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Evaluation of youth- led programs run by the Reach Foundation

Final Report
April 2013

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Research Final Report

Evaluation of youth-led programs run by the Reach Foundation

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Reporting Brief

The research team led by Dr Dianne Vella-Brodrick and Associate Professor Nikki Rickard from the Emotion and Well-Being Research Unit at Monash University was contracted by the Reach Foundation to undertake independent research to evaluate the effects of three Reach programs on participant mental health and well-being. The directive from Reach executive personnel was to (1) provide an evaluation of whether Reach programs had measurable benefits for participants, and (2) to report on whether certain programs were more efficient than others to assist them in future planning.

This final report details the findings from a comprehensive assessment of well-being changes following implementation of Reach programs over a six month period in 2012. While all efforts were made to sample representative groups from the target population of Reach programs, and to retain large numbers, findings should be interpreted with some caution as sample sizes and the number of schools participating in the study was smaller than anticipated.

Acknowledgements

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- Sean Butler
- Jules Damschke
- Shaun Doherty
- Kim Watson

Thanks also to Tiffani Howell for her assistance with this report.

Finally, this project would not have been possible without all the young people who generously shared their experiences and stories. Thank you.

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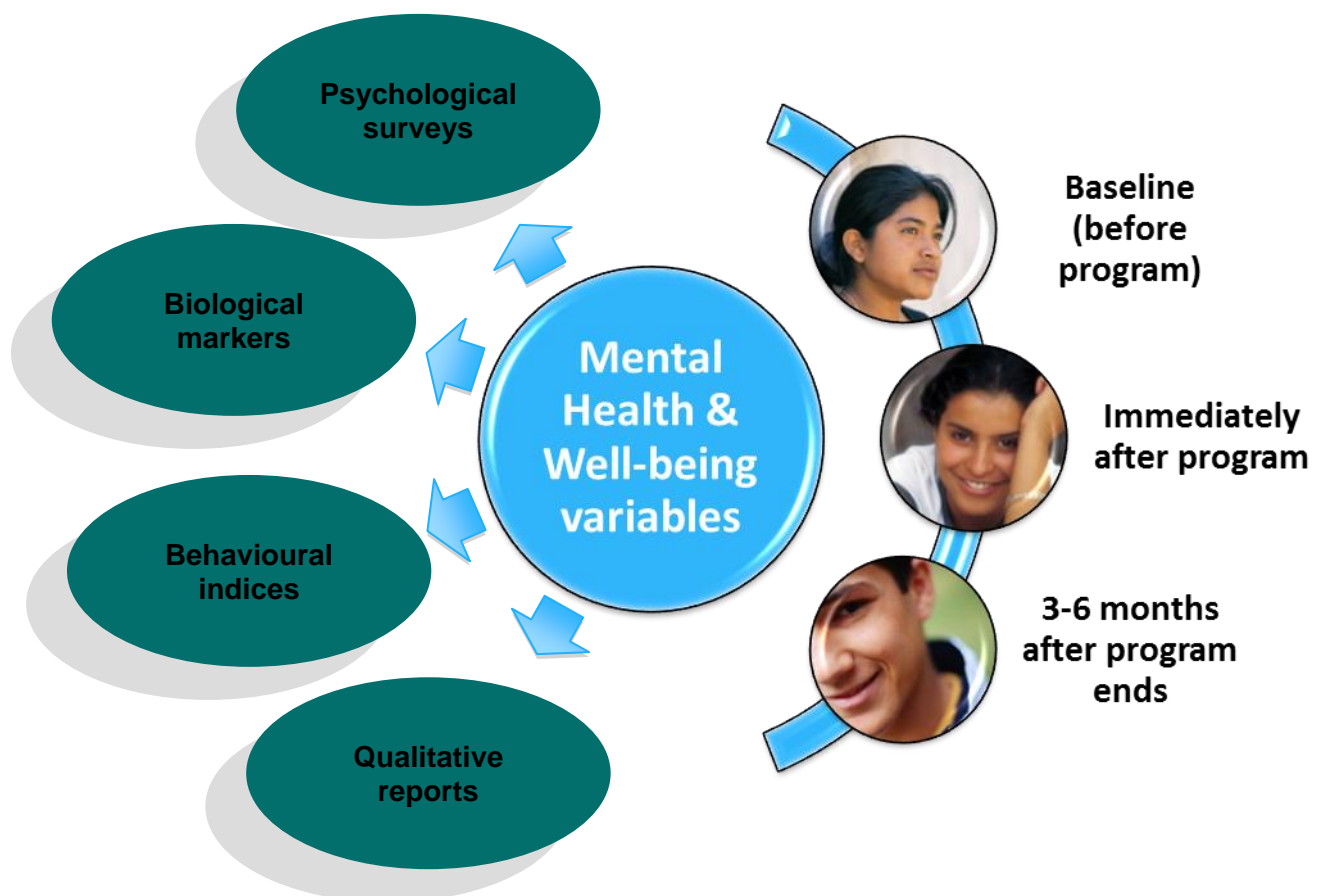
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Executive Summary

Established in 1994, The Reach Foundation is a national youth organization providing community and school-based programs for young people. These youth-led programs aim to promote the mental health and well-being of young people.

In 2012, the research team from Monash University conducted a comprehensive assessment of short-term outcomes of three Reach programs on young people's well-being and mental health. Assessments included psychological (well-being and mental health), biological (daily cortisol slope), behavioural (experience sampling reports of mood and strategy use) and qualitative indices (interest and satisfaction with reach programs) for two of the programs (Secondary School Workshops and Heroes Days) and qualitative assessments for a third program (Fused). All measures were also obtained for a Control group of students from socioeconomically matched schools who did not participate in Reach programs during the same period.

Assessments were conducted at three time-points; baseline, immediate post-program and at 3-6 month follow-up.



Key Findings

This research demonstrated that many young people experience positive well-being outcomes as a result of participating in Reach programs. Evaluations of Secondary School workshop and Heroes Day participants resulted in a number of benefits. Specifically, when compared with controls immediately after the program, young people reported:

- significantly enhanced life meaning
- significantly improved engagement with life
- a physiological profile (daily cortisol slope) reflecting enhanced well-being
- an increase in the use of two positive strategies explored in Reach programs (expression of gratitude and sharing experiences) in response to personal negative events.

One group in the Heroes Day program also reported:

- improvements in life satisfaction
- enhanced positive affect, and
- increased perseverance.

Hence, the Reach Foundation is effective in promoting the 'full life' for young people whereby all three primary pathways necessary for well-being; pleasure, engagement and meaning, are being fostered. Results also indicate that changes have occurred at both psychological and deeper biological levels and are therefore likely to result in more long-term changes than would psychological changes alone.

These findings are powerful, as they arise from an experimental pre-post evaluation, including a control group. Importantly, many of these effects were sustained at follow-up assessments 3 to 6 months later.

It should be noted that some of the psychological measures did not change following the Reach programs. There was also some indication that participating in a Reach program could result in increased anxiety. This is not surprising given the personally challenging, and at times confronting, nature of some of the program material. It is therefore, important that schools participating in Reach programs are adequately resourced to offer students additional support and access to mental health services following the program.

Focus group evaluations which included all three Reach programs revealed some key insights:

- The Reach programs evaluated exceeded young people's expectations
- Reach crew were found to be easy to relate to
- About 20% of participants (mostly Fused participants) experienced a 'lightbulb' moment during the program, which is often a sign of inspiration or revelation

In sum, this research provides evidence that youth-led Reach programs can improve the well-being of young people. This is a very promising finding especially in relation to the promotion of engagement and meaning which over time can be instrumental in reducing the incidence of mental illness and optimizing young people's capacity to thrive.

Background

Youth is a crucial period of development and change, spanning from adolescence (12 years) to young adulthood (24 years). As a consequence of inconsistent maturation of brain development between affective and cognitive systems, most young people experience emotional difficulties and distress (Steinberg, 2005). This distinct developmental phase of adolescence marks the onset of most major mental health disorders (Roza, Hofstra, van der Ende, & Verhulst, 2003; Whitaker, Johnson, & Shaffer, 1990). According to the World Health Organisation (WHO, 2011), around 20% of adolescents will experience a mental health problem such as depression or anxiety in any given year. The prevalence of mental health issues among young Australians is no better, at approximately 26% (Australian Institute of Health and Welfare: AIHW, 2011), the highest of any population group. Fifteen percent of the burden of disease is accounted for by Disability Adjusted Life Years (DALYs) in those aged between 10 and 24 years (Gore et al., 2011).

Yet nearly 60 to 80% of young people who experience mental health problems do not seek professional help (Sawyer et al., 2001). This reluctance to speak up and seek help stems from issues related to confidentiality, cost, and fear about services (Campbell, 2006; Donald, Dower, Lucke, & Raphael, 2000), as well as the fear of being stigmatized and the perceived shame associated with seeking help and using mental health services (Schomerus, Matschinger, Angermeyer, 2009; Wilson & Deane, 2002). This is further exacerbated by poor mental health literacy and scant knowledge about mental health issues including when, how and where to seek appropriate help (Jorm et al., 1997; Kelly, Jorm & Wright, 2007). The need to raise awareness and create opportunities for young people to speak out and seek support in a safe and secure space is high, and only increases when the multitude of issues and challenges that young people can live with, such as bullying, peer group pressure and stress, are also realized (Fisher et al, 2012).

During these years of complex transition, young people require support and resources to cope with the significant emotional, hormonal, behavioral and psychosocial changes (Sawyer, et al., 2012), and to develop into healthy, resilient and well-adjusted individuals. Most services react to and directly target youth problem behaviour and psychopathology (Grimes et al, 2011). However, services consistent with the Dual Factor Model of Mental Health (Keyes, 2007) which advocates that: (a) adolescent mental health should be addressed from both a treatment and prevention perspective and (b) the presence of well-being is as important to mental health as the absence of mental illness, are gaining momentum. Many mental health services are now promoting the inclusion of activities for enhancing well-being to complement traditional approaches to treating mental disorders.

An asset-based approach which emphasizes; a) developmental strengths and protective factors; b) early intervention and prevention and; c) youth consultation and involvement may provide a complementary approach to reducing the incidence of mental illness (Catalano, 2012; Sawyer et al, 2012). Asset or strengths based approaches to mental health typically reflected in Positive Psychology (Seligman & Csikszentmihalyi, 2000) and Positive Youth Development frameworks (Lerner, Almerigi, Theokas & Lerner, 2005) can assist in mobilising resources and building resilience which in turn serves to combat negative states whilst bolstering well-being (Quinlan, Swain & Vella-Brodrick, 2011).

Theoretical perspectives on promoting happiness and well-being such as the Orientations to Happiness (Peterson, Park & Seligman, 2005) and PERMA models (Seligman, 2012) emphasize the importance of pleasure, engagement, relationships, meaning and accomplishment. *Pleasure* is frequently associated with hedonic qualities of happiness where the aim is to maximize positive states and emotions and to minimize pain. The emphasis tends to be on gratification of the senses. The concept of *engagement* is closely related to the work of Csikszentmihalyi (1990) on flow and is characterized by feeling completely immersed in what one is doing such that time is distorted, attention is intensely directed towards a task and self-consciousness is minimized. Definitions of *meaning* incorporate eudaimonic qualities such as living in accordance with one's personal values and having clear and directed goals which align with these. Living a meaningful life can also refer to a sense of connecting with and serving something larger than oneself - having a higher purpose.

Peterson et al. (2005) claim that pleasure, engagement and meaning are the primary pathways to happiness, and that individuals need to incorporate all three happiness orientations into their everyday life if they wish to live the "full life". The PERMA model has added two further dimensions to the OTH framework; relationships and accomplishments (Seligman, 2011). *Relationships* which are supportive can provide a strong sense of community and connection with others. Meaningful connections can foster feelings of love and of being loved. These quality connections with family, friends and peers are considered to be an essential component of, or antecedent to, well-being. *Accomplishment* underscores the importance of setting and achieving goals and the personal satisfaction and pride that often accompanies success and mastery of goals.

Empirical support for the importance of these PERMA constructs for well-being is also available. For example, a meta-analysis by Sin and Lyubomirsky (2009) found that positive interventions such as those focused on building positive emotions, social connections and meaning are effective in reducing depression and increasing happiness. Work by Fredrickson (2001) in her examination of the Broaden and Build theory of positive emotions through a series of empirical studies has also supported the notion that positive emotions (a) broaden thought-action repertoires such that people can become more open to new experiences and (b) build psychological, social, intellectual and physical resources which contribute towards the development of a more resilient, resourceful and mentally healthy individual. Several studies have found that pleasure or positive affect is positively correlated with well-being and indicators of success in significant life domains such as health, relationships and work (see Lyubomirsky, King, & Diener, 2005).

Although there is strong evidence to support the contributions of positive emotions and pleasurable states to the attainment of well-being (e.g., life satisfaction), experiencing a sense of engagement and meaning is especially important for well-being. Engagement and meaning have been found to be significant predictors of life satisfaction and affective states (Vella-Brodrick, Park & Peterson, 2009). For example being engaged in one's work has been shown to have beneficial effects on life satisfaction and depressive symptoms (Hakanen & Schaufeli, 2012) and living a meaningful life has been related to enhanced well-being (Zika & Chamberlain, 1992) and inversely related to psychopathology (Debats, van der Lubbe & Wezeman, 1993).

Hope is another important variable that has been shown to be important for young people. Snyder, Lopez, Shorey, Rand, and Feldman (2003) indicate that hope can be enhanced by setting internally valued goals, creating an achievable pathway to attaining these goals and working with supportive others. High levels of hope have been associated with favourable academic outcomes and better psychological adjustment in terms of enhanced well-being and decreased levels of mental illness (Snyder, 2002). Strengths use and identification have also been associated with enhanced well-being, decreased psychopathology and higher levels of academic engagement (see Norish & Vella-Brodrick, 2009 for a brief review).

Self Determination Theory (Deci & Ryan, 2002) draws attention to three components which are deemed to be essential for psychological health, namely; competence, relatedness, and autonomy. *Competence* refers to having a sense of control over the outcome and experiencing a state of mastery. *Relatedness* concerns an inherent need to interact with others and to experience warm and caring connections. *Autonomy* refers to having volition over one's life course such that there is consistency between actions and integrated self (values).

Positive relationships with others, opportunities to make choices and engagement in core life activities, such as with school, are important for the well-being of young people. For example, Van Ryzin, Gravely and Roseth (2009) found with 283 secondary school students, that academic autonomy, teacher support and school engagement are related to academic performance and psychological adjustment. Connectedness to peers, family, the school and local communities has been shown to be critical for the mental health of young people (Diener & Seligman, 2002) and supportive friendships have been associated with lower rates of bullying one year later (Kendrick, Jutengren & Stattin, 2012).

Consistent with the importance of peer relationships and the growing need for autonomy, it is noteworthy that young people are more likely to seek help from their peers than they are to speak with an adult or seek professional assistance, particularly if they are in the later stages of adolescence (Boldero & Fallon, 1995; Rickwood, Deane, Wilson & Ciarrochi, 2005). It is essential to respect young peoples' growing need for independence and mastery experiences in the delivery of youth health services. Hence, engaging young people in the process of developing and implementing youth mental health programs can help to better understand their needs and deliver a more youth friendly and effective mental health service (Rickwood, Deane & Wilson, 2007).

There are several existing youth mental health organizations providing online (e.g., ReachOut) and telephone mental health support (e.g., Headspace). These services aim to provide support to youth directly, in a confidential, free and safe space and focus on young people and their families who are seeking help for mental health issues. However, it is plausible that young people struggling with emotional or personal problems may still choose not to contact these youth mental health services. It is then equally important to provide a safe, non-threatening, youth-friendly space for young people to meet and connect with one another. It is also important to ensure that all young people are accessing information and resources which may be helpful to them during this potentially vulnerable life stage. Schools are ideally positioned to address the mental health needs of young people as they can focus on prevention, early intervention and are accessed by most young people (Rickwood, 2005). However, not all young people attend school so community based services are also needed.

The Reach Foundation is a national youth organization providing community and school-based programs for young people. These youth-led programs provide an opportunity for young people to share their experiences with other peers and are led by highly trained youth. The strategy of using youth-leaders to deliver youth mental health programs has received significant empirical support in the past (Black, Tobler & Sciacca, 1998) and is in line with recommendations made by Rickwood et al. (2007) about involving young people in the development and delivery of youth programs. In addition, Reach's philosophy reflects an eclectic mix of Positive Youth Development and Positive Psychology principles (health promotion) which are combined with more traditional approaches to mental health which focus on group treatment models and cognitive behavior therapy. This comprehensive approach aligns with Keyes' (2007) Dual Factor Model of Mental Health. Reach also encourages young people to live according to their personal values, to connect with their feelings, to be authentic and self-accepting, to respect and relate well with others, and to find life meaning and engagement – all factors associated with well-being. Consequently, the programs delivered by the Reach Foundation Crew are likely to be effective in addressing the mental health needs of young people but there are also a number of other factors that can influence program effectiveness such as the program length and format (Sin & Lyubomirsky, 2009). To date the Reach Foundation has not undertaken a thorough and objective evaluation of their youth-programs. The undertaking of an evaluation study of a selection of Reach programs is therefore a logical next step.

Aims

The broad aim of this research project was to evaluate the effects of participating in youth programs offered by the Reach Foundation, on well-being and mental health. Well-being and mental health was assessed from complementary perspectives, consisting of on-line surveys, focus groups, behavioural and contextual data and hormonal assays. It was anticipated that participating in Reach programs would improve well-being dimensions such as positive emotions, life satisfaction, meaning, engagement, positive relationships, autonomy, competence, hope, strengths awareness and use, and general resilience as reflected in measures of perseverance and cortisol levels, compared with control participants who have not previously attended a Reach program. It was also anticipated that the Reach programs would decrease levels of anxiety, stress, depression and difficulty with regulating emotions. Three Reach programs were specifically selected for inclusion in this project, namely:

- a) Heroes Days (HD) – large scale environment for 500 Year 9 students; challenge perceptions; honest expression; respect for peers
- b) Secondary School Workshops (SSW) – year groups of 70 students; 90 minutes workshop held in school; encourage students to step out of their comfort zones/peer groups and express themselves; increase self-awareness and belief; challenge being judgmental at school
- c) Fused – community based program conducted over 5 weeks; self-discovery; safe and non-judgmental environment for young people to share experiences and connect with others

The more specific aims of the research project were to:

- a) Examine the well-being and mental health effects over time across the three programs compared to a control group.
- b) Compare the effects of each Reach program included within the study.
- c) Explore whether program participants were connecting with the programs and applying knowledge and skills gained from the program to everyday situations (through focus groups and Experience Sampling Method).
- d) Explore whether the effects of the Reach program were capable of influencing well-being at the psychobiological level as determined by hormonal assays.

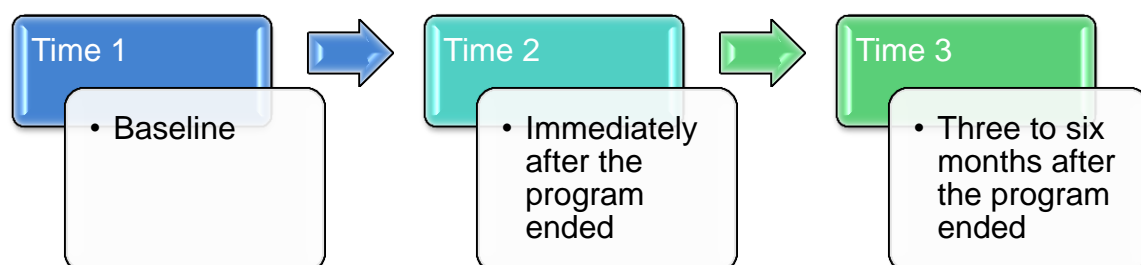
Methodology

The Sample

Two hundred and twenty-nine participants (138 females; 91 males) aged 13 to 16 years were recruited from various schools. There were 56 females and 46 males in the 'Secondary School Workshops' group, 45 females and 39 males in the 'Control' group, and 37 females and 6 males in the 'Heroes Day' group. Participants in Reach's 'Fused' programs were also recruited, but difficulty was encountered in liaising with this more dispersed group to provide research instructions and maintain data monitoring integrity. The Reach Foundation personnel therefore advised that the data for this group be limited to qualitative information only.

Participants were recruited from secondary schools which had expressed an interest in participating in Reach programs. Schools were contacted via phone and invited to participate. Where relevant permission from the school principal was obtained as well as from parents and the young people themselves. Allocation of participants to each group was limited by school availability during testing periods, but all selected schools were within the midrange of socioeconomic status school ratings according to the Index of Community Socio-Educational Advantage (ICSEA) (2012) data (range of ICSEA scores 1008-1095), with 46-62% of students within the middle quarter range. Most schools had a similar distribution of boys and girls participating in the study, although more girls participated in the Heroes Day (one of the participating schools was an all-girls school). Participating students were aged between 13 and 16 years, with a median age of 14 years. Students participating in the Secondary School workshops (recruited from Year 8 classes) were approximately one year younger than the participants of the other groups (recruited from Year 9 classes), so differences in this group must be interpreted with this age difference in mind.

The young people for whom both parental and youth consent was obtained were invited to provide a set of measures at three time points:



The majority of data in this report is therefore summarized by group according to these three time-points.

The Procedures

This study examined a range of qualitative and quantitative data from on-line surveys, focus groups, the experience sampling methodology (ESM) and biochemical assays. Schools matched on socioeconomic status who did not deliver Reach programs were also invited to participate in the study and acted as control schools. The well-being and mental health questionnaires were made available online via Qualtrics (www.qualtrics.com). Small prizes such as iTunes vouchers were awarded to students using a lottery system. Monash University Human Research Ethics Committee approved all procedures (*Approval number: 2011001936*).

