chart. Express enthusiasm or disappointment. Copy participant’s Home Work on to your copy of the Home Work chart in the file, by hand).

89. OK. Let’s do a reading of ‘The Be’s’ (Participant reads the Be’s out loud in a dynamic fashion with or without toy animal. Check to see the participant is reading it slowly and meaningfully. If not, correct it). What rating would you give this today according to how much you practice it, on a rating out of 10, with 10 being ‘I practice it all the time’ and 0 being ‘I don’t practice it at all’? (Record the rating on the chart and write in brackets after it – (PDT).
90. OK. Let’s go through our three ‘I Am’ readings and then we will rate them. *(Put a date in the second date box).* Let’s see if we can go a little faster today! *(Reading 1).* Ready, set, go! *(Time with a stopwatch and write in the time on the graph).* That was great. You read that in x seconds. Let’s do it again. See if you can go even a shade faster. *(Reading 2.)* Ready, set, go! Well done, you read that in ________ seconds! Now let’s do it the final time. *(Reading 3.)* Ready, set, go! That was ________ seconds! Now we are going to rate them just like last time.

91. Let’s turn your homework over so you can’t see what rating you gave it last time. *(Hide the previous ratings so that the participant can’t see them).* Here’s the rating chart *(Chart with Descriptors 0 to 10).* OK, *(Read out each sentence, rating one concept at a time)* *(Example)* ‘I am happy’). What rating would you give that this week?’

92. *(Add up the ratings in each section like last time, add up the total from all the numbers, get a grand average, transfer the average to the graph, write it in the Average box, then graph it. Show the participant the graph and encourage them to keep going or do more consistent homework to keep up with the predicted line of success.)* *(Example)*, I want you to keep up your homework. Do not miss a day.

93. *(Psychodynamic exercise for session 3)* Do you remember what we were talking about last week with the Parent, Adult, and Child diagram? Today we are going to do a visualization exercise to introduce your Natural Parent self to your Adapted Child. It’s just a short, imagination exercise. Would that be all right to do that?

Close your eyes and imagine yourself as a young child. It could be in your home where you grew up or somewhere close by. Can you tell me about how old you are and where you are?

94. So you are about ‘x’ years old and you are sitting (standing) on ………. As you sit there (stand there) you look up and see someone coming towards you. It’s someone quite familiar; in fact it’s YOU, all grown up, just like you are today. And the grown-up You comes right up to the Child You and you smile at each other because you recognize each other straight away. And the Grown-up You says, ‘I’m so glad to meet you at last. I’m sorry I didn’t know that you existed.
Now I know that you exist I’m going to be here for you always because I’m your Inner Parent.’

95. ‘And the Child You feels relieved that at last there is someone to carry all your heavy loads. You look at this big person who is You, and you trust her (him), and the two of you sit together for a long time. And the Big You says everything the Little You has needed to hear. (Pause). Just give yourself some time to let these two say all the things they need to say to each other. (Pause) And when you are ready you hug each other and you know that you will never be parted, now that you have found each other. (Pause). And we leave the two of you together, talking and hugging and sharing as we come back to the present. When you are ready you can open your eyes.’ ‘What did you see? Can you tell me what happened? How did you experience the Child? How did you experience the Parent? Who did you identify with most?’ ‘That’s all we have to do today. Let’s fill out the evaluation sheets. Take this one to fill out in the waiting room’ (Participant Evaluation sheet) ‘Please leave it at reception. Keep up your homework and I will see you back next week’. Participant to fill out ‘participants evaluation form’. Clinician to fill out ‘Clinician Evaluation form’.

Session Four

96. Hello! How did you go with your Home Work? Let’s see what you did. (Spend time looking at the Participant’s homework and encourage them to fill in the Home Work chart. Express enthusiasm or disappointment. Copy participant’s Home Work on to your copy of the Home Work chart in the file, by hand).

97. OK. Let’s do a reading of ‘The Be’s’ (Participant reads the Be’s out loud in a dynamic fashion with or without toy animal. Check to see the participant is reading it slowly and meaningfully. If not, correct it). What rating would you give this today according to how much you practice it, on a rating out of 10, with 10 being ‘I practice it all the time’ and 0 being ‘I don’t practice it at all’? Record the rating on the chart and write in brackets after it – (PDT).
98. OK. Let’s go through our three ‘I Am’ readings and then we will rate them. *(Put a date in the second date box).* Let’s see if we can go a little faster today! *(Reading 1).* Ready, set, go! *(Time with a stopwatch and write in the time on the graph).*

99. That was great. You read that in “x” seconds. Let’s do it again. See if you can go even a shade faster. *(Reading 2).* Ready, set, go! Well done, you read that in x seconds! Now let’s do it the final time. *(Reading 3).* Ready, set, go! That was “x” seconds! Now we are going to rate them just like last time. Let’s turn your homework over so you can’t see what rating you gave it last time. *(Hide the previous ratings so that the participant can’t see them).* Here’s the rating chart *(Use Chart with Descriptors 0 to 10).* OK, *(read out each sentence, rating one concept at a time)* *(Example)* ‘I am happy’. What rating would you give that this week?’

100. *(Add up the ratings in each section like last time, add up the total from all the number, get a grand average, transfer the average to the graph, write it in the Average box, then graph it. Show the participant the graph and encourage them to keep going or do more consistent homework to keep up with the predicted line of success.)* *(Example)* I want you to keep up your homework. Do not miss a day.

