CHANGES AND FACTORS IN MENTAL HEALTH FUNCTIONING OF ADOLESCENTS IN THERAPY

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ABSTRACT

To explore factors that might contribute to changes in mental health functioning in adolescents with mental health problems seen at a Child, Adolescent, and Family Mental Health Service (CAFMHS), the present study examined changes in scores on the Clinical Outcomes of Routine Evaluation (CORE) and the Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA) over a 3 month period. Ten female and 5 male adolescents completed the CORE and 7 of their respective therapists assessed their mental health on HoNOSCA, before and after 3 months of intervention. Life events and factors within therapy during the period of the study were assessed through interviews with clients and their respective therapists. Analysis of the data indicated that overall the mental health of the participants did improve. No significant correlations between clients' and clinicians' assessment of therapeutic factors were found. The hypotheses that focused on factors that might have contributed to the changes were not supported, possibly due to the small number of participants. Limitations of the study and future directions were discussed.

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1. INTRODUCTION

Rationale for research

The researcher involved in the present project has been working as a counsellor at Child, Adolescent, and Family Mental Health Service (CAFMHS) in Wanganui since June 1996. She observed that some clients do report they feel a lot better after a while, while others do not seem to make any positive changes. On occasions where she has asked the adolescents what they believe has made them feel better, the answers often involved factors such as getting into a relationship, changing schools, moving out of home or getting a part-time job.

The researcher became interested in finding a way to gather scientific data to obtain a better understanding of what makes young people with mental health problems feel better, according to themselves and their therapists. This project attempted to make a start in describing this.

Treatment outcome research in the literature is mostly focused on adult populations. Research with younger age groups is sparse and often children and adolescents are grouped together. Because of the developmental changes that occur from childhood to adulthood, it is important to distinguish between children and adolescents.

In the literature the emphasis is often on what kind of treatment works best for what population. The treatment programmes used often have a treatment manual and are monitored to ensure treatment integrity. The groups included in the research are frequently analogue samples, who differ from an average client referred to a mental health service. Not much research has been done with adolescents in clinic settings.

Scientists have produced numerous reviews about the gap between research and the clinical field. A field study at a Child, Adolescent, and Family Mental Health Service (CAFMHS) might give some insight in what factors contributed to changes in mental health in clients who received services from a CAFMHS.

The main objective of the present project was to investigate whether adolescents saw life events (such as relationship break-ups, change of schools, family problems) as having more influence on changes in their mental health functioning than treatment at a CAFMHS. The following questions were formulated:

1. Does adolescents' mental health functioning change significantly over the 3 months of the study according to the adolescents?
2. Does adolescents' mental health functioning change significantly over the 3 months of the study according to their therapists?
3. What factors do adolescents report that are associated with any changes?
4. What factors do clinicians report that are associated with changes in their clients' mental health functioning?

This chapter provides a description of the definitions of adolescence and mental health that were used in this project. Chapter 2 gives an overview of research measuring adolescent psychotherapy outcomes. Chapter 3 describes factors that contribute to changes in mental health. Chapter 4 integrates the previous two chapters. The methodology is described in Chapter 5, followed by results in Chapter 6, discussion in Chapter 7, and conclusions in Chapter 8.

Defining adolescence

There are a number of definitions of adolescence available in the literature. Within these definitions, the age range of adolescents varies between age 11-12 until age 18-19 (Miller, 1983), and the entire teenage years (Petersen, 1988). There are a number of disadvantages of defining adolescence in terms of age. The main limitation of this definition is that the onset and duration of developmental processes associated with adolescence vary between sexes, cultures, and individuals. A more useful way of describing adolescence might thus be as a phase of life in which the transition from childhood to adulthood takes place (Petersen & Leffert, 1995). Adolescence often is divided into three stages: early adolescence, middle adolescence and late adolescence. Again there does not seem to be consensus as to which exact ages these different stages include. Different changes and tasks are believed to take place in different stages of adolescence. In early adolescence the changes related to puberty are most pronounced. Adjusting to these physical and emotional changes is thus one of the major tasks of this stage. In the middle stage of adolescence, formation of identity takes place. Late adolescents are learning to become increasingly independent (Miller, 1983).

In spite of different opinions about the age limits of adolescence, there appears to be consensus that puberty is an important aspect of the transition from a child to an adult. Puberty is a time of rapid physical and hormonal changes. Boys and girls will experience changes in secondary sex characteristics and height, and will obtain the physical ability to reproduce (Miller, 1983). It is widely known that girls tend to develop earlier than boys. Research focused on differences between early and late development has consistently found, that early onset of puberty for boys has mostly beneficial effects, while for girls this is associated with more psychological difficulties (Petersen & Leffert, 1995).

In addition to biological changes in adolescence, there are cognitive and psychosocial developments that take place during this period including the adolescent's increased abilities to think and reason about abstract concepts. This makes it possible to discuss for example "What if....." scenario's, in which the adolescent is asked to consider hypothetical situations. They also become increasingly better in decision making processes (Petersen & Leffert, 1995). Adolescents have a better developed self concept than children and start to form an identity. Autonomous functioning and formation of meaningful relationships are also tasks of adolescence. Resnick (2000) describes a number of needs for adolescent, taken from a report from the Federal Department of Health, Education, and Welfare, to help them to develop into healthy adults. These need are; to participate in different aspects of the community (such as work, household), make decisions; have interactions with other adolescents and have a sense of belonging; have the opportunity to be self-reflective; practice discussion of beliefs and develop own values; experiment with relationships, identity, and roles, without having to commit oneself; feel accountable in relationships with peers; and have fun in life.

In the first half of the last century, adolescence was seen as a period of turmoil and stress. Emotional and behavioural difficulties were seen as part of normal development (Petersen, 1988). These ideas were based on theoretical concepts instead of sound research. Research in the second half of the twentieth century suggests that the majority of adolescents do not experience significant difficulties (Petersen, 1988). Adolescents who do experience these problems often continue to develop into troubled adults. Even today a lot of people appear to have the understanding that adolescents are supposed to be moody, unpredictable and difficult. Problems they experience are often brushed off and seen as a stage they will eventually grow out of. This is likely to lead to the underestimation of mental health problems in adolescents. Especially in detecting internalising disorders, such as depression and anxiety, adolescents themselves identify more problems than their parents (Cantwell, Lewinsohn, Rohde, & Seeley, 1996).

Adolescence is a period in life which has received a lot of attention in the literature in the last century. It is a period in which a transition from childhood to adulthood takes place, and is characterised by a number of biological, psychological, and social changes. The view that adolescents usually experience significant problems has not been supported in the literature. If problems in adolescence occur, this could lead to ongoing mental health problems in adulthood.

The age of adolescents who were asked to participate in the present project was 13 to 20. This is the distinction the Child, Adolescent, and Family Mental Health Service (CAFMHS) Wanganui makes between children and adolescents. Some clinicians worked predominantly with children aged 0-12 and some clinicians worked mainly with adolescents aged 13-20. Younger children, aged 10 to 12 were not included because of this distinction within the service. Another reason was the fact that one of the measurement instruments used, Clinical Outcomes in Routine Evaluation (CORE), was developed for the use with adults and not appropriate for younger children. The normative data available for CORE are based on non-clinical samples with an age range from 14-45 years and clinical samples with an age range from 16-78 years (CORE System Group, 1999). No specific norms for adolescents were available; however as the available norms started at age 14, CORE is likely to be suitable for the use with adolescents. A version of CORE especially designed for teenagers, Teen CORE was developed. Rationale for not using this instrument will be given in the methodology section.

Defining mental health

Kazdin (1993a) described two aspects of mental health. The first aspect is absence of impairment in day to day psychological, emotional, behavioural, and social functioning. The second aspect is optimal functioning in psychological and social areas. Impairment in any of the areas described in the first part of the definition include not only categories as described in manuals for classification of psychiatric disorders, but also behaviours such as alcohol and drug use, sexual promiscuity, and social circumstances such as poverty. Optional functioning or well-being assumes more than only absence of impairment. If a person has optimal functioning, he/she is likely to have a number of personal and interpersonal strengths to achieve this. Both aspects of this definition are obviously related. If a person has impairment in any of the described areas, it is likely that he/she will not be able to achieve a sufficient level of well-being. This overlaps with Sharman's (1997) description. He related mental health to being able to cope with the stresses that people encounter in their day to day life and adjusting to these stresses.

The adolescents that participated in the present project were likely to have had one or more DSM IV diagnoses. Having a DSM IV diagnosis means mental health problems. However, the absence of a DSM IV diagnosis does not mean that the adolescent did not have mental health problems. Adolescents without a formal diagnosis were therefore not excluded from the present project. The researcher approached all adolescents that were assessed at CAFMHS Wanganui in the period of the study and could be followed up after 3 months. Their mental health was measured with use of CORE. CORE will be further described in Chapter 4. The definition of mental health used in the present project was thus broader than the presence of a DSM IV diagnosis.

2. MEASUREMENT OF ADOLESCENT PSYCHOTHERAPY OUTCOMES

Introduction

In reviewing the literature on treatment outcome research, the authors of most research projects made a distinction between clinic based settings and outcome research in more controlled conditions. The latter will be named experimental in the present project. Experimental means here, that the participants, treatment methods, and therapists in these studies were selected for the purpose of the research. This is in contrast to clinic based research, where there is a more natural selection of clients, a wider variety of treatment methods and therapist variables.

Experimental research

Compared to research on psychotherapy outcomes with adults, literature on psychotherapy outcomes with adolescents is sparse. In 1952, Eysenck concluded in general that psychotherapy did not have positive effects; improvements that occurred without treatment were similar to changes in functioning following psychotherapy (Eysenck, 1952). This conclusion has not been supported by more recent studies that have demonstrated the effectiveness of psychotherapy with adolescents. Further, the effectiveness found is comparable with the effectiveness found in psychotherapy outcome research with adults (Kazdin, 1993b).

Jensen, Hoagwood, and Petti (1996) reviewed the literature on psychotherapy outcome research with children and adolescents. They summarised outcomes of different disorders, using mainly studies from 1988 onwards that used control or contrast groups and had a six month or greater follow-up period. The studies in the area of disruptive behaviour disorders all found significant improvements in the treatment groups compared to the control groups. Different treatment methods included problem solving skills training and parent management training. Treatment research in the area of Attention Deficit Hyperactivity Disorder often included medication. In most studies no differences were found between groups with medication only, and medication and psychotherapy. The number of studies on anxiety disorders is limited. Cognitive behavioural treatment and medication were found to be beneficial. Affective disorders in general also appear to respond to treatment, including Cognitive Behavioural Therapy. Two controlled outcome studies in the area of autistic disorders found positive treatment effects through medication and intensive behavioural treatment. Only one study in the area of eating disorders met the criteria to be included in this summary and did not find significant differences between young people with poor and young people with good overall outcomes. No studies for other disorders such as drug abuse or comorbid disorders were found.

Tramontana (1980) reviewed the literature on psychotherapy outcome with adolescents from 1967-1977. Despite the acknowledgement of methodological imperfections in the studies he evaluated, his overall conclusion was that psychotherapy with adolescents yields positive effects over and above outcomes for groups that did not receive treatment.

Mann and Borduin (1991) reviewed the literature on psychotherapy outcome studies with adolescents from 1987-1988. They concluded that adolescents with emotional and behavioural problems showed better interpersonal behaviours in role play after receiving social skills training. Both cognitive self-instruction training and problem solving skills training did have a positive effect compared to no treatment on adolescents with both internalising and externalising problems. There are not many studies in this area that have assessed longer term effects of individual psychotherapy. Positive changes in behaviour problems and family relations following family systems therapy are believed to be maintained over longer periods. Behavioural/communication skills family therapy appears to reduce self reported conflict and adolescent problem behaviour. Studies on interventions within the peer group reportedly showed promising results, and multisystem treatments have shown improvements in some areas.

Weisz, Weiss, Alicke, and Klotz (1987) used meta-analysis to evaluate the effectiveness of psychotherapy with children and adolescents. Meta-analysis is used to summarise several studies and compare them. The advantage is that studies using different research methods and instruments can be compared, using effect size. Effect size is the difference between means of the experimental group and control group, divided by the pooled standard deviation (Kazdin, 1994a). The conclusion Weisz et al. (1987) made, was that psychotherapy with children and adolescents appears to be effective. Treated children and adolescents were functioning better than 79% of the children and adolescents that did not receive treatment. Results for adolescents were less profound than for children, and behavioural treatment methods had a larger effect size than other treatments.

Kazdin (1994b) reported similar results. He reported firstly that psychotherapy appears superior to no treatment. Secondly, the effect sizes for treatment outcomes with children and adolescents were similar to outcomes with adult populations. The suggestion that behavioural treatments were more effective than non-behavioural treatment methods was also supported. Additionally, individual treatment techniques did not seem to differ from each other. Finally, no differences between outcomes for various problems were found.

