

# Treatment Effectiveness of



## A Comprehensive Evaluation



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programs / training / research



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**Cindi Hinch** BA(Hons) has researched various facets of occupational stress, as well as being involved with clinical research as a Research Officer at Swinburne University investigating the psychological effects of a wide range of psychological and psycho-physiological interventions. She is currently conducting doctoral research into the role of emotional intelligence in psychological disorders such as depression. As a consultant for Neo Psychology, she consults on methodology in clinical research, study design, statistical analysis and interpretation. Cindi is a probationary psychologist and is currently completing the Doctor of Psychology (clinical) degree at La Trobe University, Melbourne.

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### **Important Caution**

**There are an enormous variety of wilderness and adventure based programs with a wide range of formats, methods and staff skills. The results reported herein describe the outcomes from a specific, manualised psychological intervention. Therefore, these results should not be assumed to apply to other interventions, programs or treatments that may also use wilderness or adventure activities. The specific model of Wilderness Adventure Therapy evaluated here has been trailed and developed extensively for over a decade and a half using specific procedures involving client psychological assessment and selection, group composition, intake processes, psychological safety procedures, therapeutic group procedures, and so on. For this reason, these research results only apply to accredited Wilderness Adventure Therapy<sup>®</sup> programs that include the specific components and procedures as described in the practice guidelines thereof. Any other type of adventure program should present separate evaluation results based on data specifically drawn from that program.**

## What is Wilderness Adventure Therapy?

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This document is a summary of key results from a more detailed report of a comprehensive evaluation of a therapeutic adventure-based intervention for adolescents and families termed “Wilderness Adventure Therapy” (WAT) by Crisp & Hinch (2004). The specific Wilderness Adventure Therapy model evaluated has been developed and researched over the last 12 years (Crisp, 2002a; 2001a; 1996; Crisp & Augner, 1998; Crisp & O’Donnell, 1998).

The Wilderness Adventure Therapy® model of clinical treatment was first established as an integrated component of a full-time adolescent mental health day-program (BIP) for treating adolescents with severe psychological, behavioural and psychiatric problems at the Austin Hospital’s Child & Adolescent Mental Health Service, Melbourne, between 1992 and 2000 (Crisp, O’Donnell, Kingston, Poot & Thomas, 2000). This model was developed to compliment conventional group therapies, including a manualised cognitive-behavioural group therapy program. Following the success of the multi-modal day-program in treating severe mental health problems both in the short term and up to 5 years following treatment (Crisp, 2003a), the WAT component was subsequently established as a ‘stand-alone’ out-patient treatment at the Barwon Health Adolescent Mental Health Service in 2000. Interestingly, the results of this part-time treatment were more promising than when combined with the original and more intensive, full-time day program at the Austin Hospital. The efficacy of the WAT model in treating a range of severe mental health problems was confirmed with a comprehensive evaluation (Crisp, 2002a). The third stage of development of the WAT model was to apply it as an early intervention and prevention approach with adolescents in the community who were at risk of developing serious psychological and behavioural problems. Between 2001 to 2003, the *Systemic Wilderness Adventure Therapy Research And Development* (SWATRAD) project was established at the Inner East Community Health Service, Melbourne, to work with local government high schools and community youth and family agencies to investigate the potential to intervene early and treat psychological, behavioural and family-based problems in adolescents before they required referral to a clinical service (Crisp, Noblet & Hinch, 2003). The results of the latter two stages of development are presented in this document.

The clinical procedures and operational features of the Wilderness Adventure Therapy® model are described in a detailed manual (Crisp & Noblet, 2004). The model applies a social-emotional competency and coping skill framework to group based adventure experiences that are implemented in the field by a psychologist. WAT treatment is run in a part-time, 10 week program format that involves a range of steps:

- (1) Recruitment and orientation of clients, families and support people to the aims and processes of the WAT treatment,
- (2) In-depth clinical assessment through psychometric tests and interviews, including setting individualized therapeutic goals with the adolescent and family,
- (3) Selection of a small and therapeutically complimentary group of adolescents,
- (4) Graded sequence of in-door and one day adventure based activities with therapist facilitated group de-briefing for the adolescent peer group, as well as including families and other social supports directly in the intervention,
- (5) Individual goal-oriented counselling by a psychologist throughout,
- (6) A 2 day overnight training expedition followed by several weeks of single day adventure activities such as caving, rockclimbing/abseiling, rafting, cross-country skiing, ropes course, combined with group therapy sessions on alternate days.
- (7) An extended wilderness expedition of 5-6 days bushwalking or white-water rafting,
- (8) Termination activities with the group and individuals before concluding the program,
- (9) Follow-up day with all stakeholders, approximately 2-3 months post-program.

## Treatment Outcomes in Clinical Groups

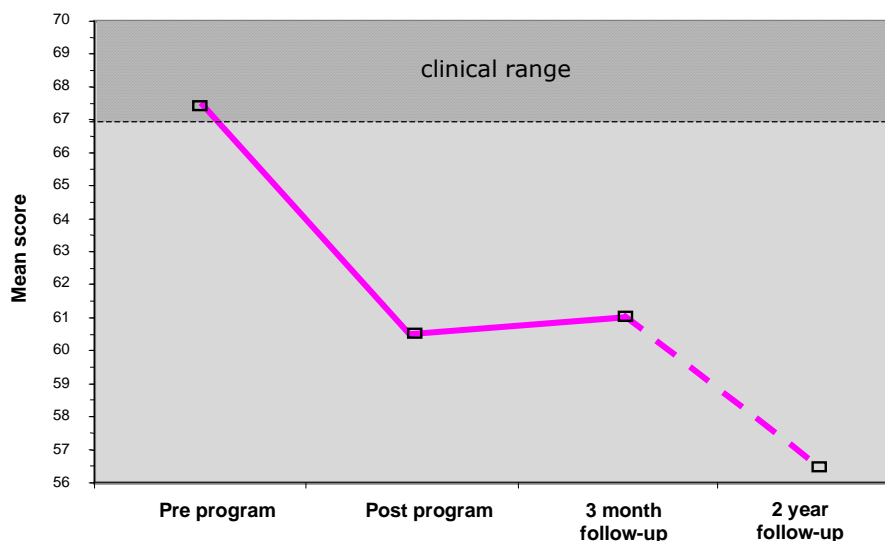
The following results are from 6 WAT treatment programs that were implemented in series between 2000 and 2001 with 39 adolescent out-patients (ages 13 to 18, average age of 15 years 2 months) from the Barwon Health Adolescent Mental Health Service, Victoria. Patients were referred to the WAT treatment because of a lack of response to traditional therapy, or because of the chronicity and/or complexity of their mental health problems<sup>1</sup>.

### Risk Factors:

#### 1. Mental health symptoms and behaviour problems

##### *Total frequency of mental health symptoms and behavioural problems*

The sum total of mental health symptoms in WAT clients is shown in the diagram below (measured by the *Youth Self Report - Total score* [Achenbach, 1991]). Significant reductions were found at post-program, with a large magnitude of change. These changes were maintained at 3 month and 2 year follow-up.



#### **Total mental health symptoms**

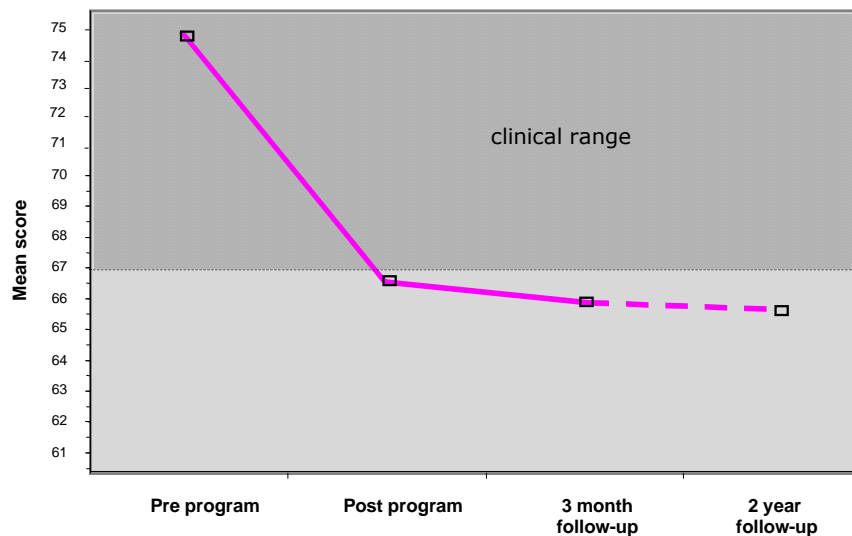
[significant pre-post treatment reductions  $p=0.001$ , partial  $\eta^2= .347$ ]

##### *Most severe mental health symptoms and behavioural problems*

Ultimately, it is critical to recognise that in clinical groups, the types of symptoms that warrant being the focus of treatment vary between individuals. In order to take account of this, it becomes most meaningful to consider the effects of treatment on the symptoms or behaviours that are the most severe before treatment. To this end, the area with the greatest number of symptoms before WAT was examined.