The on-line surveys were completed in class, or in the case of the Fused program, just prior to the program commencement, in a group setting. A range of psychological inventories or questionnaires which assess various aspects of well-being were utilized for this purpose (see Box 1 for inventory detail):

Well-being variables:

- student life satisfaction and engagement in school
- well-being
- hope
- positive and negative affect
- autonomy and autonomy support
- relatedness
- competence
- strengths knowledge and use

Mental health variables:

- depression
- anxiety
- stress
- lack of emotional awareness
- difficulties engaging in goal-directed behaviours when distressed

A subset of these participants (approximately 60) also attended focus group sessions either at school or in the case of the Fused participants, at a Reach venue where the Fused workshops are held. Four focus groups were conducted for the secondary school workshops, two for the Heroes Days and one for the Fused participants. Each focus group session included between 6 and 12 participants, with a total of 60 students interviewed.

An objective physiological assessment of well-being was also obtained from a sub-set of the sample. The response of the stress hormone, cortisol, was assessed for this purpose (see Box 2). Subject to availability, a sub-set of participants also completed real-time assessments of mood and behaviours of interest (e.g., strategies being used to manage significant events, and the source of each strategy used). Experience sampling methodology (ESM) was utilized for this purpose (see Box 3).

Box 1: Psychological Measures Included in the On-Line Surveys.

Questionnaire	Psychometrics	Sample item(s)
<i>Students' Life Satisfaction Scale</i> (Huebner, 1991)	7-item measure of global life satisfaction in children. Published reliability coefficient of this scale ranges between .70 to .90. In this study, the average Cronbach's alpha across three time-points is .88.	"I have what I want in life" and "My life is going well". Rated on a 6-point scale from "Strongly disagree" to "Strongly agree". School engagement was also assessment with 5 questions about enjoyment and perceived value of school work.
<i>Warwick-Edinburgh Mental Well-being Scale</i> (Tennant et al., 2007)	14-item measure of mental well-being. Published reliability coefficient of this scale is .89. In this study, the average Cronbach's alpha across three time-points is .94.	"I've been thinking clearly" and "I've been feeling loved". Rated on a 5-point scale from "None of the time" to "All of the time".
<i>Children's Hope Scale</i> (Snyder et al., 1997)	6-item scale assessing hope in children aged 7 to 16. Published median reliability coefficient is .77. In this study, the average Cronbach's alpha across three time-points is .93.	"I think the things I have done in the past will help me in the future" and "I'm doing just as well as other kids my age". Rated on a 6-point scale from "None of the time" to "All of the time".
<i>Positive and Negative Affect Schedule – Child</i> (Laurent et al., 1999)	30-item self-report measure of positive and negative affect. Published reliability coefficients range between .83 to .9. In this study, the average Cronbach's alpha across three time-points is .95 (Positive Affect) and .94 (Negative Affect).	Items include a list of adjectives, such as "irritable" and "inspired" which correspond to the instructions "Indicate to what extent you feel that way right now, that is, at the present moment". Rated on a 5-point scale from "Not much or not at all" to "A lot"
<i>Children's Intrinsic Need Satisfaction Scale</i> (Veronneau et al., 2005)	18 items that assess adolescents' autonomy, competence, and relatedness across three contexts – at home, at school, and with friends. The published reliability coefficients of this scale range between .71 to .8. In this study, the average Cronbach's alpha across three time-points is .818 (autonomy), .776 (competence) and .776 (relatedness).	"I feel I do things well at home" and "My friends like me and care about me". Rated on a 5-point scale ranging from "Not at all true" to "Very true".
<i>Difficulties in Emotion Regulation Scale</i> for adolescents (Neumann et al., 2010)	6-item Lack of Emotional Awareness subscale and a 5-item Difficulties Engaging in Goal-Directed Behaviors When Distressed subscale. The published reliability coefficients range between .72 to .88. In this study, the average Cronbach's alpha across three time-points is .90 (lack of emotional awareness) and .67 (difficulties engaging subscale).	"I am clear about my feelings" and "When I'm upset, I feel like I am weak". Rated on a 5-point scale ranging from "Almost never" to "Almost always".
<i>Depression Anxiety Stress Scale – 21</i> (Lovibond & Lovibond, 1995)	21-item short form of DASS measure, consisting of three 7-item subscales, assessing current negative emotional states of depression, anxiety and stress. The published reliability coefficients range between .87 to .94. The Cronbach's alpha for this study is .92 (depression), .86 (anxiety) and .87 (stress).	"I felt that I had nothing to look forward to" and "I was aware of a dryness in my mouth". Rated on a 4-point scale from "Did not apply to me at all" to "Applied to me very much, or most of the time".
<i>The Strengths Knowledge Scale</i> (Govindji & Linley, 2007)	8 items that assess awareness and recognition of individual strengths. The published reliability coefficient is .89. In this study, the average Cronbach's alpha across three time-points is .91.	"I know the things I am good at doing" and "I know when I am at my best". Rated on a 7-point scale from "Strongly disagree" to "Strongly agree".

Questionnaire	Psychometrics	Sample item(s)
<i>The Strengths Use Scale</i> (Govindji & Linley, 2007)	14 items that assess the extent of strengths use in various situations. The published reliability coefficient is .95. In this study, the average Cronbach's alpha across three time-points is .98.	"I am regularly able to do what I do best" and "I am able to use my strengths in lots of different situations". Rated on 7-point scale from "Strongly disagree" to "Strongly agree".
<i>Perception of Parents Scales</i> (Grolnick, Deci, & Ryan, 1997)	9-item parental autonomy support scale. Published reliability coefficients range between .55 to .7. In this study, the average Cronbach's alpha across three time-points is .83.	"Some mothers are always telling their children what to do but other mothers like their children to decide for themselves what to do" and "Some fathers don't have enough time to talk to their children about their problems but other fathers always have time to talk to their children about their problems." Rated on a 2-point scale including "sort of true" and "really true", answered about one of two parents.
<i>The EPOCH measure of adolescent well-being</i> (Kern et al., 2012)	25-item measure of adolescent well-being, assessing five aspects of adolescent psychological function: Engagement, Perseverance, Optimism, Connectedness, and Happiness. In this study, the average Cronbach's alpha across three time-points is .85, .91, .92, .91 and .93 respectively.	"I get completely absorbed in what I am doing"; "I finish whatever I begin"; I believe that things will work out, no matter how difficult they seem"; "When I have a problem, I have someone who will be there for me"; "I feel happy". Rated on a 5-point scale from "Almost never" to "Almost always".
<i>Adolescent Life Change Event Scale</i> (Yeaworth, York, Hussey, Ingle, & Goodwin, 1980)	31-item list of significant life events occurring in the last six months.	Participants were asked to indicate whether or not they had experienced any of the 31 listed stressful life events. Items included death of loved ones, illness and injury of family members or close friends, as well as changes in living situations or relationships.
<i>Multidimensional Scale of Perceived Social Support</i> (Zimet, Dahlem, Zimet, & Farley, 1988)	12-item measure relating to the source of social support from family, friends or significant other. The published reliability coefficients range between .89 to .93. In this study, the average Cronbach's alpha across three time-points is .94 (significant other), .93 (family) and .96 (friend).	"My family really tries to help me" and "I can talk about my problems with my friends". Rated on a 7-point scale from "Very strongly disagree" to "Very strongly agree".
<i>Self-report Strengths and Difficulties Questionnaire</i> (Goodman, Meltzer, & Bailey, 1998).	10 items of the Peer Problems and Prosocial subscales were used in this study. The published reliability coefficient is .73. In this study, the average Cronbach's alpha across three time-points is .85 (prosocial) and .58 (peer problems).	"I worry a lot" and "I usually do as I'm told". Rated on 5-point response options ranging from "Not true" to "Certainly true".
<i>Orientations to Happiness Questionnaire</i> (Peterson, Park, & Seligman, 2005)	18-item measure. The published reliability coefficient ranges between .72 to .82. In this study, the average Cronbach's alpha across three time-points is .85 (engagement), .86 (pleasure) and .87 (meaning).	"My life has a higher purpose" and "I go out of my way to feel euphoric". Rated on a 5-point scale from "Not like me at all" to "Very much like me".

Box 2: Why include Biological Measures of Well-being?

1. Subjective measures alone are not sufficiently sensitive to detect all changes in well-being

Subjective measures are ideal for capturing the phenomenology of well-being; how the individual perceives what is happening to them, and about their conscious feelings. However, there is now substantial evidence that our emotional states can be influenced by events *without* our conscious awareness. Despite this lack of awareness, such changes in emotional state can nonetheless influence our judgments, memories and perceptions of others.

Implicit measures (which can be both physiological and cognitive task-related) can often capture subtle changes in affective states that individuals are not aware of, or are for reasons of social desirability or such, unwilling to voluntarily report. Biological measures have therefore been used in this research to both a corroboration and extension to subjective measures of well-being. This *multi-level* approach to well-being assessment is more comprehensive than questionnaire data alone, hence leading to more robust and sensitive insights about program effectiveness. Therefore, inclusion of biological measures is important to fully capture some of the effects that positive interventions may produce.

2. Interventions that impact on physiological foundations of well-being may be more likely to be sustained in the long-term

It is important to distinguish between interventions that temporarily enhance well-being from those that have longer-lasting benefits for recipients. As with all subjective states, well-being rests on biological foundations. Attempts to modify well-being must therefore be mindful of the underlying mechanisms supporting this subjective state. The success or otherwise of positive psychology or lifestyle interventions will ultimately depend on the plasticity of these systems; interventions which produce sustained effects are likely to have effects on recipients that permeate deeply to the biological foundations of well-being. Including biomarkers of well-being enables us to identify interventions which have an impact on these substrates, and subsequently which interventions may have greater longevity over time.

Salivary cortisol is a reliable and easily obtained biomarker of well-being and mental health. Cortisol samples are easy to obtain, requiring participants to simply provide several samples of saliva (spit) across the day. Steeper declines in cortisol release across the day have been associated with well-being and resilience.

For further reading, refer to:

Rickard, N. S. & Vella-Brodick, D. A. (in press). Changes in Well-Being: Complementing a Psychosocial Approach with Neurobiological Insights. *Social Indicators Research*.

Box 3: Why use “ESM”?

The experience sampling method (ESM) requires individuals to respond to a series of prompts at random moments over a period of time, whilst remaining in their usual setting and continuing with their normal activities. It can assess the real world frequency, intensity and patterning of cognitive and emotional states, behaviour and environmental factors in response to particular activities, programs or interventions. This method is valid for use with young people in a range of contexts, including education settings (Csikszentmihalyi & Larson, 1987; Shernoff, 2010) and can be delivered effectively through mobile device technology (Reid et al, 2009).

The use of ESM will (a) increase measurement accuracy and minimise memory biases associated with retrospective reporting, (b) enable dynamic processes between individuals and their environment to be detected through repeated assessments and (c) enhance generalisability of findings due to the real-life context of the assessment (Ebner-Priemer et al, 2009; Scollon et al, 2003). This repeated sampling of moments enables multi-dimensional assessments to be tracked in parallel with the introduction of various programs or activities, while considering contextual factors which may affect the outcome measures at different time-points. These assessments can provide rich within-participant data on program/activity effects and are the ideal supplement or alternative to more controlled trials that are sometimes not feasible in real world settings.

More about the iPod® device application

A mobile device (e.g., iPod®, smart phone) application has been developed by our team at the Emotion and Well-Being Unit. During ESM data collection, participants are prompted at various times throughout the day via their mobile device. At each prompt, participants are asked to complete questions using a tailored software application that presents them with highly intuitive graphic scales which can be completed very quickly (around 2 minutes) and with minimal interference to their current activities. Random prompts are used to minimise expectancy effects (Alliger & Williams, 1993). Questions typically assess positive and negative affect, engagement and meaning as well as activity and context information such as where the respondent was at the time of the prompt, what they were doing, who they were with, the level of support available and whether or not they were applying knowledge or skills acquired from the program and the reasons behind whether or not they were (barriers and enablers).

The development of a mobile device application to embed questions and prompts is appropriate for young people and school-based research as student responses can be prompted and provided with minimal disruption to school activities. The technology is familiar to adolescents, and it can be restricted for research use only (with for example, music and internet functions disabled). In addition, ESM enhances the usability and compliance for adolescents resulting in more sustained involvement.

I. Psychological Survey Results

Data Analysis

The means for each group of students was compared across groups, and across the three test times (baseline, immediately after the program ended, and 3-6 months follow up). Due to attrition at follow up (approximately 10%), and the absence of data from Time 3 for the CC Heroes Day group (as a result of delayed recruitment and data collection), analyses were conducted between Times 1 and 2, and then separately between Times 1 and 3. Analyses of Variance (ANOVAs), followed by post-hoc comparisons, were performed to determine the statistical significance of any differences observed. All significant results are assessed at the α level of .05.

In all analyses, the two Heroes Day groups were separated due to baseline differences between these two groups as well as differences in the effects that were observed at Times 2 and 3. This separation permitted a more detailed understanding of the different effects of the same program on two different school populations. However, the two control groups were merged for analyses in order to increase statistical power, allowing a clearer observation of the differences between the controls and program participants.

Findings should be interpreted with some caution as sample size and the number of schools participating in the study was smaller than anticipated.

For more detailed statistical results, refer to the Appendices.

Appendix A reports the full descriptive statistics per group for each outcome at three different time points, and the total scores across all groups.

Appendix B reports the results of all interactions between groups and within groups, across Times 1 and 2, including significant and non-significant results.

Appendix C is identical to Appendix B except that it includes the ANOVA results across all three time points. However, at Time 3 the number of participants was reduced slightly and data from the CC Heroes Day was not collected, therefore the conclusions drawn from Time 3 analyses should remain tentative and conditional on further research support.

Appendix D summarises the outcomes of the post-hoc tests performed between Time 1 and 2, and Time 1 and 3.

Appendix E provides more detailed information about strategies used in response to positive and negative experiences.

The following section summarises significant findings across groups and time on the well-being and mental health outcome variables. Measures not shown here demonstrated no significant difference between groups (see Appendices for data).

Abbreviations throughout: SSW - Secondary School Workshops; Heroes - Heroes Day; "CC" & "RSC" differentiates two schools participating in Heroes Days). Statistically significant differences are asterisked in figures.

Indicators of Well-being

Well-being is often operationalized as the combination of positive affect and satisfaction with life. Figures 1 and 2 show an increase in positive affect and satisfaction with life scores for students in the Secondary School Workshops (SSW) and one of the Heroes Days groups (CC). Compared with the controls, a significant improvement in both positive affect and satisfaction with life was observed as a result of the Heroes Day (CC group).

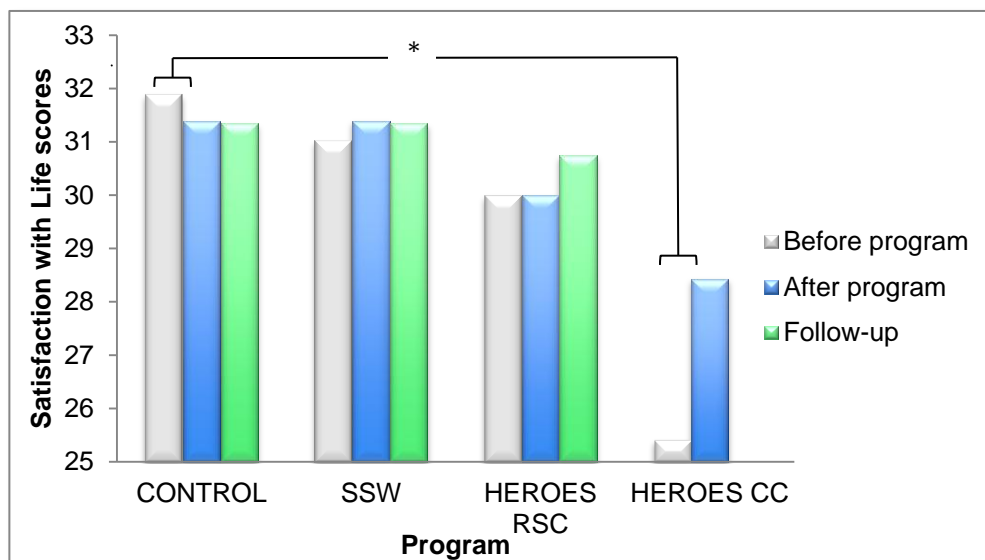


Figure 1: Satisfaction with Life

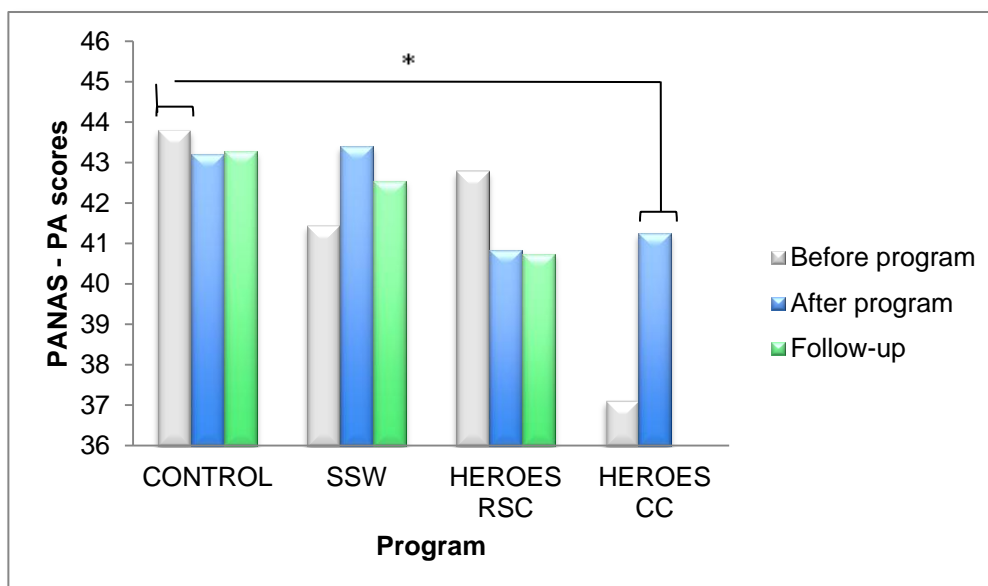


Figure 2: Positive Affect

Consistent with life satisfaction and positive affect, estimates of happiness and competence were also relatively consistent or fell over time for the control group (see Figures 3 and 4). In contrast, increases in happiness and competence were observed following the Secondary School Workshops and the Heroes Day (CC group). Surprisingly, happiness and competence significantly declined in the RSC group attending the Heroes Day, although this may be due to unusually high ratings recorded in this group at baseline.

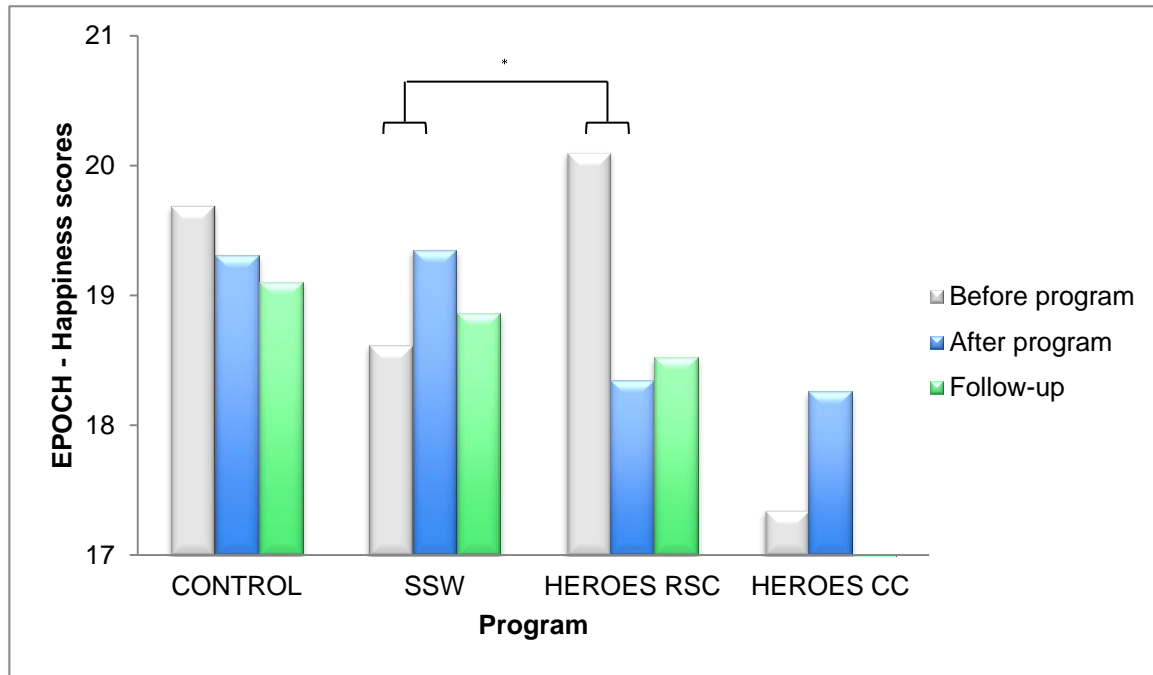


Figure 3: **Happiness**

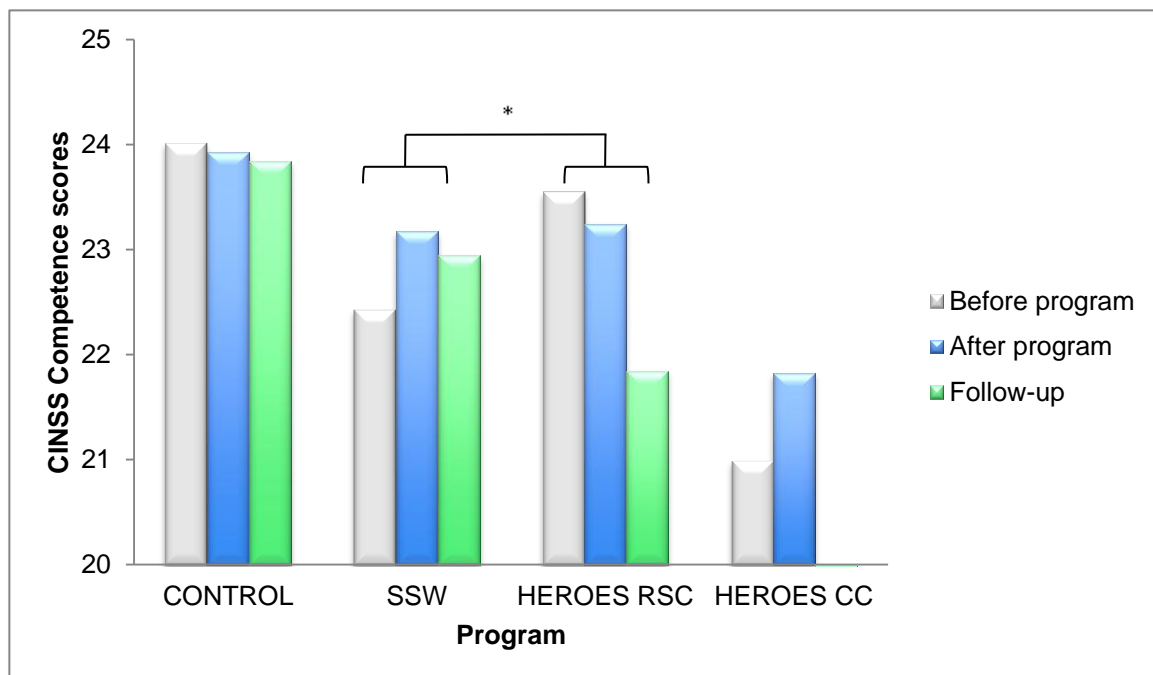


Figure 4: **Competence**

Students participating in Secondary School Workshops and the Heroes Day (CC group) experienced an increase in perseverance (see Figure 5). This was in contrast to a decrease observed in the Control group and those in the Heroes Day (RSC group).