The effectiveness of psychotherapy with adolescents in experimental research is thus supported in the literature. In the next section, treatment outcomes for psychotherapy in clinic settings will be discussed.

Clinical research

The number of outcome studies in clinic settings is very limited compared to studies involving experimental research methods. One of the possible reasons for this is the methodological difficulties that occur if research is undertaken in "real world" situations. Random assignment and the use of control groups who do not receive treatment obviously cause significant ethical issues in dealing with "real" clients (Weisz & Weiss, 1989).

Most studies that addressed the question whether psychotherapy with children and adolescents in clinic settings is effective, failed to find evidence to support this. Weisz and Weiss (1989) used a control group consisting of children and adolescents who dropped out of therapy, to deal with the previously mentioned ethical issue of the use of control groups. They cited research which indicated that there were no significant clinical or demographic differences between "drop-outs" and "completers". They failed to find evidence that the subjects who completed treatment made more improvements than those who did not. They believed the reason for not finding evidence to support effectiveness of treatment in clinic settings was likely due to it truly not being effective. The possible alternative explanations they mentioned, such as variability in the data, reliance on parent reports, and possible differences between dropouts and completers, were believed to be unlikely. However, even though there were no significant demographic and clinical differences between the completers and the dropouts at the time of the assessment, it is possible that there were differences between the two groups in areas that were not measured. Weisz, Weiss, and Donenberg (1992) cited several studies that failed to find support for the efficacy of clinic treatment, and even reported the occurrence of deterioration in functioning after psychotherapy at times. Even though the studies they cited were often decades old, and had methodological imperfections, the results can not be ignored.

In contrast with the previously cited projects that did not find positive effects for clinic based psychotherapy with children and adolescents, Angold, Costello, Burns, Erkanli, and Farmer (2000) found more positive results. They conducted a study on the effectiveness of treatment for children and adolescents. They concluded that outpatient psychiatric treatment for children and adolescents does have positive effects on psychiatric symptoms. Children and adolescents deteriorated before treatment and after only having had one or two sessions. They found that improvement was associated with the amount of received treatment; more than eight treatment sessions were needed before the person made real improvements in psychiatric symptoms. They described several possible reasons for the difference between their results and previously mentioned outcome studies. They believed the small power in the studies, the use of outcome measures that did not measure outcomes specifically enough, the lack of using child self-reports, and exclusion of differences in trajectory of the disorders between treatment and control groups were possible explanations. They reported that they might have even underestimated the positive effects of the interventions because they did not control for all the factors which differentiate people who seek treatment from those who do not.

Psychologists and psychiatrists reported that overall they believed that their individual and family therapy interventions were effective (Kazdin, Siegel & Bass, 1990). Factors they believed were responsible for different outcomes were identified in child, parent and therapist variables.

In the next section possible explanations for the differences in therapy outcomes with children and adolescents in controlled studies versus clinic settings will be discussed.

Experimental versus clinical research

Scientists and practitioners often mention differences between standardised treatments used in experimental research and eclectic treatment in clinics, more heterogeneous populations and more severe problems in clinic populations as reasons for the difference in therapy outcomes for children and adolescents in experimental versus clinic based studies. Weisz, Donenberg, Han, and Kauneckis (1995), reviewed these and other possible reasons for this difference. In another article, Weisz, Donenberg, Han, and Weiss (1995) investigated similar issues. They agreed on one factor that could explain the differences in therapy outcome between experimental research and clinic based treatment, and had conflicting outcomes on other factors. The explanations that were believed not to be responsible for these differences in both studies will be described first, followed by the factors on which both studies concluded differently, and two factors that were only investigated in one article (Weisz, Donenberg, Han, & Kauneckis, 1995). Finally, a description of the factor believed to explain the differences in psychotherapy outcome between experimental and clinic based studies in both studies is given.

As mentioned previously, a lot of the cited clinic based studies were conducted decades ago in contrast to most experimental research which is more recent. Treatment and assessment methods have improved over the years and could possibly explain better outcomes in more recent studies. However, the relationship between effect size and year of publication that was found can be disregarded (Weisz, Donenberg, Han & Kauneckis, 1995; Weisz, Donenberg, Han & Weiss, 1995). The assumption that clinicians could be less successful than research therapists was also not supported. Specific training in the therapy methods used in experimental research prior to the implementation of the treatment also failed to explain the difference in outcomes between clinic based and experimental research. Finally, the often more precise problem focus in research therapy was not believed to be a valid explanation.

The question whether the severity of disturbance in the children and adolescents and their families in clinic settings makes them more difficult to treat than subjects participating in research therapy was not supported by Weisz, Donenberg, Han, and Kauneckis (1995). They found no evidence to support the belief that analogue subjects had better outcomes than clinical subjects.

Donenberg, Han, and Weiss (1995), however, did find that analogue samples showed a larger effect size than clinical samples. The literature offers no explanation for the difference in these outcomes. The question whether aspects of the clinic settings (such as serving large numbers, waiting lists, and completion of forms) had negative effects on treatment outcome was not supported by the first study (Weisz, Donenberg, Han, & Kauneckis, 1995), but supported by the second (Weisz, Donenberg, Han, & Weiss, 1995). Both projects also addressed the question whether research therapy is more effective because it is usually more structured. This question was answered positively in the first article (Weisz, Donenberg, Han, & Kauneckis, 1995) and negatively in the second (Donenberg, Han, & Weiss, 1995).

Weisz, Donenberg, Han, and Kauneckis (1995) also evaluated the difference in treatment length between research and clinic based therapy and the use of more focused treatment methods in research therapy as possible factors that might explain the superior outcome of research therapy. They found evidence to support the second explanation but not the first.

The final possible explanation for the difference in treatment outcome in the two conditions was the predominant use of behavioural treatment methods in experimental treatment outcome research. In clinic settings eclectic approaches are widely used (Kazdin, Siegel, & Bass, 1990), in contrast to laboratory studies, in which behaviour modification and cognitive-behavioural therapies dominate (Weisz, Donenberg, Han, & Kauneckis, 1995). This explanation of the superiority of treatment outcomes in experimental research was supported in both studies.

Factors within therapy contributing to treatment outcome

Treatment modality

Orlinski and Howard (1995) included activities such as traditional healing and religious practices in their description of psychotherapeutic interventions, giving examples of them having had beneficial effects in different cultures over time.

There are many different more traditional forms of therapy that are used in working with adolescents. At least 230 different methods can be identified (Kazdin, 1994b). As stated before, the number of psychotherapy outcome studies with adolescents is much sparser than studies on adult populations. Often research on children and adolescents is amalgamated, which leaves little research on adolescent populations only. The outcome studies that are available predominantly are (cognitive) behavioural and in research settings (Kazdin, 1994b). Differences in outcome between different forms of treatment are not often found and if they are, behavioural techniques are found to be slightly better (Kazdin, 1994a).

A brief overview of outcomes in behaviour therapy, CBT, psychodymamic therapy and experiential approaches will be given next. Most research involves adult populations. Behaviour therapy appears to be effective with adults that present with phobias, post traumatic stress symptoms, and depression (Emmelkamp, 1994). Cognitive and cognitive behavioural approaches are often found to be superior in the treatment of depression, anxiety, and eating disorders. The outcomes for problems with substance abuse, marital discord and children with ADHD are less promising (Hollon & Beck, 1994). Conclusions regarding psychodynamic approaches are less straightforward as the nature of this form of therapy makes it difficult to measure outcomes and the impact of interventions (Henry, Strupp, Schacht, & Gaston, 1994). The amount of research on experiential therapies is sparse and no firm conclusions can be made (Greenberg, Elliott, & Lietaer, 1994). However, the process-experiential approach appears to have some promising results (Elliott & Greenberg, 1995.)

Therapist variables

The effects of therapist variables on treatment outcome have been extensively studied in the adult literature. Not much research in this area has been done in the area of child and adolescent therapy. Weisz, Weiss, Alicke, & Klotz (1987) found that paraprofessionals such as teachers and parents are as effective in working with children as professionals. In general, outcomes for adolescents were better if the treatment was conducted by professionals. In treating children and adolescents, professionals have more success compared to paraprofessionals when treating over controlled problems, but not in treating under controlled problems. Literature on therapist variables with adult populations reports that age, sex or ethnicity of the therapist does not influence treatment outcomes significantly. Therapist factors that do seem to have an effect on treatment outcomes are in areas such as which treatment interventions are used and whether or not the therapist uses a treatment manual (Beutler, Machado, & Allstetter Neufeldt, 1994).

Client variables

As with other therapy outcome research, most existing literature on this topic is in the area of adult clients. The main conclusion there is that the area of the effect of client variables in treatment outcome is complex and that in predicting treatment outcomes, only taking into account this variable is insufficient (Garfield, 1994).

Therapeutic relationship

Agreement exists amongst most schools of psychotherapy, that the therapeutic relationship is an important aspect of therapy. The overall effect of this relationship is not as straightforward as previously believed (Lambert & Bergin, 1994). The therapeutic relationship can be described as an ongoing process between client and therapist, with both parties contributing to the quality. Overall, research indicates that the therapeutic relationship contributes to a client's progress (Beutler et al., 1994). As with other variables related to treatment outcome, most research has been focused on adult populations.

Conclusion

There appears to be little consensus in the literature about the question whether therapy with children and adolescents is effective in both experimental and clinic settings. Evidence for effectiveness of therapy in experimental conditions clearly outnumbers evidence for positive effects of clinic based treatment. Use of behavioural treatment methods in experimental therapy conditions is likely to explain part of this difference. The number of outcome studies in clinic settings is sparse, which makes it more difficult to make firm conclusions. Increasing research in real world settings hopefully will help to bridge the gap between researchers and clinicians, so that they can continue to utilise each others knowledge and experience to strive towards continuous improvement of our service towards our clients and their families.

The above literature review leads to the first six research hypothesis;

1. Adolescents' mental health functioning will improve significantly over the 3 months of the study.
2. Clinicians will report improvement in their clients' mental health functioning over the 3 months of the study.
3. Positive changes on CORE and HoNOSCA are more likely to be found if the client received eight or more therapy sessions during the period of the study.
4. Clients that received previous therapy are likely to have less positive changes on CORE and HoNOSCA than clients who have had no prior therapy experience.
5. Adolescents will report more positive changes in their mental health functioning if they reported more positive impact of therapy factors in the 3 months of the study.
6. Clinicians will report more positive changes in their clients' mental health functioning if they reported more positive impact of therapy factors on their clients in the 3 months of the study.

3. EXOGENOUS FACTORS CONTRIBUTING TO CHANGES IN ADOLESCENT MENTAL HEALTH

Introduction

In this chapter, an overview of a number of factors that have been linked with the development and continuation of mental health problems will be given. Most of the literature in the area of mental illness investigates the risk factors for development and maintenance of mental health problems. One of the main issues that stands out is that it is unlikely that the presence of one or a few risk factors will predict mental health problems. Risk factors appear to interact with each other and also with protective factors. The relationship between all these factors is not straightforward.

Another issue is the debate about whether nature or nurture is more important in developing mental illness. The discussion around nature versus nurture in the development of mental illness has been going on for a long time. It appears obvious now, that it is not nature *or* nurture that determines a person's mental health, but that both nature *and* nurture play an important part. The best way to determine biological factors, is through studies on twins. By comparing identical twins (who have the same genes) with fraternal twins (who on average only share half their genes), the environmental factors can be controlled for. If identical twins are separated at birth and raised in different environments, similarities are likely due to heredity (Zuckerman, 1999). Genetic factors in the development of mental illness ranged from very low for some disorders, to about 60% for bipolar disorder

(Kiesler, 1999). To obtain a good understanding of the causes and development of mental illness, it is important to gather data from a developmental perspective over a long period of time (Nigg & Goldsmith, 1998).

There is evidence that the course of mental health problems in adolescents was not easy to disrupt (King, Hovey, Brand, & Ghaziuddin, 1997). Problems in adolescence often persist into adulthood. Better predictions of stability of problems can be made for adolescents that present with problems than for children. Some research indicates that this stability was more profound for externalising disorders, other projects have not found this difference (Hofstra, Van der Ende, & Verhulst, 2000).

Research has indicated that a strengths based approach might be valuable in the study of psychopathology. Lyons, Uziel-Miller, Reyes, and Sokol (2000), investigated the occurrence of strengths in a sample of adolescents in residential placements and the relationship between strengths and clinical and functional characteristics. They assessed strengths in the areas of family, school/vocation, psychological functioning, peers, moral/spiritual, and extracurricular. Strengths were found to have impact on symptoms, risk behaviours, functioning and outcomes.