<sup>1</sup> The only other treatment option of equal or greater intensity was admission to a psychiatric in-patient ward.

The most severe area of symptoms in WAT clients is shown in the diagram below (measured by the *Youth Self Report - highest elevated clinical subscale* [Achenbach, 1991]). A statistical trend<sup>2</sup> of reduced symptoms was found at post-program with a large magnitude of change. These changes were maintained at 3 month and 2 year follow-up.

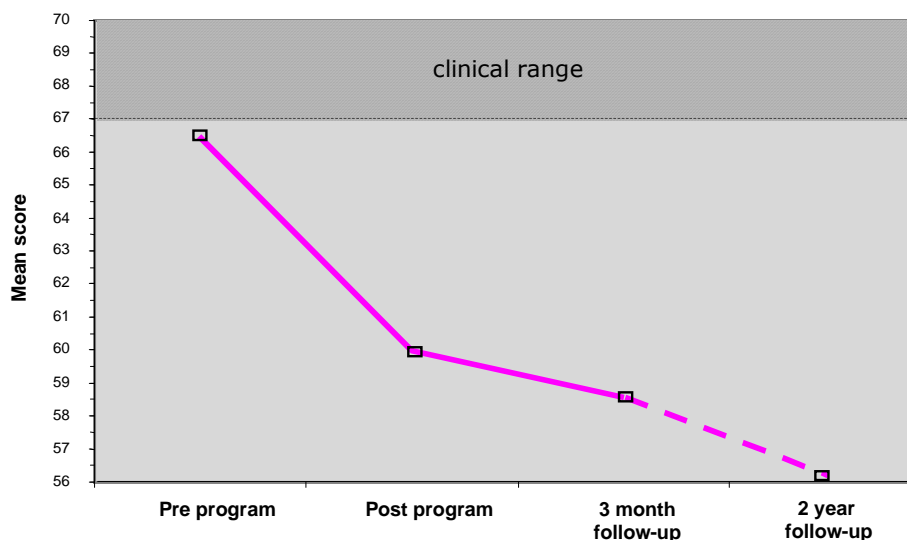


**Most Severe mental health symptoms**

[trend in pre-post treatment reductions  $p=0.063$ , partial  $\eta^2= .333$  ]

*Internalising symptoms*

Internalising symptoms include the cluster of withdrawn behaviour, somatic (physical) complaints, anxiety and depressive symptoms. The frequency of internalising symptoms in WAT clients is shown in the diagram below (measured by the *Youth Self Report – Internalising subscale* [Achenbach, 1991]). A statistical trend of reduced symptoms was found at post-program with a large magnitude of change. These changes were maintained at 3 month and 2 year follow-up.



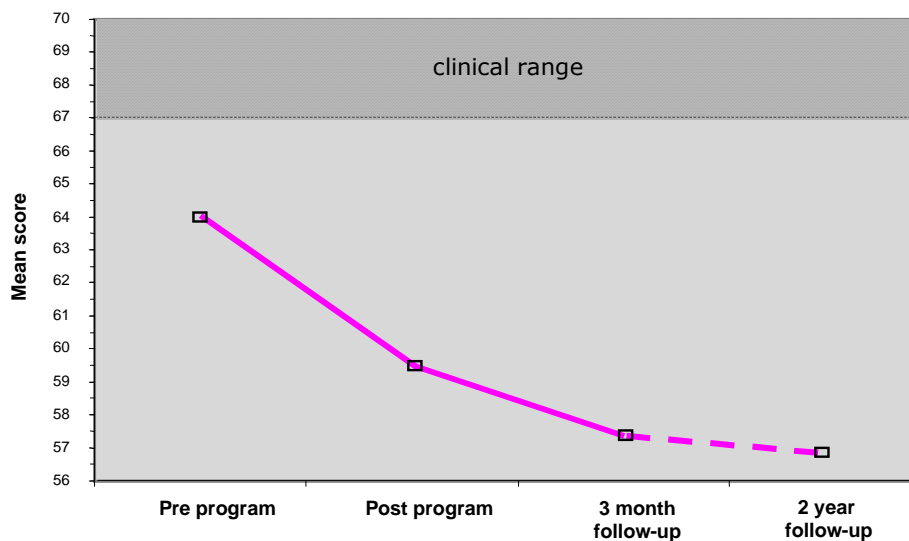
**Internalising symptoms**

[trend in pre-post treatment reductions  $p=0.069$ , partial  $\eta^2= .113$  ]

<sup>2</sup> This means a 94% confidence in this finding rather than the usual 95% probability cut-off

*Externalising symptoms*

Externalising symptoms include the cluster of aggressive and delinquent behaviours. The frequency of externalizing symptoms in WAT clients is shown in the diagram below (measured by the *Youth Self Report – Externalising subscale* [Achenbach, 1991]). Significant reductions were found at post-program with a large magnitude of change. These changes were maintained at 3 month and 2 year follow-up.



**Externalising symptoms**

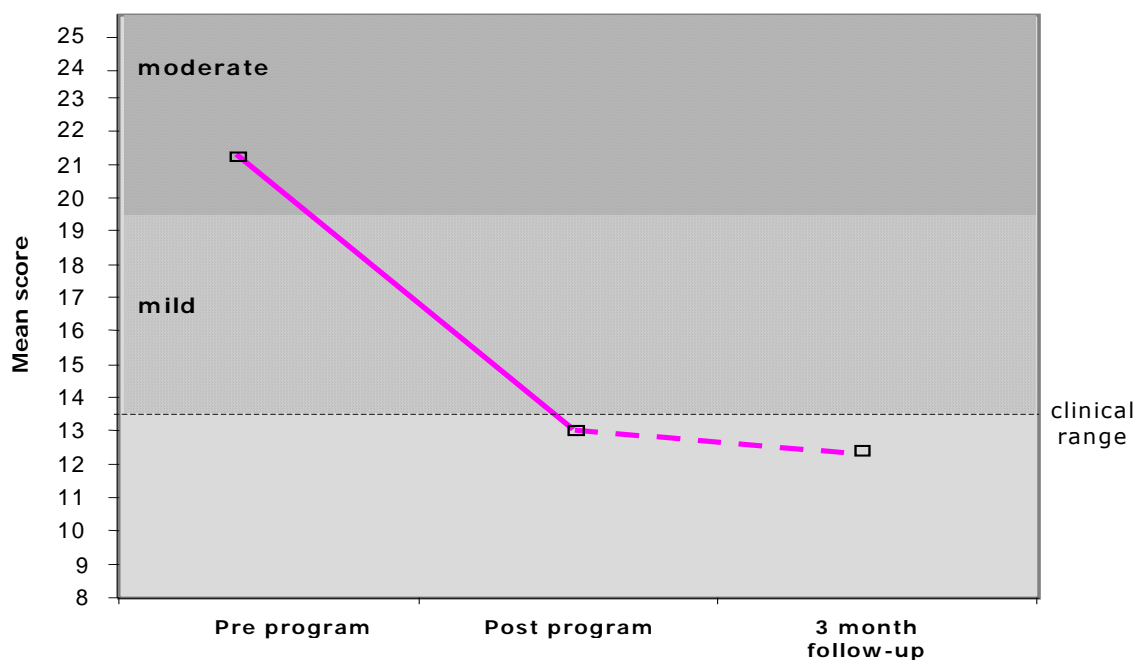
[significant pre-post treatment reductions  $p=0.032$ , partial  $\eta^2= .154$ ]



## 2. Depression

### *Depressive symptoms in all WAT clients*

The average of the range of depressive symptoms in all WAT clients is shown in the diagram below (measured by the *Beck Depression Inventory - Total score* [Beck, Steer & Brown, 1996]). Significant reductions were found at post-program, with a large magnitude of change. These changes were maintained at 3 months.



