THE IMPACT OF STARS ON PEER MENTORS

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A report prepared for the New Zealand Lottery Grants Board

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ACKNOWLEDGEMENTS

EXECUTIVE SUMMARY

A study initiated in 2012 by FYD's Research and Evaluation team and an academic partner from the University of Auckland investigated the impact of the Stars Peer Mentoring programme on the Peer Mentors' development of life effectiveness skills and prosocial values

Questionnaires containing both closed and open-ended questions were distributed to mentors eight times between the January/February of 2013 (i.e. the beginning of the Stars programme) and September/October 2014 (i.e. one year after the completion of the Stars programme). However, only data from five time points were used in the final analyses because of low response rates to online surveys

The questionnaires asked the Peer Mentors to rate themselves on eight areas of life effectiveness, and on values associated with character, valuing diversity and empathy. The Peer Mentors were also asked to comment on their programme experiences (mid-way through and at the end of the programme) and the impact the programme had on their lives (six months and one year post-programme).

NCEA Achievement results were requested from schools. Mentors also reported on their academic achievement results and their educational, employment or training status in the questionnaires collected during the follow up period

Data Analyses revealed that:

- The Peer Mentors' social competence and character increased significantly from the beginning of the programme until the end of the programme and these increases were still evident one year after programme completion.
- While no significant changes were detected in the Peer Mentors' task leadership, intellectual flexibility and self-confidence during the programme, significant increases were found when assessing growth trajectories from the beginning of Stars to one year after programme completion.
- Increases in social competence, self-confidence, and intellectual flexibility, character, empathy and valuing diversity during the programme depended to a degree on the amount of sessions the mentors attended; mentors attending many sessions (over twenty) reported increases in social competence, intellectual flexibility, and self-confidence over the duration of the programme but those attending *few* sessions (less than 10) reported *increases* in character, empathy and valuing.
- Programme attendance also influenced the development of outcomes in the year following programme completion; in the follow up period Peer Mentors attending many sessions (over twenty) had sustained increases in intellectual flexibility and self-confidence and those attending few sessions (less than 10) showed significant declines in active initiative.
- The great majority of mentors who responded to the surveys expressed that the programme was a positive experience and more than 90% indicated that the programme had a positive influence on them in the year following programme completion.

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- The themes associated with positive experiences and impact aligned strongly with Positive Youth Development outcomes discussed in the research literature, including Connection (to people and places), Confidence and Competence (especially in interpersonal and leadership areas), Caring and Contribution (supporting younger peers and having an influence), and Character (responsibility and maturity).

- The strongest themes mid-way and at the end of the programme related to Connection, whereas at the end of the programme the most prevalent theme was Confidence and Competence.

- The most frequent challenges experienced by Peer Mentors were relational challenges, especially those associated with controlling difficult mentee behaviour and lack of mentee engagement in the group sessions.

- Many Peer Mentors also acknowledged challenges associated with overcoming their own personal inadequacies or anxieties (e.g. pushing past their comfort zones, stepping up and being a good leader); however, these challenges also reflect important opportunities for personal growth.

- On average, the level of Peer Mentor engagement in school at baseline was positively associated with social competence, task leadership, emotional control and active initiative.

- Having more positive adult role models at baseline was also associated with better life skills, including social competence, achievement, motivation, task leadership, emotional control and active initiative, and higher levels of character.

- Peer Mentors who had higher levels of parental support at baseline had higher self-confidence and those whose parents help others often valued diversity more.

- A distinguishing characteristic of Peer Mentors who returned to mentor for another year was the number of positive adult role models in their lives; returning mentors indicated they had more positive adult role models than other students.

- The descriptive profiles of NCEA achievement and educational/training and employment rates for Peer Mentors indicated higher than expected academic achievement and occupational status outcomes relative to national norms.

Despite efforts to obtain a comparison group of similar students who were not Peer Mentors, comparative between-group analyses could not be conducted because too few comparison students were retained over the duration of the study; this greatly limits the strength of the evidence regarding the true impact of the programme on Stars Peer mentors, as does the high attrition rate of study participants. It was notable that non-responders tended to be less committed to the programme than the respondents.

Feedback from current mentors, research participants, teachers and Stars programme staff obtained during the research dissemination sessions indicated that the findings aligned well with their personal experiences. A few suggestions for programme improvement were also offered, including more in-depth mentor training and a strong emphasis on ensuring mentors can commit to the programme throughout the year.

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The findings suggest that Stars is helpful in developing senior student social competence, leadership and confidence but a stronger training focus on values – empathy, commitment to the programme – and positive behaviour management strategies may enhance the positivity and impact of the experience for Peer Mentors.

In addition to generating research-based evidence to inform future programme development, the project was a rich evaluation capacity-building experience for FYD's junior Research & Evaluation team coordinators.

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INTRODUCTION

The body of evidence on youth volunteerism and service indicates that young people who engage with voluntary leadership opportunities within their schools and communities and are positively impacted by such experiences are more likely to become engaged citizens as adults (Yates & Youniss, 1996; Youniss, 2011). Accordingly, providing young people with opportunities to contribute whilst developing prosocial values and skills that will enable them to be more effective in the world is a critical part of cultivating a flourishing future society. We do not, however, know much about the impact of youth service experiences within the New Zealand context. A better understanding of this would help to elucidate strategies for involving more young people in these valuable experiences and ensuring that their experiences do promote their positive development.

Cross-age peer mentoring programmes, through which older youth provide mentoring support to their younger peers (Karcher, 2014), offer rich service experiences for older youth, as they require the development of authentic relationships and on-going contributions of support --factors recognised to enhance the impact of service experiences (Billig, 2000; Dymond, Renzaglia & Chun, 2007). Despite the fact that peer mentoring experiences can provide mutual benefits to mentees and mentors, most youth mentoring research focuses on mentees. Much less is known about the impact on mentors in general (Slaughter-Defoe, 2010), let alone the impact on mentors who are also peers. Furthermore, empirical studies demonstrate that mentee gains are contingent on the quality of support provided by their mentors (Parra, DuBois, Neville, Pugh-Lilly & Povinelli, 2002; Zand et al., 2009). It follows that the positivity and impact of the experience for mentors then also indirectly impacts the mentee recipients. Knowing more about how to cultivate positive and impactful experiences for mentors would thus valuably inform more effective mentoring services for mentors and mentees alike.

The following report presents the findings of a collaborative research project conducted by the Foundation for Youth Development (FYD)'s Research and Evaluation team and a University of Auckland academic. The project involved a quasi-experimental evaluation of Stars (a cross-age peer mentoring programme owned by FYD) that focused on the experiences of and impact on the senior student mentors. The aim of the project was to not only use the findings to directly inform further development of Stars for the benefit of the young people and communities the programme serves but to also contribute to the broader knowledge base on youth service experiences within peer mentoring contexts. The collaborative aspects of this Community-University research partnerships also generated benefits with respect to evaluation capacity building for FYD.

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RESEARCH BACKGROUND & RATIONALE

Youth Service and Positive Youth Development

The desired outcome of the nationwide positive youth development (PYD) approach advanced in the Youth Development Strategy Aotearoa (YDSA) is a country of engaged, empowered, connected, and contributing youth citizens who feel secure in their identities (Ministry of Youth Affairs, 2002). This essentially captures the notion of youth "thriving". Thriving, according to the 5 C's theory of positive youth development (PYD; Lerner et al., 2005), occurs when a young person exhibits Confidence, Competence (in academic, social, cognitive and vocational domains), Connection (to positive people and institutions), Character (moral integrity and respect for social and cultural norms), and Caring (or Compassion; sympathy and empathy for others, Lerner et al., 2005). Positive Contributions (the sixth C) to self, family, community and broader society are said to be more likely to arise when youth are supported to develop these five C's and empirical support for this relationship does exist (Lerner et al., 2005; Phelps et al., 2009). The reverse is also true; research on youth volunteerism and service indicates that youth contribution experiences can also engender the development of confidence, character (Billig, 2004; Conrad & Hedin, 1991, Yate & Youniss, 1996) competence (Billig, 2000, 2004; Nelson & Epstein, 2008), connection (Billig, 2000; Yates & Youniss, 1996) and caring (Billig, 2004, Conrad & Hedin, 1991; Lakin & Mahoney, 2006; Scales, Blyth, Berkas, & Kielsmeier, 2000; Yates & Youniss, 1996). What is more, involvement in service activities as a young person predicts continued volunteerism and other forms of civic engagement in adulthood (Beane, Turner, Jones & Lipka, 1981; Billig, 2000; Yates & Youniss, 1996, 1998; Youniss, 2011). Involving more young people in service experiences is thus one way we can grow the numbers of flourishing NZ youth who will become civically engaged adults, but little research on the experiences and impact of service for young NZers exists (Deane, 2012).

The international literature suggests that not all service experiences are the same with regards to promoting PYD. Previous reviews have also demonstrated that the effects tend to be small (Eyler, 2002). This has been attributed to the huge variety of service-learning experiences (Furco, 1996; McLellan & Youniss, 2003; Youniss, 2011) and the variable quality of programme implementation (Eyler, 2002). A one off experience is unlikely to produce the same impact as a long-term service commitment (McLellan & Youniss, 2003). Authentic engagement in meaningful activities that meet a genuine need, opportunities for youth voice and agency and ongoing reflection are factors that have been recognized to increase the impact of service experiences on young people's development (Billig, 2000; Dymond, Renzaglia & Chun, 2007). Programme dosage (the intensity and duration of the experience) is also acknowledged to have an important influence (Einfield & Collins, 2008; Scales, Benson, Roehlkepartain, Sesman & van Dulman, 2006; Scales et al., 2000; Scales & Roehlkepartain, 2005).