Diathesis-stress models

Having vulnerability to develop a disorder does not always result in the development of the illness. Diathesis-stress models suggest that for a disorder to develop, both vulnerability/predisposition/diathesis and stress need to be present.

If a person has a high level of vulnerability, less stress is needed for the onset of the disorder then for a person with less vulnerability (Zuckerman, 1999).

Interaction between a person and his/her environment is a dynamic process. Different people focus on and respond in different ways to different aspects of the environment. They also choose to a certain degree what situations, environments and personal interactions they are part of. This means that environments can not be considered as being completely independent of the individuals that are part of it (Kiesler, 1999). This makes the question of what influences what even harder to answer.

Resiliency

The literature on adolescents at risk often mentions the concept of resiliency in the context of attempting to achieve better outcomes for young people seen as more likely to develop into adults with a number of problems. Attributes linked with resilience included personal characteristics (e.g. positive social skills, internal locus of control, at least average intelligence, good self esteem), family factors (e.g. feeling connected to at least one parent, family cohesion and structure), and external factors (e.g. involvement with school and or community, caring other adult, fewer negative life events) (Blum, 1998). The resiliency model focuses on trying to identify protective factors in young people with a number of factors that are likely to limit their development into well functioning adults (Resnick, 2000). Resilient youth are described as well-adjusted in spite of exposure to a high number of adverse life events. Resilient youth received more guidance and supervision from parents, lived in families with a higher level of functioning, had other adults in the family that also provide support and might have had a sense of direction and hope related to educational aspirations (Tiet et al., 1998).

Environmental factors

The literature on environmental factors makes a distinction between shared and non-shared environments. Shared environmental factors are those experienced by all siblings in the family such as parents' personalities and family income. Non-shared environmental factors are factors unique to each individual person in a family, such as interaction with other family members and peer relationships. Environment when used in this way is very broadly defined and includes everything that can not be explained by genetic effects that are heritable (Pike, & Plomin, 1996). Research has indicated that the onset of mental illness is less influenced by shared environment than it is by non-shared environment (Kiesler, 1999). The exception to this might be juvenile delinquency (Pike, & Plomin, 1996).

Children who are born premature and have a low birth-weight were believed to have more problems in the development of a relationship with their mother. Poor physical health, including chronic illness and developmental problems were also risk factors (Saxe, Cross, & Silverman, 1988). Qualities that were believed to be protective factors in the development of problems in adolescents included having sufficient skills in the area of learning and problem solving, being socially responsive and having a high self-efficacy (Kazdin, 1993a).

A number of issues within the family environment are believed to be linked with a person's emotional well-being. Beardslee et al. (1996) evaluated risk factors for the development of affective disorders in adolescents. Lifetime mental illness of the parents was one of the most powerful predictors of the development of an affective disorder in adolescents in this study. Parental psychopathology has been reported as a risk factor by Saxe, Cross, and Silverman (1988). Other studies did not find evidence that having a first-degree family member with a mental illness impact on adolescent treatment outcomes (Phillips et al., 2000). Having parents with mental illness involves both genetic and environmental risk factors. Family dysfunction also has been found to be related to poorer outcomes in adolescent functioning in several studies evaluated by Phillips et al. (2000). A negative perception in the area of receiving support from the family has been found to be related to emotional and behavioural dysfunction in 16-18 year old high school students (Garnefski & Diekstra, 1996). This study emphasised the central role of family relationships for the wellbeing of adolescents. Persistence of psychiatric disorder in general in 8-16 year olds was found to be influenced by having a mother who did not have a confiding relationship with her current partner and by family dysfunction at presentation (Goodyer, Herbert, Tamplin, Secher, & Pearson, 1997). Other family factors that play a role in the mental health of adolescents included changes in family constellations (through separation, divorce, death, remarriage of a parent), and lack of appropriate supervision (Kazdin, 1993a). Adolescents who were living with parents or relatives had better outcomes but Phillips et al. (2000) found no difference between family structure and outcome in several studies they evaluated. A protective family factor was receiving stable care from a responsible adult (Kazdin, 1993a). A study on observed parent-adolescent interactions (O'Connor, Hetherington, Reiss, & Plomin, 1995) concluded that adolescent behaviour appeared to have more genetic components than parent behaviour.

Adolescence is a developmental stage in which peer relationships become increasingly important. Garnefski and Diekstra (1996) found that students who reported a negative perception of social support from peers, were more likely to have emotional problems. Poor friendships were not found to be predictors for comorbidity or persistence of disorder, but in combination with disappointing events, they did seem to have some effect on poorer outcome (Goodyer, Herbert, Tamplin, Secher, & Pearson, 1997). In the treatment of conduct disorder, assisting the adolescent to change from association with deviant peers to a pro-social peer group is one of the goals of therapy (Henggeler, Schoenwald, & Pickrel, 1995). Adolescents usually spend a large section of their day in a school environment. Research has concluded that good school functioning can serve as a protective factor in the development of signs of disturbance (Achenbach, Howell, McConaughy, & Stanger, 1998). Leaving school without qualifications can be seen as a risk factor for the development of mental health problems (Kazdin, 1993a). Students with behavioural difficulties were reported to perceive the school environment as less supportive than students without these difficulties (Garnefski & Diekstra, 1996). It is likely that for adolescents that have left school, having satisfactory employment will serve as a protective factor and unemployment and a problematic work environment would increase the risk for the development of problems.

There does not appear to be consensus in the effect of socioeconomic status (SES) in outcomes of adolescent functioning. Phillips et al. (2000) cited three studies that did not find a significant relationship and two studies that did. The studies that did find a significant relationship did so in different directions. Saxe, Cross, and Silverman (1988) cited studies that report a connection between poverty and minority status and psychological stress and increased occurrence of mental disorders.

Personality and temperament

Personality can be described as all the behavioural and mental features that make a person distinguishable from other people (Makins, 1994). It is widely believed that the full personality formation does not take place until late adolescence. However, personality traits can be distinguished from a very young age. Infants have different temperamental features that invite different responses from their caregivers. Chess and Thomas (1990) investigated continuities and discontinuities in temperament and concluded that some temperamental features (such as adaptability and activity level) appear to be reasonably stable over time but that correlations on other variables (such as distractibility and persistence) are less straightforward. Temperament is different from personality. Temperamental differences between people are apparent early in life and can be defined as differences in emotional and behavioural reactivity. Some of these temperamental features may develop into personality features (Zuckerman, 1999).

Caspi, Elder, and Herbener (1990) studied how individual differences in interactional styles in men influenced life-course patterns. They defined three different interactional styles; ill-temperedness (reacting with temper tantrums when experiencing frustration and authority), shyness (being inhibited in expressing emotions and feeling uncomfortable in social settings), and dependency (seeking attention, company, approval and help). Data collection took place several times during childhood and again when the subjects were aged 30 and 40 years. The outcome of the study suggested that adjustment across the life-span is influenced by childhood interactional style and that men with a dependent interactional style in childhood had the best adult outcome.

Diagnosis and severity

Prognosis is somewhat related to diagnosis. Some mental disorders, usually first diagnosed in childhood, are likely to be chronic (Kazdin, 1993a) and even though help is available to make the condition more manageable, a "cure" is unlikely to take place. Examples of such conditions are autism, Attention Deficit Hyperactivity Disorder (ADHD), and mental retardation.

Phillips et al. (2000) evaluated 34 studies in the area of predictive factors for the outcomes of mental health treatment for adolescents. Significant relationships between diagnosis and outcomes were regularly found. Poor treatment outcome was also associated with more severe symptoms in depressed, behaviour disordered and substance abusing adolescents. Mixed results on functional impairment in relation to outcome were found. Delinquent tendencies and syndromes in the area of attention problems have been found to be strong predictors of signs of disturbance in young adulthood (Achenbach, Howel, McConaughy, & Stanger, 1998).

To answer the question whether disorders in childhood could predict serious emotional disturbance in adolescents, Costello, Angold, and Keeler (1999) interviewed children and their parents at age 7-11 and again 5 to 7 years later. Their results suggested that children with functional impairment are most likely to continue having severe emotional disturbance in adolescence. Behavioural problems from not very severe to severe were also predictors as well as emotional disorders in girls.

Factors believed to have a negative impact on the short term outcome of major depression in school age children were comorbidity (especially comorbid obsessive compulsive disorder or oppositional defiant disorder, higher self reported severity, and being older (Goodyer, Herbert, Secher, & Pearson, 1997). The fact that older children reportedly had worse outcome than younger children, might indicate that adolescents also are less likely to recover rapidly from a major depressive episode. This finding was supported by Lewinsohn, Rohde, Klein, and Seeley (1999), who concluded that children with depression are likely to become adolescents with depression and continue to experience depression in adulthood. They also found that adjustment disorder for adolescents increased the risk for development of depression, as the depressed adolescent group and the group of adolescents with Adjustment Disorders did not differ during follow up measurement.

The abuse of substances such as alcohol and drugs can often be related to a number of other problems such as being unsuccessful at school, being unable to function in a job, criminal activity and mental illness (Kazdin, 1993a). Comorbidity of substance abuse and depression was more likely to occur in adolescent girls if they had longer periods of depression, more behaviour problems, lower psychosocial functioning and more involvement in relationships with opposite sex peers. For boys the risk of comorbid alcohol and substance abuse when they are depressed increased with older age, having problems with school work and a conduct disorder (King et al., 1996). For adolescent psychiatric inpatients, the severity of depression at the time of admission to hospital, and the presence of suicidal thoughts, were strongly related to continuity in these areas and re-hospitalisation within 6 months. Compliance with medication was found to decrease self reported depressive symptoms and problems with peers (King, Hovey, Brand, & Ghaziuddin, 1997). Severity thus seems to be a stronger predictor for long term outcome than diagnosis.

Life events

Suicide attempts in adolescents are often believed to be precipitated by life events. Not all youth with suicide attempts are able to identify a precipitating life event, but of those who did, interpersonal problems (including relationship breakdowns) and financial difficulties were the most common (Beautrais, Joyce, & Mulder, 1997). McKeown et al.(1998) measured life events in relation to suicidal behaviours in adolescents and found that undesirable life events were not significant predictors for suicide attempts and thoughts. A possible explanation they gave was that they measured these events over a longer period of time and believed that they might only impact if they are closer to the suicide attempt.

Negative life events may play a role in the onset of mental illness, but they have not been found to be predictors of persistence of disorder if they occur before the onset of the disorder. If disappointing events continued, especially in the area of friendships, the disorder was more likely to persist (Goodyer, Herbert, Tamplin, Secher, & Pearson, 1997). Another study (Sandberg, Rutter, McGuinness, Pickles, & Angold, 2001), found only limited support for the hypothesis that psychiatric illness could be triggered off by the occurrence of negative life events. Depressed adolescents were found to have experienced high levels of stress before the onset of their depression (Williamson et al., 1998). Canty-Mitchell (2001) evaluated the relationship between life change events (changes in different aspects of life, such as social and occupational, which necessitate the individual to make possibly stressful adjustments), hope (belief in a good future), and self-care agency (ability for experiencing maximum life, health and well being). She did not find significant correlation between life change events and hope, or life change events and self-care agency. Life events such as unplanned pregnancy and running away from home can be seen as risk factors for the development of problems (Kazdin, 1993a). Events such as maltreatment, physical, and sexual abuse are also seen as significant risk factors for the development of difficulties in a number of areas of functioning, including mental health (Saxe, Cross, & Silverman, 1988).

Other Factors

Other risk factors for the development of mental illness include some sexual behaviours (such as unprotected sex) and behaviour that is likely to cause problems with authorities (such as criminal activity and violence). Being homeless was also believed to be a risk factor for mental health problems, as well as abuse and neglect (Kazdin, 1993a). There appears to be some evidence that the presence of one risk behaviour makes it more likely that other risk behaviours are present. Risk behaviour might be associated with stressors, not having access to a lot of resources, having a family history of mental illness, psychopathology, and functional impairment (Flisher, et al., 2000). For adolescents participating in an inpatient drug treatment program, a more positive outcome was believed to be related to being female, not having as much problems with the law, having less neurological risk factors (measured by e.g. being full term at birth, not having had problems such as encephalitis, high fever and meningitis before age 10), having less pathological scores on the Minnesota Multiphasic Personality Inventory (MMPI), and having higher verbal and lower performal IQ as measured by the Wechsler IQ Scale (Knapp, Templer, Cannon, & Dobson, 1991). The relationship between gender and outcomes is unclear. Differences in outcome between genders have been found in some studies but others failed to find significant differences (Phillips et al., 2000). Phillips et al.(2000) found that previous treatment is related to poorer outcome in several studies they evaluated

Conclusion

The area of factors that contribute to a person's emotional well-being is complex and extensive. This literature overview is likely to be incomplete and has not investigated different points of view on the effect of factors between researchers and participants. For the present study, the following hypothesis relating to factors outside of therapy were formulated:

7. Adolescents will report more positive changes in their mental health functioning if they have experienced more positive life events in the 3 months of the study.