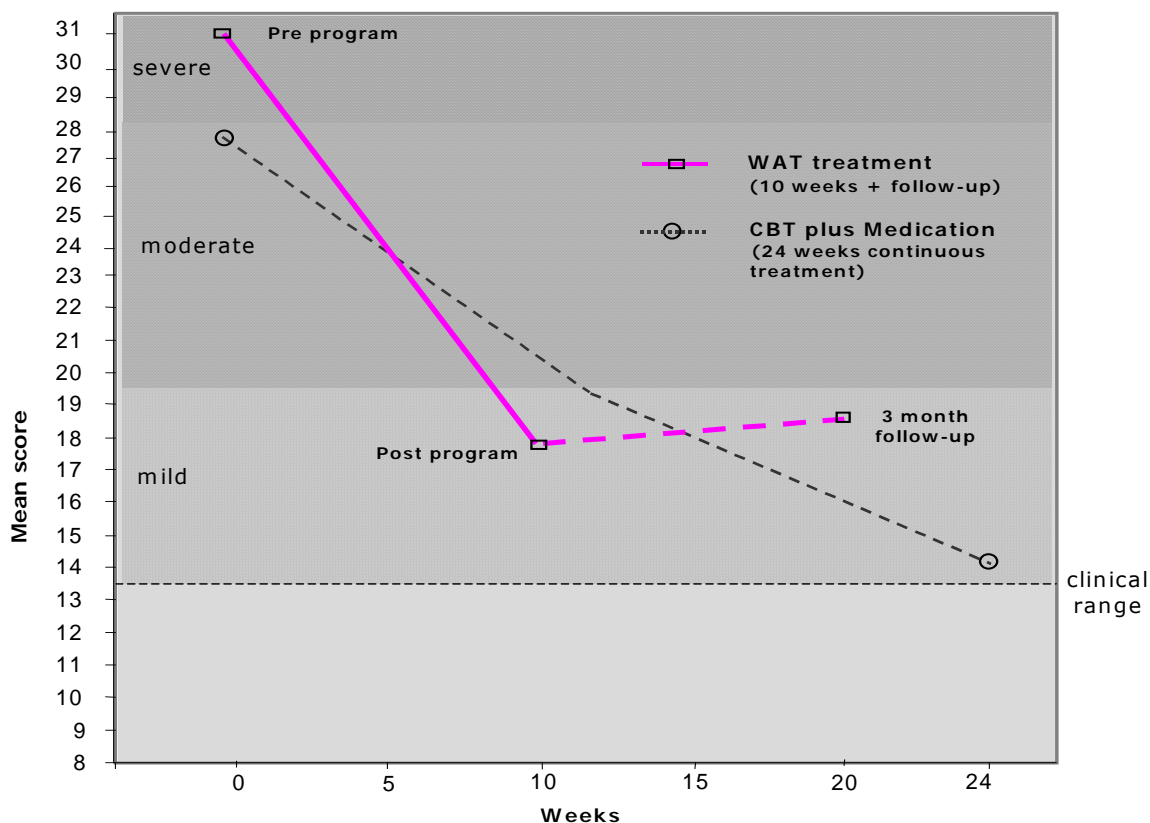
**Depressive symptoms: All clients**

[significant pre-post treatment reductions  $p=0.0001$ , partial  $\eta^2= .431$ ]

### *Treatment response for WAT clients with clinical levels of depression*

Treatment response in WAT clients who had clinical levels of depressive symptoms pre-program is shown in the diagram below (measured by the *Beck Depression Inventory - Total score* [Beck, Steer & Brown, 1996]). Significant reductions were found at post-program, with a large magnitude of change. These changes were maintained at 3 months. The rate and magnitude of treatment response following WAT is benchmarked against the treatment response to the most effective known interventions for depression. This is done by comparing the mean scores (BDI) for adults with diagnosed Major Depressive Disorder who were treated with a combination of cognitive behavioural therapy (CBT) and medication (SSRIs)<sup>3</sup>.

<sup>3</sup> Based on studies with adult out-patients formally diagnosed with Major Depressive Disorder who are treated with anti-depressant medication (SSRIs) combined with cognitive behavioural therapy (CBT) have shown a similar average effect size of .34 (Friedman, Detweiler-Bedel, Leventhal, Horne, Keitner & Miller, 2004)



**Depressive symptoms: Clients in the clinical range before treatment benchmarked against best-known treatment for MDD**

[significant pre-post treatment reductions  $p < 0.005$ , partial  $\eta^2 = .628$ ]

As can be seen by comparison, as well as being statistically significant, the response to WAT is comparable in *rate* and *magnitude* of response to the most effective treatments known for depression, that is, CBT combined with medication. The magnitude of change, or *effect size*, compares favourably well to other psychotherapy outcome research<sup>4</sup>. Further, when considering typical effect sizes of *clinical effectiveness trials* (undertaken in clinical settings under normal operating conditions, in contrast to highly controlled university based research), effect sizes have been found to be very small, if not negative (Weisz & Jensen, 2001). For example, with adolescents there is little evidence for the effectiveness of interpersonal therapy, and even less for family therapy (Harrinton, Whittaker & Shoebridge, 1998).

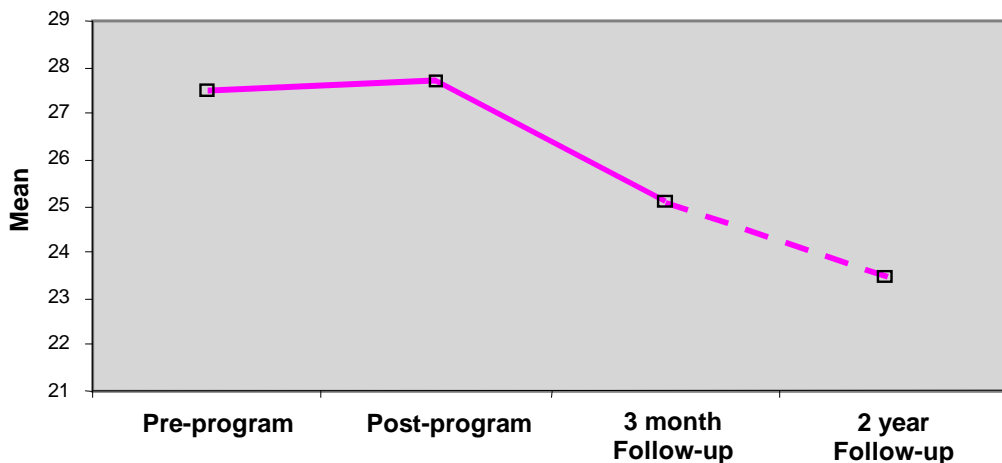
Also, of note, WAT is only 10 weeks in duration compared to 24 weeks duration of continuous CBT + medication treatment apparently required to achieve a similar result. The financial cost-to-benefit of WAT treatment compared with weekly CBT and psychiatric consultations is also comparable. However, WAT has substantial additional benefits with regard to enhancing important resilience (or protective) factors (see below), and promoting normal psychological and social development generally.

<sup>4</sup> Meta-analyses of psychotherapy for children and adolescents have found an average effect size (ES) of 0.71 (Kazdin & Weisz, 1998)

### 3. Poor coping

#### *Counter-productive coping*

Levels of counter-productive coping in WAT clients are shown in the diagram below (measured by the Adolescent Coping Scale [SF] – *Non-productive coping* subscales [Frydenberg & Lewis, 1993]). While no change was observed immediately following WAT, a statistical trend of reduced counter-productive coping, with a large magnitude of change was found from post-program to 3 month follow-up. Improvement continued 2 years later at the second follow-up, again with a large magnitude of change ( $p=0.073$ ,  $\eta^2= .29$ ).



#### **Counter-productive Coping**

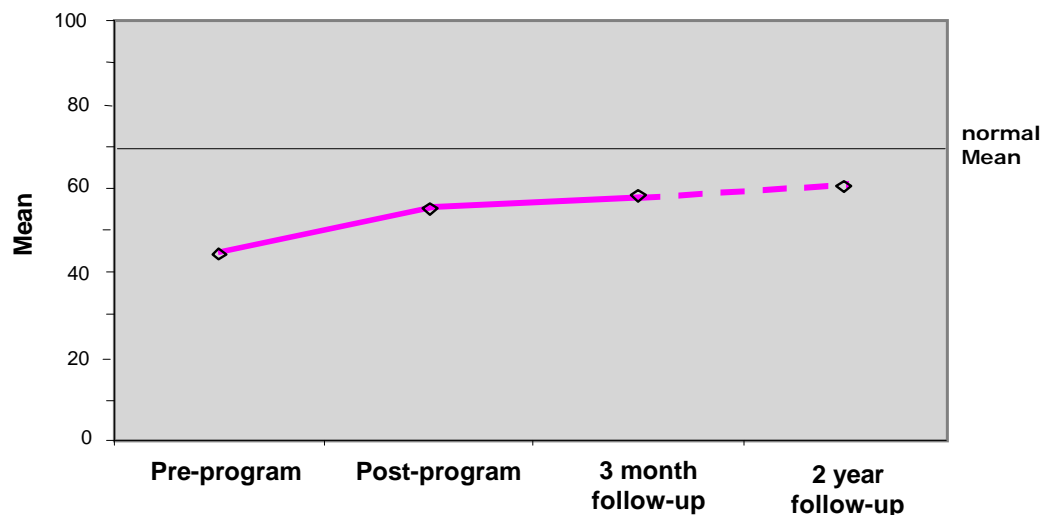
[trend in post-treatment to follow-up reductions  $p=0.063$ , partial  $\eta^2= .096$ ]

## Protective Factors:

### 4. Self Esteem

#### *Total self esteem*

Total levels of self-esteem in WAT clients are shown in the diagram below (measured by the Coopersmith Self Esteem Inventory – *Total* score [Coopersmith, 1981]). Significant improvements were found at post-program, with a large magnitude of change. These changes were maintained at 3 month and 2 year follow-up.