Cross-Age Peer Mentoring Programmes

If structured in a manner that incorporates the above elements (which they often do), cross-age peer mentoring programmes have the potential to enhance the positive development of the mentors while simultaneously benefitting the younger mentees. Karcher (2014) explains that cross-age peer mentoring programmes involve an older middle or high-school mentor supporting a mentee who is at least two years younger over a sustained period during which regular mentoring sessions are held. The sessions generally involve conversations and fun, structured activities with the purpose of fostering close relationships in addition to teaching skills or sharing information (this distinguishes

peer mentoring from peer tutoring or counselling). These programmes generally occur in schools and while most focus on one-to-one relationships, some use group mentoring models (which include one or a few mentors supporting a group of mentees). There is some but very limited evidence that cross-age peer mentoring programmes benefit the older youth mentors but as with the general mentoring literature, the majority of empirical studies have focused predominantly on benefits to mentees (Karcher, 2014).

Like other youth service experiences, the limited evidence base on mentoring effectiveness for mentors demonstrates that individual, programme and broader environmental characteristics interact to influence the development of positive outcomes for mentors, as well as their recruitment and retention. Furthermore, a qualitative inquiry into the failures of youth mentoring relationships demonstrated that mentors can sometimes be negatively impacted by their experiences in such programmes (Spencer, 2007). More evidence-based information is needed to understand for whom and under which conditions, mentors are more likely to stay committed and positively benefit from their experiences. Moreover, positive mentee outcomes are acknowledged to be contingent on the quality (Parra, DuBois, Neville, Pugh-Lilly & Povinelli, 2002; Zand et al., 2009) and length of the mentoring relationship (Grossman & Rhodes, 2002), which are largely influenced by the mentor's engagement in and experience of the relationship. Therefore, the more we learn about the benefits accrued by mentors and which mentors are more likely to be committed, engaged and return for a longer-term commitment to mentoring, the more we'll know about how to benefits both groups of young people. The limited evidence base of offers little guidance with respect to these knowledge gaps and we know even less about how to involve, enhance and retain young people in such service opportunities in the New Zealand context. FYD's Stars programme offers an opportunity to explore these issues.

The Stars Mentoring Programme

Stars is a Foundation for Youth Development (FYD) cross-age peer mentoring programme delivered in schools across 5 regions of New Zealand: South Auckland; West Auckland; Canterbury; South Waikato; and Wellington. FYD provides governance for its Community Partners (local trusts) to deliver Stars (and four other youth development programmes) within their local regions. The Stars programme is designed to help Year 9 students make a successful transition into secondary school. It also aims to strengthen the sense of community within a school by bringing younger and older students together through peer mentoring. Stars encourages Year 9 students to develop a sense of responsibility and connectedness to the school, their peers and their wider community through challenging and fun experiences in a supportive environment. It has three key activity components: the Stars Adventure Camp, the Community activities (a Community project and Community Adventure) and Peer Mentoring. Each component is described in more detail below.

The Adventure Camp

The Stars Camp Adventure camp is a 3-5 day residential camp that takes place at the beginning of the school year. On the Adventure Camp, Year 9 students undertake a series of outdoor and indoor experiential activities designed to develop confidence and life skills that can be transferred to their school and community environments. Students reflect on what they have learnt from each activity and consider how the can transfer the knowledge to different situations. Previous research has

shown that Stars adventure camps provide "an abundance of rich learning opportunities" (Noonan, Bullen & Farruggia, 2012, p.59). During the Adventure Camp the Year 9 students are supported by their Peer Mentors, teachers and the Stars Coordinator.

Although the core structure of Stars is more or less standardized across regions, FYD's Community Partners have the autonomy to modify the programme activities to suit their local context and can make modifications to the programme structure with FYD's approval if a strong case is made. For instance, in 2012, due to the difficulty of larger secondary schools locating a venue that could accommodate a large number of students, a variation to the Stars Adventure Camp was trialed in one High School. The non-residential Stars Activity Days modification consisted of a series of activities run over 3 days, at the school. The activities were led by professionally-trained Outdoor Facilitators and designed to help students to form prosocial relationships with others in the school community, and to develop communication, problem-solving, and team work skills.

Community Activities

The community component provides an opportunity for students to transfer the learning gained from the Adventure Camp to the community context. Year 9 students plan and deliver a Community Project designed to contribute to their community and the wellbeing of others. They also take part in a Community Adventure that is designed to help students to get know and connect to their community, and explore resources and the support available to them within their community. During the Community Activities the Year 9 students are supported by their Peer Mentors and the Stars Coordinator.

Peer Mentoring

Before the start of the school year, Year 12 and Year 13 students (Peer Mentors) are recruited, inducted, selected and trained to peer-mentor Year 9 students (mentees). The mentees are divided into small groups of 10-12 and then matched with a group of 3-4 Peer Mentors. The group meets for 20 weekly, 30 to 45 minute peer mentoring sessions, over three school terms. During the peer mentoring sessions, the Peer Mentors facilitates activities designed to develop life skills through experiential learning. Session topics include lessons on time and stress management, communication skills and relationships, goal-setting and other topics associated with youth health and well-being. The Stars Coordinators and teacher Group Leaders assist with the preparation and de-brief of the peer mentoring sessions but only become involved in delivery if a Peer Mentor asks for assistance. In addition to the group-based peer mentoring sessions, peer mentoring occurs throughout the Stars programme. Wherever possible, Peer Mentors are expected to encourage the Year 9's to develop pro-social relationships with their peers, and provide examples of positive mentoring and role modelling.

Stars Research

In addition to the rich learning opportunities offered by the Stars Adventure Camp, the findings of Noonan et al.'s, (2012) mixed method research study indicated that the Year 9 mentees in Stars schools report positive benefits associated with sense of school community, skills acquisition, relationship building and teamwork, and personal achievement. Previous FYD in-house evaluations to assess the effectiveness of the Stars programme also showed that the Peer Mentors gained from their participation in the mentoring. Thematic analysis of Peer Mentor responses indicated gains in leadership, confidence and friendships. The current study was developed to further investigate the proposed gains for the Peer Mentors. Ascertaining the impact of the Stars programme for the Peer Mentors was thought to be important because the mentors represent a group of youth who could potentially benefit a great deal from their mentor training experiences and their contribution to their school community. At the same time, it could be that extensive involvement in volunteer activities in the last years of secondary school compete with time spent on personal academic responsibilities and thus could interfere with academic achievement at a time when these students are on the cusp of a critical transition to further education or employment. Thus, determining whether Stars functions to aid or impede positive development, including the academic success of the senior student mentors has important implications for future programme development initiatives. In addition, investigating the individual and programme characteristics that are associated with better outcomes for Stars mentors and their retention in the programme in subsequent years could also offer important insights.

STUDY AIMS & OBJECTIVES

Given the rationale provided above, the overall aims of the project were therefore to:

- Evaluate the experiences and overall impact of Stars on the positive development of senior student peer mentors.
- Investigate the personal and programme factors that influence positive mentor outcomes.
- Identify the mentor characteristics associated with a longer-term mentor commitment.

These aims gave rise to six research objectives:

Objective 1: Examine the developmental trajectories of eight domains of life effectiveness and three prosocial values (constructs described below) for the Stars Peer Mentors from baseline to the end of the programme and in the year following programme completion.

Objective 2: Examine which personal factors (e.g. age, ethnicity, school engagement, extracurricular involvement, parental support, adult role models) are associated with greater life effectiveness and stronger prosocial values, and how these factors influence the developmental trajectories of these outcomes.

Objective 3: Investigate how programme dosage and mentor commitment influences the development of life effectiveness skills and prosocial values.

Objective 4: Compare the academic achievement and occupational profiles of mentors to NZ youth population norms one year after programme completion.

Objective 5: Compare the characteristics of mentors who return to mentor for another year to new mentors and other senior students.

Objective 6: Identify common themes associated with positive and challenging mentor experiences during the programme, and programme influence in the year following programme completion.

METHODS

Design

A mixed-method evaluation design was employed for this study. Quantitative self-report data on life effectiveness skills, prosocial values and other individual characteristics, and qualitative self-reports of programme experiences were collected with questionnaires. Additional data on mentor attendance was collected from Stars Coordinators and NCEA results were requested from the participating schools (if consent from the student participant was provided). Details of the procedure and measures are provided in the sections to follow.

A quasi-experimental one-group repeated measures evaluation design with non-equivalent dependent variables guided the collection of the standardised quantitative data. Quasi-experimental evaluation designs, like randomized experimental designs, attempt to test hypotheses about cause and effect relationships. Evidently, in programme evaluation, the cause and effect relationship(s) of interest is the programme (or treatment) and outcome(s) relationship(s). The objective with both experimental and quasi-experimental programme evaluation designs is thus to determine if the effect (desired outcomes) can be attributed to the programme (cause). To make reasonable conclusions about programme effects, three basic conditions must be met. One must demonstrate that: 1) the cause occurred before the effect; 2) a relationship between cause and effect exists; and 3) alternative explanations for the relationship are implausible (Shadish, Cook & Campbell, 2002). Whereas randomised controlled evaluation design can largely meet these conditions (and thus eliminate a large degree of bias with regards to cause and effect conclusions) through the random assignment process, quasi-experimental designs require a number of other design controls to reduce the threats to cause and effect conclusions.