8. Clinicians will report more positive changes in their clients' mental health functioning if their clients have experienced more positive life events in the 3 months of the study.

9. If adolescents and/or their therapist report a negative impact of issues with friends, they are less likely to have made positive changes in the 3 months of the study.

4. CHANGES IN MENTAL HEALTH FUNCTIONING IN ADOLESCENTS

The previous chapters gave an overview of therapy factors and factors outside of therapy that were likely to have had an impact on adolescent's mental health functioning. Most studies have either controlled for therapy or other factors. Relationships between all variables have proved to be complex and interactions between variables are numerous. It is difficult to establish exactly what part of an adolescent's life impacts on their functioning and to what extent. The aim of the present project was to gather data on adolescents' functioning and ask their and their therapist's opinion on possible contributing factors to changes. It is obvious that the present study was not able to determine to what extent the various factors contributed, but only explored and described therapy factors and life events. The hypotheses are summarised here:

1. Adolescents' mental health functioning will improve significantly over the 3 months of the study.
2. Clinicians will report improvement in their clients' mental health functioning over the 3 months of the study.
3. Positive changes on CORE and HoNOSCA are more likely to be found if the client received eight or more therapy sessions during the period of the study.
4. Clients that received previous therapy are likely to have less positive changes on CORE and HoNOSCA than clients who have had no prior therapy experience.

5. Adolescents will report more positive changes in their mental health functioning if they reported more positive impact of therapy factors in the 3 months of the study.

6. Clinicians will report more positive changes in their clients' mental health functioning if they reported more positive impact of therapy factors on their clients in the 3 months of the study.

7. Adolescents will report more positive changes in their mental health functioning if they have experienced more positive life events in the 3 months of the study.

8. Clinicians will report more positive changes in their clients' mental health functioning if their clients have experienced more positive life events in the 3 months of the study.

9. If adolescents and/or their therapist report a negative impact of issues with friends, they are less likely to have made positive changes in the 3 months of the study.

5. METHODOLOGY

Introduction

The present project was approved by the Manawatu Whanganui Ethics Committee and the Massey University Human Ethics Committee and was exploratory in nature. Clients aged 13-20 that were seen by the Child, Adolescent, and Family Mental Health Service (CAFMHS) Wanganui for an assessment between April 2002 and February 2003 were asked to participate. Because of the limited number of possible participants, no random sampling was used but the researcher approached all suitable candidates.

The CAFMHS in Wanganui provided assessment and treatment for children and adolescents aged 0-20 years with moderate to severe mental health problems. CAFMHS accepted referrals from General Practitioners, Specialists (such as paediatricians), the Psychiatric Emergency and Home Treatment Team (PEHT), Public Health Nurses, School Counsellors, some Community Agencies (such as Family Support Services and the Open Home Foundation) and Child, Youth and Family (CYF). Self-referral was possible for previous clients if it was within 6 months of discharge. Adolescents who needed help from Mental Health Service beyond their twentieth birthday, were transferred to the Adult Community Mental Health Team. There was some flexibility in the transfer process regarding age limits.

Participants

Clients

The adolescents that participated in the present project were seen for their initial appointment at CAFMHS between April 2002 and February 2003. Both new clients and clients that have had previous contact with CAFMHS participated. During the time of the research project, 156 adolescents aged 13-20 were referred to CAFMHS Wanganui. Of these referrals, 26 were not seen for assessment, due to a variety of reasons. Seventeen clients were only seen once at their GP's surgery for screening without the need for follow up at CAFMHS. There were 28 clients that were not asked to take part in the study because the researcher was their therapist. Seventy eight clients did not participate. A number declined at the start, while others initially agreed and later withdrew. Other clients had left the Service before they could be asked, moved to a different area, were seen to be too unwell to participate (e.g. severely autistic) or unable to understand the purpose of the research. Eventually 15 clients participated. Of the 15 clients that participated, 10 were female and 5 were male. The age range was 13-19 years, with a median of 15 years. Three clients identified themselves or were identified by their caregiver as Maori, 12 as non-Maori.

Clinicians

At the start of the present research project the CAFMHS team in Wanganui consisted of 12 clinicians. The two child and adolescent psychiatrists both worked part time and did not carry a caseload. Two child psychotherapists, one full time and one part time, worked predominantly with children. There were two psychiatric nurse counsellors, one part time that worked predominantly with children and one full time who was mainly working with adolescents. Another enrolled child nurse worked mainly with children. The team had four full time social workers of which two mainly saw adolescents. The third social worker was a Maori mental health worker and worked with the whole age range. The clinical team leader was trained as a social worker, but did not carry a full caseload. Finally the present author was a counsellor, who worked mainly with adolescents and did not participate in the present project as a clinician.

Seven clinicians participated in the project. Three were senior social workers, one female and two male. One female and one male senior psychiatric nurse counsellor also participated as well as one female experienced enrolled nurse and one female registered nurse that recently finished her training.

Measures

Clinical Outcomes in Routine Evaluation (CORE)

CORE was developed in the UK by the CORE System Group (CSG). It was developed as a tool to evaluate, audit and measure outcome of psychological therapy services. The CORE system has several components. The *Administration Checklist* is a list that gives an overview of what components of the CORE System have been administered and reasons for not administering parts. This form was developed as a tool to assist with the use and administration of the full CORE System and was not used for this study. The *Therapy Assessment Form* records information on the client such as referral date, relationship/support, current/previous use of services for psychological problems, identified problems, risk, diagnosis, and assessment outcome. The *End of Therapy Form* captures issues such as what type of therapy the client received, treatment modality, frequency of therapy sessions, reason for ending the therapy, review of problems, risk and benefits of therapy. Most of the requested information on the *Therapy Assessment Form* and the *End of Therapy Form* was either not relevant for adolescents, or was recorded in other reports in files of clients of CAFMHS Wanganui. Compliance from clinicians was expected to decrease if participating in the present project would increase the amount of paper work they were expected to complete. These parts of CORE System were therefore not used in the present study. The part relevant to this project is the *CORE Outcome Measure*.

The CORE Outcome Measure assesses a pan-theoretical core of clients' distress. It consists of 34 items (see Appendix C). There are 4 items that measure subjective well-being, 12 measuring commonly experienced problems or symptoms, 12 measuring life/social functioning and 6 items measuring risk to self and/or others (CORE System Group, 1999). The CORE Outcome Measure (from now on referred to as CORE), is a self report questionnaire. The mean of the total score is used as an overall index of distress. The higher the score, the higher the experienced level of distress. The means of the different dimensions can also be looked at separately.

CORE has been developed from a phase model of psychotherapy outcome. Howard, Lueger, Maling, and Martinovich (1993), described this model. This three phase model proposes that improvement during psychotherapy takes place in three different areas of distress. The first improvement is believed to be in the area of subjectively experienced well-being. After that, a decrease in symptoms or commonly experienced problems is expected, followed by improvement in the area of life/social functioning. The improvements in the different areas are believed to be worked through in the different stages of therapy, even though they may overlap. The three phases in the model are *remoralisation, remediation,* and *rehabilitation*. Remoralisation is believed to occur when the client obtains a sense of hope that he/she will receive adequate help. During the remediation phase the resolution of the client's symptoms and/or life problems is the main goal. The therapist will help the client to develop or activate appropriate coping skills. Most clients will terminate therapy after this phase has been completed. If they continue, the focus in the rehabilitation stage will be on changing unhelpful patterns of dealing with situations and learning new, more adaptive strategies. Support and the prevention of relapse are also part of this phase of therapy. It is likely that therapy with adolescents will not often progress to this latter stage. Adolescents are often focused on the present and their motivation for therapy is likely to decrease once their immediate distress has abated.

CORE was developed and standardised for adult clients. An adolescent version of CORE has also been developed: Teen CORE. This is a 14 item self report questionnaire. The three stages of change as previously described were maintained in Teen CORE. The researcher chose not use Teen CORE in the present research project for several reasons. First, the risk scale was not included in Teen CORE. Measuring risk is crucial in the assessment of adolescents, especially in a mental health setting. Another reason is that the well-being scale in Teen CORE only consists of two items which might make the instrument too insensitive to change. Jeremy Christey, who is currently conducting research with Teen CORE in the

UK, reported that he has not had trouble in measuring change with Teen CORE (J. Christey, personal communication, 19 February, 2002). The final reason for not using Teen CORE is that the language used in the questionnaire might appeal more to younger children, for example: "I have done my work this week".

Some advantages of the CORE are that it has been extensively piloted and tested, has clinical face value, and is able to distinguish between clinical and non-clinical populations. Internal reliability was good (0.75) as well as test-retest reliability (0.95) and convergent validity with seven other instruments (Evans, et al., 2002). Other advantages are that it is relatively brief and easy to score and administer. The aspects that are measured have been identified by practitioners as domains for routine assessment and can be applied within a wide range of services. Normative data are available which makes it possible to assess whether changes are clinically significant. Three samples adding up to a total of 1106 respondents aged 14-45 were used for the non-clinical norms. Clinical data were collected on 890 participants from 21 sites, aged 16-78 (CORE System Group, 1999). When CORE is used as an outcome measure, there are different ways of interpreting change, such as whether the change was reliable or clinically significant. The people that developed CORE give guidelines to assess whether improvement is clinically significant, which means changed from the clinical to the non-clinical range (Evans et al., 2002). This is another advantage of using CORE.

The main disadvantage for using CORE is that there are no norms available for New Zealand. All research on CORE has taken place in the UK. It is therefore likely that cultural differences will not be captured. Another difficulty with CORE is the way in which the questions need to be answered. Questions are rated on a 5-point Likert scale, with choices *not at all, only occasionally, sometimes, often,* and *most or all the time*. The number of points given for the answer depends on the question; e.g. on the item "I have felt terribly alone and isolated", the answer "Not at all", scores 0 points. On the item "I have felt I have someone to turn to for support when needed", the same answer scores 4 points. It has been the researcher's experience that clients sometimes tended to make mistakes, as they sometime gave answers that were inconsistent with the other answers. When questioned about it, they often acknowledged that they intended to tick the opposite answer. One of the risk items has also proven to be easily misinterpreted. The item is "I have made plans to end my life". This has been answered with "Not at all", by at least one severely suicidal adolescent who believed that dying is not the same as the end of life. Examples like this emphasise the importance of evaluating the questionnaire with the clients to ensure that they gave the information they intended to give and did not interpret items in a different way than it was intended. The researcher asked clients to clarify items on the second administration of CORE if their answer on an item seemed inconsistent with their other responses. As it was not known at the time of intake whether a client was willing to participate, this procedure was not followed after the first administration of CORE.

CORE was administered to all clients that were 13 years and older. They were asked to complete CORE before their first intake appointment, and again at 3 monthly intervals and before discharge. The clients that participated in the present project also completed CORE before their initial interview, and again after 3 months.

Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA)

HoNOSCA was developed in the UK (Gowers et al., 1999a). Before the development of HoNOSCA, an adult version of the Health of the Nation Outcome Scales (HoNOS) was developed. The purpose of HoNOS was to measure improvements in the health and social functioning of mentally ill people. In the construction of HoNOS the goals were to develop an instrument that would cover common clinical dysfunction and social functioning, was suitable for routine use by clinicians, was sensitive to measure whether change had occurred, and was related to and had reliability compared to other scales [the Brief Psychiatric Rating Scale (BPRS-24) and the Role Functioning Scale (RFS)] (Wing, et al., 1998).

HoNOSCA was developed to be used in clinical settings as a measurement of global outcome. HoNOSCA consists of two sections; section A having 13 problem scales and section B having 2 scales related to problems for the client and/or caregiver(s) in the area of having access to services or having access to sufficient information (Gowers, et al., 1999b). The 2 scales of section B were not used in this study because they were not relevant in testing the hypotheses. HoNOSCA is presented in Appendix D. All the scales needed to be rated in order (scale 14 and 15 only if required) and it was important to not include information that had already been rated in a previous scale. For example, scale 3 (Non-accidental self-injury) dids not cover illness or injury as a direct consequence of alcohol or substance abuse which was rated on scale 4 (Problems with alcohol, substance/solvent misuse). It was also intended to rate the most severe problem that occurred during the rated period. For example if a child usually attended school, but had been absent for most or all days in the rated period, a high severity score needed to be given on scale 13 (Poor school attendance). The scales were rated on a 5-point scale, from 0 (no problem) to 5 (severe to very severe problem). If the information about a problem area was insufficient, a score of 9 was given (Gowers, et al., 1999b). The guidelines gave specific examples of what to include or exclude in the scales. A minor concern was that the recommended scores in the training programme were not always consistent with the guidelines. An example was a case that was used in the training programme in which a girl gets in a fight. The recommended rating on scale 1 (Problems with disruptive, antisocial or aggressive behaviour) was 2, even though the guidelines defined a score of 3 as "Moderately severe aggressive or antisocial behaviour *such as fighting* [italics added] or persistently threatening or very oppositional or more serious destruction to property or moderate delinquent acts" (Gowers, et al., 1999b, p. 428). This was only seen as a minor issue because the training programme emphasised that the reliability of the instrument remains high if there is only one point difference in the rating between different people who are rating HoNOSCA.