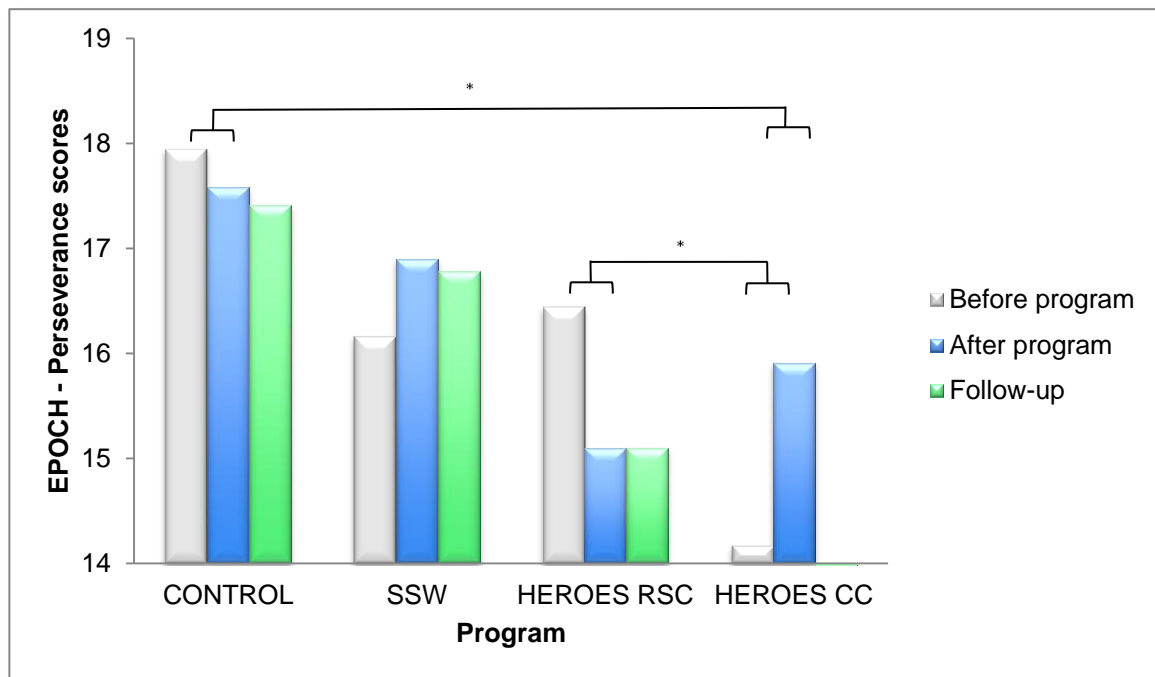


Figure 5: **Perseverance**

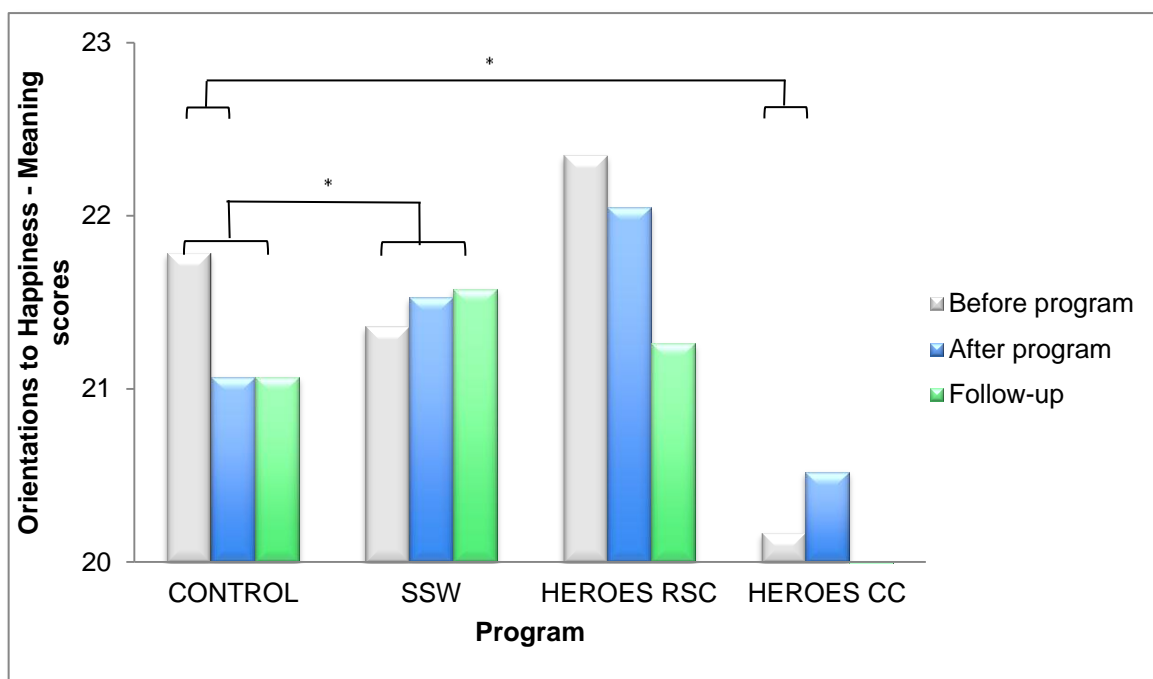


Figure 6: **Meaning**

A similar trend was observed for meaning and engagement (see Figures 6-8). The Control group and Heroes (RSC group) showed a decline in engagement over time, while an improvement was observed in participants of the Secondary School Workshops and Heroes Day (CC group). The improvement in engagement was confirmed by two independent measures of engagement (Orientations to Happiness and EPOCH questionnaire) (see Figures 7 and 8).

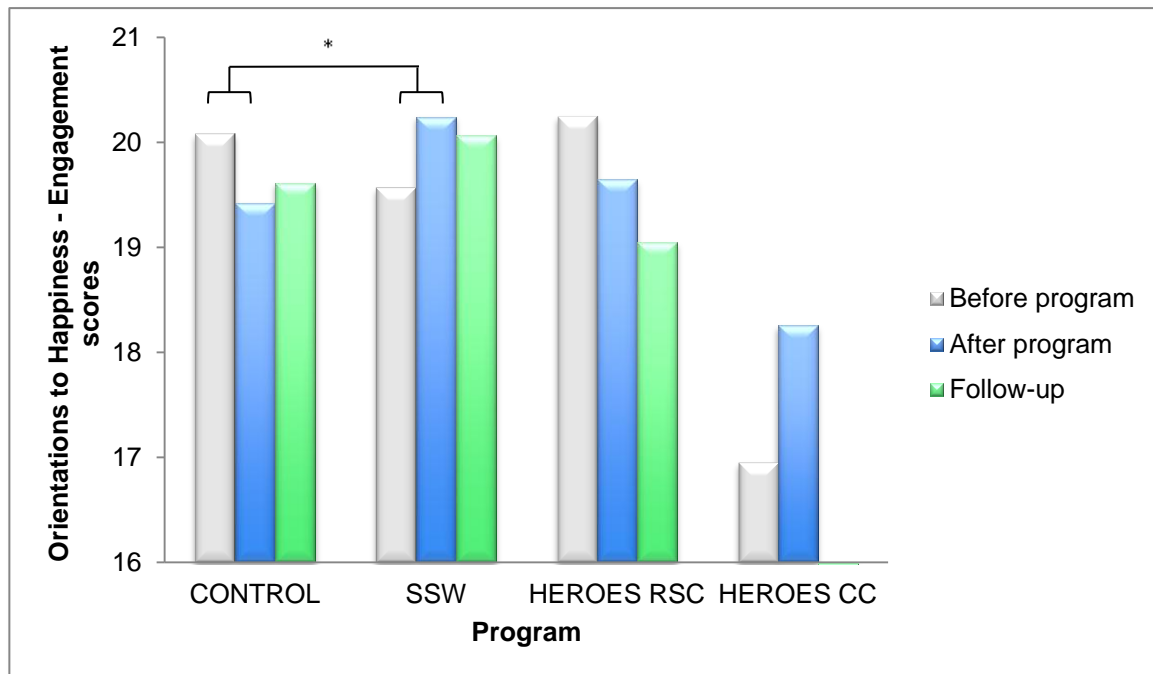


Figure 7: **Engagement** (Orientations to Happiness questionnaire)

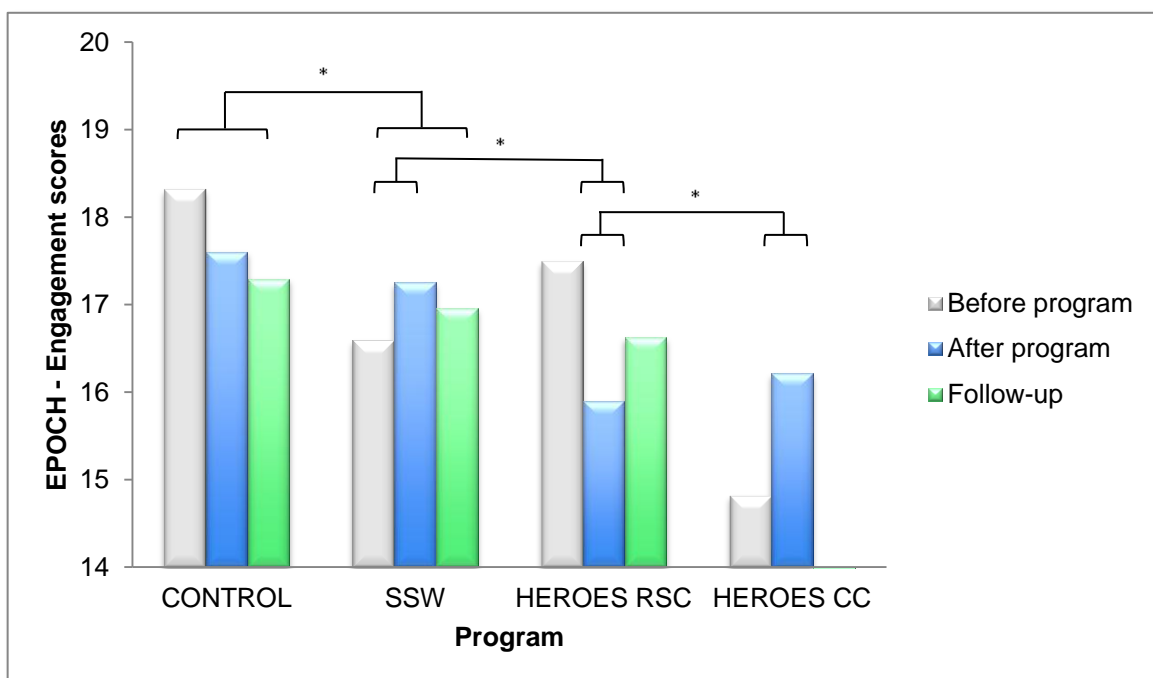


Figure 8: **Engagement with Life** (EPOCH questionnaire)

Students participating in the Secondary School Workshops also appeared to experience increases in Optimism and Connectedness, although not to a significant extent (see Appendices for data).

Indicators of Psychological Distress

Some effects were also observed in measures of psychological distress. Trends indicated that anxiety and emotional awareness difficulties *increased* as a result of the Heroes Day in the CC group. This is surprising given this group experienced the greatest positive gains in well-being measures in response to this Reach program. However, analyses revealed significant omnibus effects (that is, when analysed as a whole), no significant differences were detected between any particular groups, indicating less robust effects than with well-being measures.

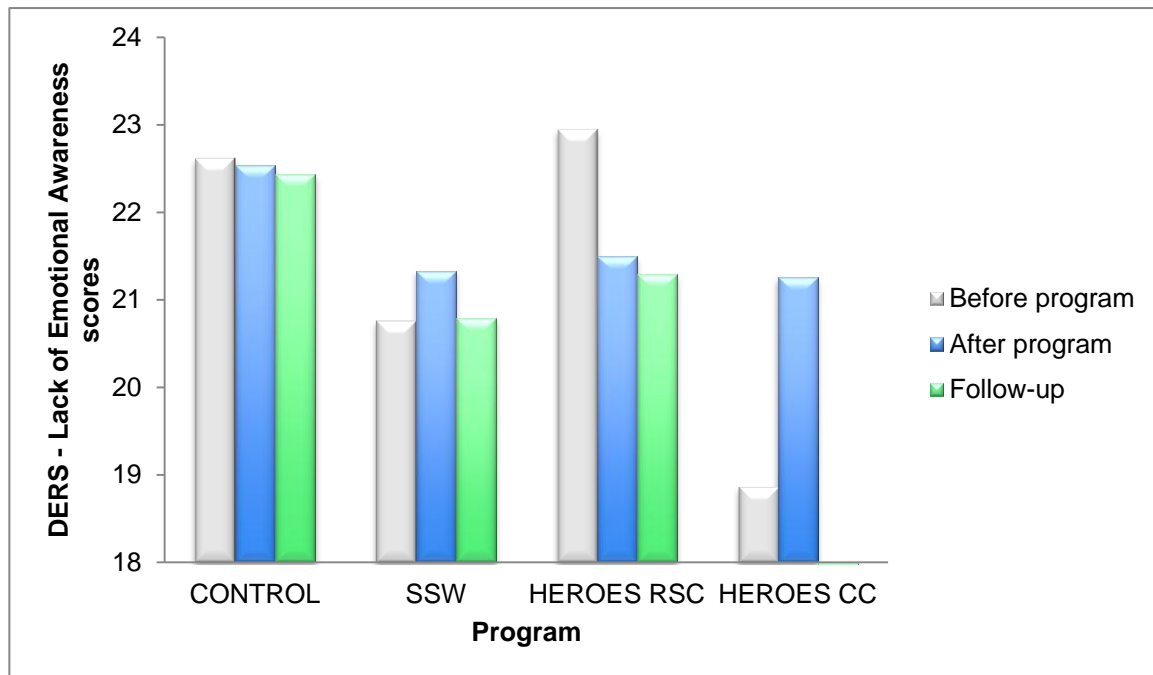


Figure 9: Lack of Emotional Awareness

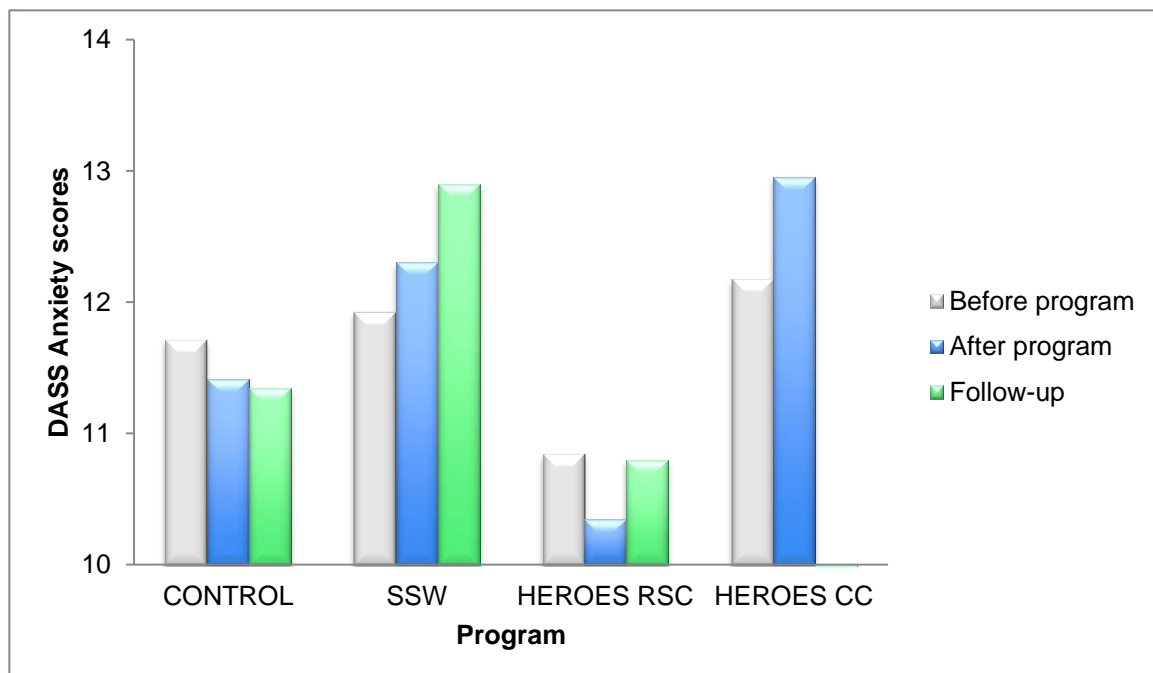


Figure 10: Anxiety

II. Biological Marker (Cortisol) Results

Background and Method

The primary measure of well-being in research has been self-report measures (e.g., questionnaires). Such results are strengthened substantially if supported by objective measures of well-being, such as physiological measures of stress (see Box 2). Cortisol is a stress hormone (part of the hypothalamic pituitary adrenal axis system), and the pattern of its release has been associated with stress, well-being and physical health.

One of the more widely used biomarker of well-being is the **daily slope of cortisol release across the day**. Cortisol levels typically peak early in the morning and decline over the day. Steeper declines have been associated with better well-being and health outcomes, while flatter slopes are associated with poorer well-being and health outcomes (Adam & Kumari, 2009; Cohen et al, 2006; Ryff et al, 2004).

In the current study, saliva samples were obtained from participants on waking, 30 minutes later, and at bedtime using purpose-designed oral collection swabs (*Salimetrics*). Samples were then analysed using a competitive assay (Enzyme-linked immuno sorbent assay or ELISA; *Salimetrics*) to measure cortisol concentration, which correlates with bodily cortisol levels.