A randomised experimental design was deemed inappropriate for the current project because of pragmatic and ethical concerns identified in the consultation phase of the project. Each site used different processes to select Peer Mentors; at some sites any mentor who expressed an interest could participate, whereas clear criteria were used to select what programme and school personnel deemed to be the most suitable mentors at other sites (sometimes this included academic achievement criteria to ensure the mentoring would not compromise their studies). Furthermore, there were few sites where the interest in mentoring exceeded the demand thus random assignment of individuals in the pool of interested and eligible mentors would have greatly reduced the total number of mentors in the programme. It was felt that imposing a randomised experimental design in this situation would have compromised the quality of programme delivery and the autonomy of the Community Partner and associated school to determine selection processes that would best meet their needs.

To increase the likelihood that the changes observed in the outcomes measured could be attributed to programme effects using a quasi-experimental design, a number of other strategies were employed to mitigate the bias associated with the absence of a randomised control group as recommended by Shadish et al. (2002):

- The outcomes of interest (life effectiveness skills and positive values) were measured multiple times with the first measure taken at the beginning of the programme (within a month of programme start) and the final measure one year after programme completion enabling longitudinal assessment of the proposed cause and effects.

- Non-equivalent dependent variables were also identified and used to guide research predictions. This involved measuring developmental outcomes that were not expected to be impacted by Stars and comparing the trajectories of these to those that were expected to be impacted upon. This helps to account for bias associated with confounds such as normal maturation and social desirability bias because one can assess whether the hypothesized trajectories are supported.

- Other potentially confounding variables representing other theoretical threats to cause and effect conclusions (i.e. selection, history, maturation, and interaction effects) were identified, measured and adjusted for in the statistical analysis allowing the assessment of change independent of other theoretical predictors of life skill and prosocial values outcomes.

The qualitative data on programme experiences and impact collected at four different time points (during and after the programme) provided additional sources of information with which to triangulate programme effects. The initial design also included recruitment of control participants who were retrospectively matched to peer mentors with similar characteristics using propensity score matching analysis (see Lanza, Moore & Butera, 2013). This would have further strengthened the validity of the conclusions about programme impact by further mitigating the selection bias associated with those who volunteer to mentor. Unfortunately, too few control participants were retained in the study rendering any between-group analyses meaningless. This and other study limitations are taken up in the discussion.

As one aim of the project was to build FYD's evaluation capacity, particularly with respect to the two junior Research Unit members, the University-FYD partnership was entirely collaborative with the project team consisting of the University of Auckland academic staff member and three members from FYD's Research and Evaluation team. Decisions with regards to the evaluation design and measures were determined together, both parties were involved in the data collection process, analyses of the quantitative data were conducted by the academic staff member but the process and findings were jointly reviewed and the qualitative data were collectively analysed. Ethical approval for the project was obtained from the University of Auckland Human Participants Ethics Committee.

Procedure

Consultation Process

After a preliminary design was conceptualised, members of the research team initiated a consultation process with several of the Programme Directors, Stars Coordinators, and Teacher Liaisons in the Greater Auckland region to ascertain interest and to discuss any unforeseen challenges and practical constraints associated with the project. The intention was to ensure that the project would not be too burdensome on school or programme staff nor disruptive to their on-going activities. There was general agreement that a focus on mentor outcomes would be valuable and that the suggested approach (an easily administered questionnaire distributed to participants at the school site only a few times) would not create difficulties for the staff. Those consulted also agreed that the proposed Life Effectiveness Questionnaire (Neill, Marsh, & Richards, 2003) would capture outcomes of relevance to the programme. It was also determined at this point that a randomised controlled trial evaluation would be problematic (as described above).

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Pilot Process

In late 2012, the researchers visited a group of current Peer Mentors from a South Auckland school and invited them to complete the Life Effectiveness Questionnaire to provide feedback on the relevance and clarity of questions and the length of time required for completion. The feedback provided indicated that it the questionnaire was suitable for the target population and the purposes of the study.

The Peer Mentors were then asked to work in small groups to rank the eight domains of life effectiveness in order of programme impact (i.e. the outcome thought to be most affected by participation as a Stars mentor was ranked 1 and the least likely to be affected was ranked 8). A total of 13 groups (of 5-8 students) completed the ranking exercise. Analysis of the ranks indicated that the Peer Mentor respondents felt that the programme would have the strongest impact on Self Confidence, followed by Task Leadership. The lowest rankings were generally attributed to Time Management and then Achievement Motivation. The rankings for the other outcomes were variable but tended to be moderate. This enabled the identification of non-equivalent dependent outcomes to guide study predictions. As a result, it was hypothesized that positive changes would be observed in the developmental trajectories of self-confidence and task leadership, over and above any changes in Time Management or Achievement Motivation.

Following the consultation process, FYD encouraged the inclusion of additional questions pertaining to the Five C's theory as this theoretical framework strongly informs all FYD programmes. As a consequence, additional questions about Character and Caring (two of the 5 C's) were included to supplement the questions about Confidence and Competence already captured in the Life Effectiveness Questionnaire. The subscales for Character and Caring were obtained from the Institute for Applied Research in Youth Development's (2008) measure of Positive Youth Development which is described in Lerner et al.'s 2005 publication (no permission is required to use the measure). Permission to use 30 items from the Search Institute ®'s Profiles of Student Life: Attitudes and Behaviors (PSL-AB) survey was also granted. These represent theoretical predictors of PYD which were included as covariates to control for confounds in the analyses. Details of the measures are provided next.

Measures

Quantitative Programme Outcomes

Neill, Marsh, & Richards (2003) Life Effectiveness Questionnaire (LEQ) measures eight domains of life effectiveness: time management, social competence, achievement motivation, intellectual flexibility, task leadership, emotional control, active initiative, and self-confidence. This questionnaire was initially developed to evaluate the impact of youth adventure programmes and can be utilized to evaluate various youth programming initiatives. It has also been demonstrated to be psychometrically sound (see Neill, 2008) and is publicly available at http://www.wilderdom.com/leq.html. Each of the 8 domains are measured with a 3-item subscale; thus the total measure is 24 items. Responses to each item are provided on an 8-point Likert scale varying from 1 (FALSE – not like me) to 8 (TRUE – like me).

Three Prosocial Values (Character, Valuing diversity and Empathy) which represent dimensions of Caring and Character in the Institute for Applied Research in Youth Development's (2008) measure of Positive Youth development were also included as outcomes. The Caring scale is a 9-item measure

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created from previously existing measures of empathy (the Eisenberg Sympathy Scale and the Empathic Concern Subscale of the Interpersonal Reactivity Index; Institute for Applied Research in Youth Development, 2008). The measure requires a response to 9 statements in relation to the question "How well does each of these statements describe you?" Reponses are provided on a 4-point Likert scale varying from 1 (Not Well) to 4 (Very Well). This was considered to be a measure of Empathy for the purposes of this study. The Character scale in this measure consists of 4 subscales measuring social conscience, values diversity, conduct behavior, and personal values. In the interests of keeping the questionnaire to a reasonable length and focusing on areas of particular relevance to the programme, 3 items from the 4-item values diversity subscale (called Valuing Diversity in this study) were selected as these required the same response options on a Likert scale from 1 (Not Like Me) to 4 (Very Much Like Me), along with the 5-item personal values subscale (called Character in this study) with response options from 1 (Not Important) to 4 (Important). The valuing diversity and personal values subscales from the Institute for Applied Research in Youth Development's measure was borrowed from the Search Institute ®'s (2012) PSL-AB survey. Permission to use these items in this study was also obtained from the Search Institute®.

A summary of the outcomes measured in the questionnaire (included at each time point) are described in Table 1 below:

Table 1. Outcomes measured in the Stars Peer Mentor evaluation questionnaires.

Life Effectiveness Area	Description
Time Management	Making the best use of your time *Example: I plan and use my time efficiently*
Social Competence	How able you feel in social situations *Example: I communicate well with people*
Achievement Motivation	How motivated you are to do well and to put in the effort you need to do well *Example: When working on a project, I do my best to get the details right*
Intellectual Flexibility	Being able to change the way you think and use new information as it becomes available to you, such as when a situation suddenly changes or someone tells you about a different way to look at a situation *Example: I change my thinking or opinions easily if there is a better idea*
Task Leadership	How well you lead other people, especially when you need to get something done *Example: As a leader I motivate other people when tasks need to be done*
Emotional Control	Being able to keep control of your emotions when you find yourself in a stressful situation *Example: I stay calm and overcome anxiety in new or changing situations*
Active Initiative	Getting actively involved in the things that need doing *Example: I like to be busy and actively involved in things*
Self Confidence	Having confidence in your abilities, knowing that you can do what you need so that things work out well *Example: I know I have the ability to do anything I want to*
Character	Your belief in the importance of values associated with honesty, responsibility, and integrity Example: *It is important to do what is right, even if my friends make fun of me.*
Valuing Diversity	You respect, appreciate and desire to be with people from cultural backgrounds different to your own Example: *How would someone who knows you well rate you with regards to respecting the values and beliefs of people who are of a different ethnicity than you are.*
Empathy	Expressing concern and empathy towards others' misfortune *Example: When I see someone being picked on, I feel sorry for them.*

Academic Achievement and Occupational Status - In addition to the above outcomes, the six months-post-programme and one year post-programme follow up questionnaires included questions about NCEA achievement (Achievement at Level 1, 2, 3 and University Entrance – Yes or No) and the mentors' Occupational Status (the question included categorical options from which one or more could be ticked: I am at school; I am in full time further education or training; I am in full time employment; I am in part-time employment; I am in part time further education or training; I am looking for further education or training; I am looking for employment; or I am unemployed and not looking for further education/training or employment). Participants were also asked if they were restricted in any way from further education/training or employment and could provide further

details about the type of educational course they were involved in (University, Institute of Technology/Polytechnic; College of Education; Wananga; Industry or Vocational training; Youth Training).