HoNOSCA has been tested to evaluate the reliability, validity, and usefulness in clinical settings (Gowers, et al., 1999a). Interrater reliability was good. It was not calculated for scale 4 (Problems with alcohol, substance/solvent abuse). Reliability scores that were established varied between 0.63 for scale 12

(Problems with family life and relationships) to 0.98 for scale 13 (Poor school attendance). In section A, nine out of eleven scales for which interpreter reliability has been established had a score higher than 0.80 (Gowers et al., 1999a). To evaluate the discriminant validity of HoNOSCA, an analysis was executed to measure inter-correlation between the different scales. The scales were found to not correlate highly with each other, with a mean correlation of 0.13. The factor structure was also close to that of the key component sections. Table 1 gives an overview of the factor structure of HoNOSCA.

Table 1. *Health of the Nation Outcome Scale for Children and Adolescents structure*

Factor	***Scale***
Behaviour	1. Disruptive/aggressive behaviour 2. Overactivity and attentional difficulty 3. Non-accidental injury
Impairment	4. Alcohol, substance/solvent abuse 5. Scholastic or language skills 6. Physical illness/disability problems
Symptoms	7. Hallucinations and delusions 8. Non-organic somatic symptoms 9. Emotional and related symptoms
Social	10. Peer relationships 11. Self-care and relationships 12. Family life and relationships 13. Poor school attendance
Information	14. Lack of knowledge- nature of difficulties 15. Lack of information-services/management

HoNOSCA was able to give an index of severity and was sufficiently sensitive to change (Brann, Coleman, & Luk, 2001). There were greater changes in the scales that cover behaviour and symptoms than in the scales that measure social functioning and impairment. Face validity also is apparently satisfactory as scores between inpatients and outpatients were significantly different (Gowers et al., 1999a). Scoring of HoNOSCA takes only 8.5 minutes on average. HONOSCA was found easy to use by the majority of clinicians that participated in the study. The response rates were very high as well. HoNOSCA can not be used without having participated in a brief training programme (Gowers et al., 1999a).

The Mental Health Research and Development Strategy (MHRDS) was in the process of undertaking a National Mental Health Epidemiology Study. This study included a Classification and Outcomes Study (CAOS) to evaluate "who receives what services from whom with what effect and at what cost" (R&D Fostering Mental Health, 2002. p.2). Another purpose of the study was to introduce outcome measurement into routine clinical practice. One of the recommended outcome measures for this study was HoNOS. This was only looking at mental health outcomes for adult populations. Liaison with Australia regarding measurement for children and young people is ongoing (R&D Fostering Mental Health, 2002) and might include HoNOSCA. A measure useful for Maori was also developed for adult populations.

Interviews

There are instruments available to measure some of the issues that were addressed in the interviews. Examples were the therapy assessment form and the end of therapy form that were part of the CORE system. These forms were described earlier. Missing from these forms were questions about life events. Instruments that measure life events were also available, for example the List of Threatening Experiences (Brugha, Bebbington, Tennant, & Hurry, 1985). This instrument only takes into account negative life events and was thus not suitable for this project. Goodyer, Herbert, Tamplin, Secher, and Pearson (1997), cited research that indicated that the best way to assess what impact life events are having is to use semi-structured interviews.

The main purpose of the interview with the clients (Appendix E) was to measure their perception of what events within or outside of therapy have impacted on changes in their mental health. Long term issues such as personality and genetic factors were not taken into account, as it was unlikely that they would change over time. Only events or circumstances with the likelihood of change were thus evaluated. The list of factors outside of therapy that might impact on the client's mental health was developed after a literature study as described in the previous chapters. The factors within therapy were also are supported in the literature. In the interview the researcher asked the clients whether a number of factors were relevant to them, and if so, to rate the impact on their mental health on a 5-point Likert scale (-2 very negative +2 very positive).

The interview with the clinicians (Appendix F) had as main goal to measure whether there was agreement between the clients' and the clinicians' perception of (un)helpful aspects of therapy and life events. It was also useful to see how informed clinicians were about their clients' circumstances.

Procedure

The focus of the present project was to explore whether adolescents seen at a CAFMH Service perceived any changes in their mental health functioning over the 3 months of the study and whether their therapist believed there was a change in their clients' functioning over that period. Factors that contributed to the changes or lack of changes were also explored, divided into factors within therapy and life events.

An ethics proposal was sent to the Manawatu Whanganui Ethics Committee. Approval and a number of recommendations to which the researcher responded were given. The Massey University Human Ethics Committee also approved the study.

Prior to their decision whether to participate or not, information sheets (see Appendix A) were handed out to clients. Caregiver(s) of clients under age 16 also received an information sheet, as well as CAFMHS clinicians. Initially the planned procedure was to send out the information sheets with appointment letters for clients' initial appointment at CAFMHS. This proved to be ineffective for a number of reasons. Firstly clinicians sometimes invited the client [and caregiver(s)] for their first appointment through a telephone call. This left out possible candidates for the research. Other clients that did not receive an information sheet by sending them out with the first appointment were clients seen on an urgent to semi-urgent basis. Appointments for urgent and semi-urgent intakes were usually scheduled over the telephone as well. Secondly, appointment letters were sent out on some occasions without having included the information sheet. Another reason for changing the procedure for informing participants was that not all adolescents that were scheduled to attend for an intake, became registered clients. Some failed to attend or cancelled the appointment because CAFMHS were no longer wanted or required. Finally, it was believed to be more appropriate to give the clients [and their caregiver(s)] the opportunity to become introduced to the Service before asking them about participation in research. These factors initiated a change of procedure, by which the researcher approached clients after the initial intake.

To monitor the referrals to CAFMHS of adolescents aged 13-20 years, the researcher made a list of these referrals once a month during the present project. She then approached the appointed therapist to establish whether the clients had been seen and when was a suitable time to introduce them to the research project. The therapist asked the client [and their caregiver(s)] whether they were willing to meet the researcher and if they agreed, the researcher met them briefly. A brief verbal explanation of the research process was given, followed by the information sheet and consent to participation (see Appendix B). The clients [and their caregiver(s)] had the opportunity to read the information sheet immediately or take it home with them and read it later. The researcher was available on request to answer questions. The consent was obtained either after giving the information sheet or before the interview.

The researcher informed clinicians about the project at a multi professional team meeting. Individual clinicians also received an information sheet (Appendix A). They were asked to sign consent after one of their clients had agreed to participate (Appendix B). All clinicians that were therapist for clients that participated, agreed to take part in the present project.

The researcher kept a record of clients she approached about the research and were willing to participate or considering it. An appointment for the interview was arranged around three months after their initial appointment. The researcher attempted to make this appointment following or prior to an appointment the client had with their therapist, so that they did not have to attend the service especially to take part in the project. On two occasions the interview and second administration of CORE was conducted over the telephone. This was because these clients were no longer attending CAFMHS.

The therapist completed HoNOSCA after the intake and again after three months. On a few occasions the therapist completed both HoNOSCA's after three months, the first one retrospectively from the time of intake. CORE was completed on the first appointment and again after three months.

Data Analysis

Data for 13 clients were collected before they were processed and coded. Data for 2 more clients were added later. Data were analysed using Statistical Package for Social Sciences (SPSS) version 11. Prior to conducting any analysis, the data were checked for accuracy of input with all the measurement instruments being checked for possible input errors. Errors found were corrected and were checked again.

6. RESULTS

Introduction

Results were structured by starting with an overview of descriptive statistics for age, gender and the various measurements. Most of the distributions of the scores on the CORE and HoNOSCA scales, both pre- and post-treatment were skewed (see Appendix G), and the number of participants was small. Non-parametric statistical tests were thus more appropriate to use. Females scored significantly higher on CORE than males, but not on HoNOSCA. No significant differences between males and females on the interviews were found (see Appendix H).

Changes in mental health

To test the first two hypotheses, the Wilcoxon test was used to measure whether there were statistical significant changes between initial CORE and HoNOSCA scores and scores after three months. It was expected that scores on the second measurement would be lower, indicating a decrease in mental health problems.

Table 2. *Differences in Clinical Outcome of Routine Evaluation (CORE) and Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA) scores between first and second administration.*

Before-After		**N = 15**	**Mean Rank**	**Sum of Ranks**	**Z**
Wellness	Negative Ranks	10	9.55	95.50	-2.03*
	Positive Ranks	5	4.90	24.50	
	Ties	0			
Problems	Negative Ranks	12	8.83	106.00	-2.61**
	Positive Ranks	3	4.67	14.00	
	Ties	0			
Functioning	Negative Ranks	12	8.17	98.00	-2.16*
	Positive Ranks	3	7.33	22.00	
	Ties	0			
Risk	Negative Ranks	8	7.94	63.50	-1.26
	Positive Ranks	5	5.50	27.50	
	Ties	2			
Total	Negative Ranks	11	9.27	102.00	-2.39*
	Positive Ranks	4	4.50	18.00	
	Ties	0			
Total-Risk	Negative Ranks	12	8.58	103.00	-2.44*
	Positive Ranks	3	5.67	17.00	
	Ties	0			
Total HoNOSCA	Negative Ranks	15	8.00	120.00	-3.41***
	Positive Ranks	0	.00	.00	
	Ties	0			

* $p < .05$, ** $p < .01$, *** $p < .001$; asymptotic two-tailed

From Table 2 for all of the scales except risk, scores were significantly lower on the second administration than on the first administration, indicating that participants' mental health functioning as measured by CORE had improved over the 3 month period of the study. Just over half of the clients' change also fell within the range of clinically significant improvement as suggested by Evans et al. (2002). Hypothesis 1 was supported. There were no significant differences in improvement on the different scales, which is not consistent with the changes proposed by Howard et al.(1993). He suggested that during therapy subjective experiences of well-being are likely to change in the first stages of therapy, followed by changes in problems and finally in functioning. HoNOSCA scores were also significantly lower on the second administration than on the first, $Z = -3.41$, $p < .001$, thus supporting Hypothesis 2.

To determine the correlations between CORE and HoNOSCA scores, Spearman's *rho* (r_s) was calculated. No significant correlation ($p > .05$) between total CORE and HoNOSCA scores was found for the first administrations of the instruments ($r_s = .20$) or the second administration ($r_s = .44$), indicating minimal agreement between clients' and clinicians' ratings of mental health functioning on CORE and HoNOSCA.

To test Hypothesis 3, Mann-Whitney-U was calculated, comparing clients that received less than eight sessions (n = 7), with clients that received eight or more sessions (n = 8) during the period of the study. No statistical significant differences were found for change in CORE (U = 28, Z = 0.00) or HoNOSCA (U = 25, Z = -0.35) scores, rejecting Hypothesis 3.

To test Hypothesis 4, Mann-Whitney U was calculated, comparing clients that were previously seen at CAFMHS Wanganui, with clients that had not been seen before. No significant differences in change on both CORE (U = 13.5, Z = -0.62) and HoNOSCA (U = 15.5, Z = -0.36) were found, thus rejecting Hypothesis 4.

Impact of factors within therapy

Clients and clinicians were asked to rate the impact on client's mental health functioning of different aspects of treatment at CAFMHS. Impact was rated on a five-point Likert scale, from -2 (very negative impact) to +2 (very positive impact). Detailed results appear in Appendix I. Overall a positive impact on mental health functioning of therapy factors was reported by clients and clinicians. "Having someone to talk to" and "Feeling listened to and understood" were rated as having had a positive impact by most clients and clinicians. "Feeling more hopeful that things could get better" was rated as having had a positive impact by 13 clients and 10 times by a clinician. "Increased insight and understanding", "Seeing things in a different way", and "Knowing that other people have similar problems" were also rated as having had a positive impact for the majority of clients. Clinicians did not rate any therapy factors as having had a negative impact on their client's functioning. Medication was seen as having had a negative impact by two of the four clients that were prescribed medication. "Seeing things in a different way" was the only therapy factor that revealed a statistically significant correlation ($r_s = .62, p < .05$) between clients' and clinicians' ratings. A positive correlation ($r_s = .53, p < .05$) was found between clients' and clinicians' ratings of the total impact of therapy factors.