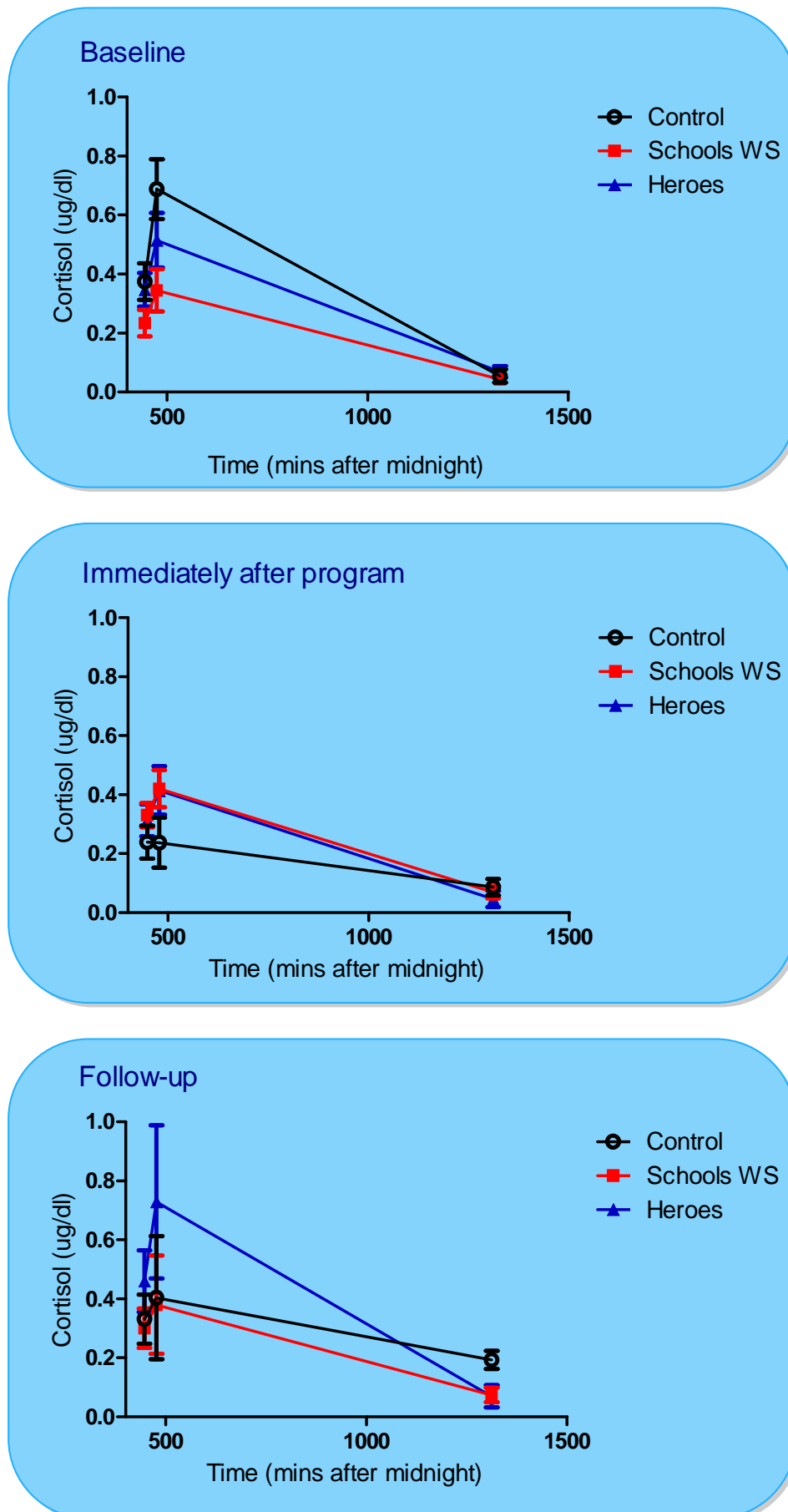
Daily cortisol slope was then calculated from waking to bedtime¹. The impact of the Reach programs (Secondary School Workshops and Heroes Days) on this marker of well-being was compared across groups exposed to a Reach program or control, at the three assessment time-points (pre-program, post-program and 3-6 months after program completion).

Potential confounds examined included gender, age, socioeconomic status, physical activity, depression levels and duration waking time. Of each of these, only gender and age correlated significantly with cortisol indices at baseline. Gender was controlled in all analyses. Age differed systematically across the three groups, and therefore could not be controlled statistically, so all conclusions should take this limitation in to account.

Sample sizes were quite small due to incomplete samples returned from many students, so the power is lower than anticipated. Regardless, the results (presented in Figures 11 and 12) are very promising.

¹ Removing the potential bias of the Cortisol Awakening response which occurs approximately 30 minutes post-waking.

Description of Raw Cortisol Data



At Baseline

There was some pre-existing difference in cortisol slope at baseline, reflecting higher well-being in the Control group compared to the group who would later experience the Secondary School Workshop. (The reason for this is unclear, but the groups did differ in a number of other ways at baseline too, including age.)

Immediately AFTER the program, Controls showed a much flatter profile, while the groups who participated in the Reach program maintained an awakening response and strong decline across the day.

At follow-up, only those who participated in the Heroes Day maintained this profile, with both Controls and those who participated in the Secondary School Workshops showing flattened profiles.

Figure 11: Raw Daily Cortisol Slopes over Time for each Group.

Analyses of Daily Cortisol Slope

The proportional change in diurnal slope relative to baseline slope in each of the three groups is summarized below for greater clarity.

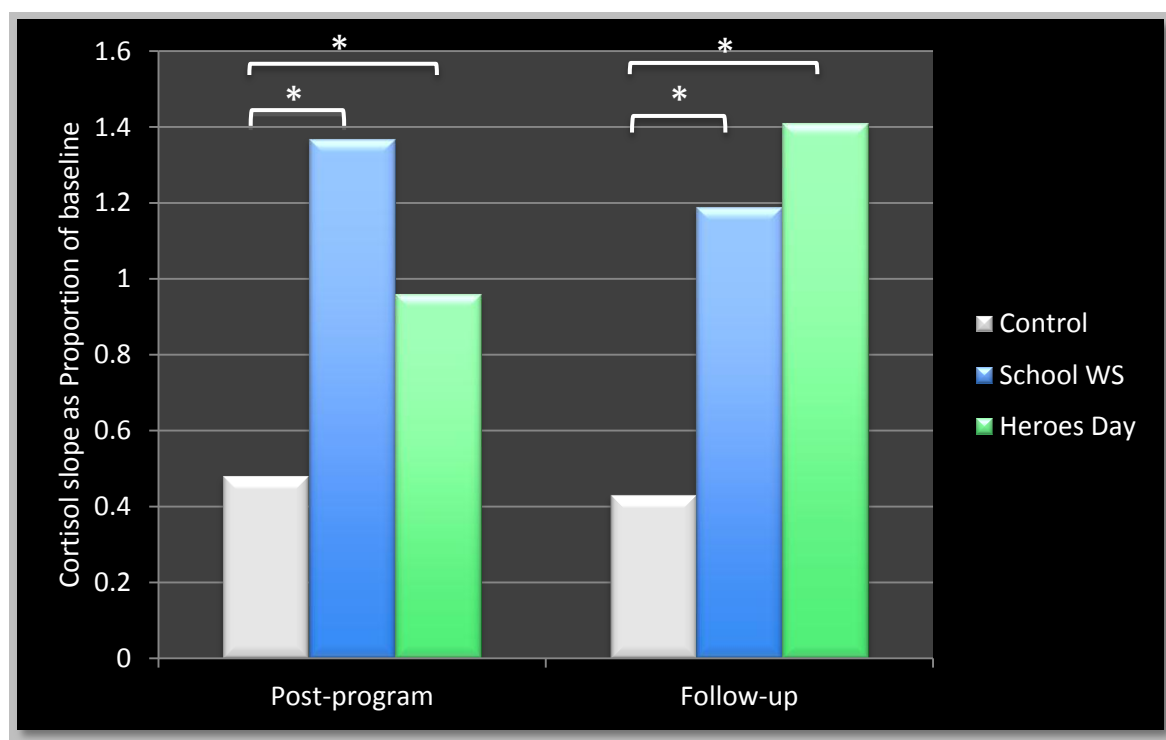


Figure 12: **Summary of Daily Cortisol Changes as a Proportion of Baseline.**

Figure 12 shows that this index of well-being declined in control participants over time, reflecting a flatter slope in this group – an index of poorer well-being. As no intervention occurred for this group, this pattern reflects what we might expect over the course of the school year for adolescents – a reduction in well-being, according to this objective index.

In contrast, this flattening appears to be prevented for participants who experienced either the Secondary School workshop or Heroes Day. In fact both groups showed much steeper slopes than the control group immediately after the Reach program. At follow up, this index of enhanced well-being was maintained well above baseline levels in the Heroes Day group.

Statistically, the mixed model ANOVA (2 times relative to baseline x 3 groups) revealed a significant group effect, $F(2,32)=5.03$, $p=.013$, $r=.56$. LSD post-hoc test revealed significant differences between controls and both Reach groups, but no difference between the two Reach programs.

Practical Implications of Cortisol Findings

This pattern of findings indicates that participation in either the Heroes Day or Secondary School Reach workshops was beneficial for the wellbeing of young participants. The results are particularly encouraging as they were obtained with an objective biomarker of well-being – the daily cortisol slope.

A flattened daily cortisol slope has been associated with poorer health and well-being outcomes, while a steeper cortisol slope is associated with better wellbeing outcomes. Flatter slopes are believed to be a reflection of repression of negative emotions, while steeper slopes have been related to a capacity to express emotions (Giese-Davis et al, 2006). The improved outcomes observed following the Reach programs may therefore reflect an improved capacity to express emotions (including negative emotions such as depression and anxiety) as a result of participating in a Reach program, and a subsequent increase in well-being.

These objective results strengthen the conclusion that Reach programs are beneficial for young people's well-being. Importantly, for the Heroes Day group, the effect was maintained several months after the program finished suggesting sustained effects of the program.

III. Behavioural Experience Sampling Results

Participants in the sub-group participating in this more intensive part of the study were prompted via an iPod® device twice a day for 7 days. They were asked to report on a range of experiences, including:

- their current mood
- whether a positive or negative experience had occurred since the last time they were prompted
- whether they used any particular strategy in response to that event
- who prompted the use of that strategy.

Differences in Current Mood across Groups over Time

Young people's current moods were compared across three groups (Controls, Reach Secondary School Workshops and Reach Heroes Days), from baseline to immediately after the program, and again several months later. More specifically mood was assessed using a 7 point sliding scale ranging from unpleasant to pleasant. This measure of 'current mood' was highly sensitive as it was an aggregate obtained from 14 individual self-reports – twice a day, over a weeklong period. Results are shown in Figure 13.

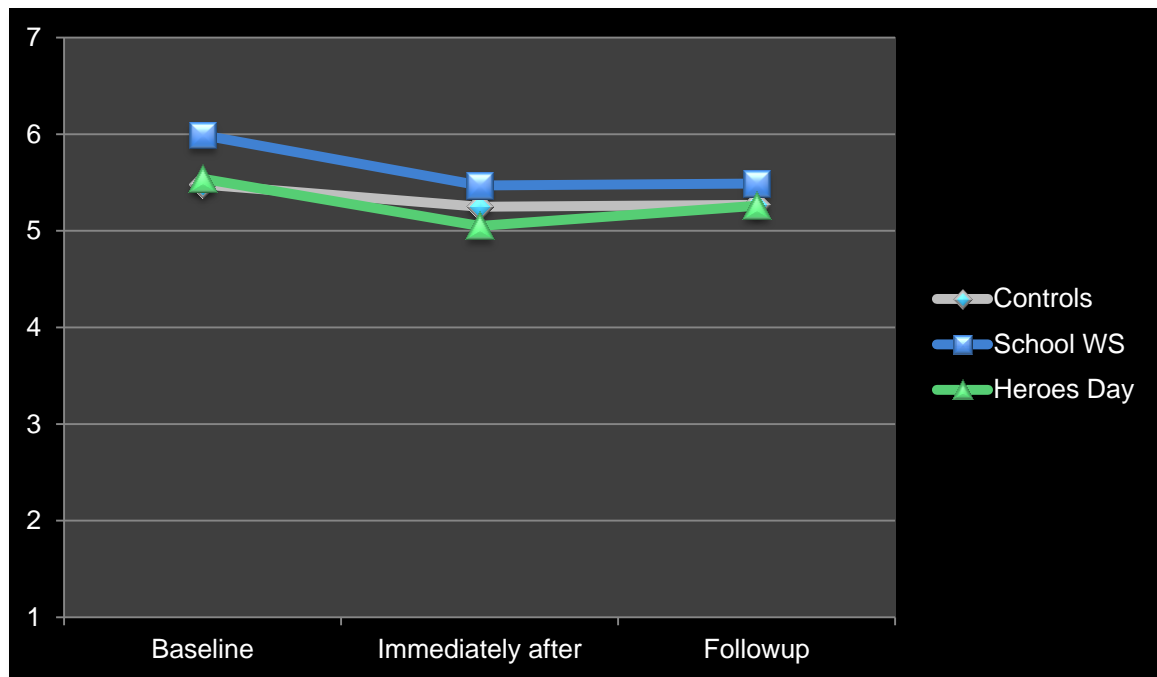


Figure 13: **Changes in Subjective Mood across Time for each Group.**

As is evident from Figure 13, there was no significant difference in aggregate mood scores between the groups over time, $F(2,130)=0.60$, $p=.666$, $\eta^2=.02$. This is perhaps not surprising given that a young person's mood is influenced by numerous factors that may be longer standing than those which could be impacted on by short interventions such as the Reach programs being evaluated. Moreover, these data do not distinguish between young people who utilized strategies explored in the Reach programs and those who may not. It would be expected for instance, that mood changes would be more positive in participants who actually used such strategies.

Strategy Use

Young people were asked to report the types of strategies they used in their everyday functioning, in response to both negative events ('something unpleasant happened' since last time prompted by the iPod device) and positive events ('something pleasant happened' since last time). Strategies included strategies identified by Reach crew as fundamental to the Reach programs, as well as other positive and negative strategies (see Box 4).

Box 4: Strategy Types

Strategies Explicitly Explored in Reach Programs.

- I asked for help (e.g., from family, friends or teachers)
- I did something to improve the situation (e.g. changing things around me or my attitude or speaking openly with someone)
- I expressed gratitude
- I focused on my positive qualities
- I imagined the situation from someone else's perspective
- I praised myself
- I shared my experience or celebrated with others
- I thought about what happened and what I could learn from the experience
- I tried to keep everything in perspective
- I tried to stay true to myself and my values

Other positive strategies

- I tried to relax (e.g. by listening to music, exercising, or meditating)
- I tried to think positively about others
- I cherished the moment
- I focused on my goal(s) (e.g., listing steps to achieve what I want)

Negative strategies

- I didn't really do anything about it
- I fell apart or lost it (e.g., cried heaps, lost my temper)
- I gave up
- I tried to avoid the situation

Associations Between Momentary Mood Ratings and Broad Strategy Use

We first examined the momentary mood ratings by assessing whether use of broad strategy type (positive, negative, Reach explicit) correlated with mood at each individual ESM reported. (Statistically, bivariate partial correlations were performed controlling for influence of repeated measures obtained from each participant.)

At this level, we observed clear positive correlations between use of both Reach-promoted and other positive strategies and positive mood. Negative strategies tended to be associated with poorer mood, as would be expected. These associations occurred in all groups, and at baseline as well as later time-points. This indicates that the strategies Reach promotes are positively associated with well-being. However, there is no evidence at this level that the beneficial effect of these strategies on well-being was enhanced specifically by the Reach programs.

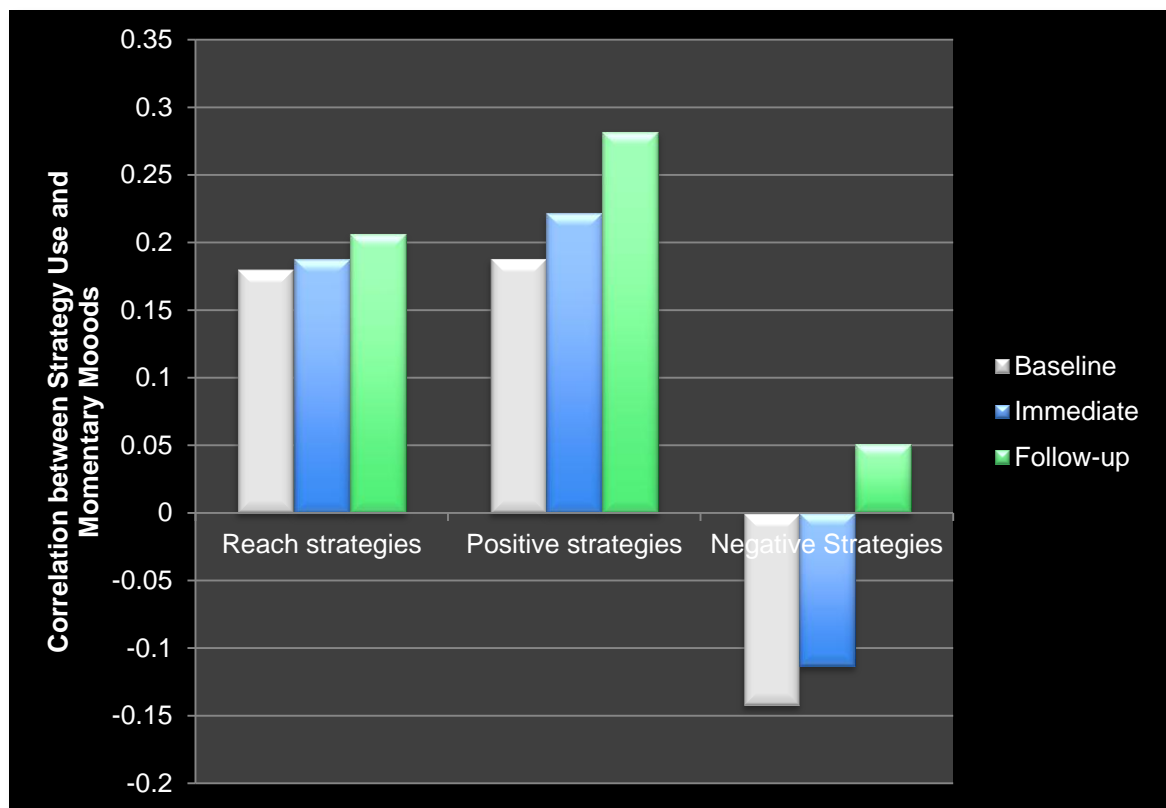


Figure 14: Relationship Between Strategy Type and Mood Change for Entire Sample (independent of group)

Use of Reach Strategies

Of these strategies, those identified as explicitly explored in Reach programs were analysed further. (Use of strategies not specifically identified as Reach strategies are reported in Appendix E, as the number of strategies was very small. The notable finding in these comparisons was that use of negative strategies in response to positive events was substantially reduced by the Secondary School workshops; see Figure E2).

Use of Reach strategies in response to both negative and positive events were compared across the Control, Heroes Day and Secondary School Workshops groups, across the three time-points of the study. As participants could report use of multiple strategies to each event, these data could only be analysed descriptively and are presented in the following section.

Reach programs focus on encouraging young people to thrive, particularly in challenging circumstances. It was therefore anticipated that effects would be observed in response to *negative* events.

In support, Figure 15 shows that following both Reach programs, participants increased their use of Reach strategies *in response to negative events* relative to before the program. This is in contrast to the decline in use of these strategies observed over time in the Control group.

Interestingly, participants in the Reach programs showed little change in use of Reach strategies *in response to positive events*. Control participants showed an increase in use of these strategies over time.

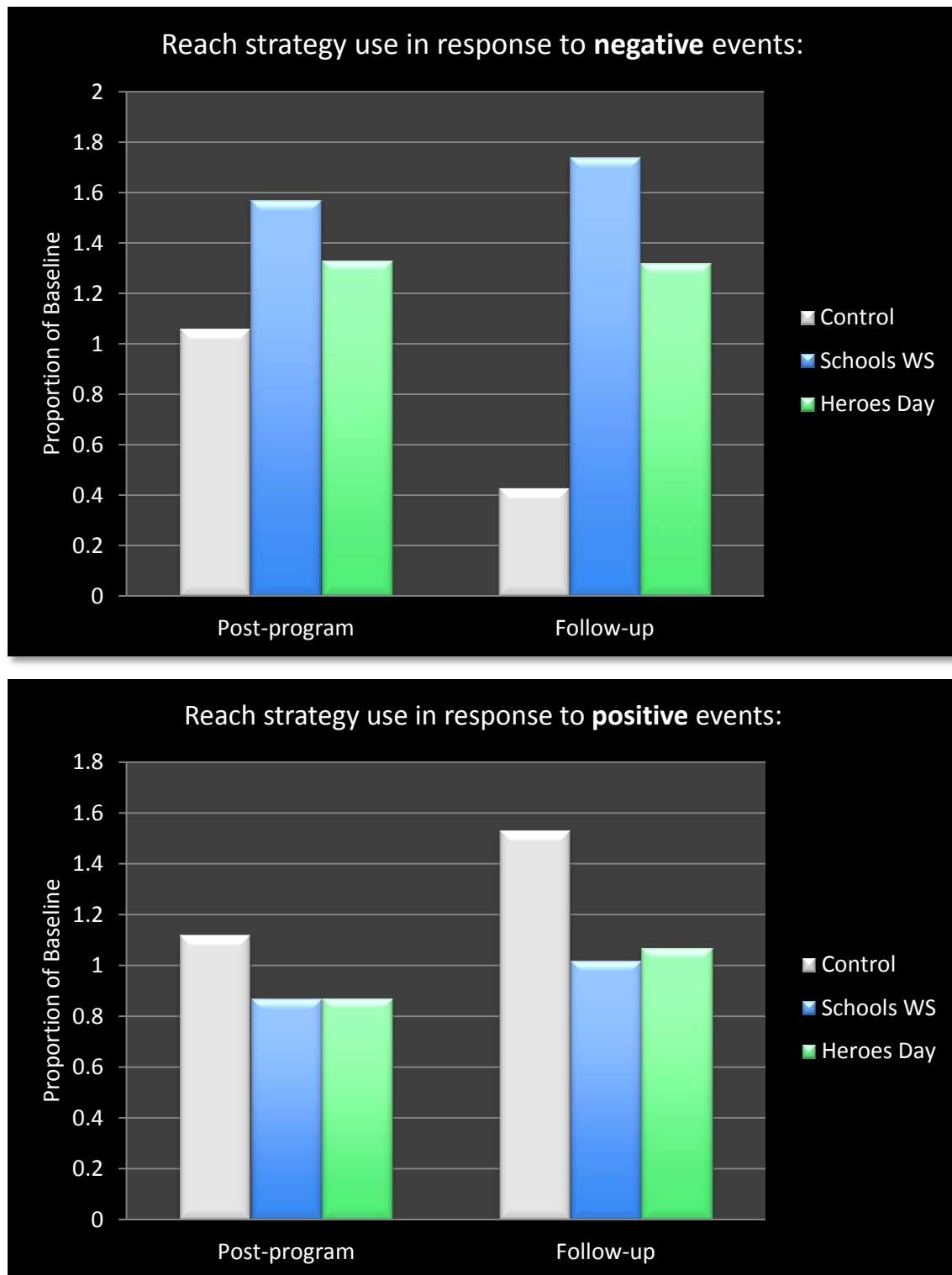


Figure 15: Changes in Use of Reach Strategies in Response to Positive Events.