School Reported Academic Achievement- NCEA (National Certificate of Educational Achievement) results (i.e. Successful achievement of Level 1, 2, 3 NCEA Certificates and University Entrance) as of January 2015 were also requested directly from the five participating schools for the mentors who consented to allowing the research team third party access to their results.

Predictors of Positive Youth Development

To adjust for theoretically relevant covariate predictors of youth development as identified in the Search Institute's Developmental Assets framework and associated research (see Scales, Benson, Leffert et al., 2000; Scales, Benson, Roehlkepartain, et al., 2006) and to assess if these variables predicted positive outcomes in general as well as whether they influenced increases in the outcomes over time, additional questions were included in the baseline questionnaire:

- **Parental Support** (feeling loved and supported) was measured with a five items requiring responses on a five point Likert scales (1 = strongly disagree to 5 = strongly agree)
- **Positive Parental Role Modelling** (parents often help others) was measured with one item requiring a response on a five point Likert scale (1 = strongly disagree to 5 = strongly agree)
- **Positive Adult Role Models** (number of adults well known to young person who helps others often) was measured with one item requiring a response on a five point Likert scale (0 = 0 to 5 = 5 or more)
- **Negative Adult Role Models** (number of adults well known to young person who is involved in wrong or unsafe things) was measured with one item requiring a response on a five point Likert scale (0 = 0 to 5 = 5 or more)
- **School Engagement** (level of school boredom and lack of preparedness to learn) was measured with four items requiring responses on a three point Likert scale (1 = usually to 3 = never)
- **Extracurricular Involvement** consisted of a combined measure of four individual items asking about weekly involvement in sports activities/clubs, non-sport school organisations or clubs, community organisations or clubs, and activities or programmes offered by religious organizations). Each item required a response on six point Likert scale (0 = 0 hours to 6 = 11 or more hours)

All measures were obtained from the Search Institute ®'s PSL-AB survey after receiving permission for their inclusion.

Construct Validity and Reliability

The psychometric properties (unidimensionality and internal consistency) of any construct measured by multiple questionnaire items were assessed with the current sample at each relevant time point. In general, the scales had good construct validity and reliability (Chronbach α's was usually ≥ 0.70 as recommended). When the results provided both cross-sectional and longitudinal support for an internally consistent, unidimensional construct, the items were aggregated into a composite variable by calculating the mean score. For a few measures (e.g. intellectual flexibility, task leadership and empathy), the validity and reliability was improved after some of the original items were removed thus the mean scores were based on fewer items than the original constructs. For others (e.g.

Valuing Diversity), reliability was not improved with any scale modifications thus the original items were retained. See Appendix A for more details.

Programme Dosage & Commitment

Stars Programme Coordinators are required to keep track of mentor attendance at each session. Mentor attendance records for each school term were obtained directly from Stars Coordinators. The total number of sessions attended (dosage) and percentage of available sessions attended (commitment) were calculated for each mentor as each school had different total numbers of sessions.

Demographic Characteristics

Participants were also asked to indicate their gender, age, one or more ethnicity (NZ Māori, Tokelauan, Fijian, Niuean, Tongan, Cook Islands Māori, Samoan, Other Pacific Islands, NZ European/Pakeha, Other European, South-East Asian, Indian, Chinese, Other Asian, Other), and length of experience mentoring. The latter responses were used to derive mentor status (new or returning).

Qualitative Responses

The mid and end or programme surveys also included three open-ended questions about the general Stars programme experience, the highlights and challenges. The six months and one year follow up questionnaires include one question asking participants to reflect on their Stars experience and to comment on the influence the programme had had on them.

Programme Site Selection

At the time the project was initiated, seven schools were enrolled in the Stars mentoring programme and five of the schools were purposively chosen for the project. The selected Stars schools were chosen to ensure a mix of ethnicity, school size, and new and established Stars programmes. The research team also wanted to ensure that a school from every Stars region was included.

In regions that were running more than one Stars programme, only one of the Stars schools was included as the research team did not want to overburden the Community Partners who were responsible for coordinating the programmes. Therefore, one school was excluded in two regions, one of the schools at the request of the Community Partner as it has a very high school roll, and one because there was some uncertainty as to whether the Stars programme would continue. Both Stars schools in another region were included as the region's Community Partner was responsible for only one of the Stars schools (FYD's National Support Office was responsible for the coordination of the other school). This also ensured that the project included both the longest running and newest programme, and the schools with the smallest and largest school rolls.

In 2013, the decile ratings for each of the five participating schools was either 2 or 3 and school rolls ranged from 193 to 1913 students. Four of the five schools were co-educational; the fifth had an all-female student body. All schools were ethnically diverse with the majority of students identifying as Pasifika for four of the five schools (47% to 87% of the school population) and Māori forming the majority for the other (57%). The length of time the Stars programme had been running in each of the schools ranged from two to eleven years.[1]

Data Collection

Early in 2013, the research team visited each of the five schools to invite students to participate and to distribute participant information sheets and consent forms. Some students were under 16 years of age, thus parent/caregiver information sheets and consent forms and participant assent forms were distributed to these students.

The researchers returned to the schools shortly after the initial visit to collect baseline data. This was the longest questionnaire and consisted of 77 standardised questions. Questionnaire completion time ranged from 5 (for the shortest only questionnaire) to 30 minutes (for the baseline questionnaire and those requiring open-ended responses).

Half way through the programme (July 2013), most of the participants attended a special visit to the University of Auckland to meet other students involved in the project, participate in a brief research workshop and complete the mid-programme questionnaire. The researchers travelled to the Wellington-based school to collect the mid-programme data and provide a research update.

At the end of September/beginning of October (2013), the research team again travelled to each school to collect the End of Programme data. Participants were also invited to extend their participation in the project for another year at this point.

The six month follow up survey was administered online and the researchers travelled to the schools or organised meeting places in a central community location in each of the five regions (depending on the Stars Coordinators and the participants suggestions) to collect the one year post-programme data as many of the participants had left school at this point. If any participants could not attend the

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[1] *Individual school profiles are not provided to reduce the likelihood of school identifiability.*

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data collection sessions in person, they were given the option to complete the survey online or via post.

Online questionnaires were also sent to students at three other times during the programme (two between baseline and mid-programme and one between mid and end of programme) but the response rates at these points were very low thus a decision was made not to include these in the final analyses.

As mentioned above, other students (non-mentors) from the participating schools were invited to join the study with the intention of matching these students to peer mentors using propensity scores derived from their baseline data for the purposes of between group (programme vs. control group) analyses. Unfortunately, few control group students were retained in subsequent data collection time points thus comparisons were not meaningful and these participants were removed from the final analyses.

Ethical Protocols

During the baseline data collection, all participants created their own personal code to be used as a unique identifier on the questionnaire instead of their names to ensure that individuals could not be identified but could be linked to their subsequent data. Participants' provided their personal code, names and contact details to one of the research team members who created a password-encrypted data file of personal information only accessible to the research team. All hard copy information was kept securely stored with data separate from any identifying information. Participants were provided with kai at each face to face data collection session and were provided with a $20 gift voucher as compensation for their continued participation in the project mid-way, at the end of the programme and one year post-programme. Draws at each school for an additional voucher were held to incentivise participation at the beginning of the project and one draw for a mini iPad was also held to encourage continued participation in the project after programme completion.

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Respondents

According to programme records, a total of 235 peer mentors participated in the 2013 deliveries of the programme at the five participating schools and 199 mentors (85%) expressed interest in participating in the study. At baseline, 176 of these mentors consented (or assented and provided parental consent) to participate in the study and completed the initial questionnaire. At the mid-programme data collection point, 112 mentors responded to the survey. This included an additional 21 mentors who were allowed to join because the provided consent at this point. At the end of the programme, 108 completed the questionnaire (representing 46% of the mentor population for these schools). Consent/assent to extend their participation through the follow up period (until one year post-programme) was sought at the End of Programme data collection and 85 mentors decided to continue in the project at this point. However, only 62 and 59 completed the six months and one year post-programme questionnaires respectively (representing about one quarter of the total peer mentor population). Table 2 provides an overview of the mentors' demographic characteristics at each time point.

Table 2. Mentor Demographic Characteristics by Data Collection Time Point (Percentage based on those Providing Responses to Demographic Items)

Demographic Variable	Baseline	Mid-Programme	End of Programme	Six months Post-Programme	One Year Post-Programme
Male	36%	36%	36.5%	30%	30%
Female	64%	64%	63.5%	70%	70%
European (NZ or Other)	32%	36%	40%	43%	43%
NZ Māori	24%	26%	26%	19%	19%
Pasifika	50%	47%	48%	53%	53%
Asian	33%	37%	34%	28%	28%
Year 12	49%	50%	49%	77%	77%
Year 13	43%	39%	40%	15%	15%
Returning Mentor	30%	29%	32%	15%	15%
New Mentor	70%	71%	68%	85%	85%

Because several mentors joined the study mid-way through the programme, they were not included in the quantitative analyses of the life skill and values trajectories due to their missing baseline data. As a result, the sample size for the quantitative analyses at each cross-sectional time point was 175 at baseline, 99 at mid and end of programme, and 48 for the six months and one year post-programme questionnaires. With regards to the open-ended questions, 119 mentors responded at mid-programme, 103 at the end of the programme, 61 six months post-programme and 56 one year post-programme.