Impact of life events

Clients and clinicians were asked to rate the impact of life events the client experienced in the 3 months of the study on a 5-point Likert scale, from –2 (very negative impact) to +2 (very positive impact). A total life score was calculated for each participant as rated by them and their therapist. The maximum possible life event score was 28 and the minimum score -28. Detailed results are presented in

Appendix J. There was no significant correlation between clients' and clinicians' report of the impact of life events ($r_s = .42, p > .05$).

Correlation of reported changes in mental health functioning and therapy factors

An overall lower CORE score on the second assessment was expected to correlate positively with a positive impact of therapy factors and negatively with a negative impact of therapy factors. The correlation between the difference of CORE and reported impact of therapy factors was not significant ($r_s = -.01, p = > .05$). Hypothesis 5 was thus not supported.

An overall lower score on HoNOSCA on the second assessment was expected to correlate positively with a positive impact of therapy factors and negatively with a negative impact of therapy factors. The correlation between the difference of HoNOSCA and reported impact of therapy factors was not significant ($r_s = .02$). Hypothesis 6 was not supported.

Correlation of reported changes in mental health functioning and life events.

An overall lower CORE score on the second assessment was expected to correlate positively with a positive impact of life events and negatively with a negative impact of life events. The correlation between the difference of CORE and reported life events was not significant ($r_s = .03, p > .05$). Hypothesis 7 was not supported.

An overall lower score on HoNOSCA on the second assessment was expected to correlate positively with a positive impact of life events and negatively with a negative impact of life events. The correlation between the difference of HoNOSCA and reported life events was also not significant ($r_s = -.01$, $p > .05$), thus rejecting Hypothesis 8.

Hypothesis 9 predicted that a negative impact of issues with friends would be related to less positive changes in client's mental health functioning. Mann-Whitney U was calculated to test this hypothesis. No significant difference between clients with negative impact of peer relationship issues and clients that did not experience negative impact of peer relationship issues were found. Differences on changes on CORE ($U = 23$, $Z = -0.25$) or HoNOSCA ($U = 11.5$, $Z = -1.66$) for clients' reports on impact of peer relationship issues and on CORE ($U = 10$, $Z = -2.08$) and HoNOSCA ($U = 21$, $Z = -8.13$) on clinicians' reports of peer relationship issues were not significant, rejecting Hypothesis 9.

Summary

Clients and clinicians reported a change in client's mental health functioning over the 3 months of the study. Therapy factors appeared to have had a more positive effect as rated by both clients and clinicians than life events. However, no significant correlation between the impact of both life events and therapy factors and changes in mental health functioning were found. Clients and clinicians agreed more on impact of life events and therapy factors than they did on changes in mental health functioning.

7. DISCUSSION

The primary aim of the present project was to explore variables within therapy and outside of therapy that might contribute to changes/no changes in mental health functioning in adolescents that were seen at a CAFMHS. The following section considers each of the research questions and related findings and results, followed by a discussion of limitations and suggestions for further research.

Changes in mental health

The participants in the present project and their therapists overall did report a positive change in clients' mental health functioning over the 3 months of the study. No significant differences between male and female participants were found, which was possibly due to the low number of participants. No significant correlation between client's and clinician's report was found, indicating that clients and their therapists did not agree much on improvement in the client's functioning. Recently a client version of HoNOSCA (HoNOSCA-SR) was developed. A study that compared client and clinician completed HoNOSCA's, found only a weak correlation between client and clinician ratings with a somewhat higher correlation in an outpatient group as compared to an inpatient group (Gowers et.al, 2002). The possibility that the discrepancy in the present study between client and clinician report was due to the use of different measurement instruments, is thus somewhat less likely.

Another possible explanation for the lack of correlation between client's and clinician's ratings is that their evaluation criteria were possibly different. Clinicians might have been more conservative in reporting changes and used criteria that were more objective. If clients subjective feelings of well-being improved this is likely to have impacted on their answers on CORE. This might give a more positive CORE score, than would have been obtained if more objective standards such as daily functioning were measured. As there were positive changes reported by all clinicians and in four cases negative changes mentioned by clients, this is an unlikely explanation. CORE scores might not have reflected functioning adequately, but reflected the state the adolescent was in only at the time of completion of the CORE.

A final possible reason for the differences in reported changes in mental health between clinicians and clients is that clinicians might not have been aware of the full details of the client's functioning at the time of the second assessment. Clearly, more research is needed to make statements that are more confident about the different ratings between clients and clinicians.

Impact of factors within therapy

Both clients and clinicians reported a positive effect of therapy factors on mental health functioning, even though this was not reflected in outcomes on CORE and HoNOSCA, as no significant correlations between positive impact of factors within therapy and changes in CORE and HoNOSCA scores were found. This indicates that even though most clients and clinicians believed that there were therapy factors that were experienced as being helpful, it did not lead to changes in mental health functioning in all cases. Therapy is likely to have a supportive function first, and in this study did not always seem to have achieved changes in functioning as well. This conclusion could have important implications for past and future research. Most treatment outcome research focuses on objectively measurable changes in functioning. Therapy is believed to be ineffective if these changes are not found. The present study suggested that even though changes might not have occurred in all cases, therapy was still seen as helpful, possibly in a supportive way.

Another possibility is that clients did report more positive impact of therapy than they experienced because the researcher was part of the treatment team. Even though the researcher was not a therapist of any of the participants at the time of the study and clients were informed that the information they gave would not be shared with their therapist, the possibility that they gave answers that they believed would please the researcher can not be ignored. Future research in this area might be better conducted by a person with less direct links with the service.

The three factors within therapy that were seen as having been most helpful were having someone to talk to, feeling listened to and understood, and feeling more hopeful that things could get better. A number of clients also pointed out specifically that they found it helpful that they were not pushed in a certain direction, were not judged, and believed the therapy helped them to increase self-esteem. Involvement of parents was also seen as very important and it was reported as negative if parents were not involved much. A possible factor that might have stopped therapy from being effective was mentioned by one clinician who believed this client was "too thought confused to be able to work things out".

The literature review suggests a relationship between number of sessions and improvement, indicating 50% of clients improve after eight sessions and 75% over 26 sessions attended over a 6 month period (Lambert & Bergin, 1994). The present study did not support this view, as no relationship between number of sessions and changes in mental health functioning was found. A possible explanation for this discrepancy is that the cited literature is mainly focused on research with adult populations. Adults might respond to treatment differently then adolescents. The small *N* in this study was another possible factor, as the number of participants is likely to be too small to find significant dose effects. The study did not control for variables such as severity and diagnosis. As these factors might also impact on improvements this might also have evened out possible dose effect.

No difference in changes was found between clients that received previous treatment at CAFMHS and clients that were seen for the first time. Again, this is likely due to the small number of participants.

Impact of life events

Clients and clinicians agreed to a moderate degree on the impact of life events on mental health functioning. Issues with friends were most often rated as having had a negative impact, by both clients and clinicians. This supported the global belief that for adolescents peer relationships are very important. Changes in family circumstances and change of school/leaving school most often had a positive impact. Most of the other life events did not happen during the period of the study, and if they did, death/illness/serious injury of someone close to you, financial issues, being abused, and pregnancy were mostly seen as having had a negative impact. Drug/alcohol abuse was reported by clinicians as having had a more negative impact than by clients. Other life events that were mentioned were having another supportive adult available and relationship issues. Overall, life events were not seen as having had a lot of impact. This does not reflect the expectation at the start of the project, obtained through anecdotal evidence during the researcher's work.

There are a number of possible explanations for the reported low impact of life events on mental health functioning in the present study. One of the most likely explanations has to do with the design of the interview. The question dealing with impact of life events listed 13 possible life events and asked clients and clinicians to mention any other significant life event that had not been listed. The amount of impact of these events was reflected by both number of events experienced and the intensity of the impact they had. Clients who experienced more life events were thus likely to have had a higher impact score than clients who experienced fewer events. Although the number of experienced life events is likely to have been important, the amount of impact might be a more important factor in the effect it has on mental health functioning. One of the limitations of the interview was, that the rating scale only went from impact negative 2 to impact positive 2. Retrospectively, the differentiation of the scale did not give clients and clinicians the opportunity to accurately rate the impact of life events. It would have been a better reflection of impact if clients and clinicians had been able to rate a life event such as death of someone close to the client as more serious than a negative 2. A more qualitative approach to the impact of life events on mental health functioning might be more appropriate in future research, so that clients and clinicians can give a narrative description that reflects the impact of life events in a more realistic way.

Another possible explanation of the limited impact of life events was that the participants in the present study did not experience a lot of life events that potentially could impact on their mental health functioning in the 3 months of the study.

Finally, the low impact of life events on mental health functioning might have been an accurate reflection of clients' and clinicians' experiences.

Limitations of the study

The current study had a number of limitations. The main limitation was the lack of a control group, which made it difficult to determine whether the reported changes in mental health functioning would have happened without the intervention of CAFMHS. Ethical issues make the use of control groups in treatment outcome research difficult. Especially with adolescents, follow up when they do no longer have input from a mental health service is likely to be experienced as intrusive and inappropriate. Not giving treatment to adolescents who have been referred is unethical.

Another limitation was that the number of participants was very small. Generalisation of results is not recommended because of the small number of participants. Only a small percentage of clients that were seen for assessment at CAFMHS Wanganui during the period of the study participated. This raises another concern, related to the possibility that the clients that participated did not represent the population of adolescent clients of CAFMHS Wanganui adequately.

The period of the study was only 3 months. It is also possible that more changes would have been reported over a longer period. With adolescents however, problems often tend to be crisis related, with sudden onset and rapid relief. It is thus also possible that the changes over the 3 months of the study were a true reflection of processes these adolescents went through. Adolescents who reported positive changes in mental health functioning were likely to have experienced these changes within the 3 months of the project, and adolescents who did not report positive changes, might have had longer term difficulties that are less likely to change even if the study was stretched out over a longer period of time.

The instruments that were used pose another possible threat to the usefulness of this study. CORE was not developed to use with adolescents. The teen version of CORE was not used, mainly because the risk scale was taken out. CORE also is an instrument that is not widely used within New Zealand, which makes it more difficult to compare this study with other studies. Cultural differences between New Zealand and the United Kingdom, for which CORE was developed, might also impact on the validity of CORE for a New Zealand population, especially for Maori and Pacific Island participants or immigrants from other countries such as Japan. HoNOSCA also might have limited use for people from non-western backgrounds. Only three client participants in this study were Maori and the others identified themselves or were identified by their caregiver(s) as New Zealand European.

Other factors that made it difficult to make firm conclusions from this project are related to the choice to not control for variables that are likely to confound the results. Issues such as the therapeutic relationship, treatment approaches and client diagnosis have not been the focus of this study. It is very possible that these factors have confounded the results, as they have been mentioned in the literature as playing an important part in client progress.

Recommendations for future research

Ongoing research related to treatment outcome is needed. There is an increasing demand from funding agencies, to produce evidence of the effectiveness of treatment. Consumers of healthcare also become increasingly knowledgeable about treatment options, which make it more likely that they request a certain treatment approach. Because of the discrepancy of treatment outcomes between experimental and clinic based studies, more clinic based studies are needed. Especially clinic based outcome studies with children and adolescents are sparse. Because of the need to approach adolescents from a developmental perspective, specialised research in this area will add to the knowledge base regarding treatment outcome.

Although ethical issues need to be considered cautiously, the use of control groups in future research will increase the validity of the results. A possible way to address the dilemma of approaching adolescents that drop out of therapy might be dealt with by offering them a monetary incentive for participation if they are no longer involved with mental health services. The adolescents that drop out, could then be used as a control group. Another possibility would be an ABAB design, with two groups. Group 1 would receive treatment, while Group 2 would be assigned to a waiting list condition. Treatment for Group 1 would be stopped after a decided time frame, and treatment for Group 2 started. Group 1 would receive more treatment, while treatment for Group 2 would be stopped. Step two would then be repeated. After each block of treatment/no treatment, CORE and HoNOSCA would be administered for both groups. The hypothesis would be that there would be more improvement on these measurements after a period of treatment as compared to a period of no treatment for both groups. One limitation of this design would be practice effects, with multiple administrations of the measuring instruments and the participants' reactivity to expected improvements. Some ethical issues might arise with this design, as treatment will be started and stopped as planned instead of as appropriate for the participants' needs.

A larger pool of participants is another recommendation for future research. Results and differences that did not emerge from this study are more likely to appear with a larger group of participants. This will also make it possible to compare clients from different cultural backgrounds. Other factors that will be interesting to explore in future studies include therapist variables, age differences, diagnosis and severity, and treatment modality.