Strategy use was then examined further by comparing across time:

(a) the **type** of strategy that altered over time (see Box 4), and

(b) **who influenced** the use of that strategy

- A leader at Reach
- My family
- My friends
- Nothing I can think of
- Reach program I attended
- Stuff I learn in school

Figure 16 shows that participants in the Secondary School workshops reported an increase in ‘expressing gratitude’ after the program. In addition, they reported that the Reach program influenced their use of this strategy. No other strategy or influences changed substantially over time, other than various changes attributed to ‘nothing I can think of’ (data not shown).

Figure 17 shows that participants in the Heroes Day reported an increase in ‘sharing my experiences with others’. This group reported that family and friends influenced their use of this strategy.

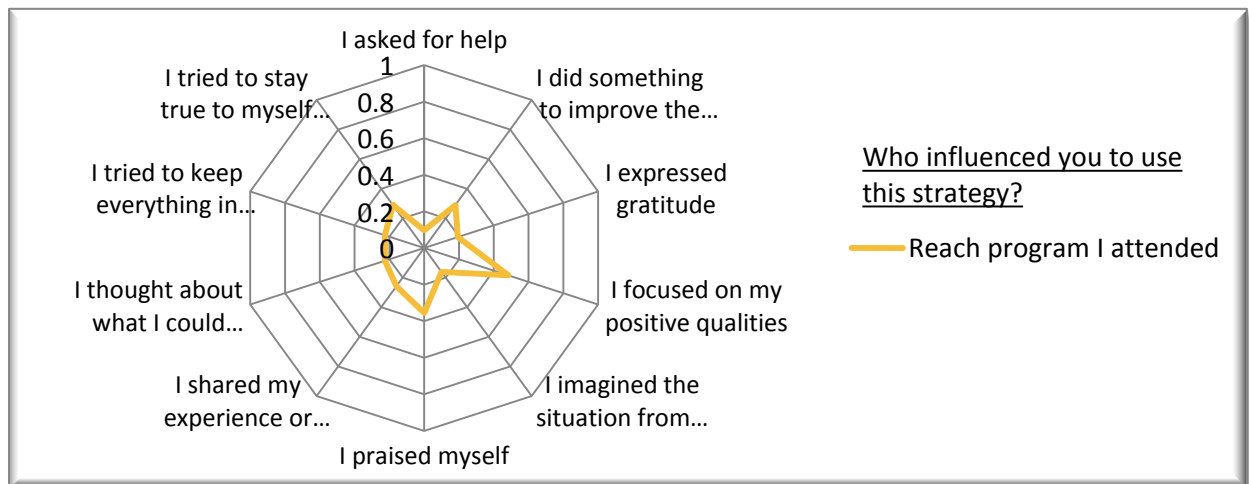
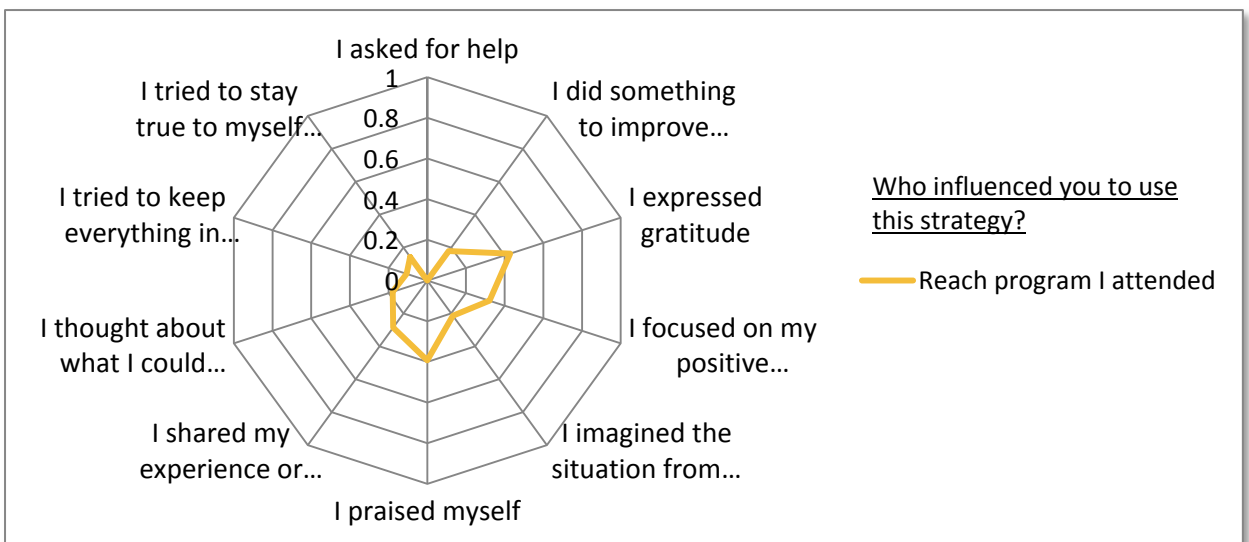
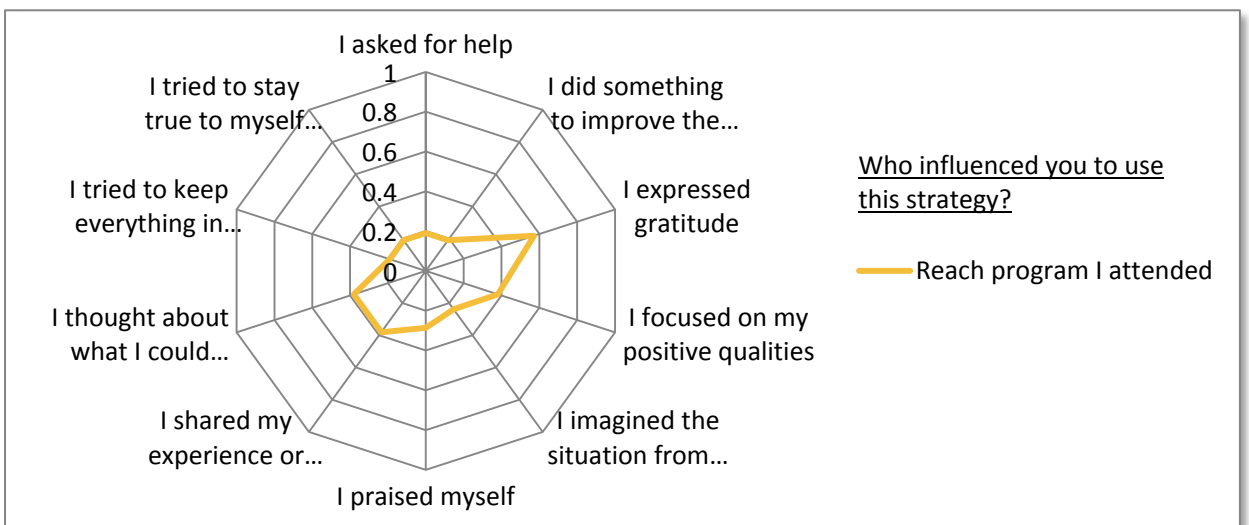
Time 1: Before program**Time 2: Immediately after program****Time 3: Follow-up**

Figure 16: Change in Reach-influenced Strategy Use for School WS Group.

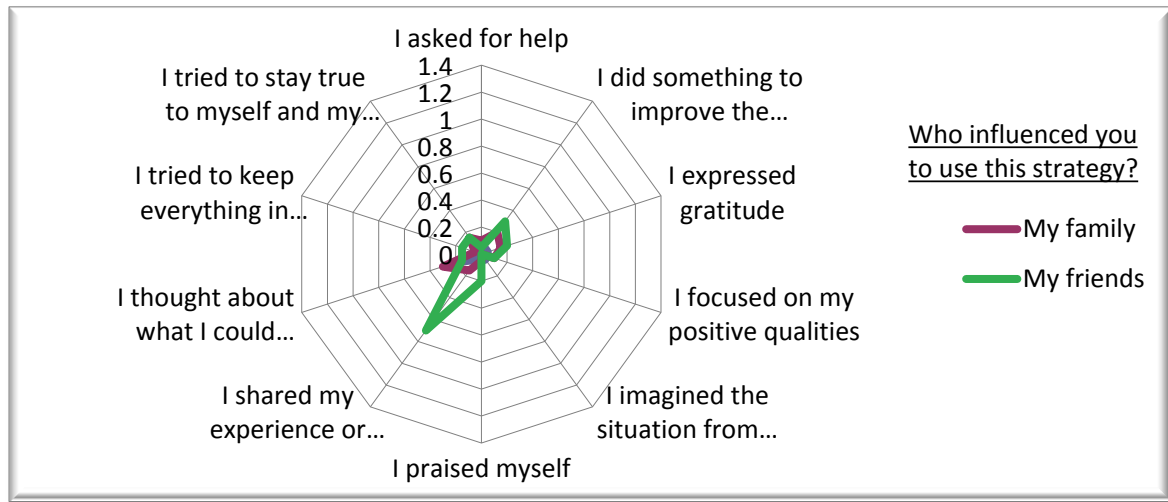
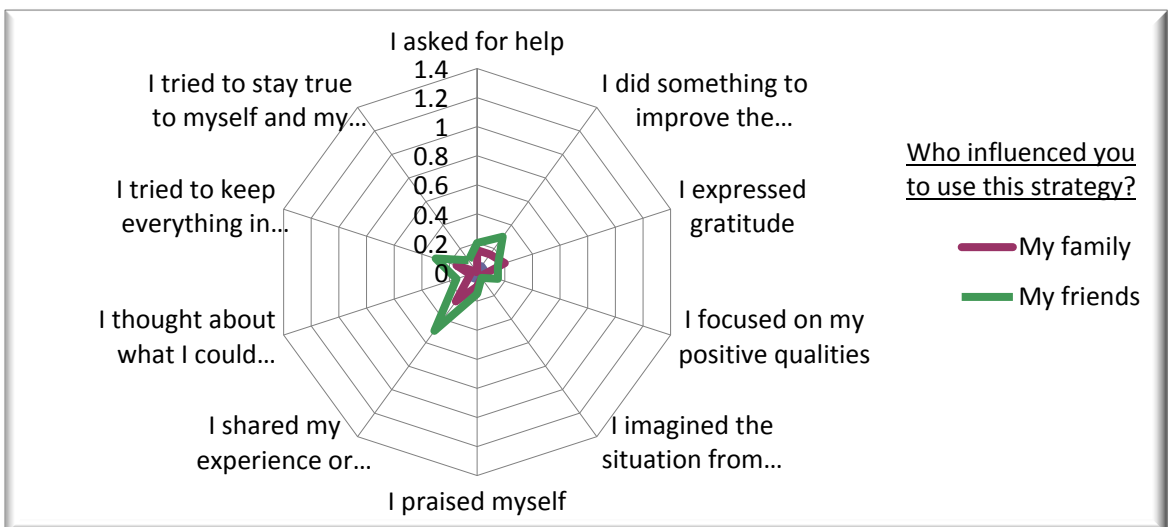
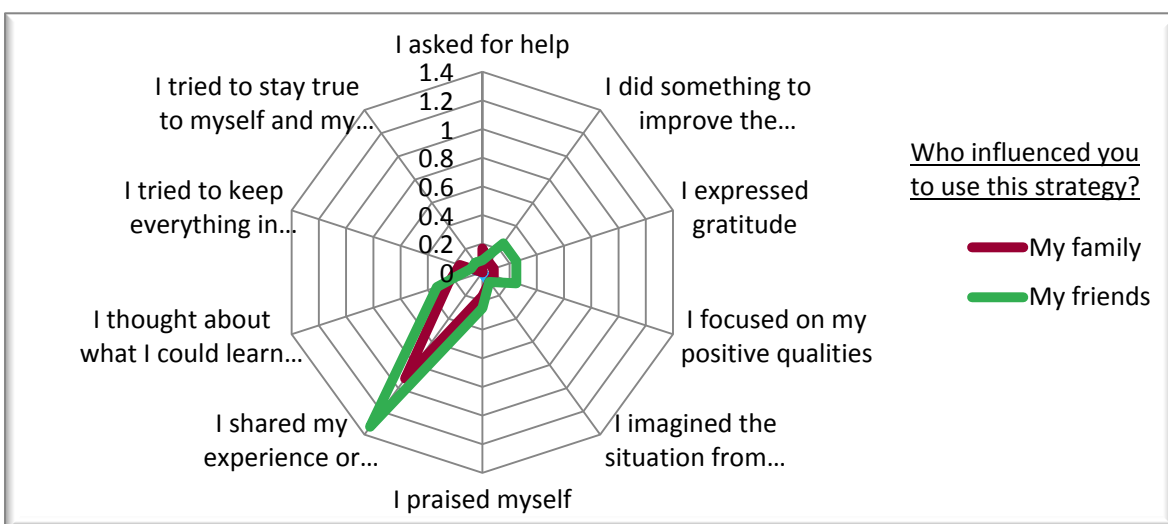
Time 1: Before program**Time 2: Immediately after program****Time 3: Follow-up**

Figure 17: Change in Family/Friends-influenced Strategy Use for Heroes Day Group.

IV. Focus Group Results

Qualitative data were examined using NVivo software to identify key themes from the interviews. Members of focus groups were asked questions about their level of interest in the Reach program, and how satisfied they were with the program. Pie charts show the combined responses of the Fused, Secondary School workshop, and Heroes Day groups. Quotes from participants about aspects of each program are also included to illustrate differences between young people's experiences in each program.

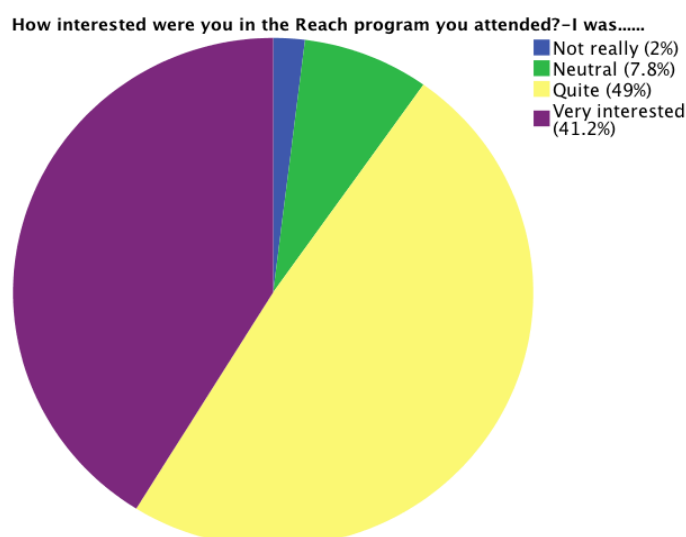
Knowledge of Reach Foundation (what Reach does)

The majority of the participants had no prior knowledge about The Reach Foundation. Some participants were aware that Jim Stynes founded the organization but most had no clear understanding of what Reach does as an organization.

"I didn't know what it was. Except that Jim Stynes... I knew he had an organization but I didn't know it was called Reach." - Heroes Day participant

Expectations (prior to Reach program)

Expectations prior to participating in a Reach program were negative. Participants had anticipated the program to be boring, much like most of the other well-being activities they had previously done at school. This is not reflected in the pie chart which asked participants to rate their level of interest in the program, however. Participants overwhelmingly reported being 'quite' or 'very' interested in the program. Across all programs, participants indicated that the Reach program exceeded their expectations.



"I was sort of worried that it would be really really boring but it wasn't...Yeah, I expected it to be sort of like everyone sitting around and then talking for hours but that didn't happen. It was really good." - School Workshop participant

"I didn't think it was going to be good. I thought it was going to be boring. Just do the same things. Talk about feelings and stuff. It was different. Yeah it was almost fun." - Heroes Day participant

Figure 18: Interest in Reach Program

Program (General)

Across all groups, participants indicated that the Reach program they attended was engaging and interesting. Participants in both the Fused and Secondary School Workshops group also found the program very enjoyable. Participants in the Heroes Day group voiced concerns about the content of the video clip played at the beginning of the day, in that many of them were shocked, or confused by it. Participants in this group also indicated that the lighting at the program venue was distracting and uncomfortable at times. Participants also mentioned that they did not have enough food for lunch. When queried about negative experiences of the Reach program attended, amongst the three programs, only participants from the Heroes Day program noted that there was frequent repetition of questions and concepts throughout the day, and that towards the latter half of the program, several participants indicated that they had lost interest.

“It was interesting when they weren’t repeating the questions. When they were repeating the questions, that’s when I lost concentration.” - Heroes Day participant

“The second half was kind of boring, because there was talking and no one talked back... like there were lots of opportunities to get involved but only for like, like a scarce amount of people for the amount of people that were actually in the room. So there could have been a hundred opportunities to get involved, but because there was so many people there, it doesn’t seem like that many.” - Heroes Day participant

Of the three programs, participants in the Secondary School Workshops noted most positive moments and positive outcomes from the program. Apart from increased awareness, participants observed greater connection between peer groups, as well as between individuals. Young people in this program were also the only participants who highlighted the opportunity to reflect on past behavior and current mindset.

“...make me think about like how like words can hurt and stuff... and how you treated other people” - School Workshop participant

“I think everyone was like saying like sorry to people, and thanking people for being there for them and like yeah... it like made me realize that like people probably regretted some stuff that they said to others when they got up and spoke about it. People probably felt really bad, didn’t realize that it affected them as much as it did.” - School Workshop participant

Across the programs, the majority of the participants did not experience an ‘a-ha!’ moment (moment of insight or ‘lightbulb’ moment). A few participants, particularly from the Fused program, indicated that they experienced such a moment, where they had a new revelation or perspective on an aspect of their life.

“I realized what is better for me and I need to start looking after myself. Because I don’t. In the last week... two last weeks and then I realized, hang on, I need to start focusing on what I like to do and what other people want me to do because I’m not doing very well... makes sense? And now I’ve started focusing on what I’m good at. And not letting myself get into such a stag ride and lose it. Suppose it’s sort of taught me that it’s actually good to look after yourself.” - Fused participant

“I found that I kind of only realized that I always felt like before the workshop that I that I was just caring about what other people thought about me and I just thought that everybody was like was really confident with who they are and they can be anything. I was like the only one that was worrying about being judged. And then and then when we did the workshop it actually occurred to me that everyone felt like that. Some people might just be better at covering it up. Like they are more confident than others. It kind of made me feel like I’m not alone. I’m not the only one who thinks that. I still think about like how I feel like I still get judged sometimes but it’s good to know that I’m not the only one that feels like that.” - School Workshop participant

Did you experience an “A-Ha” or lightbulb moment as a result of doing the Reach program?

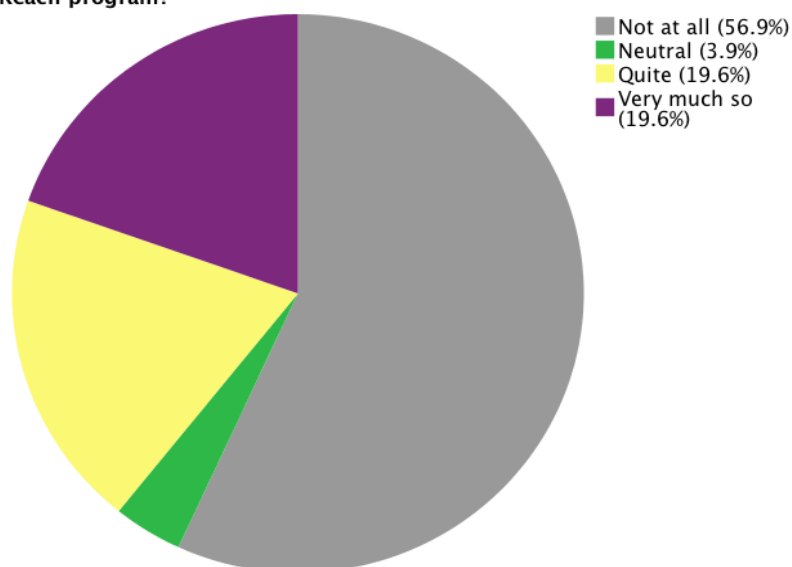


Figure 19: Light bulb moments experienced

Reach Crew

Participants were in agreement that the facilitators running the Reach programs were relatable. Participants cited age as the main factor (Crew members are typically about 5 years older than participants), followed by the openness of the facilitators in sharing their own personal experiences and stories. Across all programs, participants also indicated that they felt that the facilitators understood their struggles, and that it made it easier to talk about personal challenges and problems.