The characteristics of mentors responding vs not responding to surveys at each point following baseline collection were compared using *t*-tests. The results of these analyses indicated that when comparing baseline characteristics and programme attendance records, the mentors responding at the mid-programme time point attended more mentoring sessions and had fewer negative adult role models in their lives compared to mentors who did not respond at this time point. Mentors responding at the end of the programme also attended more mentoring sessions than those who did not respond at the end of the programme. They also volunteered more in the community and this group and were more likely to be European. Mentors responding at six months post-programme attend more mentoring sessions and were more likely to be in Year 12 relative to non-respondents. Finally, those responding at one year post-programme differed from those not responding at this time point in that they attended more mentoring sessions, were more likely to be European and in Year 12. The impact of attrition on our conclusions is addressed when discussing the programme limitations.

As explained above, the control group participants were not included in the analyses of outcomes due to poor retention in the study over time. By the final time point only 10 control group participants remained and only three of these individuals could be matched to a Peer Mentor using a propensity score - for the purposes of between-group comparisons. Control participants were, however, included in the analyses comparing the characteristics of returning mentors to other students. Eighty control students expressed interest in participating in the study; however, only 68 of these students returned a consent or assent form and completed the baseline questionnaire. Of the 68, 24 were male and 41 were female (3 individuals did not identify their gender). Twenty identified as European (NZ or Other); 12 as NZ Māori, 37 as Pasifika, and 16 as Asian. Most (94%) were in Year 12 or 13.

Analysis

Quantitative Data

Developmental Trajectories

Descriptive statistics (means and standard deviations) were calculated for the baseline levels of each predictor variable and each life skills and values outcome at each of the five time points (baseline, mid-programme, end of programme, six months post-programme and one year post-programme). These were first calculated for all those who responded at each cross-sectional time point. Descriptives were then calculated for those who consistently responded at each time point, as this enabled an investigation of longitudinal trajectories. This was first calculated for individuals who responded to all three time points over the duration of the programme (n = 75) and then for those who responded to all five time points from the beginning of the programme to one year post-programme (n = 31). IBM SPSS 22 software was used for these analyses. (See Appendix B for these details).

As the data were hierarchical in nature, with repeated measures nested within individual participants who were nested in five different schools, multilevel modeling was then used to analyse the individual trajectories of life skill and prosocial values development over the duration of the programme (baseline to end of programme) and from the beginning of the programme to one year

after the completion of the 2013 Stars deliveries (baseline to one year post-programme). HLM7 software was used for these analyses.

Multi-level modelling is preferred to other general linear modelling techniques (e.g. ANCOVA or standard multiple regression) when data are hierarchical because this type of analysis adjusts for the dependence in the data arising from the nested data structure. This type of analysis is also ideal for ascertaining the influence of predictors or moderators across different levels of analysis (Hox, 2002). For instance, estimating the influence of individual-level factors (e.g. gender) on the developmental trajectories of various outcomes. Multilevel modeling also has advantages in terms of dealing with the missing observations that are commonly found in longitudinal datasets. Instead of deleting participants from analyses when longitudinal data are missing at any time point, the estimates for the overall growth rates are based on all information available for all participants included; however, estimates are also weighted by the reliability of the estimates for the individual trajectories (Field, 2009). The various advantages of multi-level modelling essentially mean that more accurate estimates of effects are produced in comparison to more traditional statistical techniques.

Growth models for each outcome (i.e. the eight life effectiveness skills and three prosocial values) were first estimated using multilevel models with time as the predictor at level 1 (Time was coded as 0 = Baseline, 1 = Mid-Programme, 2 = End of Programme, 3 = Six Months Post-Programme and 4 = One Year Post-Programme). The growth models for programme duration effects (baseline, mid-programme and end of programme) were estimated independently from the growth models for the five time points from baseline to one year post-programme. The growth models were then assessed after independently controlling for each of the potentially confounding covariates (i.e. theoretical predictors of positive outcomes) and moderating variables (interaction effects which indicate that the rate of the developmental trajectories depend on another variable) entered at level 2 (the individual person level). Appendix C provides the regression weights and indicates the significant predictors for each of the multilevel regression models for the three time points of data collection over the duration of the programme and the five time points of data collection from baseline to one year post-programme. When multiple predictors and/or interaction effects were significant for any outcome, all of the significant variables were then simultaneously entered into a multi-level regression model to determine which variable and interactions continued to uniquely predict growth in outcomes over time.

Returning Mentor Profiles

Descriptive statistics (means and standard deviations) of returning mentors, new mentors and other senior students were first calculated (see Appendix B). To determine the characteristics that distinguished returning mentors from other students (both new mentors and students who consented to participate in the study as control participants, one way ANOVAs were conducted in SPSS 22 to establish between group differences (returning mentors vs. other students) on each variable of interest (predictors and outcomes) independently. Then a multi-level logistic regression was conducted using HLM7 software (to account for the fact that participants were nested within five different schools). This allows the prediction of a categorical outcome (returning mentor or not) from a number of relevant independent variables (in our case this included demographic variables, baseline levels of the life skills and values outcomes and the other predictors of PYD described above).

The initial intention of collecting data on NCEA results and the participants' occupational status during the follow up period was to conduct between-group comparisons of mentors and matched control participants. These comparisons could not be conducted due to the poor retention of control participants as discussed previously, thus only descriptive profiles (% of mentors attaining NCEA Level 1, 2, 3 and University Entrance and those engaged in education, training or employment) are provided to enable general comparisons with population norms. NCEA results for the Peer Mentor sample were compared to the achievement rates by school decile band published in the latest New Zealand Qualifications Authority (NZQA) annual report (NZQA, 2014).

Unfortunately, only two schools were able to provide most recent NCEA results which were made available to students in early 2015 after the final data collection point. The students from the other three schools who were working towards attaining NCEA Level 3 and University Entrance in the final year of school could not comment on their achievement on the one year post-programme survey because they had not yet received their final marks thus they are not included in the sample for the NCEA 3 and University Entrance rates. At the same time, a few students who were allowed to be Peer Mentors in Year 10 and 11 would not yet have received their results for NCEA Level 2 achievement at this time point, thus the sample size for this outcome is based only on the data available for those who would have completed and received their NCEA Level 2 results by the final data collection time point. As all students would have completed Year 11 by the time the final questionnaire had been distributed, all students whose results were available either self-reported (for three schools) or reported by the school (one school for NCEA Level 1) are provided.

Qualitative Data

The qualitative data were collectively analysed by all four research team members using Braun and Clarke's (2006) guidelines for thematic analysis. The mentor responses to each open-ended question on the mid-programme, end of programme, six months-post programme and one year post-programme questionnaires were reviewed by at least two of team members. The responses were individually read multiple times and initial codes were generated. These were then reviewed and organised into themes thought to accurately reflect all responses within each distinct thematic category. The team members then met to discuss the thematic labels and the hierarchical organisation of themes. Preliminary coding maps that outlined themes at each level of the hierarchy along with coding descriptions were produced. The responses relating to positive programme experiences and programme highlights were collapsed for joint coding using one thematic coding map as the themes were the same. Separate thematic coding maps were produced for the programme challenges (reported on at the two time points during the programme) and the programme influences (reported on at the two time points collected in the follow up period). The same thematic map was used to analyse the presence or absence of a theme for each participant responding at the same time point by at least two team members.

The team met to discuss challenges with the process, discrepancies in coding and needed refinements to the coding maps. Minor changes to the thematic labels and grouping were made at this point and the coding process was independently repeated. Inter-coder agreement (percent agreement on presence or absence of a theme by the two independent coders) was assessed for themes at the first and second level of the thematic hierarchy. Inter-rater agreement for all codes for which thematic prevalence was assessed ranged from 83.2% to 100% across all time points indicating

very high coding agreement. Each coding discrepancy was discussed in a team meeting and a final code was agreed upon. The prevalence of each theme was then calculated (as the percentage of respondents reporting a comment representing the theme) for each relevant time point. The finalised coding maps are reproduced in the Findings section below with the prevalence results included.

Dissemination

Upon completion of the analyses, the research team offered research dissemination workshops to the study participants in each region (Auckland, Waikato and Wellington). The purpose of the workshops was to share the key findings with those who were involved and allow the participants the opportunity to provide their own explanations of the findings. In total, 19 young people participated. In addition to the workshops, the findings were also presented to current mentors, and a few of the teaching staff and Stars Coordinators at three of the participating schools. The other schools were not able to schedule a time for the presentation prior to the completion of this report. Feedback from those attending the workshops and presentations were noted and are addressed in the discussion.
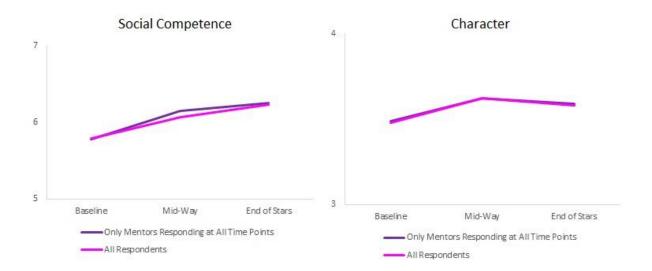
FINDINGS

Quantitative Findings

Overall Changes in Life Effectiveness Skills & Values from Baseline to End of Programme

Figure 1 illustrates the descriptive trajectories for the outcomes that showed significant changes over the duration of the programme. As is demonstrated, mentors reported significant increases in *social competence* and *character* from baseline until the end of the 2013 Stars programme.