101. Do you remember what we were talking about last week with the Parent, Adult, and Child diagram? Today we are going to do an exercise to show how the Inner Parent can help the Inner Adapted child. Do you remember how we talked about percentages between the Natural Child and the Adapted Child? How much are you Adapted Child? and how much are you Inner Child? *(Write the percentages next to each).*

102. Let’s go over what the Adapted Child feels and thinks. What are some of your negative feelings or thoughts? *(Gather about 3-5 words such as ‘angry’, ‘sad’, ‘hopeless’, ‘explosive’ etc.)* Let’s get a toy to represent your Inner Child. *(Put the toy on the desk in front of the participant).* Let’s say that this toy represents your unhappy inner child. What do you think the toy would tell us about your negative
feelings? (Elicit things like, ‘I’m angry about what happened’ or ‘I feel rejected and lonely’, or ‘I feel stupid’).

103. What do you think a caring parent would say to a little child who was angry? I want you to be the caring parent and to look after this little child - (coach the participant to speak to the toy. If they have difficulty, get them to repeat words after you). What would that child need to hear the most in order to become happy and childlike? (Make the Inner Parent have authority and the ability to quieten the Inner Child. Encourage the Inner Child to be childlike and happy. The Inner Parent might say, ‘It’s OK. I’m in control now and I will care for you because I love you. You can be angry but just for a little while, then I want you to stop being angry. I don’t want you to be sad any more. I am the grown-up and I will take care of all your needs. You belong to me. You are safe. I don’t want you to communicate with anyone else. I am your caring parent. When you are upset you can come to me and I will make it better. I don’t want you to go to anyone else because you only belong to me. I want you to be a happy kid, laughing and enjoying life. No more sadness). Don’t encourage the Adapted Child to ‘argue’ with the Parent. Leave the Inner Parent with the ‘last say’.

104. Now what percentage is the adapted child and what percentage is the natural child? (Go back and redo the exercise until the Adapted Child is close to 0% and the Natural Child is close to 100%. You may have to do it several times. If it doesn’t seem to be working, instruct the participant to speak more strongly and with more authority to still the child’s voice. Sometimes the Inner Adapted Child is very wilful and has never had a strong parent voice. The Natural Parent voice must always be strong and kind. Be on the look-out for the Adapted Parent Voice which is harsh and critical. Discourage the Adapted Parent Voice).

105. When you have reduced the Adapted Child as much as possible you may finish the session and do the evaluation sheets. After the 4th session you have to do the BDI and the DASS, also the extra part of the Participant Evaluation Sheet.
106. *Instruct the participant to continue with all the homework. Make a session time six weeks ahead.* ‘Continue doing your homework for the next six weeks until I see you again. Bring your homework sheets back with you when you come. This concludes the therapy’. *Participant to fill out ‘Participants Evaluation Form’, Post Treatment Questionnaire, DASS and BDI. Clinician to fill out ‘Clinician’s Evaluation Form’.*
### Appendix I: Participant Evaluation Sessions 1-3

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Participant Number:
Date:

### Session Profile 1, 2, 3, 4, 5, FU

1. **What aspect of the treatment have you found most helpful so far?**
   - Talking to therapist
   - Repeating your statements
   - Other Please explain: ________________________________

2. **How much has your behaviour changed for the better because of this therapy?**

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3. **How far have you progressed towards achieving your goals?**

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4. **At this point how would you rate the effectiveness of the treatment on a scale of 0 low to 10 high?**

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<td>Effective</td>
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5. **How do you rate rapport with your therapist?**

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<td></td>
<td>Very weak</td>
<td>Very strong</td>
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## Appendix J: Therapist Evaluation

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<tr>
<td><strong>Participant Number:</strong></td>
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<td><strong>Therapist Number:</strong></td>
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<tr>
<td>1 How did you rate this session?</td>
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<td></td>
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<td></td>
<td>Not Successful</td>
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<td>2 How much did you deviate from the script?</td>
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<td></td>
<td>A lot</td>
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<td>3 Do you think this treatment suits this participant?</td>
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<td>Definitely Not Suited</td>
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<td>4 What are your predictions for this participant’s success?</td>
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<td>Not Successful</td>
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<td>5 Did you establish, or maintain, rapport with this participant?</td>
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<td>6 How comfortable were you with the session?</td>
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<td></td>
<td>Very Uncomfortable</td>
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<td>7 How compliant was the participant with the homework? (N/A for session 1)</td>
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<td>Not Compliant</td>
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<td>8 Is there anything unusual to report from this session?</td>
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Thank you for taking the time to complete this questionnaire.
### Appendix K: Participant Evaluation (Post & Follow-up)

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<th>Post and</th>
<th>Follow Up</th>
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The following questions must be answered a) after session 4 and b) again after the follow-up session.

1. **At the end of this process how would you rate yourself on a scale of 0 (low) to 10 (high), in terms of:**

   **Emotions?**

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   **Thoughts?**

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   **Attitudes?**

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2. **How effective has this treatment been for you?**

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3. **Would you recommend this therapy to anyone else?**

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4. **Do you have any other comments?**

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Thank you for taking the time to complete this questionnaire.
Appendix L: Thank You Letter

Belmont Counselling Clinic
355 Great Eastern Highway
ASCOT WA 6104
Phone: 9277 6060
Fax: 9477 4843

Dear Participant

We would like to acknowledge your participation in the Depression Project conducted at the Belmont Counselling Clinic.

The project has been progressing steadily and we are grateful to all of you who have offered your time and personal effort.

It is reasonable to suggest that those of you who committed themselves to the project and specifically the homework task achieved the greatest results. None of the treatment conditions functioned as a control group, and all of you, ultimately, received a variation of the ABCT treatment design.

Well done and thank you.

Yours sincerely

Mrs Genevieve Milnes
Rewiring Head and Heart

**Appendix M: Raw Data**

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