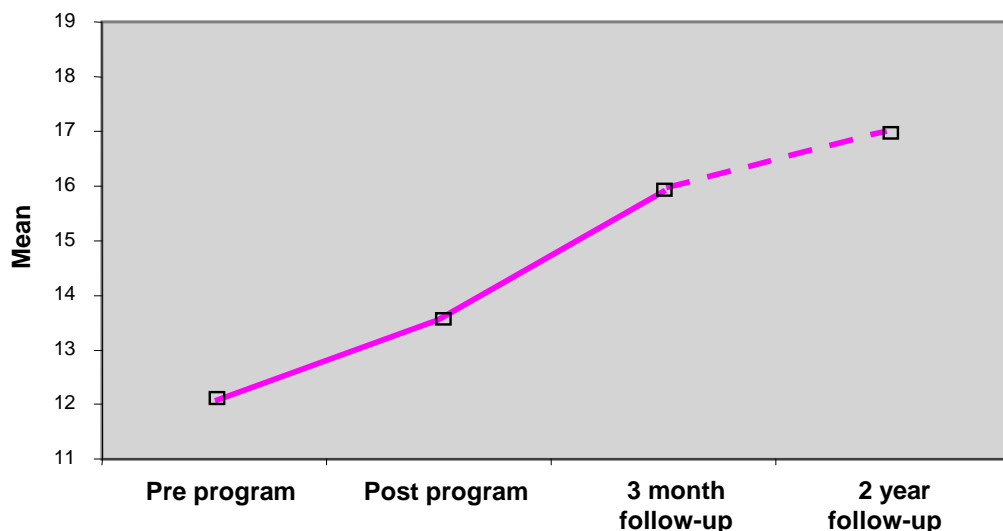


**Total Self Esteem**

[significant pre-post treatment improvements  $p=0.003$ , partial  $\eta^2= .264$ ]

#### *General self esteem*

Levels of general self-esteem in clients are shown in the diagram below (measured by the Coopersmith Self Esteem Inventory – *General* subscale [Coopersmith, 1991]). Significant improvements were found at post-program, with a large magnitude of change. These changes were maintained at 3 month and 2 year follow-up.

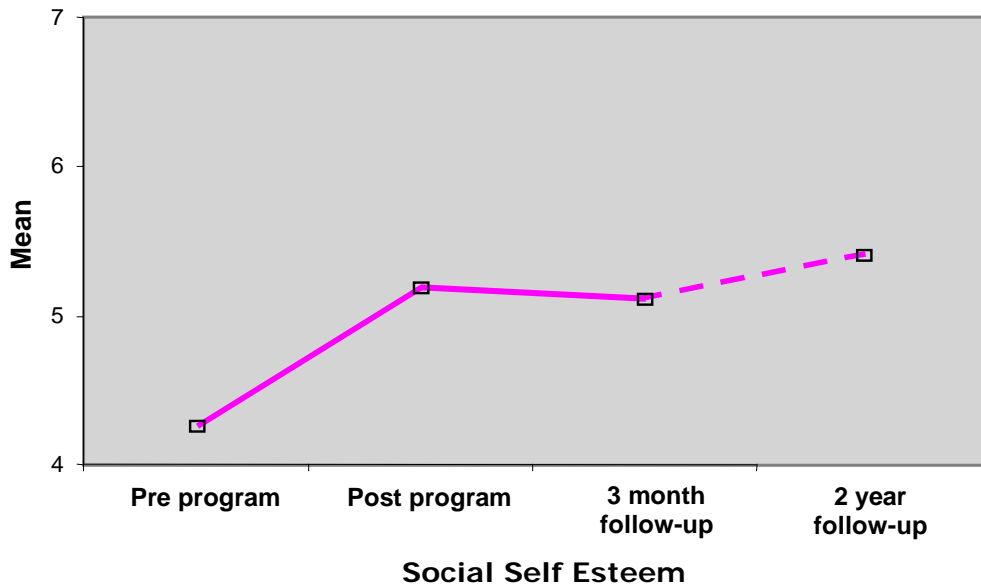


**General Self Esteem**

[significant pre-post treatment improvements  $p=0.012$ , partial  $\eta^2= .192$ ]

*Social self esteem*

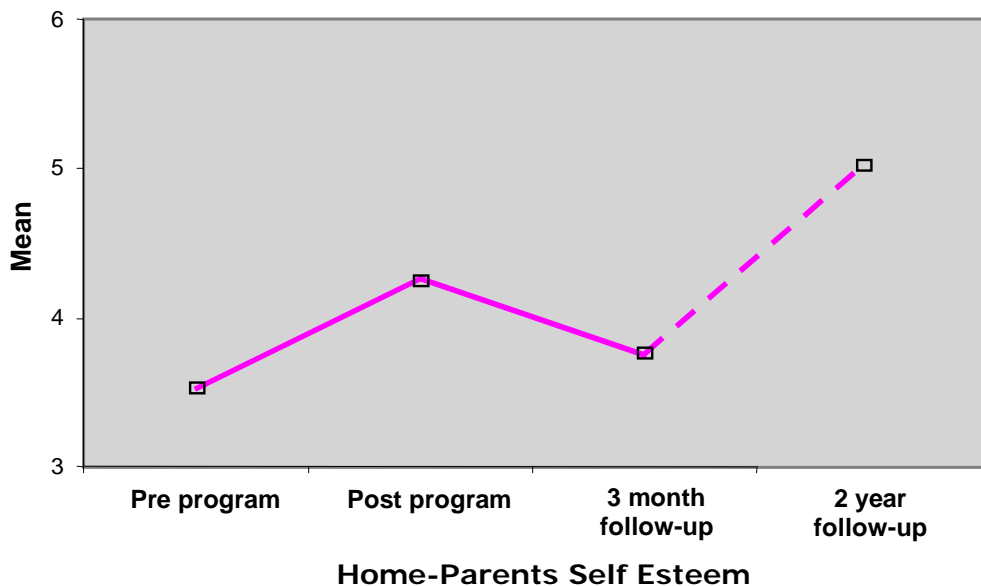
Levels of social self-esteem in WAT clients are shown in the diagram below (measured by the Coopersmith Self Esteem Inventory – *Social* subscale [Coopersmith, 1981]). Significant improvements were found at post-program, with a large magnitude of change. These changes were maintained at 3 month and 2 year follow-up.



[significant pre-post treatment improvements  $p=0.0001$ , partial  $\eta^2= .959$ ]

*Home-Parents self esteem*

Levels of self-esteem at home and with parents in WAT clients are shown in the diagram below (measured by the Coopersmith Self Esteem Inventory – *Social* subscale [Coopersmith, 1981]). Significant improvements were found at post-program, with a large magnitude of change. These changes were maintained at 2 year follow-up.

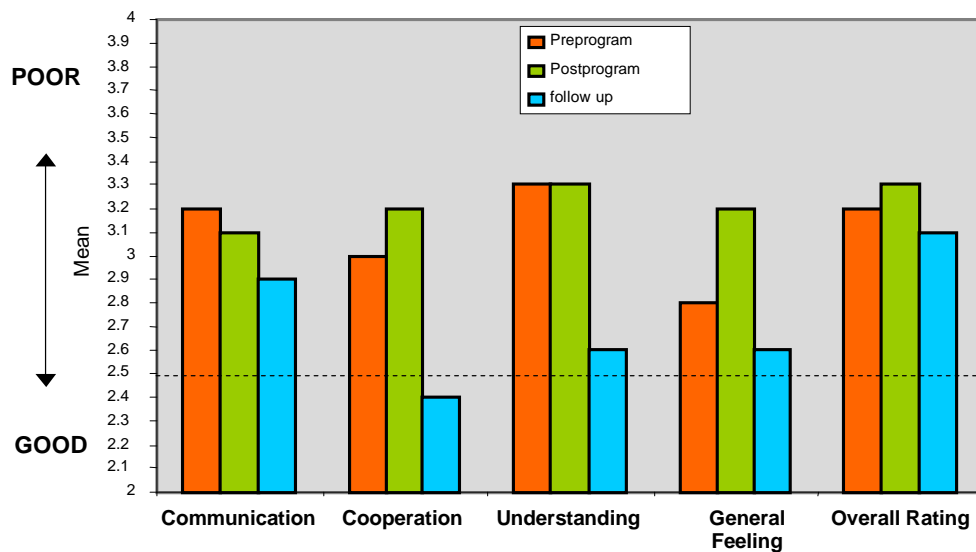


[significant pre-post treatment improvements  $p=0.047$ , partial  $\eta^2= .125$ ]