Figure 1: *Significant changes found from the beginning of the Stars programme until the end of the programme*

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Overall Changes in Outcomes from Baseline to One Year Post-Programme

Additional effects were evident in the longer-term trajectories of life skills and values from the beginning of the programme through the follow up period ending one year after programme completion (September/October 2014). The significant increases in *social competence* and *character* were sustained one year post-programme. Self-confidence, task leadership and intellectual flexibility also increased significantly from the beginning of the programme through to the year after programme completion. Figure 2 demonstrates the descriptive trajectories for these outcomes.
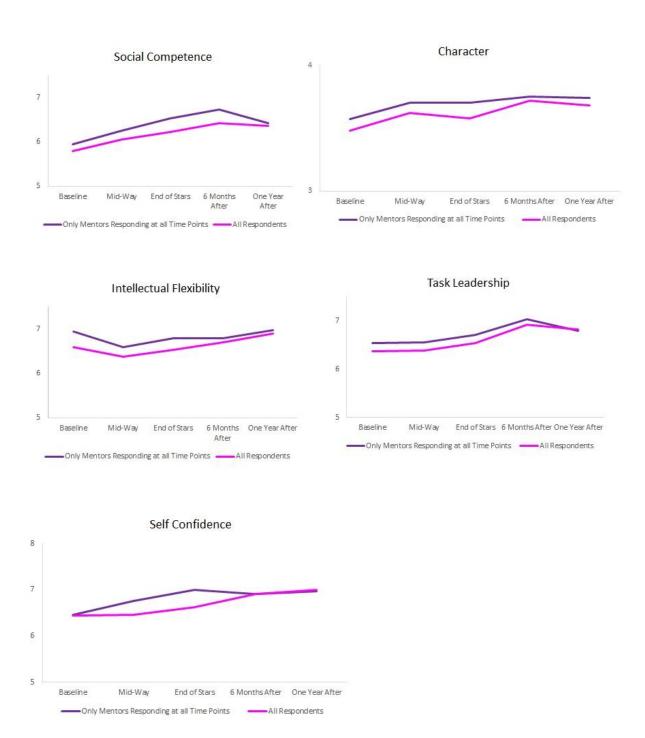

Figure 2: Significant changes in outcomes from pre-programme to one year post-programme.

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Other Predictors of Positive Outcomes

As expected many of the variables shown to be significant predictors of in the existing literature on positive youth development were significantly associated with the life skills and prosocial values of the mentors involved in the current study. For instance, whether assessing average life skill ratings across the three time points during the programme or the five time points that included the follow up period, baseline levels of school engagement were consistently associated with higher levels of all of the life effectiveness and values outcomes, with the exception of empathy. Extracurricular involvement was positively associated with all of the life skills except for time management and achievement motivation. High parental support was consistently associated with higher ratings of the three prosocial values, social competence, intellectual flexibility and self-confidence. High levels of positive parental role modelling were also associated with higher prosocial values, social competence, task leadership and self-confidence as well as time management and emotional control. Knowing many positive adult role models well was associated with reporting higher levels of all outcomes except time management and empathy.

Interestingly, knowing many negative adult role models well was only associated with lower levels of time management and achievement motivation when averaging levels reported during the programme but higher levels of valuing diversity when averaging outcomes over all five time points. A few differences were also found across demographic groups. For instance, males reported higher levels of emotional control while females reported higher levels of character and empathy. Older mentors reported higher levels of time management, achievement motivation, intellectual flexibility, task leadership, self-confidence and character although some of these associations were confounded with returning mentor status as returning mentors (who were generally older) also reported higher levels of intellectual flexibility, task leadership and self-confidence. Returning mentors also reported higher levels of social competence, active initiative and valuing diversity. Few ethnic differences were found. Asian mentors reported higher levels of time management while Māori mentors reported higher levels of social competence and valuing diversity (See Appendix C for the regression models).

When assessing which of the above factors were the most significant predictors of life skills and values when they were entered simultaneously in multilevel regression models, the effects associated with school engagement and having many positive adult role models were the most pervasive. Those who were highly engaged in school had higher social competence, task leadership, emotional control and active initiative over and above all other significant covariates. Those who had many positive adult role models in their lives also had higher social competence, task leadership, emotional control, and active initiative as well as achievement motivation and character. This was over and above all other significant covariates, including parental support and role modelling. However, those with high levels of parental support had higher self-confidence and those with parents who often modelled helping behaviours valued diversity more after controlling for the other covariates.

It is important to note that the changes in outcomes over time (during the programme and from baseline through the follow up period) were significant even after statistically adjusting for differences in baseline levels of these outcomes associated with the significant covariates described above (however, the statistical power of the analyses was compromised when entering the ethnicity variables simultaneously in the regression models thus these could not be accurately estimated).

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Factors Influencing the Development of Mentor Life Skills and Values

Programme Dosage & Commitment

The interaction effects of greatest interest were those associated with programme dosage as these indicate that the degree of involvement in the programme makes a difference to gains in life skills and prosocial values over time. It was hypothesised (in line with the existing literature on youth development programme dosage) that higher programme doses would be associated with bigger gains in life skills and prosocial values. Significant interactions between programme dosage (i.e. number of sessions attended) and time were obtained for *social competence*, *intellectual flexibility*, *self-confidence*, *character* and *empathy* when assessing the pre to end of programme trajectories. This indicates that the development of these outcomes differs for mentors depending on how many sessions they attended (see Appendix C – the interaction effects reported above were stable after accounting for the effects of other significant covariates at baseline). Simple slope analyses revealed that those attending 22.5 or more sessions (i.e. more than one standard deviation above the mean attendance – considered a high programme dose) showed significant increases in social competence and self-confidence over the duration of the programme. In contrast, those attending 9 sessions or less (more than one standard deviation below the mean – considered a low dose) showed no changes in social competence and a significant decrease in self-confidence. Similarly, those attending 9 or fewer sessions showed significant declines in intellectual flexibility while the intellectual flexibility of those attending 22.5 or more sessions remained stable over the duration of the programme. Figure 3 illustrates these effects. It is notable that those experiencing a lower programme dose reported higher levels of these outcomes at baseline and effects associated with this group may reflect regression to the mean instead of true differential effects.
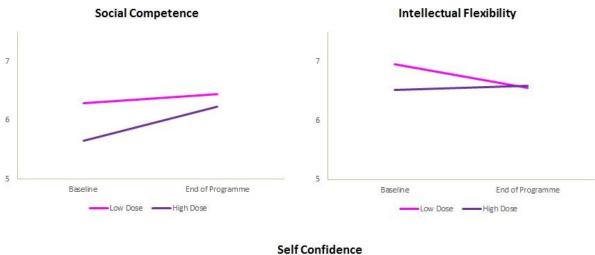
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Figure 3: *Plotted simple slopes based on significant multilevel interaction estimates of programme dosage and changes in life effectiveness skills over the duration of the Stars.*
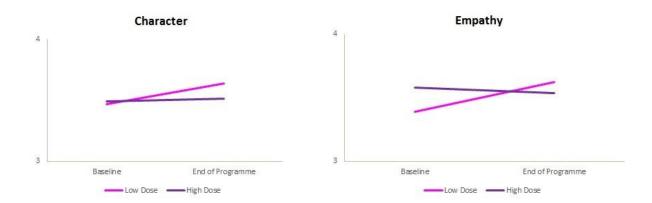
Interestingly, the simple slope analyses of the dosage and time interactions with character and empathy indicated that those attending 9 or fewer sessions had significant *increases* in these outcomes, whereas those attending 22.5 or more sessions showed no changes. A significant interaction between programme commitment (percent of sessions attended of the total available) and time for the valuing diversity outcome showed the same pattern of simple slope effects. Those with lower commitment increased in their levels of valuing diversity while those with high commitment showed no change (see Figure 4).
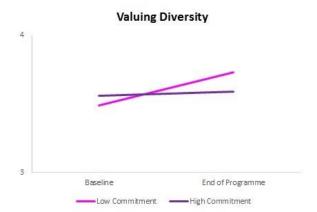
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Figure 4: *Plotted simple slopes based on significant multilevel interaction estimates of programme dosage and changes in prosocial values over the duration of the Stars.*
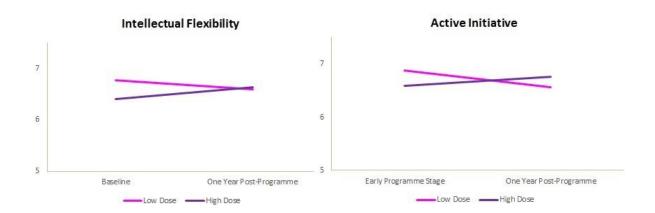