“The Reach Crew is understanding of everyone's story and that we have a close friend and they had something really challenging in their life and it's hard for them to talk about it and he got really emotional talking about it, and the Reach Crew were like... Yeah I understand your story... and it's hard for them to talk about it and they said it's okay for them to not want to talk about it and they just understood how people were feeling about things.” - School Workshop participant

“Most of the crew has like been through what we've been through. So like they know how we are feeling and stuff. They being very open about themselves makes it easy for us. They kind of set a really good example. They always, you know they ask you to do something, they are always more than willing to do it themselves.” - Fused participant

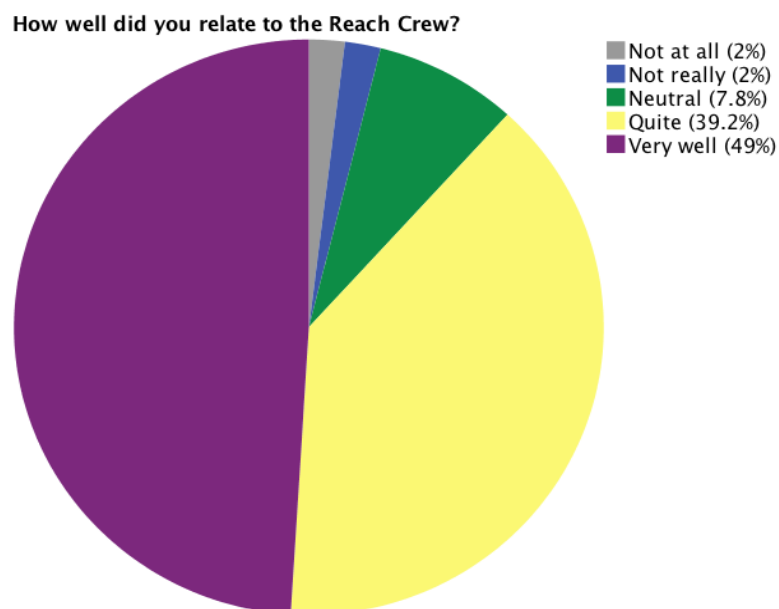


Figure 20: Relating to the Crew

Sharing the Reach Experience

Participants across all three programs indicated that they shared their Reach experience with family and friends. Several participants also used what they had learned from the Reach program to express their gratitude and appreciation towards their friends.

“When I went and said thank you to my best friend, like always been there, like we did this thing and like just thank you, I'm sorry if I haven't said thank you, but thank you. And... they were like, thank you for being my friend. And they were like, return the thank you and stuff.” - School Workshop participant

Participants were also likely to recommend the Reach program to their schoolmates or friends outside school. Several participants also noted that they would be selective as to whom they recommend the program to.

“I would recommend to certain friends. Some would just be... why would I want to go to something like that? Like people who would go into it and try to get something out of it. Rather than like if you just sat at the back of the room doing nothing.” – Heroes Day participant

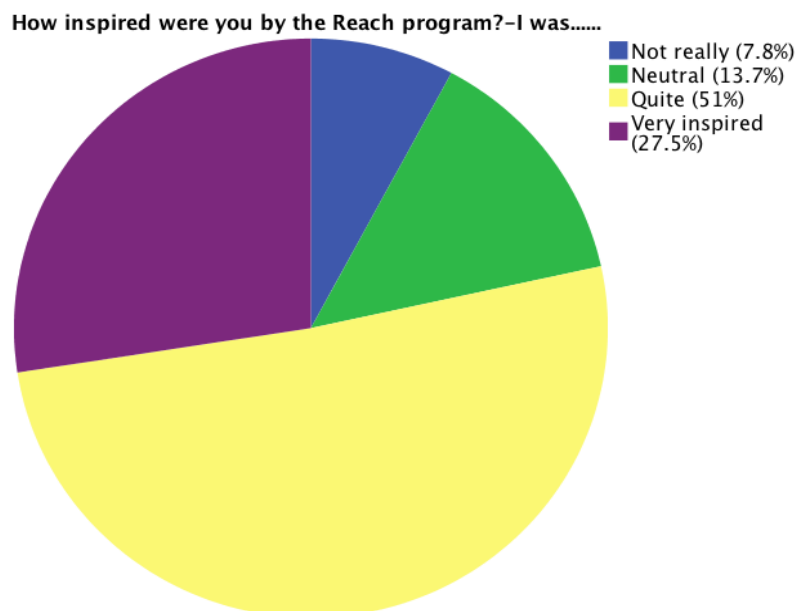


Figure 21: Was Reach Inspiring?

Lessons Learned from Participating in Reach Programs

Across all three programs, participants noted that they had increased awareness of themselves, as well as what others were going through.

“It sort of made us feel like a bit better and sort of less, I won’t judge this person, I don’t know who they are, I don’t know their story, so I’ve... you know if I have an opinion on them I would go talk to them and everything... and think positively.” - School Workshop participant

“Yeah I think also learnt to be more aware of what I’m feeling... like realize the effects on other people too. Like if I’m grumpy, or when I’m sad, like, and that... because like a year ago, I was going through like really tough times. And honestly I was so in my own world that I didn’t even think about how I was affecting my friends around me. And after, a year later, it’s like, if I’m upset of anything, instead of crying I’m just thinking I’m crying now, what’s made this happen? How can I fix it?” - Fused participant

“When we were thinking of our own funeral, it made me think of how other people, how I come across to other people. And like if I don’t come across well, then like maybe, they might not come to my funeral. They might not say anything. So it made me think of perhaps what it be better that people, not just me, but other people think the same. Wouldn’t it be better that people we know, and family and friends who really matter think like that. To be a better person, to come across like who you want to be.” – Heroes Day participant

Participants frequently spoke about the importance of not judging people, and that judgment from others was a main factor contributing to their reluctance to just be themselves, and express their feelings.

“Judgmental people... yeah what people have said before... like in the past... yeah just the way people judge, can judge you, it makes you a little self-conscious. Like you could be doing something and they could give you one look and that would just bring down your entire confidence and it’s just kind of not a good feeling at all. Or like when you’ve been picked on in the past you will never be like confident about that thing again because you know that someone’s obviously gone against it so everyone else will judge you for that one thing. Because everyone else notices the bad things about you. So you change for people. To erm to sort of be who you think they want, and that they’ll like you and accept you for that. But you shouldn’t really change at all.” - School Workshop participant

“It makes you think about not judging people. Get to know them... might hear stuff about a person it’s really easy to believe what that person says but you don’t really know a person until you actually talk to them rather than relying on what other people told you.” - School Workshop participant

In the two school-initiated Reach programs (School Workshops and Heroes Days), participants learned the importance of being authentic and being true to themselves.

“That it doesn't matter who you are or what you're like, sorry like what things you like. Just who you are... that's really important... just to be authentic and genuine.” - School Workshop participant

Participants in the community-based Fused program highlighted the importance of self-awareness and self-care, and applying that to various aspects of their lives.

“Like putting my own voice first. Like not being embarrassed to what I'm saying. My main example is in class. If I have a question, I was often too scared to ask, because I'd look like an idiot. Like a dumb arse. And now I ask questions all the time.” - Fused participant

“And that I'm making choices and at the end of the day you know if I don't do the right thing then I'm the one that has to take responsibility for it. I mean there's taking that into the outside world I've been exercising more and just looking after myself. And it's actually been really good. Kind of having that feeling that I know what I'm doing... erm, good things for me.” - Fused participant

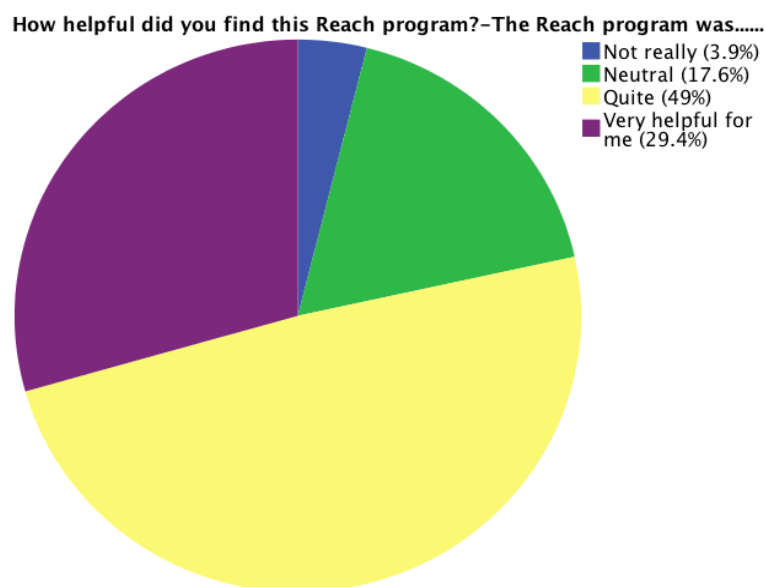


Figure 22: Helpfulness of Reach Program

Discussion and Recommendations

Key findings

The current study has assessed young people's responses to a selection of programs run by the Reach Foundation. The assessments drew on a range of comprehensive, relevant and reliable measures which have been delivered through innovative mediums which are youth-friendly. Each of the study aims will first be discussed and will be followed by a series of key considerations and recommendations for the Reach Foundation.

Aim 1: To examine the well-being and mental health effects over time across the three programs compared to a control group.

There were some mixed findings relating to the self-report on-line surveys. Improvements in satisfaction with life, positive affect, happiness, competence, perseverance, meaning and engagement were reported for Reach participants compared with control group participants. This is consistent with previous theory and research findings that youth mental health programs which focus on the dual approach to mental health, and are youth led, can improve wellbeing (Keyes, 2007; Rickwood et al, 2007). Not all well-being measures improved as predicted – for example hope and strengths use did not improve in response to participation in the Reach program, nor did student's enjoyment or appreciation of the value of school. This may be attributable to the Reach program content, which did specifically focus on these conceptual frameworks. For example, presenting the 24 strengths that comprise the Values in Action, or devising goal setting exercises as a 'pathway' to hope, were not part of the Reach programs.

Although there were some previous findings that positive interventions can also decrease depression (e.g., Sin & Lyubomirsky, 2009), the Reach programs were not effective in decreasing levels of depression, anxiety, stress or emotional awareness difficulties over the course of the evaluation. Possible reasons for this may be that more time and one-on-one guidance is needed to impact on these negative experiences (Sin & Lyubomirsky, 2009).

Aim 2: To compare the effects of each Reach program included in the study.

There were many positive findings relating to the Secondary School Workshops. Despite being only 90 minutes in duration, these workshops were able to improve meaning and engagement; two important predictors of well-being (Peterson et al. 2005; Vella-Brodrick et al., 2009). Heroes Day CC participants also reported improved life satisfaction, positive affect and perseverance. It can be seen from Figures 1 to 8 that CC had the greatest room for improvement, whereas other groups may have encountered a ceiling effect, whereby a higher baseline has meant that there is less room for improvement.

Focus group participants from Secondary School Workshops reported enjoying their Reach program more so than did the Heroes Day (RSC) participants. They also reported a greater number of positive experiences and positive outcomes. Heroes Day participants voiced concerns about the Collingwood venue and the catering. A connection with Reach Crew, a desire to share their Reach experience and a willingness to recommend Reach programs was evident irrespective of Reach program.

For participants in the Secondary School Workshops, daily slope of cortisol was reflective of well-being improvements from time 1 to time 2 but not at time 3. These short term changes align with what can be expected of a 90 minute workshop. This differs from Heroes Day participants who showed maintained improvements at time 3 (around 6 months post-intervention).

In terms of Reach strategies used over time, those in the Secondary School Workshops reported expressing more gratitude after the program whereas those in the Heroes Day reported an increase in sharing their experiences with others.

Aim 3: To explore whether program participants were connecting with the programs and applying knowledge and skills gained from the program to everyday situations (through focus groups and Experience Sampling Method).

Focus group findings were very positive and identified a number of important themes associated with the Reach programs. Although many young people had no prior knowledge about the work of Reach and had quite low expectations about what the Reach program would deliver, once they participated in a program, they found it to be engaging and interesting. A noteworthy point is that young people who attended the Reach programs reported connecting and relating well with the program leaders, the Reach Crew. As the Crew were all typically in their late teens or early twenties, this finding is consistent with the literature on Positive Youth Development and the importance of peer involvement, particularly in the development and delivery of youth mental health programs. Reach participants reported that they shared their Reach experience with family and friends and would recommend the program to other young people they know. Reach participants reported an enhanced sense of empathy for what others are going through and a greater awareness of themselves.

ESM data were collected to provide information on the context and level of knowledge transfer that occurred as a result of the Reach program. More specifically the use of strategies or responses to both positive and negative experiences was recorded along with the influence for this change. Although there were no significant differences over time and across groups in strategy use, there were some notable improvements for the Reach programs, such as an increase in 'expressing gratitude' that was reported to be prompted by the Reach program they participated in and in the 'sharing of my experiences with others' whereby family and friends were reported as being the main influence for this change.

Aim 4: To explore whether the effects of the Reach program were able to influence well-being at the psychobiological level as determined by hormonal assays.

Cortisol, the biological marker employed in this study, provided support for the two Reach programs evaluated, namely the Secondary School Workshops and the Heroes Days. Steeper declines in cortisol release across the day were obtained for Reach participants compared with control participants, thus suggesting enhanced well-being and resilience for the Reach participants. These cortisol findings corroborate the self-report results relating to improved well-being and support the premise that because changes have occurred at the deep biological level, these changes will be long lasting (at least several months).

Considerations and Recommendations

First, based on the on-line survey results, the Reach programs appear to be promoting the full range of psychological well-being as endorsed by the Orientations to Happiness framework (Peterson et al., 2005), which comprises positive emotions (pleasure), engagement and meaning. This is a positive finding which suggests that the programs are nourishing all three primary pathways necessary for well-being and in particular the engagement and meaning pathways which have been shown to be the best predictors of well-being relative to pleasure (Peterson et al. 2005; Vella-Brodrick, et al., 2009). It is interesting however, that mental health, in terms of depression, anxiety, stress and emotional awareness difficulties, were not reduced. With more sustained interventions, reductions in these areas may also occur, particularly as change can incite some initial anxiety and stress associated with increased self-knowledge and motivation for change. Thus further support may be needed during this transition phase. It is nonetheless clear that the Reach programs are impacting on management of negative emotions and events. This was demonstrated in the finding that participants in the programs increased their use of Reach strategies in response to negative events in their lives. In addition, the enhanced cortisol well-being profile observed following the Reach programs may be partly explained by an increased capacity to express negative emotions.

Second, the focus group findings support the use of young people as leaders of the Reach workshops. Participants from all the Reach groups evaluated stated how well they identified and connected with the young people (Crew) who were running the workshops. This is a special element offered by Reach programs that should continue to be promoted. It would seem that the intensive training invested in Crew by the Reach Foundation is paying off. It would also be of value to investigate the effects on well-being and mental health of Crew members as they are likely to be improving their own well-being.

Third, based on comparisons between Heroes Days RSC and CC, it appears that some important moderating factors may be at play and will require further attention in the future. These include well-being levels at baseline and the Heroes Day environments. CC generally had lower baseline levels of well-being than RSC and hence, this may have provided more opportunity for their well-being levels to improve. This raises the question about whether those with lower than average well-being may benefit the most from Reach programs like

Heroes Days. Another factor, the workshop environment, also featured in focus group participants' responses from RSC. These students attended the Heroes Day at Collingwood and noted they were cramped, the lighting was not ideal and that their lunch was not satisfactory. These comments were common and stated with conviction by participants indicating that these aspects are important to young people. Potentially, this is an area that Reach could work on improving. The CC participants attended their Heroes Day in Geelong. It is not known whether the venue at Geelong was satisfactory as the CC participants were not involved in focus groups.

Fourth, 'a-ha!' moments were more often reported to occur in the longer-term weekly program, namely Fused, than in the once-only or shorter term programs like Secondary School workshops. As Fused sessions are on a weekly basis this provides ample opportunity for young people to be actively involved and to process new information. The potential to experience challenging situations and growth and to try out some of the knowledge and skills learnt is high given the once weekly format. Connecting with other group members including the youth leaders is also more plausible in Fused compared to once-only Reach sessions. Young people have described in focus groups, the benefits of being actively involved in the programs rather than being on-lookers. While they are initially reluctant to participate, if this challenge is overcome, participants report many important benefits including the potential for these moments of insight or 'a-ha' moments. In contrast, young people attending Heroes Days report that only a few people get to be actively involved in program activities, and at times they expressed frustration about having so few people or the same people involved.

Fifth, it is a very positive outcome that a 90 minute Secondary School workshop can produce well-being benefits both through psychological reports and a biological marker. This means that effective mental health programs like those offered by Reach, can be delivered efficiently (time and cost) in schools. School-based programs also enhance accessibility for young people to mental health services and health education. This is particularly important given the widespread reluctance of many young people to seek out mental health services, even in the presence of often quite serious symptoms of mental illness. Discussing in a youth friendly format, factors that are associated with improved mental health and prosocial behaviour with young people in schools helps to meet a wide range of mental health needs ranging from preventative to treatment approaches. Although the Reach programs which have been evaluated in this study are aimed at providing short term intervention, it is recommended that a strategy for referral to professional youth-appropriate services or follow up programs for more intense mid to long term intervention need to be developed and/or promoted by Reach. In this way, Reach can capitalize on the initial positive connection Crew members have made with young people – a group who are typically difficult to access and engage with regarding mental health issues. The community based Fused program provides opportunities for young people who do not attend schools to engage with Reach programs and Crew, and offers young people an alternative to other more formal mental health services available to youth.

Sixth, the difficulty with obtaining sufficient research data from Fused participants is an important point of discussion. In particular there was difficulty with returning iPod Touch devices and saliva samples. A substantial contributing factor is that the Fused program is

community based and hence involves participants who are more widely dispersed geographically than are young people attending the school-based Reach programs. It is recommended that software which can be loaded onto young people's own mobile devices is considered for these participants as opposed to providing research-specific devices. With regard to the saliva samples, collection of samples could in future be timed to coincide with special Reach days which attract a number of Fused participants to a central location.

Seventh, the strategies promoted by Reach in the programs being evaluated in this study are commonly used by young people irrespective of time-point or participation in a Reach program. In addition, high use of these strategies is associated with higher ratings of positive mood. What this suggests is that the strategies Reach focus on are highly relevant for young people. However, four other positive strategies were also evaluated in the study, "I cherished the moment", "I focused on my goals", "I tried to relax" and "I tried to think positively about others" and these were also correlated with positive mood. It is therefore recommended that Reach consider incorporating these strategies with their existing suite of strategies currently being endorsed in their programs. The finding that at Time 3, there was a significant positive association between use of positive strategies and mood ratings for the Reach Secondary School Workshop group, which was not present in the Control group, suggests that some of these positive strategies may have also been discussed in the Secondary School Workshops. In the future, these strategies could be included in a more direct and deliberate way. The observed delay in effect may be because application of these strategies into everyday life in a way that has a real impact on mood levels takes some time. It is good to see that this translation of positive strategies into daily life does result in improved mood for young people.

Finally, although some very positive short term effects were found, many of these were not sustained at the 3-6 month follow-up. Although the reasons for this are not known and may not be attributable to the Reach programs per se, it is recommended that follow up contact is made with participants, both to provide additional 'booster' content to sustain some of the short term effects fostered by the Reach programs, and to mitigate any distress certain students may have experienced as a result of increased awareness of mental health issues.

Conclusion

In sum, based on the findings from this study, it is evident that the youth-led Reach programs can improve the well-being of young people in important areas. This is a very promising finding especially in relation to the promotion of engagement and meaning which over time can be instrumental in enhancing well-being and reducing the incidence of mental illness. With some further refinement of the program content, format and delivery, the potential for additional positive outcomes is heightened. This report is intended to provide guidance based on independent research findings on where some changes may prove fruitful to the Reach Foundation and the young people who attend Reach programs.