Qualitative research is also likely to be useful. The interview questions gave the participants some freedom of response. More open methods of questioning are likely to uncover issues relevant to adolescents mental health functioning and will also give a better understanding of the amount of impact different aspects have on their well-being.

The final recommendation for future research would be to perform a controlled, experimental study in a number of clinic based settings simultaneously. With a large number of participants and different clinic settings that participate, participants that do continue with treatment and those that do not continue, can be matched on variables such as age, ethnicity, and diagnosis. Therapist factors could also be controlled for which will increase the usefulness of the study because more conclusions can be made if the research design controls for more factors and the number of participants is larger.

8. CONCLUSION

Adolescent's mental health functioning is a complex concept. Numerous factors in past and present, within the adolescent and in his/her environment, within therapy and outside of therapy, overt and covert, play a role in outcome. This study did not envisage to over simplify this multifaceted issue. The goal was to provide some insight into aspects that might relate to the mental health of adolescents referred to and assessed at a CAFMHS. Hypotheses formulated after reviewing the literature and assumed based on the researcher's experience as a mental health clinician at a CAFMHS were mostly not supported. Clients' mental health functioning did improve in the 3 months of the study, as reported by both clients and their therapists.

Appendix A: Information sheets.

Massey University
SCHOOL OF PSYCHOLOGY
Private Bag 102 904
North Shore MSC

Changes in mental health in adolescent clients of Child, Adolescent, and Family Mental Health Service.

Information Sheet (clients)

My name is Roos van der Wees and I have been working as a Counsellor at CAFMHS Wanganui since June 1996. At the moment I am in the process of completing a Master's degree in Psychology at Massey University. This project is the topic of my Master's thesis that will be completed towards the end of 2003. My supervisor at Massey is Dr Dave Clarke. All people aged 13-20 years who are referred to CAFMHS between April and October 2002, and are being seen by clinicians other than myself, will be asked to participate.

With the project, I am going to look into the factors that play a part in changes in mental health in people aged 13-20 that come to CAFMHS. I hope that by doing that, we can continue to improve the service CAFMHS offers.

To measure "mental health", I will ask you to complete a questionnaire, the CORE (Clinical Outcomes in Routine Evaluation). It consists of 34 questions about how you have been over the last week. All clients aged 13-20 that attend our Service will be asked to complete the CORE, even the ones that decide not to participate in the project. We will ask you to complete the CORE twice; before your first meeting and again 3 months after your first meeting at CAFMHS. It is possible that in 3 months time you are no longer a client of CAFMHS. If you agree to participate in the project, we would still like you to complete the CORE after 3 months, whether you are still in the Service or not.

Apart from the CORE, we want to interview you 3 months after your first meeting at CAFMHS. In the interview we will ask you questions about the things that have been going on for you during the 3 months of the project that you believe have had an impact on your mental health (such as starting a relationship, therapy, family issues and school).

Completion of the CORE will take you about 10 minutes. The interviews will take about 15 minutes.

Please turn over . . .

All the information you give us will be kept secure at CAFMHS. Your Keyworker will see the answers you gave on the CORE, so that he/she has a better picture of what is going on for you. The outcome of the interview will not be shared with your Keyworker, so that you might feel more comfortable discussing how helpful therapy is/has been.

The CORE forms will be kept in your CAFMHS file. This file will be kept at Medical Records at the Wanganui Hospital after your discharge from CAFMHS. I will keep the interview and a copy of the CORE forms. I will not use your name the interview or copies of the CORE. This is to protect your identity and improve confidentiality. After I finish my thesis, the information will be kept in case someone else would want to use the information for further research. Your name will not be on any of the forms, so possible future researchers will not know that you gave the information.

I will use the information you give me, to get a better understanding of what you and other adolescents believe has helped them in feeling better or has stopped them from starting to feel better. I hope this will help clinicians that read my thesis to give young people that need help a better service. It will also possibly give other researchers ideas about what to further investigate.

Before you decide whether you want to take part in this project, I want to inform you about your rights to:

1. Decline to participate. This will not have any consequences for the care you will receive at CAFMHS.
2. Refuse to answer any question.
3. Change your mind about taking part in the study at any stage.
4. Ask questions about the study at any time.
5. Give information knowing that your name will not be used.
6. Get a summary of the outcome of the project when it is finished.

On your first visit to CAFMHS, a consent form to participate in this project will be given to you (and your legal guardian(s) if you are between 13 and 16 years of age). Please sign this form if you agree to take part in the study.

If you have any questions about the project, you can contact me at CAF during office hours on 06-3481900 or Dr Dave Clarke at Massey University on 09-4439799 ext. 9075.

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

Roos van der Wees

This project has been reviewed and approved by the Massey University Regional Human Ethics Committee, Albany Campus, Protocol MUAHEC 02/008. If you have any concerns about the conduct of this research, please contact Associate Professor Kerry Chamberlain, Chair, Massey University Regional Human Ethics Committee, Albany, telephone 09 4439799, email K.Chamberlain@massey.ac.nz

Massey
University
SCHOOL OF PSYCHOLOGY
Private Bag 102 904
North Shore MSC

Changes in mental health in adolescent clients of Child, Adolescent, and Family Mental Health Service.

Information Sheet (guardians)

My name is Roos van der Wees and I have been working as a Counsellor at CAFMHS Wanganui since June 1996. At the moment, I am in the process of completing a Master's degree in Psychology at Massey University. This project is the topic of my Master's thesis that will be completed towards the end of 2003. My supervisor at Massey is Dr Dave Clarke. All people aged 13-20 years who are referred to CAFMHS between April and October 2002, and are being seen by clinicians other than me, will be asked to participate.

With the project, I am going to look into the factors that play a part in changes in mental health in people aged 13-20 that come to CAFMHS. I hope that by doing that, we can continue to improve the service CAFMHS offers.

To measure "mental health", I will ask your child to complete a questionnaire, the CORE (Clinical Outcomes in Routine Evaluation). It consists of 34 questions about how he/she has been over the last week. All clients aged 13-20 that attend our Service will be asked to complete the CORE, even the ones that decide not to participate in the project. We will ask your child to complete the CORE twice; before his/her first meeting and again 3 months after his/her first meeting at CAFMHS. It is possible that in 3 months time your child is no longer a client of CAFMHS. If you give permission for your child to participate in the project, we would still like him/her to complete the CORE after 3 months, whether he/she is still in the Service or not.

Apart from the CORE, we want to interview your child 3 months their first meeting at CAFMHS. In the interview we will ask your child questions about the things that have been going on for him/her during the 3 months of the project that he/she believes have had an impact on his/her mental health (such as starting a relationship, therapy, family issues and school).

Completion of the CORE will take your child about 10 minutes. The interviews will take about 15 minutes.

Please turn over . . .

All the information your child gives us will be kept secure at CAFMHS. Your child's Keyworker will see the answers your child gave on the CORE, so that he/she has a better understanding of what is going on for your child. The outcome of the interview will not be shared with his/her Keyworker, so that your child might feel more comfortable discussing how helpful therapy is/has been.

The CORE forms will be kept in your child's CAFMHS file. This file will be kept at Medical Records at the Wanganui Hospital after his/her discharge from CAFMHS. I will keep the interview and a copy of the CORE forms. I will not use your child's name on the interview or copies of the CORE. This is to protect his/her identity and improve confidentiality. After I finish my thesis, the information will be kept in case someone else would want to use the information for further research. Your child's name will not be on any of the forms, so possible future researchers will not know that your child gave the information.

I will use the information your child gives me, to get a better understanding of what your child and other adolescents believe has helped them in feeling better or has stopped them from starting to feel better. I hope this will help clinicians that read my thesis to give young people that need help a better service. It will also possibly give other researchers ideas about what to further investigate.

Before you decide whether you want to agree with your child taking part in this project, I want to inform you about your and your child's rights to:

1. Decline to allow your child to participate. This will not have any consequences for the care your child will receive at CAFMHS.
2. Refuse to answer any question.
3. Change your mind about taking part in the study at any stage.
4. Ask questions about the study at any time.
5. Give information knowing that your name will not be used.
6. Get a summary of the outcome of the project when it is finished.

On your first visit to CAFMHS, a consent form to participate in this project will be given to you and your child. Please sign this form if you give permission for your child to take part in the study.

If you have any questions about the project, you can contact me at CAF during office hours on 06-3481900 or Dr Dave Clarke at Massey University on 09-4439799 ext. 9075.

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

Roos van der Wees

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Massey
University
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Private Bag 102 904
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Changes in mental health in adolescent clients of Child, Adolescent, and Family Mental Health Service.

Information Sheet (clinicians)

As you all know, my name is Roos van der Wees and I have been working as a Counsellor at CAFMHS Wanganui since June 1996. At the moment I am in the process of completing a Master's degree in Psychology at Massey University. This project is the topic of my Master's thesis that will be completed towards the end of 2003. My supervisor at Massey is Dr Dave Clarke. All clinicians apart from me working at CAFMHS Wanganui with people aged 13-20 years will be asked to participate.

With the project, I am going to look into the factors that play a part in changes in mental health in people aged 13-20 that come to CAFMHS. I hope that by doing that, we can continue to improve the service CAFMHS offers.

To measure "mental health", I will ask clients to complete a questionnaire, the CORE (Clinical Outcomes in Routine Evaluation). It consists of 34 questions about how they have been over the last week. All clients aged 13-20 that attend our Service will be asked to complete the CORE, even the ones that decide not to participate in the project. We will ask them to complete the CORE twice; before the initial interview and 3 months after the initial interview at CAFMHS. It is possible that some clients will not remain in the Service for 3 months. If this is the case, we will still like them to complete the CORE after 3 months.

Apart from the CORE, we want to interview the clients 3 months after the initial interview. In the interview we will ask them questions about the things that have been going on for them during the 3 months of the project that they believe have had an impact on their mental health (such as starting a relationship, therapy, family issues and school).

Clinicians will be asked to complete the Health of the Nation Outcome Scales for Children and Adolescents (HoNOSCA). This is an instrument consisting of two sections. There are 13 scales in section A and 2 optional scales in section B. The HoNOSCA will be completed during the Multidisciplinary team meetings by the clinical team. For each participating client who remains in the service for at least 3 months, the HoNOSCA will be completed twice; after intake and three months after admission.

Please turn over . . .

I will also interview clinicians 3 months after admission of the client. The interview will focus on the clinician's view on what might have impacted on change/no change in the client's mental health over the 3 months period.
The interviews will take about 15 minutes.

All the information will be kept secure at CAFMHS. You will have access to the answers your clients give on the CORE, to give you a better understanding of what is going on for them. The outcome of the interviews with the clients will not be shared with their Keyworker, so that they might feel more comfortable discussing how helpful therapy is/has been.

The CORE forms will be kept in the client's CAFMHS file. This file will be kept at Medical Records at the Wanganui Hospital after discharge from CAFMHS. I will keep the interviews and a copy of the CORE forms. I will not use the client's name on any of the interviews or copies of the CORE. I will also not identify clinicians by name. This is to protect the identity of the participants and improve confidentiality. After I finish my thesis, the information will be kept in case someone else would want to use the information for further research. There will be no names on any of the interviews, so possible future researchers will not know that it was you that gave the information.

I will use the information you give me, to get a better understanding of what you and other clinicians believe has helped their clients in feeling better or has stopped them from starting to feel better. I will also look at the consensus between the clinician and the adolescent. I hope this will help clinicians that read my thesis to give young people that need help a better service. It will also possibly give other researchers ideas about what to further investigate.

Before you decide whether you want to take part in this project, I want to inform you about your rights to:

1. Decline to participate. This will not have any consequences for your work at CAFMHS.
2. Refuse to answer any question.
3. Change your mind about taking part in the study at any stage.
4. Ask questions about the study at any time.
5. Give information knowing that your name will not be used.
6. Get a summary of the outcome of the project when it is finished.

If you have any questions about the project, you can contact me at CAF during office hours or Dr Dave Clarke at Massey University on 09-4439799 ext. 9075.

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

Roos van der Wees

This project has been reviewed and approved by the Massey University Regional Human Ethics Committee, Albany Campus, Protocol MUAHEC 02/008. If you have any concerns about the conduct of this research, please contact Associate Professor Kerry Chamberlain, Chair, Massey University Regional Human Ethics Committee, Albany, telephone 09 4439799, email K.Chamberlain@massey.ac.nz

Appendix B: Consent forms

Massey University
COLLEGE OF HUMANITIES & SOCIAL SCIENCES

School of Psychology
Private Bag 102 904,
North Shore MSC,
Auckland,
New Zealand
Telephone: 64 9 443 9799
extn 9180
Facsimile: 64 9 441 8157

Changes in mental health in adolescent clients of Child, Adolescent, and Family Mental Health Service.