An investigation of the interactions between programme dosage and time and programme commitment and time for the baseline to one year post-programme trajectories again revealed significant effects for intellectual flexibility and self-confidence but the interaction effects for social competence and the three prosocial values were no longer significant. In contrast, a significant dosage and time interaction was found for active initiative. Simple slopes analyses demonstrated that those attending 22.5 or more sessions had significant increases in intellectual flexibility and self-confidence; those attending 9 or fewer sessions had significant declines in these outcomes from the beginning of the programme to one year after the 2013 Stars programme ended. Those experiencing a low programme dose also showed significant declines in active initiative over the five time points whereas those experiencing a high programme dose had stable levels of active initiative over this period (See Figure 5).
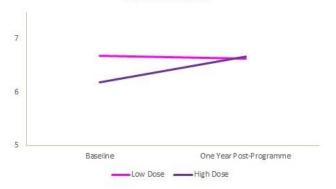
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Figure 5: *Plotted simple slopes based on significant multilevel interaction estimates of programme dosage and increases in life effectiveness skills from baseline to one-year post-programme.*

Other Interaction Effects

While a number of other interaction effects were found when assessing the trajectories of each outcome in combination with demographic and other personal characteristics or background factors, few were consistent across more than one outcome and none were consistent were comparing the programme duration and baseline to one year post-programme trajectories. Interesting interaction effects between parental support and the growth of social competence, task leadership, intellectual flexibility and valuing diversity during the programme were found, however. Similarly, positive parental role modeling interacted significantly with the growth of social competence and self-confidence over the duration of the programme. However, the simple slope analyses of these outcomes generally indicated more positive effects over time for those with *lower* levels of parent support or role modelling (See Figure 6). Nevertheless, there was little evidence that these differential effects were sustained. While significant interactions between parental support and increases in social competence and self-confidence were again found when assessing the baseline to one year post-programme trajectories, the simple slope analyses revealed that both those with high and low parental support showed significant increases over time in these outcomes. The interaction appeared to be the result of differences in baseline levels of these outcomes for those with high vs. low parental support.

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Figure 6: Plotted simple slopes based on significant multilevel interaction estimates of parental support and changes in life effectiveness skills and values over the programme duration.
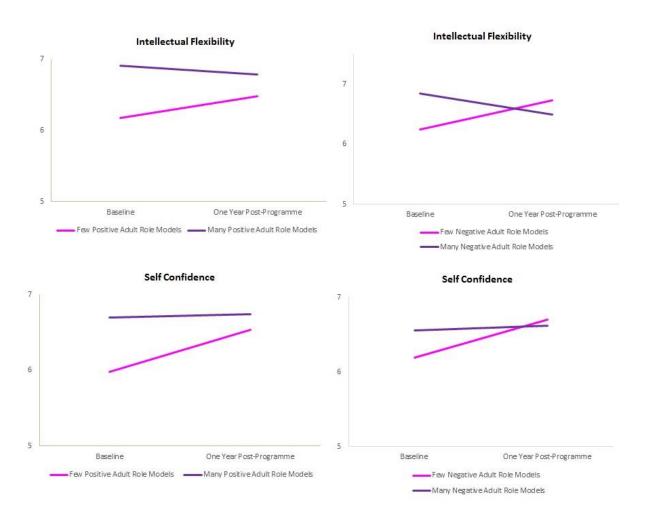

Significant interactions were also found between the number of positive and negative adult role models mentors had and growth in a number of outcomes from baseline to one year post-programme. Those with few positive adult role models in their lives showed significant increases in intellectual flexibility while those with many positive adult role models showed no changes in this outcome. However, those with few *negative* adult role models in their lives also showed significant increases in intellectual flexibility and in self-confidence over the five time points while those with many negative adult role models showed significant declines in intellectual flexibility and no change in self-confidence (See Figure 7). The reasons behind these unusual parent and other adult influences are considered in the discussion.

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Figure 7: Plotted simple slopes based on significant multilevel interaction estimates of adult role modelling support and changes in life effectiveness skills from baseline to one-year post-programme.

Mentoring and Academic Achievement

Table 3 presents the percentage of peer mentors (of those who were eligible) obtaining NCEA Level 1, Level 2, Level 3 and University Entrance in comparison to the student achievement rates for all New Zealand schools in the Decile 1- 3, Decile 1-4 and Decile 8-10 bands according to the latest New NZQA annual report on NCEA statistics (NZQA, 2014). The Table illustrates that the Peer Mentors for whom we had NCEA data available were achieving at substantially higher rates than would be expected given that all mentors had attended or were attending Decile 2 or 3 schools. Though, it must be noted that the NZQA report provides data only for those achieving NCEA 1 in Year 11, NCEA 2 in Level 12, and NCEA 3 and University Entrance in Year 13 as these are the general standards for achievement by Year level. The achievement results for the Peer Mentor sample, on the other hand, were not collected at the end of each year. It may be that some mentors achieved NCEA 1 and 2 later than Year 11 and 12, respectively.

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Table 3. Peer mentor NCEA achievement rates compared to 2013 population rates by school decile band.

NCEA Achievement Results	Peer Mentor Sample Size (n)	Peer Mentor Achievement Rates	Decile 1-3 Schools 2013	Decile 4-7 Schools 2013	Decile 8-10 Schools 2013
NCEA Level 1	128	100%	71.6%	80.8%	89.3%
NCEA Level 2	115	99%	73.1%	84.5%	90.4%
NCEA Level 3	105	81%	69.8%	77.2%	84.5%
University Entrance	100	68%	51.7%	67.1%	80.3%

Note. The NCEA achievement rates for the 2013 national comparisons by school decile band were obtained from the NZQA (2014) Annual Report on NCEA and New Zealand Scholarship Data and Statistics (2013).

Overall the pattern of findings indicates that the Peer Mentors are achieving above what would be expected relative to Decile-based norms. Importantly, this suggests that participation as a Peer Mentor in the Stars programme does not compromise academic achievement; however, the findings are limited to participants who consented to providing their NCEA results to the research team.

Occupational Status Profiles

Of the 59 mentors who completed the one year post-programme questionnaire, 98% were engaged in some form of education, employment or training, despite 10% acknowledging that they faced barriers which restricted them from engaging in these opportunities. According to Statistics NZ (2015), the percentage of young people aged 15 to 19 years (the approximate age range for our peer mentor sample) who were engaged in employment, education or training in September 2014 (when the labour market survey was conducted) was approximately 93.6%.

The majority of peer mentors in our sample (93%) were still engaged in some form of full-time education or training (many were still attending school) at the time of data collection. Seventeen of these students (29%) were engaged in both education or training and employment.
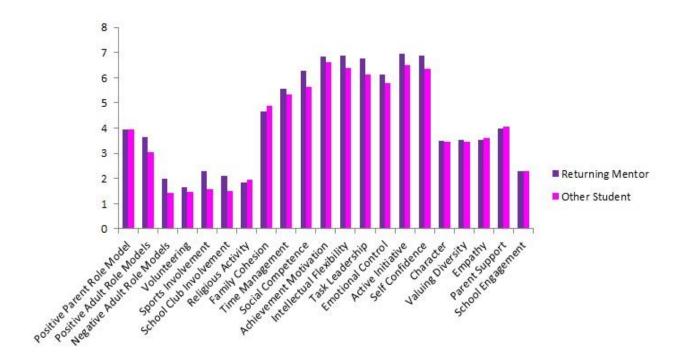
The Profile of Returning Mentors

When exploring the baseline characteristics associated with mentors who return to mentor for another year in comparison to other students (new mentors and control participants who initially joined the study), it was found that returning mentors were significantly older (as expected); had more positive *and* negative adult role models in their lives; were more involved in sports and school clubs; had higher social competence, intellectual flexibility, task leadership, emotional control, active initiative and self-confidence than the other students but they also had slightly lower levels of empathy (see Figure 9). However, when comparing which of these characteristics (along with gender and ethnicity) were the strongest predictors of determining returning mentors vs. other students using a multilevel logistic regression, only age and having more positive adult role models were significant.

Figure 9. *Comparisons of returning mentor and other students (new mentors and other senior students) on all variables of interest at baseline.*

Qualitative Findings

General Mentoring Experience and Programme Highlights Reported During the Programme

Most of the mentors (84% mid-programme and 81.6% at the end of the programme expressed *entirely positive* comments when asked about their general programme experiences mid-way and at the end of programme but a small proportion (16% at mid-programme and 18.6% at the end of the programme) also acknowledged challenges. These were considered to reflect a *mixed experience*). It is important to note, however, that even the comments referred to as "mixed" included many positive statements. For instance, one mentor wrote *"It started off great. Then our class was difficult. But in the end I really enjoyed the program and loved mentoring my mentees".*

Figure 10 presents the coding map for themes associated with the positive programme experiences and highlights along with thematic prevalence and representative mentor quotes. When asked about their experiences during the programme, most mentors commented on positive *Connections* – new friendships, social interaction and bonding with others – at both time points. Approximately half of the mentors appreciated the opportunity the programme provided to develop *Confidence and Competence*, especially in the areas of interpersonal or social competence and leadership. Many spoke generally about the boost in confidence or courage that they gained. While others noted the development of skills that allowed them to cope better or to confront challenges; however, far fewer wrote about coping and resilience in comparison to other competencies.