## 5. Family functioning

### *Client perception of family functioning*

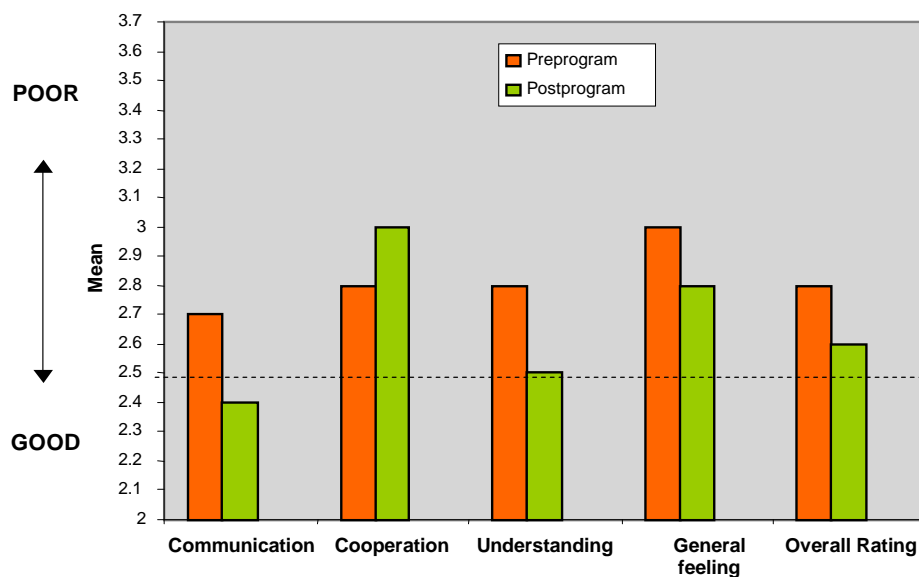
Using a customised questionnaire, WAT clients rated their perception of their family's functioning in 4 key areas as well as an overall rating. Except in the area of *communication*, clients did not see improvements in family functioning immediately following WAT. However, 3 months following treatment, they did rate the family to be functioning better than pre-treatment levels, suggesting a delayed benefit from the WAT program.



**Family functioning – client ratings**

### *Parent perception of family functioning*

Using the same customised questionnaire, the parents of WAT clients rated their perception of their family's functioning. With the exception of *co-operation*, parents reported improved levels in all aspects of family functioning immediately following WAT.



**Family functioning – Parent ratings**

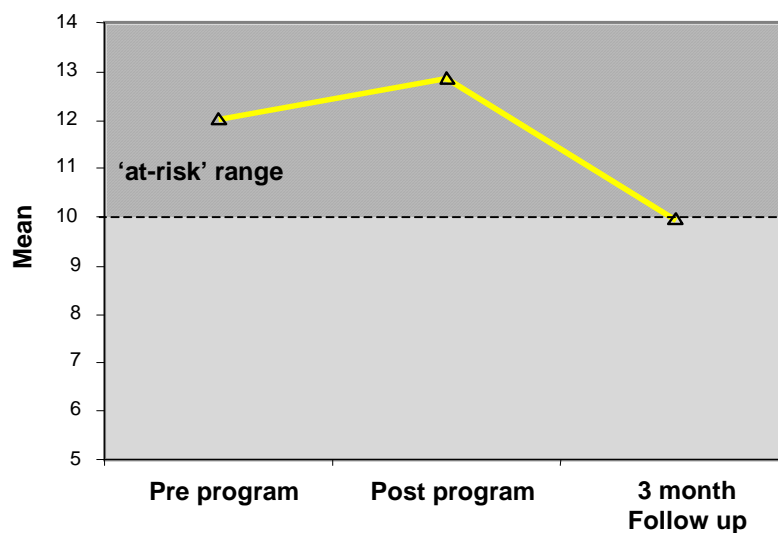
[data was not collected for parents at follow-up]

## Prevention & early intervention in 'at-risk' groups

The following results are from 6 community-based WAT early intervention programs that were implemented in series between 2001 and 2003 with 36 adolescents (ages 12 to 18, average age of 14 years 9 months). Two programs were run in government high schools, and 4 programs were run in community counselling services, Victoria. WAT clients were selected to undertake a WAT program when they were identified as showing significant risk factors including school failure, poor body image and eating problems, substance abuse, being victims of sexual abuse or assault, or family dysfunction. Referrals were made by teachers, social workers, youth workers and counselling agency staff. Clients were referred to the WAT programs because they typically demonstrated poor coping with the demands of life, which was resulting in poor school performance or inadequate functioning in other areas such as peer relationships.

### 6. Suicide risk and life-threatening behaviour

Gauging life threatening attitudes and behaviour in at-risk groups is a way of estimating their *future* risk for self-damaging and suicidal behaviour. Attitudes and behaviours that are known to predict future risk were assessed in at-risk clients of WAT programs. Levels of life-threatening attitudes and behaviours are shown in the diagram below (measured by the Life Attitudes Schedule [SF] – total score [Rohde, Lewinshonn, Seeley, Langhinrichsen-Rohling, 1996]). Changes in attitudes and behaviour at follow-up were on the borderline of the "at-risk" range, however, these results did not reach statistical significance.

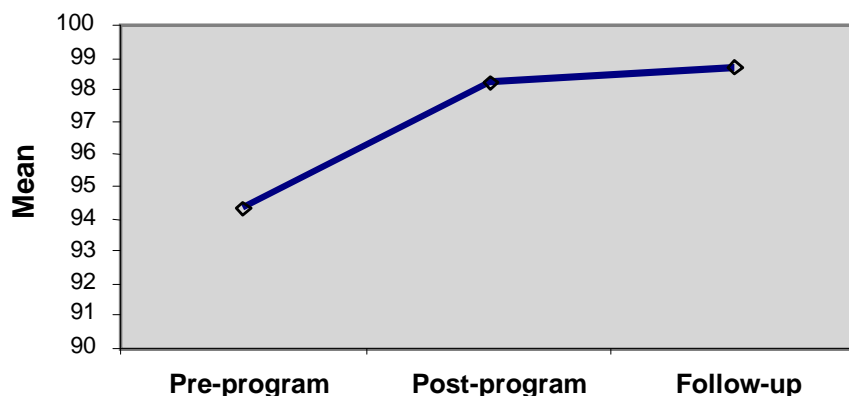


#### Life Threatening Attitudes & Behaviour

[non-significant post-treatment to follow-up improvements  $p > 0.05$ , partial  $\eta^2 = .06$ ]

## 7. Social competence & school adjustment

The average rating by teachers of social competence and school adjustment in WAT clients is shown in the diagram below (measured by the Scale of Social Competence and School Adjustment – *Total* score [Walker & McConnell, 1995]). A statistical trend<sup>5</sup> of improved behaviour was found at post-program with a very large magnitude of change. These changes were maintained at 3 month follow-up.



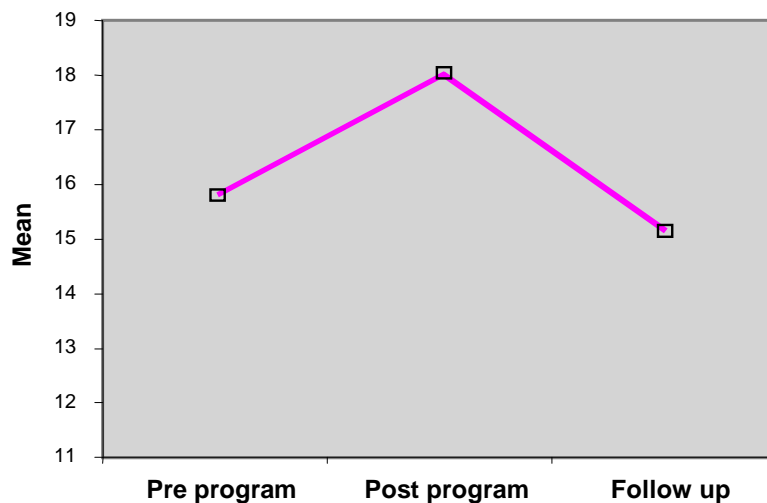
**Social Competence & School Adjustment**

[statistical trend of pre-post treatment improvements  $p=0.07$ , partial  $\eta^2= .28$ ]

## 8. Self-esteem

### *General self esteem*

Levels of general self-esteem in WAT clients are shown in the diagram below (measured by the Coopersmith Self Esteem Inventory – *General* subscale [Coopersmith, 1991]). Significant improvements were found at post-program, with a very large magnitude of change. These improvements had dissipated by the 3 month follow-up.