Client/Clinician consent form

I have read the Information sheet and have the details of the study explained to me. My questions have been answered to my satisfaction and I understand that I may ask further questions at any time.

I understand I have the right to withdraw from the study at any time and to decline to answer any particular questions.

I agree to provide information to the researcher on the understanding that my name will not be used. The information will be used for this research and possible publications and further research arising from this project.

I agree to participate in this study under the conditions set out in the information sheet.

Signed: ....

Name: ....

Date: ....

Te Kunenga ki Pūrehuroa
Inception to Infinity: Massey University's commitment to learning as a life-long journey

Massey University
COLLEGE OF HUMANITIES & SOCIAL SCIENCES

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Changes in mental health in adolescent clients of Child, Adolescent, and Family Mental Health Service.

Guardian consent form

I have read the Information sheet and have the details of the study explained to me. My questions have been answered to my satisfaction and I understand that I may ask further questions at any time.

I understand my child and me have the right to withdraw from the study at any time and to decline to answer any particular questions.

My child has agreed to provide information to the researcher on the understanding that his/her name will not be used. The information will be used for this research and possible publications and further research arising from this project.

I agree to allow my child to participate in this study under the conditions set out in the information sheet.

Signed: ……………………………

Name: ……………………………

Date: ……………………………

Appendix C: Clinical Outcomes of Routine Evaluation (CORE)

CLINICAL OUTCOMES in ROUTINE EVALUATION

OUTCOME MEASURE

Site ID ☐☐☐☐☐

letters only ☐☐ numbers only ☐☐☐☐☐☐

Client ID

Therapist ID ☐☐ numbers only ☐☐☐ numbers only ☐☐☐

Sub codes

D D ☐☐ / M M ☐☐ / Y Y Y Y ☐☐☐☐

Date form given

Age ☐☐

Male ☐

Female ☐

Stage Completed

S Screening
R Referral
A Assessment
F First Therapy Session
P Pre-therapy (unspecified)
D During Therapy
L Last therapy session
X Follow up 1
Y Follow up 2

Stage ☐

Episode ☐

IMPORTANT - PLEASE READ THIS FIRST

This form has 34 statements about how you have been OVER THE LAST WEEK.
Please read each statement and think how often you felt that way last week.
Then tick the box which is closest to this.
Please use a dark pen (not pencil) and tick clearly within the boxes.

	Over the last week	Not at all	Only Occasionally	Sometimes	Often	Most or all the time	OFFICE USE ONLY
1	I have felt terribly alone and isolated	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
2	I have felt tense, anxious or nervous	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
3	I have felt I have someone to turn to for support when needed	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
4	I have felt O.K. about myself	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ W
5	I have felt totally lacking in energy and enthusiasm	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
6	I have been physically violent to others	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
7	I have felt able to cope when things go wrong	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
8	I have been troubled by aches, pains or other physical problems	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
9	I have thought of hurting myself	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
10	Talking to people has felt too much for me	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
11	Tension and anxiety have prevented me doing important things	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
12	I have been happy with the things I have done.	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
13	I have been disturbed by unwanted thoughts and feelings	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
14	I have felt like crying	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ W

Please turn over

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Over the last week	Not at all	Only Occasionally	Sometimes	Often	Most or all the time	OFFICE USE ONLY
15 I have felt panic or terror	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
16 I made plans to end my life	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
17 I have felt overwhelmed by my problems	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ W
18 I have had difficulty getting to sleep or staying asleep	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
19 I have felt warmth or affection for someone	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
20 My problems have been impossible to put to one side	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
21 I have been able to do most things I needed to	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
22 I have threatened or intimidated another person	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
23 I have felt despairing or hopeless	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
24 I have thought it would be better if I were dead	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R
25 I have felt criticised by other people	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
26 I have thought I have no friends	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
27 I have felt unhappy	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
28 Unwanted images or memories have been distressing me	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
29 I have been irritable when with other people	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
30 I have thought I am to blame for my problems and difficulties	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ P
31 I have felt optimistic about my future	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ W
32 I have achieved the things I wanted to	☐ 4	☐ 3	☐ 2	☐ 1	☐ 0	☐ F
33 I have felt humiliated or shamed by other people	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ F
34 I have hurt myself physically or taken dangerous risks with my health	☐ 0	☐ 1	☐ 2	☐ 3	☐ 4	☐ R

THANK YOU FOR YOUR TIME IN COMPLETING THIS QUESTIONNAIRE

	(W)	(P)	(F)	(R)	All items	All minus R
Total Scores	☐	☐	☐	☐ →	☐ →	☐
	↓	↓	↓	↓	↓	↓
Mean Scores (Total score for each dimension divided by number of items completed in that dimension)	☐	☐	☐	☐	☐	☐

Survey : 119

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Appendix E: Interview with clients

I would like to ask you some questions about what has been going on for you in the past 3 months that has changed the way you are feeling and functioning or has made it difficult to make changes.

1. Which (if any) of the following events happened to you within the past 3 months?
a. Change in family circumstances
b. Death/illness/serious injury of someone close to you
c. Change of living situation
d. Change of schools/ leaving school
e. Job changes
f. Start/end of sexual relationship
g. Illness
h. Financial issues
i. Problems with the law
j. Issues with friends
k. Being abused
l. Drug/alcohol abuse
m. Pregnancy/ Making a girl pregnant
o. Other life events (please specify)

Please rate the events that happened to you in the past three months, to indicate how they impacted on you (-2 very negative +2 very positive).

2. I will mention a number of aspects of your treatment at CAFMHS . How did they impact on the way you are feeling and functioning now? Please rate them from -2 (very negative) to +2 (very positive)
a. Having someone to talk to.
b. Feeling listened to and understood
c. Feeling more hopeful that things could get better
d. Learning skills to deal with different situations (please specify).
e. Medication (please specify).
f. Increasing insight and understanding in what has been going on for you.
g. Seeing things in a different way.
h. Knowing that you are not the only one with similar problems
i. Knowing that what is going on for you has a name.
j. Other factors.

3. Are there any other factors you believe had an impact on changes/ no changes in the way you have been feeling and functioning over the past three months? If so, please specify.

Appendix F: Interview with clinicians

1. Which (if any) of the following events do you believe happened to your client within the past 3 months?
a. Change in family circumstances
b. Death/illness/serious injury of someone close to them
c. Change of living situation
d. Change of schools/ leaving school
e. Job changes
f. Start/end of sexual relationship
g. Illness
h. Financial issues
i. Problems with the law
j. Issues with friends
k. Being physically or sexually abused
l. Drug/alcohol abuse
m. Pregnancy/ Making a girl pregnant
o. Other life events (please specify)

Please rate the events that you believe happened to your client in the past three months to indicate how you believe they impacted on your client from -2 (very negative) from +2 (very positive).

2. I will mention a number of aspects of therapy. How do you believe they impacted on the way your client is feeling and functioning now? Please rate them from -2 (very negative) to +2 (very positive)
For the client to:
a. Have someone to talk to.
b. Feel listened to and understood
c. Feel more hopeful that things could get better
d. Learn skills to deal with different situations (please specify).
e. Take medication (please specify).
f. Develop increased insight and understanding in what has been going on for them.
g. See things in a different way.
h. Know that they are not the only one with similar problems
i. Know that what is going on for them has a name.
j. Other factors.

3. Are there any other factors you believe had an impact on changes/ no changes in your client's mental health over the past three months? If so, please specify.

Appendix G: Descriptive statistics CORE and HoNOSCA

	N	Minimum	Maximum	Mean	Std.	Skewness	
	Statistic	Statistic	Statistic	Statistic	Statistic	Statistic	Std. Error
AGE	15	13	19	15.47	2.031	.558	.580
GENDER	15	0	1	.33	.488	.788	.580
CAW	15	0	15	8.47	3.889	-.609	.580
CAP	15	3	39	23.53	12.053	-.518	.580
CAF	15	1	43	21.67	10.118	.146	.580
CAR	15	0	19	6.07	5.509	.943	.580
CATOT	15	5	105	59.87	27.785	-.457	.580
CATOTNOR	15	4	98	53.87	24.625	-.390	.580
CBW	15	0	14	6.40	4.120	.504	.580
CBP	15	1	35	14.73	11.247	.401	.580
CBF	15	3	34	16.47	10.197	.362	.580
CBR	15	0	17	3.80	5.506	1.609	.580
CBTOT	15	6	93	41.40	29.347	.664	.580
CBTOTNOR	15	6	78	37.60	24.692	.417	.580
HADIS	15	0	3	.93	1.100	.520	.580
HAOVER	15	0	4	1.40	1.404	.414	.580
HANONA	15	0	3	.87	1.125	.990	.580
HAALC	14	0	3	.79	.975	1.073	.597
HASCH	14	0	3	.57	1.158	1.706	.597
HAPHY	14	0	2	.64	.842	.829	.597
HAHAL	13	0	3	.46	1.127	2.179	.616
HANONO	14	0	3	1.14	1.292	.443	.597
HAEMO	14	1	4	3.00	.877	-.798	.597
HAPEE	15	0	4	1.40	1.352	.344	.580
HASEL	15	0	3	.33	.816	2.894	.580
HAFAM	14	1	4	2.64	1.082	-.430	.597
HAPOO	15	0	4	1.53	1.959	.501	.580
HATOT	15	4	29	15.07	6.892	.699	.580
HBDIS	15	0	3	.53	.915	1.821	.580
HBOVER	15	0	3	.67	1.047	1.646	.580
HBNONA	15	0	2	.20	.561	2.919	.580
HBALC	15	0	3	.60	.910	1.626	.580
HBSCH	15	0	2	.27	.704	2.405	.580
HBPHY	15	0	2	.53	.743	1.074	.580
HBHAL	14	0	2	.21	.579	2.803	.597
HBNONO	14	0	3	.57	1.016	1.570	.597
HBEMO	14	0	3	1.29	1.267	.433	.597
HBPEE	14	0	4	1.07	1.439	.940	.597
HBSEL	15	0	3	.33	.816	2.894	.580
HBFAM	15	0	4	1.47	1.125	.616	.580
HBPOO	15	0	4	.73	1.534	1.751	.580
HBTOT	15	0	21	8.20	5.557	.632	.580
Valid N (listwise)	9						

Appendix H: Mann-Whitney U test gender differences.

	Females	**Males**	**Z**
	Mean rank	**Mean rank**	
	(n = 10)	(n = 5)	
CORE 1	10.40	3.20	-2.94***
CORE 2	9.65	4.70	-2.02*
HoNOSCA 1	8.10	7.80	-1.24
HoNOSCA 2	8.40	7.20	-.49
Life events client's report	7.15	9.70	-1.06
Life events clinician's report	8.55	6.90	-.68
Therapy factors client's report	7.70	8.60	-.37
Therapy factors clinician's report	8.90	6.20	-1.11

* p < .05, *** p < .001; asymptotic two-tailed

Appendix I: Impact of therapy factors

Factor	**n**	**Spearman's rho**
Having someone to talk to	15	.45
Feeling listened to and understood	15	.21
Feeling more hopeful that things could get better	15	.41
Learning skills to deal with different situations	15	.51
Medication	4	-.54
Increasing insight and understanding	15	.44
Seeing things in a different way	15	.62*
Knowing other people have similar problems	14	.11
Knowing that what is going on has a name	14	.31
Other factors	5	-.75
Total impact of therapy	15	.54*

* $p < .05$. asymptotic two-tailed

Appendix J: Impact of life events as rated by clients and clinicians

	N = 15	Event did not happen	Negative impact	No impact	Positive impact
Change in family circumstances	Client	8	2	0	5
	Clinician	7	3	1	4
Death/illness/serious injury of someone close to you	Client	8	6	0	1
	Clinician	13	2	0	0
Change of living situation	Client	10	0	3	2
	Clinician	9	1	1	4
Change of schools/leaving school	Client	7	1	1	6
	Clinician	7	3	1	4
Job changes	Client	13	0	1	1
	Clinician	13	0	1	1
Start/end of sexual relationship	Client	12	0	1	2
	Clinician	13	1	0	1
Illness	Client	13	1	0	1
	Clinician	9	2	3	1
Financial issues	Client	14	1	0	0
	Clinician	9	2	4	0
Problems with the law	Client	15	0	0	0
	Clinician	14	1	0	0
Issues with friends	Client	7	5	1	2
	Clinician	5	7	2	1
Being abused	Client	11	4	0	0
	Clinician	14	1	0	0
Drug/alcohol abuse	Client	9	1	4	1
	Clinician	8	6	1	0
Pregnancy/making a girl pregnant	Client	14	1	0	0
	Clinician	14	1	0	0
Other life events	Client	12	1	0	2
	Clinician	10	4	0	1

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