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Appendix A – Descriptive Statistics

	Control				Secondary School Workshops				Heroes RSC				Heroes CC			
	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R
T1 Students Life Satisfaction Scale Index	84	31.89	7.65	31	102	31.03	6.70	28	20	3.00	5.50	17	23	25.43	7.48	26
T2Students Life Satisfaction Scale Index	84	31.39	7.82	35	102	31.40	6.33	28	20	3.00	6.99	24	23	28.43	7.40	25
T3 Students Life Satisfaction Scale Index	84	31.36	7.97	35	102	31.35	6.67	31	20	3.75	6.70	21				
T1 Warwick Edinburgh Mental	84	51.30	11.73	50	102	49.25	9.28	44	20	52.30	6.22	28	23	45.61	12.69	47
T2 Warwick Edinburgh Mental	84	51.23	11.99	56	102	5.68	1.04	51	20	49.00	9.58	35	23	46.43	1.42	37
T3 Warwick Edinburgh Mental	84	51.35	12.33	56	102	5.13	9.79	47	20	49.95	1.00	35				
T1 Children’s Hope Scale Total	84	4.28	1.20	4.5	102	4.03	1.06	4.33	20	4.12	.85	3.33	23	3.44	1.24	4.67
T2 Children’s Hope Scale Total	84	4.23	1.23	5	102	4.15	1.06	4.67	20	4.13	.85	3.33	23	3.73	1.32	4.5
T3 Children’s Hope Scale Total	84	4.23	1.25	5	102	4.18	1.12	5	20	4.03	1.13	4				
T1 Children’s Hope Scale Agency	84	13.24	3.75	13	102	12.29	3.39	13	20	12.55	2.65	11	23	1.65	3.83	14
T2 Children’s Hope Scale Agency	84	13.12	3.86	15	102	12.71	3.25	15	20	12.90	2.59	11	23	11.48	3.85	12
T3 Children’s Hope Scale Agency	84	13.10	3.88	15	102	12.70	3.44	15	20	12.30	3.59	13				
T1 Children’s Hope Scale Pathways	84	12.44	3.77	15	102	11.87	3.27	13	20	12.15	2.80	11	23	1.00	3.80	15
T2 Children’s Hope Scale Pathways	84	12.29	3.80	15	102	12.21	3.40	14	20	11.90	2.92	11	23	1.91	4.20	15
T3 Children’s Hope Scale Pathways	84	12.31	3.88	15	102	12.36	3.53	15	20	11.85	3.48	12				
T1 PANAS PA	84	43.81	1.99	40	102	41.45	1.20	43	20	42.80	7.83	33	23	37.13	11.14	43

	Control				Secondary School Workshops				Heroes RSC				Heroes CC			
	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R
T2 PANAS PA	84	43.23	11.30	48	102	43.41	9.78	47	20	4.85	1.18	33	23	41.26	9.88	33
T3 PANAS PA	84	43.29	11.30	48	102	42.56	1.48	48	20	4.75	11.69	42				
T1 PANAS NA	84	28.89	11.72	56	102	29.98	11.90	56	20	29.50	1.40	34	23	35.91	12.23	43
T2 PANAS NA	84	29.17	12.21	56	102	29.26	11.37	45	20	27.15	1.81	33	23	34.87	14.73	47
T3 PANAS NA	84	28.95	12.14	56	102	31.76	12.67	54	20	27.70	1.21	33				
T1 Children's Intrinsic Need Satisfaction Scale Autonomy	84	23.82	5.09	21	102	21.05	4.71	23	20	22.10	4.23	18	23	21.00	3.61	13
T2 Children's Intrinsic Need Satisfaction Scale Autonomy	84	23.71	5.30	24	102	21.69	4.55	21	20	22.25	4.31	17	23	22.78	4.22	15
T3 Children's Intrinsic Need Satisfaction Scale Autonomy	84	23.64	5.19	24	102	21.74	4.62	19	20	21.70	5.46	19				
T1 Children's Intrinsic Need Satisfaction Scale Competence	84	24.01	5.04	21	102	22.43	4.50	21	20	23.55	4.71	17	23	21.00	4.23	19
T2 Children's Intrinsic Need Satisfaction Scale Competence	84	23.93	5.47	24	102	23.18	4.55	20	20	23.25	4.67	17	23	21.83	5.34	17
T3 Children's Intrinsic Need Satisfaction Scale Competence	84	23.85	5.50	24	102	22.95	4.98	24	20	21.85	5.61	19				
T1 Children's Intrinsic Need Satisfaction Scale Relatedness	84	23.94	4.74	19	102	22.47	3.61	20	20	22.35	4.56	17	23	22.04	3.65	11
T2 Children's Intrinsic Need Satisfaction Scale Relatedness	84	23.95	4.86	24	102	23.00	3.82	19	20	22.85	4.36	16	23	22.04	3.98	12
T3 Children's Intrinsic Need Satisfaction Scale Relatedness	84	23.86	4.87	24	102	22.31	4.28	24	20	21.90	5.32	17				
T1 DERS Lack of emotional awareness	84	22.62	5.58	22	102	2.76	5.34	24	20	22.95	3.44	13	23	18.87	5.39	19
T2 DERS Lack of emotional awareness	84	22.55	6.02	24	102	21.33	5.43	24	20	21.50	4.41	17	23	21.26	4.98	21
T3 DERS Lack of emotional awareness	84	22.44	6.10	24	102	2.79	5.67	23	20	21.30	4.92	17				

	Control				Secondary School Workshops				Heroes RSC				Heroes CC			
	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R
T1 DERS Difficulties engaging in goal-directed behaviors when distressed	84	15.38	4.55	17	102	15.66	3.93	19	20	15.30	2.85	10	23	17.30	3.21	12
T2 DERS Difficulties engaging in goal-directed behaviors when distressed	84	15.40	4.55	20	102	15.51	4.22	20	20	15.75	3.13	13	23	18.04	3.05	9
T3 DERS Difficulties engaging in goal-directed behaviors when distressed	84	15.32	4.62	20	102	15.75	3.91	20	20	14.50	2.74	11				
T1DASS21 Depression	84	12.05	5.44	21	102	12.94	4.87	19	20	1.80	3.71	14	23	14.70	6.18	21
T2DASS21 Depression	84	12.18	5.28	21	102	12.37	5.64	21	20	11.20	4.14	14	23	14.13	5.78	20
T3DASS21 Depression	84	12.21	5.28	21	102	13.31	6.18	21	20	11.80	4.87	15				
T1DASS21 Anxiety	84	11.71	4.87	21	102	11.92	4.02	17	20	1.85	2.83	9	23	12.17	4.10	14
T2DASS21 Anxiety	84	11.42	4.71	21	102	12.30	4.88	21	20	1.35	3.13	11	23	12.96	4.88	17
T3DASS21 Anxiety	84	11.35	4.70	21	102	12.90	5.27	21	20	1.80	4.29	14				
T1DASS21 Stress	84	12.94	5.21	21	102	13.58	3.77	18	20	13.20	3.40	10	23	14.43	4.11	15
T2DASS21 Stress	84	12.64	4.82	21	102	13.91	4.70	21	20	13.00	3.36	12	23	15.09	4.62	19
T3DASS21 Stress	84	12.44	4.74	21	102	14.44	4.97	21	20	12.30	3.95	15				
T1 Strengths Knowledge Scale	84	42.85	1.18	40	102	41.16	8.19	42	20	42.00	6.90	27	23	36.61	9.02	32
T2 Strengths Knowledge Scale	84	42.20	1.47	42	102	4.35	8.89	46	20	41.85	8.03	27	23	37.65	8.32	29
T3 Strengths Knowledge Scale	84	42.55	1.24	42	102	4.09	9.86	42	20	41.95	9.19	33				
T1 Strengths Use Scale	84	74.31	17.44	70	102	69.98	15.25	75	20	71.15	13.24	50	23	63.52	19.37	63
T2 Strengths Use Scale	84	72.43	19.88	84	102	7.51	16.63	72	20	7.95	15.22	49	23	67.04	16.44	56

	Control				Secondary School Workshops				Heroes RSC				Heroes CC			
	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R
T3 Strengths Use Scale	84	73.11	2.15	84	102	7.76	19.10	84	20	71.10	17.64	62				
T1 POPS Autonomy	84	46.48	9.63	39	102	44.65	1.33	46	20	46.10	9.83	34	23	45.17	11.57	52
T2 POPS Autonomy	84	46.54	9.34	33	102	44.98	9.24	48	20	44.25	9.79	34	23	43.52	12.88	50
T3 POPS Autonomy	84	46.70	9.50	33	102	44.78	9.74	48	20	44.55	8.71	35				
T1 EPOCH Engagement	84	18.32	4.39	16	102	16.60	4.20	17	20	17.50	4.58	16	23	14.83	3.92	13
T2 EPOCH Engagement	84	17.61	4.79	20	102	17.25	4.29	19	20	15.90	4.33	15	23	16.22	4.37	19
T3 EPOCH Engagement	84	17.30	4.79	20	102	16.96	4.29	19	19	16.63	5.17	19				
T1 EPOCH Perseverance	84	17.95	4.82	20	102	16.17	4.73	20	20	16.45	4.24	15	23	14.17	4.12	14
T2 EPOCH Perseverance	84	17.58	5.20	20	102	16.90	4.32	20	20	15.10	3.95	13	23	15.91	4.37	18
T3 EPOCH Perseverance	84	17.42	5.25	20	102	16.78	4.47	20	19	15.11	5.09	18				
T1 EPOCH Optimism	84	18.55	5.03	20	102	16.61	4.78	20	20	17.50	3.72	14	23	15.09	5.10	17
T2 EPOCH Optimism	84	18.13	5.30	20	102	17.50	4.80	20	20	17.35	4.28	13	23	15.87	5.43	20
T3 EPOCH Optimism	84	17.95	5.22	20	102	17.25	5.03	20	19	16.79	5.00	18				
T1 EPOCH Connectedness	84	2.35	4.62	20	102	19.28	4.70	20	20	2.30	3.61	15	23	19.22	4.72	15
T2 EPOCH Connectedness	84	2.01	4.83	20	102	2.17	4.46	20	20	19.10	4.84	15	23	18.96	4.92	15
T3 EPOCH Connectedness	84	19.90	4.71	20	102	19.59	4.68	18	19	18.32	5.89	20				
T1 EPOCH Happiness	84	19.69	4.91	19	102	18.62	5.00	20	20	2.10	4.13	15	23	17.35	4.70	17

	Control				Secondary School Workshops				Heroes RSC				Heroes CC			
	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R
T2 EPOCH Happiness	84	19.31	5.05	20	102	19.35	4.90	20	20	18.35	4.49	13	23	18.26	5.20	17
T3 EPOCH Happiness	84	19.11	5.19	20	102	18.86	5.24	20	19	18.53	5.80	20				
T1 MSPSS Significant Other	83	22.34	6.09	24	102	22.04	5.03	24	20	22.15	3.51	12	23	21.70	3.78	15
T2 MSPSS Significant Other	84	21.89	6.44	24	102	23.03	4.92	21	20	22.30	3.85	14	23	21.83	4.78	14
T3 MSPSS Significant Other	84	21.82	6.41	24	102	22.25	4.99	24	19	21.47	4.89	17				
T1 MSPSS Family	84	22.08	5.94	24	102	21.77	5.30	24	20	21.10	4.75	17	23	2.61	5.74	24
T2 MSPSS Family	84	21.61	6.17	24	102	22.19	5.58	21	20	21.30	5.49	19	23	2.43	5.69	24
T3 MSPSS Family	84	21.61	6.14	24	102	21.58	5.52	22	19	2.74	6.34	22				
T1 MSPSS Friend	84	22.30	5.98	24	102	21.27	5.67	24	20	22.40	4.08	18	23	21.13	4.75	16
T2 MSPSS Friend	84	22.01	6.18	24	102	22.31	5.49	24	20	22.90	4.08	14	23	22.04	4.63	15
T3 MSPSS Friend	84	21.89	6.14	24	102	21.76	5.24	24	19	21.58	5.78	21				
T1 SDQ Prosocial	84	21.38	3.64	16	102	2.17	3.12	14	20	2.30	2.58	9	23	21.35	3.20	12
T2 SDQ Prosocial	84	2.67	4.43	20	102	2.08	3.36	14	20	19.10	3.24	10	23	2.04	3.80	12
T3 SDQ Prosocial	84	2.63	4.42	20	102	19.90	3.28	12	19	2.16	3.59	11				
T1 SDQ Peer Problems	84	11.27	3.76	14	102	11.29	3.51	20	20	1.25	2.53	9	23	1.87	3.31	13
T2 SDQ Peer Problems	84	11.39	3.60	14	102	12.07	3.12	16	20	1.90	3.35	11	23	11.09	4.03	14
T3 SDQ Peer Problems	84	11.33	3.49	14	102	12.13	3.55	19	19	11.26	3.11	11				

	Control				Secondary School Workshops				Heroes RSC				Heroes CC			
	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R	N	M	Std Dev	R
T1 Approaches to Happiness Engagement	84	2.08	5.01	24	102	19.57	4.36	20	20	2.25	3.14	14	23	16.96	5.20	21
T2 Approaches to Happiness Engagement	84	19.43	5.25	24	102	2.25	4.42	21	20	19.65	3.30	14	23	18.26	4.43	19
T3 Approaches to Happiness Engagement	84	19.62	5.48	24	102	2.07	4.42	24	19	19.05	3.87	14				
T1 Approaches to Happiness Pleasure	84	21.79	5.20	22	102	21.36	4.80	24	20	22.35	3.45	14	23	2.17	4.21	18
T2 Approaches to Happiness Pleasure	84	21.07	5.35	24	102	21.53	4.99	23	20	22.05	4.06	16	23	2.52	4.18	20
T3 Approaches to Happiness Pleasure	84	21.07	5.30	24	102	21.58	4.92	23	19	21.26	5.46	16				
T1 Approaches to Happiness Meaning	84	21.13	5.40	22	102	2.44	4.44	22	20	21.50	3.33	10	23	18.22	4.36	17
T2 Approaches to Happiness Meaning	84	2.60	5.66	24	102	21.31	4.43	22	20	21.30	3.81	15	23	2.13	4.66	18

SCHOOL ENGAGEMENT MEASURES	Control			Secondary Workshops			School Heroes Day		
	N	M	SD	N	M	SD	N	M	SD
T1 Meaningfulness of school work	84	3.55	1.06	102	3.24	0.90	20	3.25	0.72
T2 Meaningfulness of school work	84	3.51	1.05	102	3.33	0.99	20	3.55	0.89
T3 Meaningfulness of school work	84	3.51	1.06	102	3.31	0.97	20	3.50	0.83
T1 Importance school learning for later life	84	3.73	1.02	102	3.57	10.05	20	3.75	0.97
T2 Importance school learning for later life	84	3.71	1.03	102	3.71	1.02	20	3.50	0.76
T3 Importance school learning for later life	84	3.73	1.02	102	3.59	1.02	20	3.50	1.00
T1 Enjoy School	84	3.61	1.10	102	3.47	0.91	20	3.65	0.67
T2 Enjoy School	84	3.58	1.22	102	3.50	0.89	20	3.70	0.98
T3 Enjoy School	84	3.62	1.10	102	3.46	0.85	20	3.55	0.95
T1 Hate School	84	2.58	1.25	102	2.55	1.10	20	2.55	0.69
T2 Hate School	84	2.62	1.24	102	2.60	1.01	20	2.50	1.05
T3 Hate School	84	2.60	1.26	102	2.60	1.06	20	2.65	0.93
T1 Try to do best in school	84	4.17	0.99	102	4.04	0.77	20	3.85	0.75
T2 Try to do best in school	82	4.19	.096	102	3.97	0.86	20	3.85	0.75
T3 Try to do best in school	82	4.13	1.03	102	3.96	0.78	20	3.80	0.83

Abbreviations - T1: Baseline. T2: immediately after program. T3: follow up test. N: sample size. Std Dev: Standard Deviation.

FREQUENCIES	Control			Secondary School Workshops			Heroes RSC and CC*		
	N	n	% Dev	N	n	% Dev	N	n	% Dev
T1 Skipped school 0 times	84	73	86.9	102	75	73.5	43	35	81.4
T3 Skipped school 0 times	84	71	84.5	102	79	77.5	20	14	70.0
T1 Skipped school 1-2 times	84	6	7.2	102	15	14.7	43	5	11.6
T3 Skipped school 1-2 times	84	8	9.5	102	13	12.7	20	2	10.0
T1 Skipped school 3-5 times	84	2	2.4	102	8	7.8	43	2	4.7
T3 Skipped school 3-5 times	84	2	2.4	102	7	6.9	20	3	15.0
T1 Skipped school 6 or more times	84	3	3.6	102	4	3.9	43	1	2.3
T3 Skipped school 6 or more times	84	3	3.6	102	3	3.0	20	1	5.0
T1 Attended school workshop 1 st Aug	84	5	6.0	102	50	49.0	43	39	90.7
T3 Attended school workshop 1 st Aug	84	4	4.8	102	51	50.0	20	10	50.0
T1 Attended school workshop 2 nd Aug	84	3	3.6	102	28	27.5	43	0	0
T3 Attended school workshop 2 nd Aug	84	5	6.0	102	28	27.5	20	1	5.0

*Data for Heroes CC are only available for Time 1, and have been merged with Heroes RSC. Time 3 contains data from Heroes RSC only.

Abbreviations - T1: Baseline. T3: follow up test. N: group sample size. n: category size. % Dev: Percentage of group.

Appendix B – ANOVA results across Times 1 and 2

Outcome Variable	Type of ANOVA	Interaction	F-value	df [†]	p-value
Student Satisfaction with Life Scale	Within subjects	Time	3.26	2	.07
	Within subjects	Time x group	3.40	4	.02*
	Between subjects	Group	3.25	2	.02*
Warwick Edinburgh Mental Well-being Scale	Within subjects	Time	.16	2	.69
	Within subjects	Time x group	1.97	4	.12
	Between subjects	Group	1.76	2	.16
Children's Hope Scale - Total	Within subjects	Time	1.73	2	.19
	Within subjects	Time x group	1.16	4	.33
	Between subjects	Group	2.50	2	.06
Children's Hope Scale – Agency	Within subjects	Time	2.41	2	.12
	Within subjects	Time x group	.94	4	.42
	Between subjects	Group	2.68	2	.05*
Children's Hope Scale – Pathways	Within subjects	Time	.82	2	.37
	Within subjects	Time x group	1.23	4	.30
	Between subjects	Group	2.07	2	.11
PANAS PA	Within subjects	Time	1.83	2	.18
	Within subjects	Time x group	3.90	4	.01*
	Between subjects	Group	1.24	2	.30
PANAS NA	Within subjects	Time	1.49	2	.22
	Within subjects	Time x group	.50	4	.68
	Between subjects	Group	2.27	2	.81
Children's Intrinsic Need Satisfaction Scale - Autonomy	Within subjects	Time	3.88	2	.05*
	Within subjects	Time x group	1.78	4	.15
	Between subjects	Group	4.72	2	<.01*
Children's Intrinsic Need Satisfaction Scale - Competence	Within subjects	Time	.99	2	.32
	Within subjects	Time x group	1.23	4	.30
	Between subjects	Group	2.27	2	.08

Children's Intrinsic Need Satisfaction Scale - Relatedness	Within subjects	Time	.81	2	.37
	Within subjects	Time x group	.43	4	.73
	Between subjects	Group	2.34	2	.08
DERS – Lack of Emotional Awareness	Within subjects	Time	.96	2	.33
	Within subjects	Time x group	3.23	4	.02*
	Between subjects	Group	2.34	2	.07
DERS – Difficulties Engaging in Goal-Directed Behaviours When Distressed	Within subjects	Time	.76	2	.38
	Within subjects	Time x group	.47	4	.71
	Between subjects	Group	2.44	2	.07
DASS – Depression	Within subjects	Time	.15	2	.68
	Within subjects	Time x group	.51	4	.70
	Between subjects	Group	2.14	2	.10
DASS – Anxiety	Within subjects	Time	.08	2	.78
	Within subjects	Time x group	.89	4	.45
	Between subjects	Group	1.15	2	.33
DASS – Stress	Within subjects	Time	.13	2	.72
	Within subjects	Time x group	.57	4	.63
	Between subjects	Group	1.79	2	.15
Strengths Knowledge Scale	Within subjects	Time	.06	2	.82
	Within subjects	Time x group	.47	4	.70
	Between subjects	Group	2.58	2	.06
Strengths Use Scale	Within subjects	Time	.19	2	.67
	Within subjects	Time x group	1.12	4	.34
	Between subjects	Group	1.73	2	.16
POPS – Autonomy	Within subjects	Time	1.17	2	.28
	Within subjects	Time x group	.64	4	.59
	Between subjects	Group	.67	2	.57
EPOCH – Engagement	Within subjects	Time	.06	2	.81
	Within subjects	Time x group	5.53	4	<.01*
	Between subjects	Group	2.54	2	.06
EPOCH – Perseverance	Within subjects	Time	.42	2	.52
	Within subjects	Time x group	4.52	4	<.01*
	Between subjects	Group	3.16	2	.03*

EPOCH – Optimism	Within subjects	Time	.80	2	.37
	Within subjects	Time x group	2.20	4	.09
	Between subjects	Group	2.74	2	.04*
EPOCH – Connectedness	Within subjects	Time	.49	2	.49
	Within subjects	Time x group	2.58	4	.054
	Between subjects	Group	.46	2	.71
EPOCH – Happiness	Within subjects	Time	.13	2	.72
	Within subjects	Time x group	3.12	4	.03*
	Between subjects	Group	.88	2	.45
MSPSS – Significant Other	Within subjects	Time	.35	2	.55
	Within subjects	Time x group	1.75	4	.16
	Between subjects	Group	.20	2	.89
MSPSS – Family	Within subjects	Time	<.01	2	.98
	Within subjects	Time x group	.74	4	.53
	Between subjects	Group	.56	2	.64
MSPSS – Friend	Within subjects	Time	1.68	2	.20
	Within subjects	Time x group	1.17	4	.32
	Between subjects	Group	.25	2	.86
SDQ – Prosocial	Within subjects	Time	9.40	2	<.01*
	Within subjects	Time x group	1.50	4	.22
	Between subjects	Group	1.67	2	.17
SDQ – Peer Problems	Within subjects	Time	3.40	2	.07
	Within subjects	Time x group	.92	4	.43
	Between subjects	Group	.87	2	.46
Approaches to Happiness – Engagement	Within subjects	Time	.33	2	.57
	Within subjects	Time x group	2.97	4	.03*
	Between subjects	Group	1.94	2	.12
Approaches to Happiness – Pleasure	Within subjects	Time	.13	2	.72
	Within subjects	Time x group	.85	4	.47
	Between subjects	Group	.65	2	.58
Approaches to Happiness – Meaning	Within subjects	Time	2.68	2	.10
	Within subjects	Time x group	3.82	4	.01*
	Between subjects	Group	1.15	2	.33

* indicates a significant interaction at $p = .05$. Significant interactions are also highlighted in bold.