**General Self Esteem**

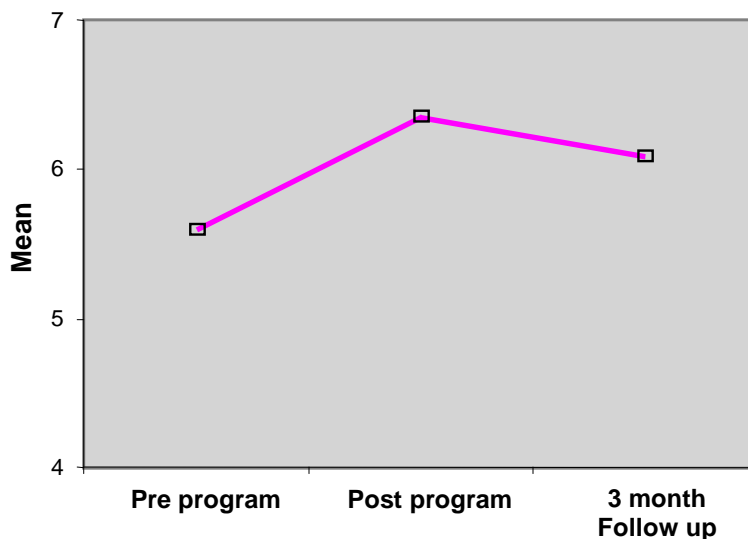
[significant pre-post treatment improvements  $p<0.05$ , partial  $\eta^2= .27$ ]

<sup>5</sup> This means a 93% confidence in this finding rather than the usual 95% probability cut-off



*Social self esteem*

Levels of social self-esteem in WAT clients are shown in the diagram below (measured by the Coopersmith Self Esteem Inventory – *Social* subscale [Coopersmith, 1981]). Significant improvements were found at post-program, with a large magnitude of change. These changes were maintained at 3 months.

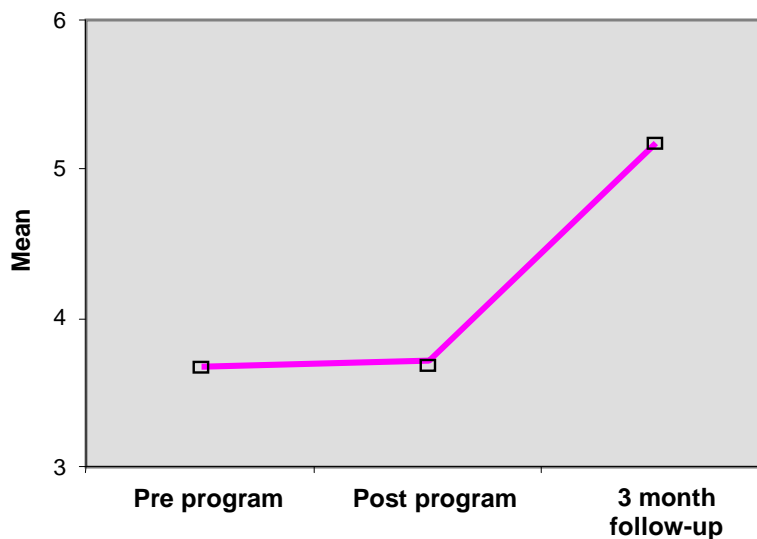


**Social Self Esteem**

[significant pre-post treatment improvements  $p < 0.05$ , partial  $\eta^2 = .19$ ]

*School self esteem*

Levels of school self-esteem in WAT clients are shown in the diagram below (measured by the Coopersmith Self Esteem Inventory – *School* subscale [Coopersmith, 1981]). While no significant improvements were found at post-program, there was a very substantial improvement 3 months following the WAT program.



**School Self Esteem**

[significant post treatment to follow-up improvements  $p < 0.05$ , partial  $\eta^2 = .34$ ]

## 9. Resilience factors

WAT clients who participated in school-based WAT programs, and their parents and teachers completed a customised questionnaire that sought to measure perceptions of known resilience factors such as feelings of social cohesion and trust in others, readiness to express feelings and seek help, confidence to solve problems and optimism. Key results are described below.

### *Adolescent perceptions of their resilience:*

1. Before the WAT program, clients reported high levels of feeling a '*connection to school*' but low levels of '*trust in school*'. However, following the WAT program, and at 3 months follow-up, feelings of '*connection to school*' and '*trust in school*' were similar to scores in other areas.
2. Following the WAT program, scores on '*connection to peers*' had decreased, but at 3 month follow-up, these ratings returned to pre-program levels. However, '*trust in peers*' ratings were similar to scores on other measures throughout the program.
3. WAT clients reported greater '*optimism about the future*' and '*perseverance*' immediately following the program, and these feelings continued, and increased 3 months later at follow-up.
4. WAT clients reported increases in confidence in '*ability to solve problems*', '*work with peers*' and '*confidence in friendships*' following the WAT program, and 3 months later at follow-up these benefits were maintained.
5. WAT clients reported increased likelihood in '*asking for help*' following the WAT program, however, these scores returned to pre-program levels 3 months later at follow-up.

### *Parent perceptions of resilience in their adolescent children:*

1. Parent ratings of '*connection to peers*', '*connection to family*' and '*connection to school*', and '*trust in peers / parents / school*' all increased following the WAT program and again 3 months later at follow-up.
2. Parent ratings of their child's ability to '*solve problems*', '*work with peers*', have '*confidence in friendships*', '*deal with hassles*' and '*perseverance*' showed no change immediately following the WAT program. However, these areas increased 3 months later at follow-up.
3. Parent ratings of their child's '*confidence in friendship*' improved following the WAT program, but was not sustained 3 months later at follow-up.

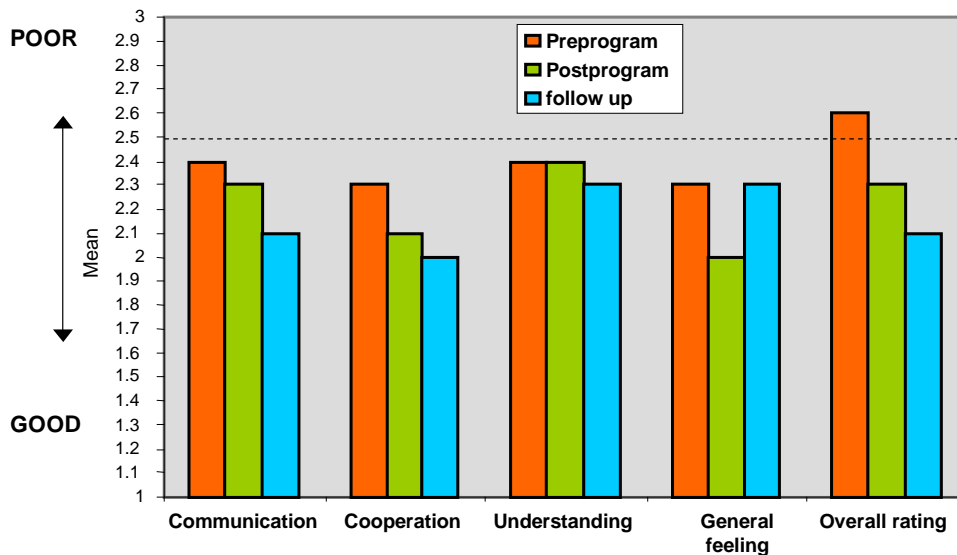
### *Teacher perceptions of their students following the WAT program:*

Teachers reported that students who completed the WAT program had better connections and trust with peers, and were more confident in making friends. Students were reported to be more likely to ask for help, express their feelings, and were more confident in solving their problems. They were more optimistic about the future, showed more perseverance, were better in groups and better at dealing with life hassles.

## 10. Family functioning

### *Client perception of family functioning*

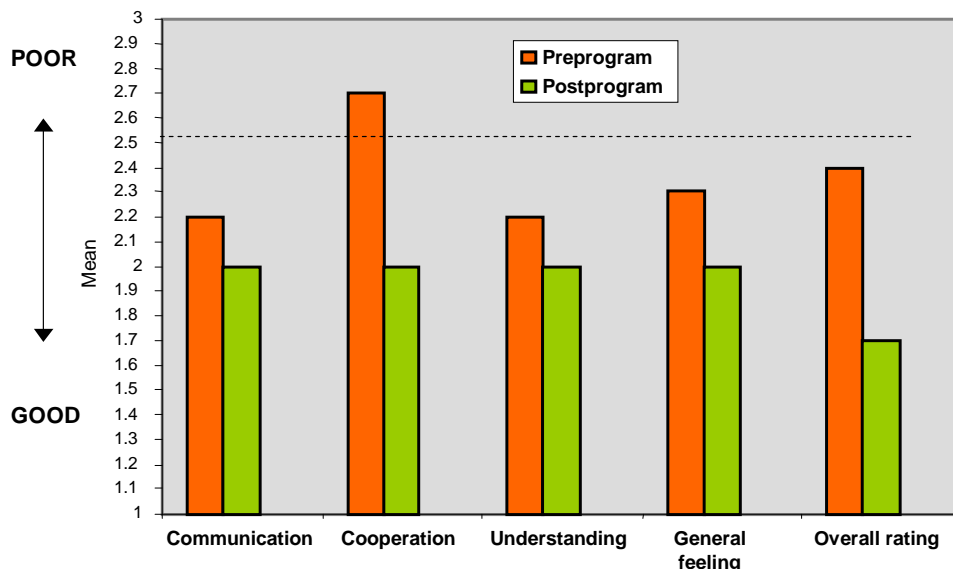
Using a customised questionnaire, WAT clients rated their perception of their family's functioning in 4 key areas as well as an overall rating. Except in the area of *understanding*, WAT clients saw improvements in family functioning immediately following WAT treatment. However, 3 months following treatment, they did rate the family to be more understanding than pre-treatment levels, suggesting a delayed benefit from the WAT program. Additionally, while *communication* and *cooperation* continued to improve, the *general feeling* in the family returned to pre-program levels at 3 months follow-up.



**Family functioning – client ratings**

### *Parent perception of family functioning*

Using the same customised questionnaire, the parents of WAT clients rated their perception of their family's functioning. All areas of family functioning improved immediately following WAT treatment.



**Family functioning – Parent ratings**

[data was not collected for parents at follow-up]

## Therapeutic Factors

*All Wilderness Adventure Therapy components combined:*

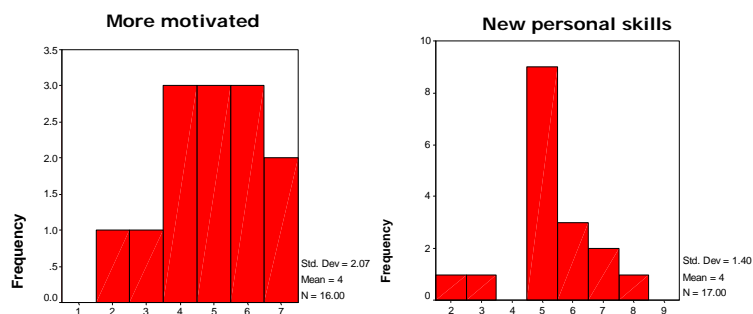
This section reports the results of a process evaluation of the therapeutic factors of the various WAT components using the *Wilderness Adventure Check-in Survey* (Crisp, 2001b) with both clinical and community-based clients. This instrument measures immediate feedback about what aspects WAT clients found the most therapeutic and why.

- Most frequently, clients reported that they found **'offering to help someone'** the most important social interaction or aspect overall in the majority of activities (27%).
- Most frequently, clients reported that the most important emotional reaction during or after the activity was that they **'felt proud of their achievement'** (26%).
- Most frequently, clients reported the reason they felt that the experience was successful was that they **'felt accepted as part of the team'** (20%).

*Overall reasons for benefiting from a WAT program*

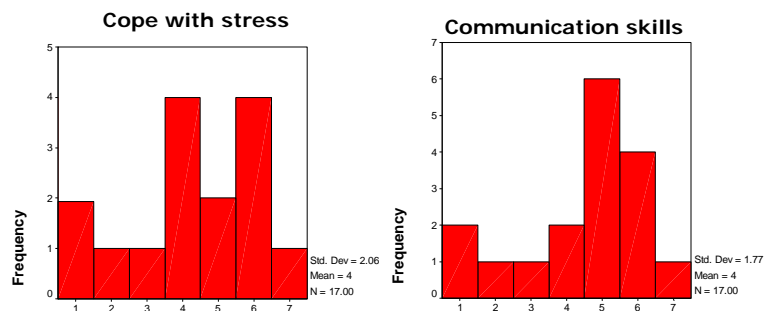
When community-based clients were asked about their experience of WAT at the end of the WAT program, they reported the following were important factors in benefiting from the treatment:

1. A majority of participants reported that **feeling more motivated** and **learning new personal skills** was important.



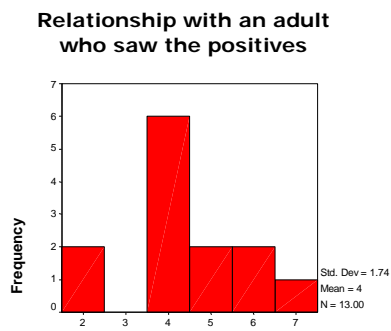
\*Rating of 4 or greater represents greater agreement, and 3 or less the opposite

2. A majority of participants reported that **learning how to cope with stress** and **learning new communications skills** was important.



\*Rating of 4 or greater represents greater agreement, and 3 or less the opposite

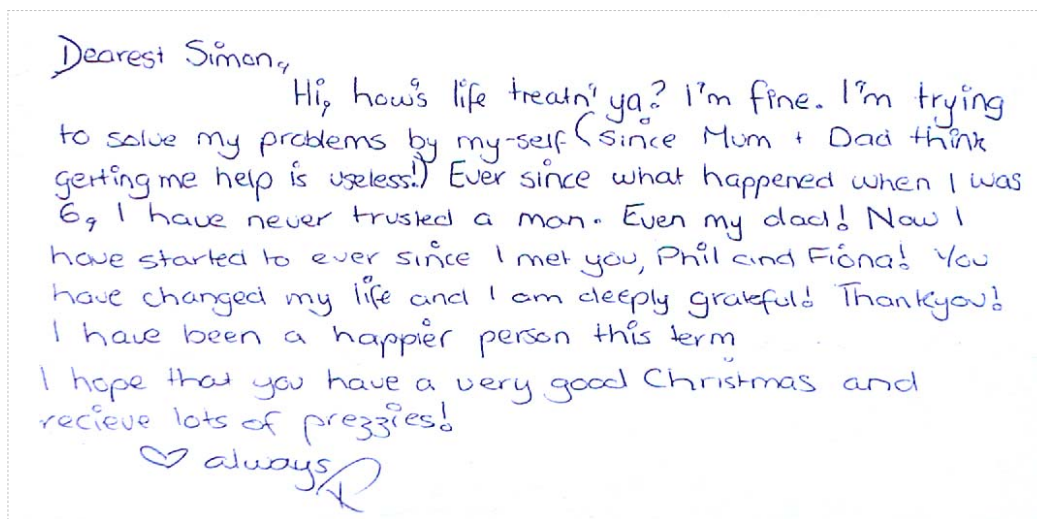
3. A majority of participants reported that having a *relationship with an adult* who saw the positives in them were important.



\*Rating of 4 or greater represents greater agreement, and 3 or less the opposite

## Client Satisfaction

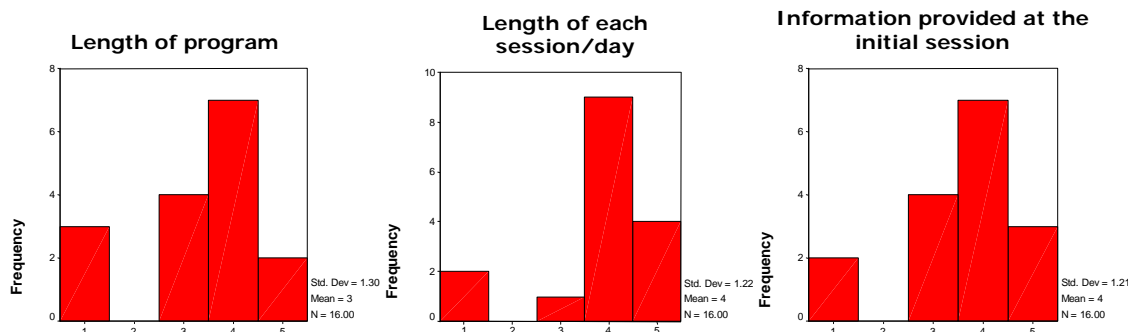
This section outlines some qualitative results from clients of community-based WAT programs and stakeholders about their experience of WAT. Anecdotally, client satisfaction was observed to be very high, as illustrated by this letter received by staff below:



Clients in the program and referring agency staff completed questionnaires relating to their experience of WAT. These results are presented below.

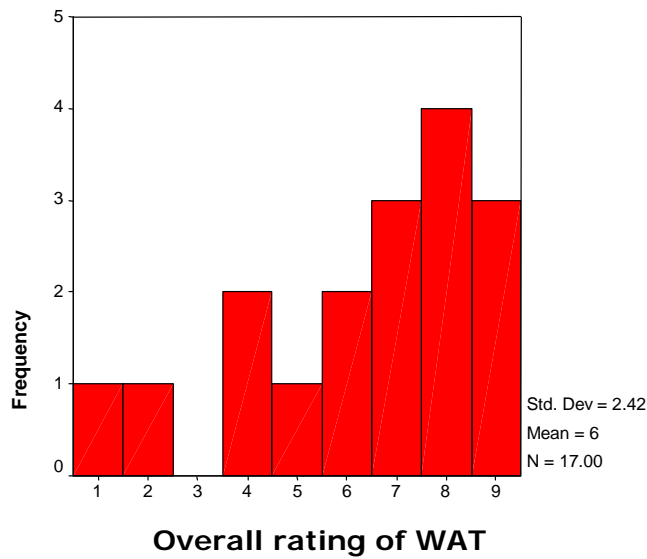
### Client feedback

1. A majority of WAT clients reported that they were satisfied with the length of the program and the sessions planned each day, and were also satisfied with the information provided at the initial information session.