[†] *df*: degrees of freedom

Appendix C – ANOVA results across Times 1-3

Outcome Variable	Type of ANOVA	Interaction	F-value	df [†]	p-value
Student Satisfaction with Life Scale	Within subjects	Time	.53	2	.59
	Within subjects	Time x group	1.94	4	.10
	Between subjects	Group	.39	2	.68
Warwick Edinburgh Mental	Within subjects	Time	.19	2	.82
	Within subjects	Time x group	.86	4	.49
	Between subjects	Group	.31	2	.74
Children's Hope Scale - Total	Within subjects	Time	.11	2	.89
	Within subjects	Time x group	.96	4	.43
	Between subjects	Group	.43	2	.65
Children's Hope Scale – Agency	Within subjects	Time	.54	2	.58
	Within subjects	Time x group	.87	4	.49
	Between subjects	Group	.83	2	.44
Children's Hope Scale – Pathways	Within subjects	Time	.02	2	.98
	Within subjects	Time x group	.93	4	.45
	Between subjects	Group	.15	2	.86
PANAS PA	Within subjects	Time	.26	2	.77
	Within subjects	Time x group	1.99	4	.10
	Between subjects	Group	.44	2	.65
PANAS NA	Within subjects	Time	.94	2	.39
	Within subjects	Time x group	1.59	4	.18
	Between subjects	Group	.56	2	.57
Children's Intrinsic Need Satisfaction Scale - Autonomy	Within subjects	Time	.28	2	.75
	Within subjects	Time x group	.96	4	.43
	Between subjects	Group	6.04	2	<.01*
Children's Intrinsic Need Satisfaction Scale - Competence	Within subjects	Time	2.01	2	.14
	Within subjects	Time x group	2.31	4	.02*
	Between subjects	Group	1.35	2	.26
Children's Intrinsic Need Satisfaction Scale - Relatedness	Within subjects	Time	1.96	2	.14
	Within subjects	Time x group	.56	4	.69

	Between subjects	Group	2.96	2	.054
DERS – Lack of Emotional Awareness	Within subjects	Time	1.42	2	.24
	Within subjects	Time x group	1.35	4	.25
	Between subjects	Group	2.24	2	.11
DERS – Difficulties Engaging in Goal-Directed Behaviours When Distressed	Within subjects	Time	.67	2	.51
	Within subjects	Time x group	.74	4	.57
	Between subjects	Group	.21	2	.81
DASS – Depression	Within subjects	Time	1.12	2	.33
	Within subjects	Time x group	.67	4	.66
	Between subjects	Group	1.22	2	.30
DASS – Anxiety	Within subjects	Time	.49	2	.61
	Within subjects	Time x group	1.66	4	.02*
	Between subjects	Group	1.96	2	.14
DASS – Stress	Within subjects	Time	.14	2	.87
	Within subjects	Time x group	1.80	4	.13
	Between subjects	Group	2.61	2	.08
Strengths Knowledge Scale	Within subjects	Time	.44	2	.65
	Within subjects	Time x group	.21	4	.94
	Between subjects	Group	1.28	2	.28
Strengths Use Scale	Within subjects	Time	.10	2	.91
	Within subjects	Time x group	.43	4	.79
	Between subjects	Group	.75	2	.48
POPS – Autonomy	Within subjects	Time	.26	2	.77
	Within subjects	Time x group	.37	4	.83
	Between subjects	Group	1.06	2	.35
EPOCH – Engagement	Within subjects	Time	2.36	2	.10
	Within subjects	Time x group	4.30	4	<.01*
	Between subjects	Group	1.15	2	.32
EPOCH – Perseverance	Within subjects	Time	1.15	2	.32
	Within subjects	Time x group	3.22	4	.03*
	Between subjects	Group	2.40	2	.02*
EPOCH – Optimism	Within subjects	Time	.28	2	.76
	Within subjects	Time x group	2.25	4	.06
	Between subjects	Group	1.45	2	.23

EPOCH – Connectedness	Within subjects	Time	1.95	2	.14
	Within subjects	Time x group	2.57	4	.04*
	Between subjects	Group	.51	2	.060
EPOCH – Happiness	Within subjects	Time	1.85	2	.16
	Within subjects	Time x group	2.54	4	.04*
	Between subjects	Group	.22	2	.80
MSPSS – Significant Other	Within subjects	Time	.80	2	.45
	Within subjects	Time x group	1.45	4	.22
	Between subjects	Group	.23	2	.79
MSPSS – Family	Within subjects	Time	.44	2	.64
	Within subjects	Time x group	.65	4	.63
	Between subjects	Group	.27	2	.76
MSPSS – Friend	Within subjects	Time	1.01	2	.37
	Within subjects	Time x group	1.11	4	.35
	Between subjects	Group	.9	2	.92
SDQ – Prosocial	Within subjects	Time	3.44	2	.03*
	Within subjects	Time x group	1.67	4	.16
	Between subjects	Group	1.99	2	.14
SDQ – Peer Problems	Within subjects	Time	2.94	2	.054
	Within subjects	Time x group	1.04	4	.39
	Between subjects	Group	1.00	2	.37
Approaches to Happiness – Engagement	Within subjects	Time	.55	2	.58
	Within subjects	Time x group	2.12	4	.08
	Between subjects	Group	.13	2	.89
Approaches to Happiness – Pleasure	Within subjects	Time	1.13	2	.32
	Within subjects	Time x group	1.14	4	.34
	Between subjects	Group	.12	2	.89
Approaches to Happiness – Meaning	Within subjects	Time	.28	2	.76
	Within subjects	Time x group	2.96	4	.02*
	Between subjects	Group	.08	2	.92

* indicates a significant interaction at $p = .05$. Significant interactions are also highlighted in bold.

[†] *df*: degrees of freedom

Appendix D - Post-hoc result summary

Post-hoc comparisons between each group

Post-hoc comparisons between Times 1, 2, and 3 were conducted. These were done by analyzing individual interactions between specific groups, using an ANOVA. In these analyses, the difference in the mean of each outcome measure, per group, between Time 1 and Time 2 was determined (as well as the mean differences between Times 1 and 3, and Times 2 and 3), and then compared to each other group. For example, for the outcome measure PANAS PA, the mean of the control group decreased by 0.58 between Time 1 and Time 2, while the mean of the Heroes CC group increased by 4.13 over time. These changes in mean were compared between the two groups, and showed that there was a significant difference in this mean change over time between the control and Heroes CC groups ($p = 0.05$). Table 1 illustrates the statistically significant interactions between groups for each outcome that had shown a significant effect in the initial analyses when considering the groups across time. For instance, the table shows that for the outcome measure, Approaches to Happiness – Meaning, there were significant interactions between the control group and the secondary school workshops, and between the control group and Heroes CC. All listed interactions were significant at an alpha level of 0.05 level. There were no other statistically significant interactions.

Outcome measure	Con	SSW	H-RSC	H-CC
Approaches to Happiness – Meaning	SSW H-CC	Con		Con
Approaches to Happiness – Engagement	SSW	Con		
Student Satisfaction with Life Scale	H-CC			Con
PANAS PA	H-CC			Con
EPOCH - Engagement	SSW H-CC	H-RSC Con	SSW H-CC	Con H-RSC
EPOCH - Perseverance	H-CC		H-CC	Con H-RSC
EPOCH – Happiness		H-RSC	SSW	

Con: control group

H-RSC: Heroes Day RSC

SSW: secondary school workshops

H-CC: Heroes Day CC

Table 1: Post-hoc results comparing each group between Times 1 and 2

This table demonstrates that, among comparisons between individual groups, the most common interactions were between the control groups and the secondary school workshops, and between the control group and the Heroes Day CC group. This suggests that these particular treatments resulted in changes over time in a range of outcome measures. On the other hand, Heroes Day RSC did not differ significantly from the control group on any of these measures.

Table 2 illustrates the difference between groups at Times 3 compared to Time 1. Heroes Day CC results were not available for Time 3, so that group has been excluded from this analysis. There were fewer significant interactions for these two times than between Times 1 and 2, as according to the table. No other interactions were significant at $p = 0.05$.

Outcome measure	Con	SSW	H-RSC
CINSS – Competence		H-RSC	SSW
Approaches to Happiness – Meaning	SSW	Con	
EPOCH - Engagement	SSW	Con	

Con: control group

SSW: secondary school workshops

H-RSC: Heroes Day RSC

Table 2: Posthoc comparisons between groups at Times 1 and 3

In these interactions, the mean increased for all three outcome measures in the secondary school workshops between Time 1 and Time 3, while it decreased among the Heroes RSC group for CINSS – Competence, and the control group also saw a mean decrease for Approaches to Happiness – Meaning and EPOCH – Engagement.

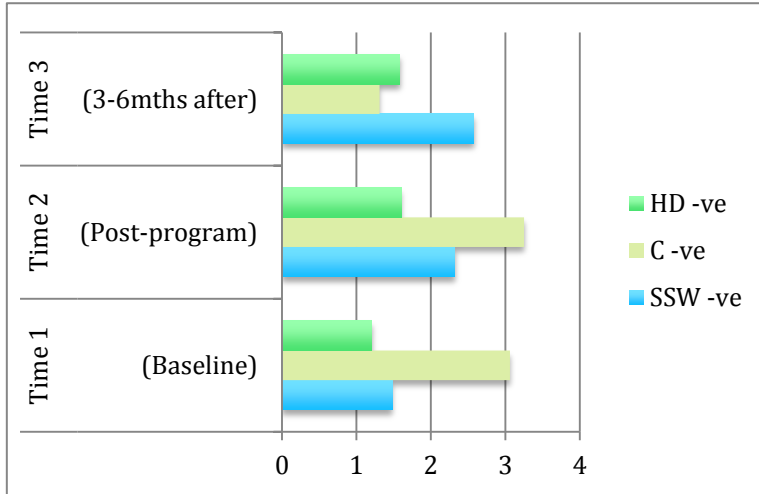
Between Times 2 and 3, the only significant interactions were in the outcome measure SDQ – Prosocial. In this measure, the secondary school workshops and the control group both differed from Heroes RSC (workshops: $p < 0.01$; control: $p = 0.02$). Heroes RSC experienced a larger mean decrease than the control group or the secondary school workshops.

Appendix E – Strategy use detail

Young people were also asked to report the types of strategies they utilized in their everyday, in response to both negative and positive events. Three types of strategies were differentiated: (1) those explicitly promoted by Reach, (2) other positive strategies and (3) negative strategies (see Box 4 for strategies).

Use of strategies to both negative and positive events were then compared across the Control, Heroes Day and Secondary School Workshops groups, across the 3 time-points of the study (Baseline, immediately after intervention and follow-up 3-6 months later). Due to the repeated nature of the data, and the small sample sizes, these data were analysed descriptively.

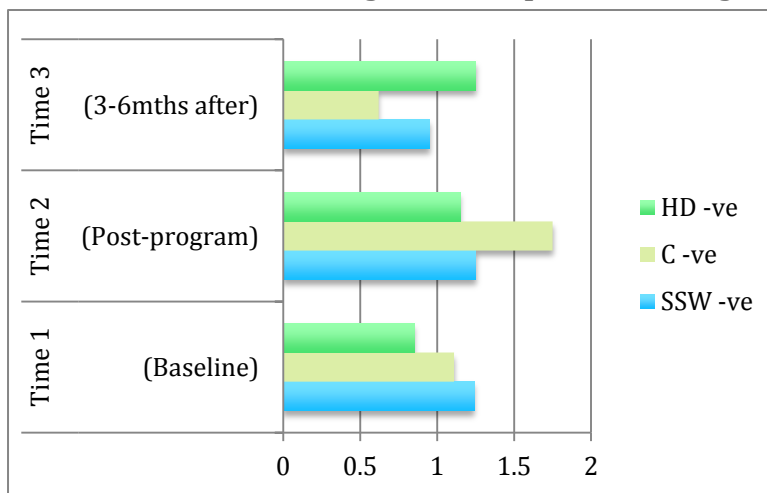
Use of “Reach strategies” in response to a negative event, across three groups



The use of Reach strategies in response to negative events reduced over time in the Control group.

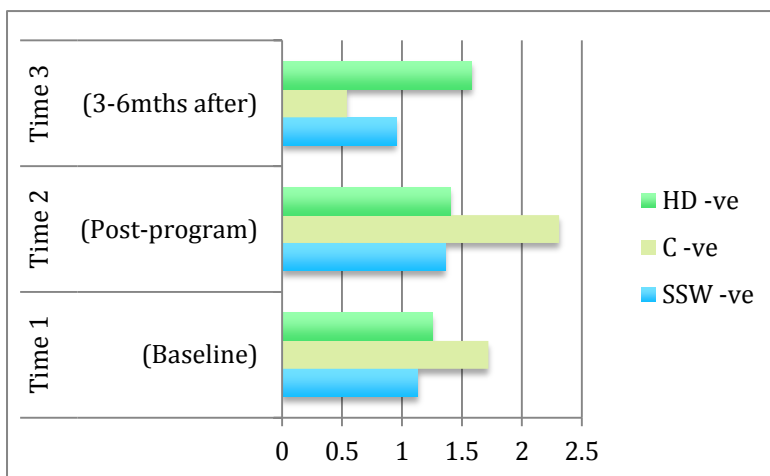
In contrast, use of Reach strategies increased following both Reach programs.

Use of “Positive strategies” in response to a negative event, across three groups



Participants in the Heroes Days also showed an increase in positive strategies over time. This was not present following the Secondary School workshops or in the controls.

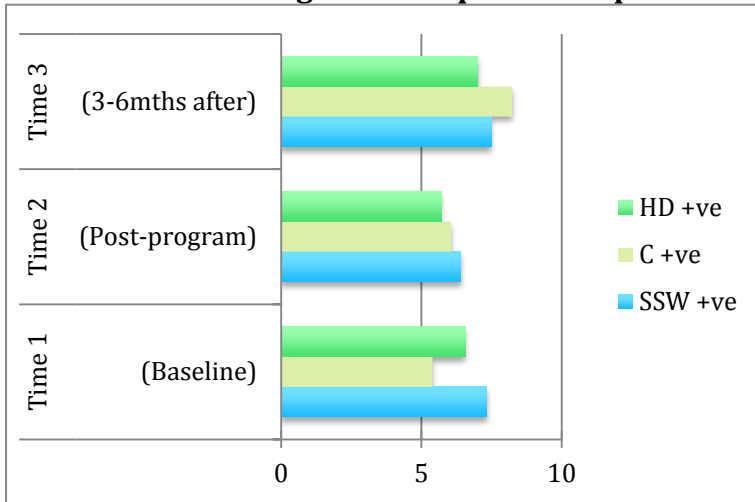
Use of “Negative strategies” in response to a negative event, across three groups



Unfortunately, participants in the Heroes Days also showed an increase in use of negative strategies. (This was again not observed in either the Secondary School workshop or control groups.)

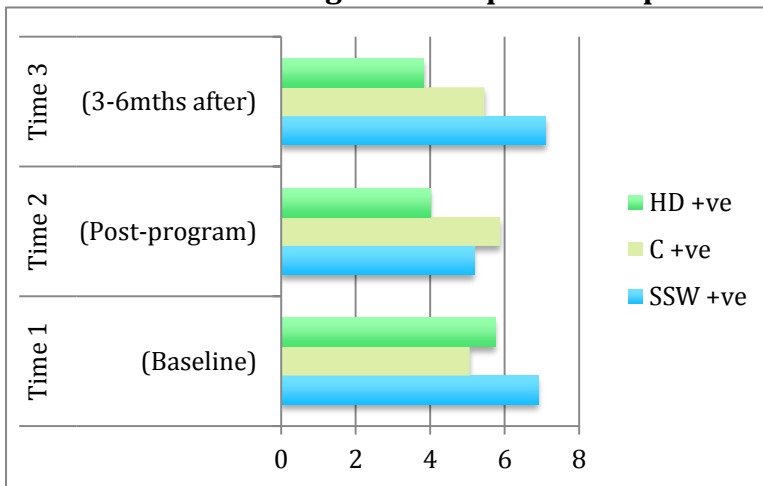
Figure E1: Change in strategy use in response to negative events for each group.

Use of “Reach strategies” in response to a positive event, across three groups



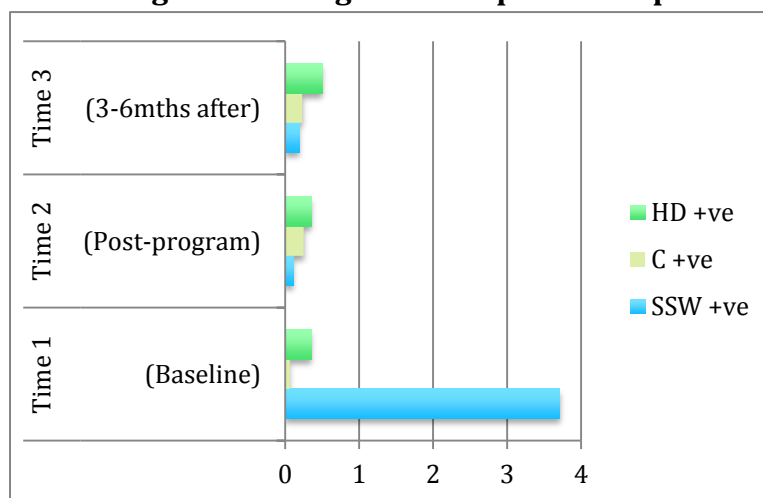
Use of Reach strategies in response to positive events was quite high – surprisingly, even at baseline and in the Control group. This is promising as it indicates that even without intervention, young people already utilize positive strategies promoted by Reach in response to positive events. Regardless of intervention (control or Reach program), usage of Reach strategies was maintained at this high level over time.

Use of “Positive strategies” in response to a positive event, across three groups



Similarly, use of positive strategies was generally high across all groups, although Heroes Day participants tended to utilize slightly fewer positive strategies following the program.

Use of “Negative strategies” in response to a positive event, across three groups



At baseline, participants in the Secondary School Workshops utilized substantially more negative strategies in response to positive events than other groups.

Encouragingly, this was substantially reduced following the Reach program.

Figure E2: Change in strategy use in response to positive events for each group.

Associations between Aggregate mood and Strategy Use

To explore whether use of various strategies was associated with reported mood, correlations were performed between aggregate mood ratings and total use of the 3 types of strategies. At baseline, there was no association between mood ratings and use of any of the 3 types of strategies in either of the Reach groups, as would be expected prior to the program. At Time 2, there was also no significant associations in either of the Reach groups.

However, at Time 3, there was a significant positive association between use of positive strategies and mood ratings for the Reach Secondary School Workshop group, $r=.393$, $p=.035$, $n=29$. This association was not present in the Control group (as can be seen in the much less steep line of association in the graph).

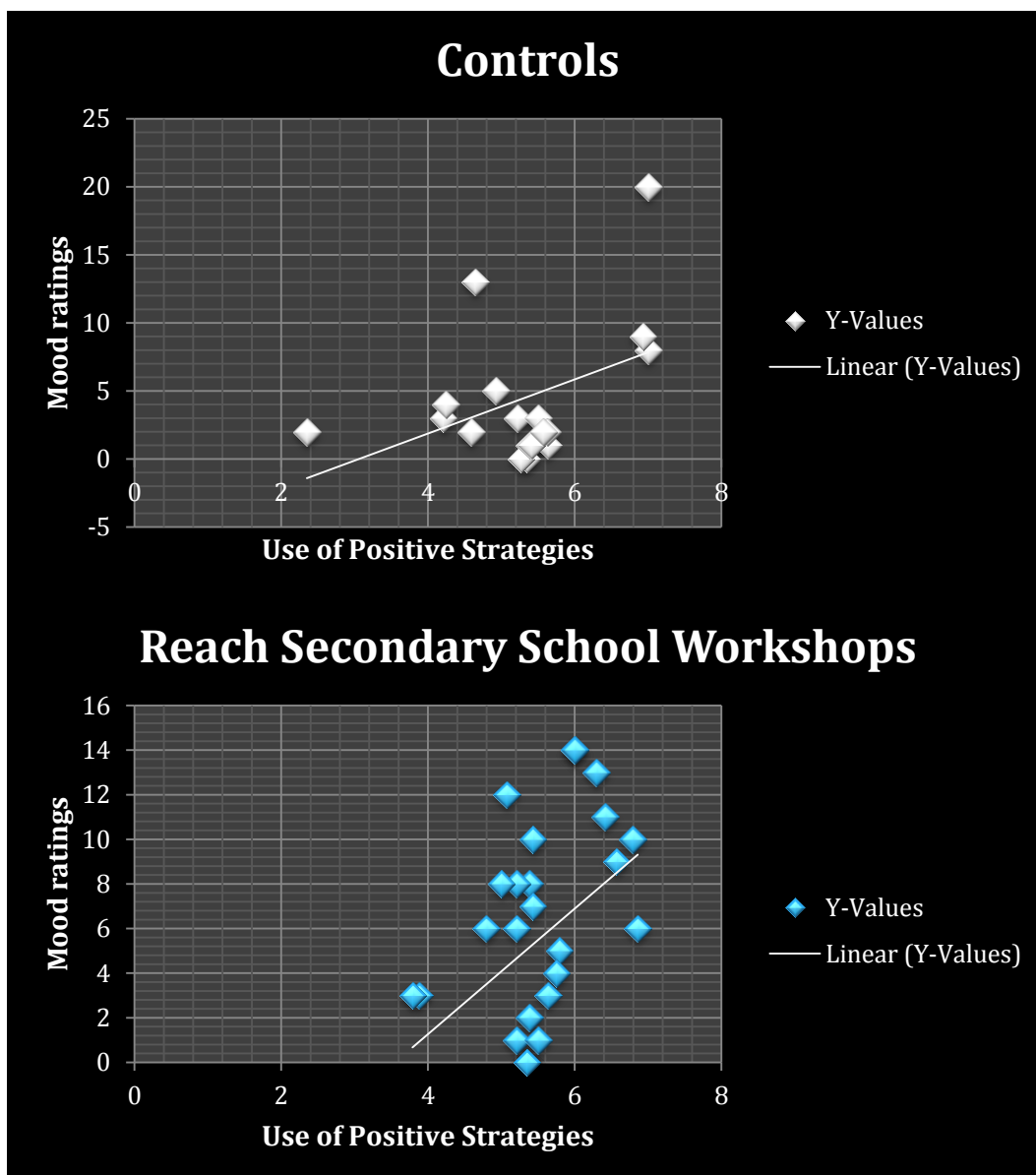


Figure E3: Relationship between use of positive strategies and mood change at Time 3.

This shows that young people who participated in the Reach Secondary School workshops reported more positive moods several months later that were associated with increased use of positive strategies. The absence of a similar effect in the Controls, or in the Secondary School Workshop group at baseline, suggests that these workshops are responsible for this effect. It is not clear why this effect was not present at Time 2 – immediately after the program, but it may be that effective translation of some of these strategies into everyday life in a way that has a real impact on mood levels takes some time. When positive strategies are utilized, these workshops may therefore be responsible for translating this strategy into improved well-being.

Disclaimer: The information in this booklet was correct at the time of publication. Monash University reserves the right to alter this information should the need arise. April 2013.

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