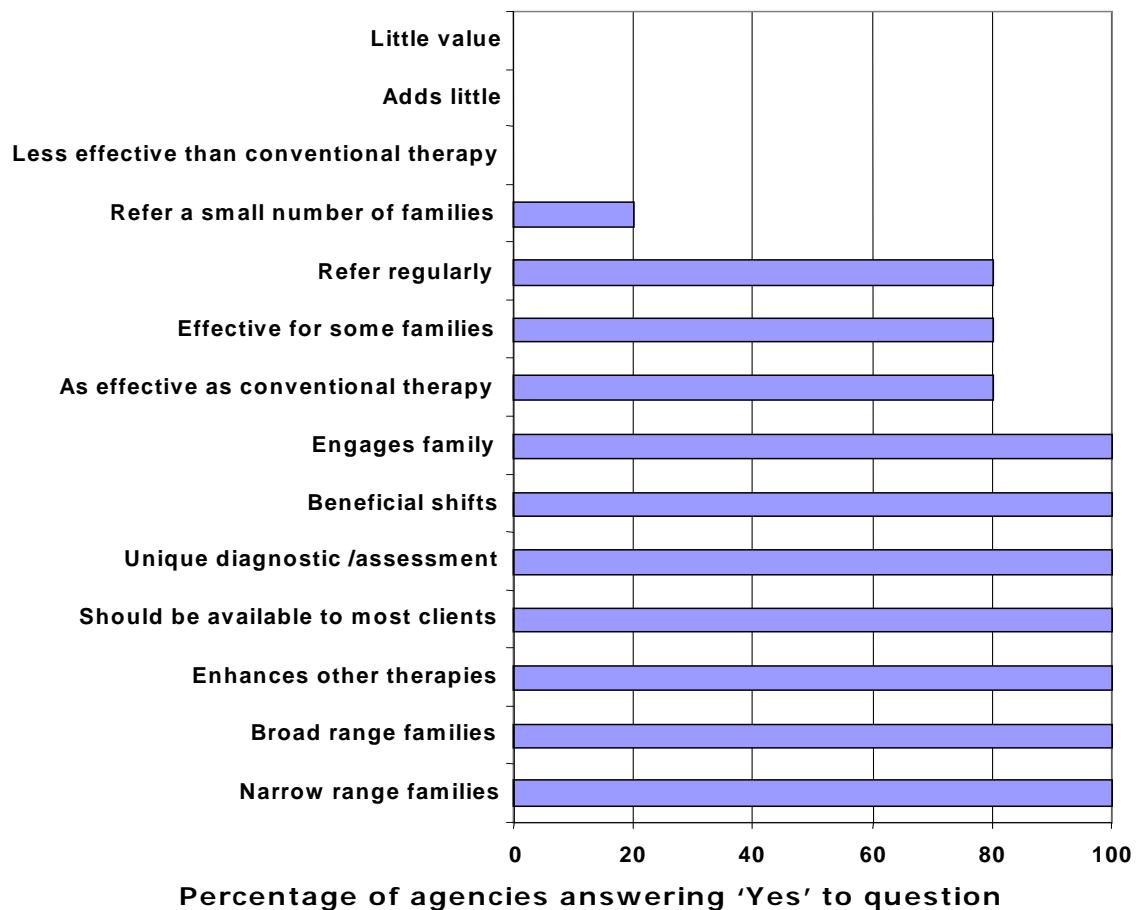
\*Rating greater than 3 represents greater agreement, and less than 3 the opposite

2. Importantly, the majority of WAT clients reported that they liked the program.



*Agency / School Experience*

Partnership agencies, school staff and referring professionals were surveyed about their views about the value of Wilderness Adventure Therapy. These results are summarized in the diagram below.



## How safe is Wilderness Adventure Therapy?

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### *Statistics:*

- WAT programs have been run for hundreds of clients continuously in Victoria since 1992 with an exceptional record of safety,
- Outdoor venues, activities and procedures have been rigorously tested: Over 45 x 10 week programs implemented, including over 1,000 field days (the equivalent of 3 continuous years in the field),
- A recent US study has found that wilderness therapy programs are substantially safer than general camps for teenagers, are 18 times less likely to result in injury than high school football practices and cheerleading, and are less than half as risky for a fatal accident as motor vehicle accidents (Cooley, 2000).

### *What measures are in place that make WAT safe?*

1. Thorough medical, psychological and behavioural screening prior to the program,
2. Physical challenge is graduated, allowing on-going assessment in the field to ensure the level of effort required is appropriately matched to the capacity of clients,
3. Field staff hold current (a) wilderness or remote area first-aid qualifications, (b) psychological first-aid accreditation, and (c) accredited training<sup>6</sup> in Wilderness Adventure Therapy<sup>®</sup>,
4. Activities and expeditions take place in extensively used venues well known to staff that provide easy access to external support if needed,
5. Partly because of small group size, the program and activities are highly flexible, are reviewed frequently, and are changed to suit the group and prevailing conditions,
6. All procedures are outlined in detail in an extensive operations manual that is based on adventure activity industry best practices.

### *What makes WAT safe?*

- Qualitative research suggests that facilitated inter-personal experiences are the major reasons client benefit - not exposure to risk or physical challenge.
- Adventure activities and wilderness expeditions are used only as a catalyst that highlights individual issues and provides a context for psychologists to provide individual counselling or group therapy<sup>7</sup>,
- Carefully minimising unnecessary exposure to risk is the best way to ensure therapeutic effectiveness without compromising safety,
- WAT procedures and safety practices are comprehensively detailed in practice guidelines that underpin the training required for WAT<sup>®</sup> accreditation.

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<sup>6</sup> The Australian Wilderness Adventure Therapy<sup>®</sup> Practitioner Accreditation Scheme (Crisp, 2002b) is the first of its kind anywhere in the world, and the only formal regulation of practice in this field in Australia.

<sup>7</sup> Many adventure based programs rely primarily on high levels of challenge, hardship or prolonged isolation as the major mechanism to bring about change in clients.



## Conclusion

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These results show WAT to be extremely promising as both an effective clinical treatment for a range of severe mental health problems as well as a preventative and early intervention approach for at-risk groups in the community. Further, when benchmarked against best-known treatments for depression, WAT shows an equivalent benefit. Uniquely, WAT also promotes normal psychological and social development above and beyond these mental health treatment benefits.

These results for the WAT model are also significant when contrasted against the few studies of other Australian program models, which usually fail to show any meaningful benefit (see Brand, 2001 and reply by Crisp, 2003b). More broadly, the same holds for more traditional therapies for children and adolescents that also frequently struggle to demonstrate substantial clinical effectiveness (Weiss & Jensen, 2001).

In particular, while a wide range of problems respond well to WAT, depression in particular shows treatment response of comparable, if not slightly better, rate and magnitude to that of medication combined with conventional psychological therapies (cognitive behavioural therapy: or CBT). Of equal importance, resilience factors such as self-esteem, social competence, school functioning and family functioning have shown clear and sustained improvements, thereby mitigating future risk.

The most important therapeutic factors reported support (a) self-efficacy theory of skill development and coping (Bandura, 1977), (b) peer socialisation processes and, or, (c) generic group therapy factors (Yalom, 1995). These findings reinforce how critical it is that these programs are facilitated by qualified therapeutic professionals, as well as the importance of practitioners being accredited in the application of the specific procedures and methods of this model.

In addition to being appropriately aligned with the developmental needs of adolescents, WAT also appears to be effective in engaging adolescents with its intrinsic appeal and the high level of client satisfaction reported. In the current mental health scene, there are very few, if any, other treatments that demonstrate this level of effectiveness, that additionally, yield such a number of added benefits, and that are also viewed so positively and rated so highly by adolescent clients.

## Summary

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- ▶ *Effective for a range of adolescent problems and clinical disorders*
- ▶ *Equally effective as medication + CBT for clinical depression*
- ▶ *Reduces counter-productive coping styles*
- ▶ *Improves self esteem in a range of areas*
- ▶ *Enhances family functioning*
- ▶ *Increases social competence & school adjustment*
- ▶ *Enhances resilience factors such as social connection & optimism*
- ▶ *Participant model of treatment promotes normal development*
- ▶ *Safe: extensive field trials over many years*
- ▶ *Run by highly trained psychologists & accredited outdoor leaders*
- ▶ *Highly appealing to adolescents & high level of client satisfaction*

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