Mentors also mentioned specific activities and experiences they enjoyed, and about a third also talked about how they enjoyed helping and influencing others. The positive experiences and highlights for about a third of the respondents related to Caring and Contribution. In the PYD
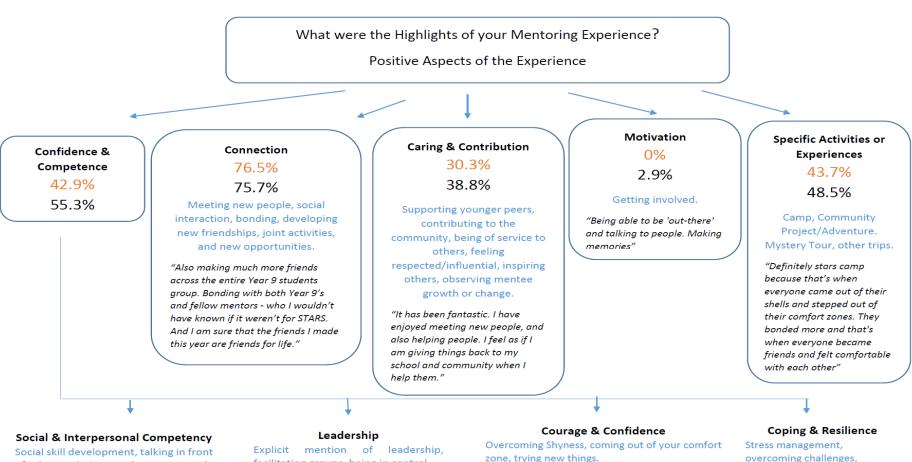
literature, Caring and Compassion is discussed as one of the distinct "C"s that leads to future Contributions (Lerner et al., 2005; Phelps et al., 2008); however, for the mentors in this sample, their experiences of caring were often directly linked to a feeling of contributing or having an influence. Others spoke of appreciating the sense of being respected or listened to, which were also considered to fall within a theme of Contribution as other research with young people has demonstrated the importance of young people feeling that their voices not also have resonance when trying to contribute (Evans, 2007). As Figure 10 illustrates, the prevalence of themes across the two time points was quite similar.

Figure 10. *Thematic coding map for positive aspects of the experience and programme highlights including percentage of mentors reporting on each theme mid-way through the programme (orange) and at the end of the programme (black).*

What were the Highlights of your Mentoring Experience?

Positive Aspects of the Experience

Confidence & Competence
42.9%
55.3%

Connection
76.5%
75.7%
Meeting new people, social interaction, bonding, developing new friendships, joint activities, and new opportunities.

"Also making much more friends across the entire Year 9 students group. Bonding with both Year 9's and fellow mentors - who I wouldn't have known if it weren't for STARS. And I am sure that the friends I made this year are friends for life."

Caring & Contribution
30.3%
38.8%
Supporting younger peers, contributing to the community, being of service to others, feeling respected/influential, inspiring others, observing mentee growth or change.

"It has been fantastic. I have enjoyed meeting new people, and also helping people. I feel as if I am giving things back to my school and community when I help them."

Motivation
0%
2.9%
Getting involved.

"Being able to be 'out-there' and talking to people. Making memories"

Specific Activities or Experiences
43.7%
48.5%
Camp, Community Project/Adventure. Mystery Tour, other trips.

"Definitely stars camp because that's when everyone came out of their shells and stepped out of their comfort zones. They bonded more and that's when everyone became friends and felt comfortable with each other"

Social & Interpersonal Competency
Social skill development, talking in front of others, relating to others, teamwork, working with others.

"I enjoyed it because I got to experience new things with people and learned how to work well in a group"

Leadership
Explicit mention of leadership, facilitating groups, being in control.

"I strongly believe my leadership skills have grown and I would want to use my talent to help others that are struggling to help our young generation."

Courage & Confidence
Overcoming Shyness, coming out of your comfort zone, trying new things.

"It has given me heaps of confidence and helped me develop my leadership and other skills. Without being selected to be a peer mentor I don't think I would have become Deputy Head Boy. I have met and worked with so many awesome people who I would otherwise never associated with"

Coping & Resilience
Stress management, overcoming challenges.

"Personally it has helped me to mature a bit more and helped me to understand responsibility, especially when I'm taking care of my Year 9 class."

Challenges Experienced by Mentors during Stars

Mentors were also asked to comment on the challenges they experienced during Stars mid-way and at the end of the programme. The prevalence of themes was similar across the two time points (see Figure 11), with the most frequent challenges associated with *relational challenges.* Experiencing mentee difficulties was by far the most prevalent subtheme within this category. A few mentors also expressed concerns about the complex personal issues that mentees came to them with. Also included in this category were general relational challenges associated with having to learn all the mentee names, trying to accommodate different personalities, and earning mentee trust. A few also grew frustrated by the lack of commitment or conflict experienced with other mentors.

The second most prevalent theme in relation to programme challenges related to the need for mentors to *overcome their own personal anxieties and sense of inadequacy*. It is interesting to note the strong connection between these personal challenge themes and the themes associated with *confidence* and *competence*. This suggests that facing some kinds of challenges in the programme are an important part of their personal growth.

Other more minor themes about challenges related to mentors' own problems with committing to the meetings, frustration with early morning sessions, having to change mentor groups or being interrupted by teachers. A few mentors also indicated that they had not experienced any challenges.

Figure 11. *Thematic coding map for challenging aspects of the Stars experience percentage of mentors reporting on each theme mid-way through the programme (orange) and at the end of the programme (black).*

What were the biggest challenges of your mentoring experience?

Challenging Aspects of the Experience

No Challenges
8.4%
5%

"No challenges so far"

Relational Challenges
54.6%
57.4%

Mentee/mentor difficulties including learning mentee names, accommodating different personalities, earning trust, getting along with everyone

"Making sure my kids are okay throughout the school year, because a lot of my kids are shy/quiet and will keep problems to themselves instead of letting me and/or others help them."

Personal Commitment
5%
4%

Competing interests/obligations, own motivation to attend sessions

"For myself, time keeping and time management, keeping a certain timetable. Balancing both school and Stars aspects."

Programme Infrastructure & External Influences
6.7%
4%

Early morning sessions, changing mentor groups, teacher interruptions

"Waking up early to go to training"

Overcoming Personal Inadequacies & Anxieties
35.3%
36.6%

Themes related to personal growth challenges identified at the next level

"Adapting to different situations confidence-wise and how to react as a peer mentor"

Other Mentor Difficulties
Themes related to challenges with other mentors (e.g. lack of commitment, conflict)

Mentee Difficulties
Themes related to mentee challenges identified at the next level:

Behavioural Conduct, Attitude & Engagement
Behaviour out of control, naughty. Negative attitude, lack of interest or participation

Complex Personal Issues
Mentee concerns about drugs, bullying, etc.

Stress & Emotions
Managing stress and anger towards mentees, worrying about first impressions

Courage & Confidence
Speaking out/in front of others, pushing past comfort zone, general need to be more confident

Leadership
Being a leader, stepping up to be a role model, growing at mentees, taking control

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Mentor Perceptions of Programme Influence in the Year Following Programme Completion

In the year following programme completion, mentors were asked about how the programme had influenced them. The themes identified in the six month and one year post-programme responses were similar to the positive programme experiences and highlights reported during the programme but the prevalence of themes differed quite substantially. A larger proportion (over 90%) commented solely on *positive* influences while a very small proportion (3 and 5 %) provided responses that did not fit within the positive influence theme. The latter comments either suggested little long-term impact, or referred to changes in experience from the 2013 to the 2014 deliveries (as some returned to mentor again in 2014), or were not clearly interpretable. These responses were included in a miscellaneous *other* category.

With regards to the positive influence themes, the most common areas mentioned in the follow up period were associated with *Confidence* and *Competence* with more than 80% of mentors mentioning this (again, responses relating to social and leadership areas were particularly prevalent). While still an evident theme, far fewer mentors mentioned *Connection* during the follow up period. Similarly, fewer mentioned influences in relation to *Caring, Compassion and Contribution* though this was still a clear theme. In contrast, whereas no responses were coded within a Character theme during the programme, a reasonable proportion of respondents spoke of being more responsible and mature one year post-programme. A few mentors also commented on the enjoyment of the experience. (See Figure 12).

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Figure 12. *Thematic coding map for programme influence during the follow up period including percentage of mentors reporting on each theme six months post-programme (orange) and one year post-programme (black).*

Looking back, how has your experience as a Peer Mentor influenced your life?

Other
3.3% (6 months Post programme)
5.4% (1 year post programme)
Any comment that does not suggest an entirely positive influence.

Positive Influence
96.7%
94.6%
General or specific comments that reflect a positive influence.

Enjoyment
8.2%
7.1%
Fun, exciting, enjoyable experience.

Connection
24.6%
17.9%
Meeting new people, general social interaction, bonding, developing new friendships, new opportunities, opened up opportunities.

"It feels like I have gained more confidence talking to people who I've never known before and I learnt some life skills that might help me in my future work place"

"Peer mentoring made me more confident because of meeting lots of new people. Before, I was really shy but now I've improved and become more outgoing. Being a mentor was a good experience overall because of all the friends I get to know in my year 9 mentoring group."

Confidence & Competence
83.6%
85.7%
General confidence, self-belief or awareness, confidence/competence development in leadership, social/interpersonal domains, resilience, coping/adapting to challenges, stepping out of comfort zone, courage, positive change in personal perspective, optimism about the future, or general/transferable skills.

"Honestly, my confidence and leadership skills have increased so much."

"It put me in a position of leadership and specific activities allowed me to have more courage due to having to do scary things first so my STARS students would do them too."

Caring, Compassion, & Contribution
14.8%
19.6%
Supporting younger peers, contributing to the community, being of service to others, feeling respected/influential, inspiring others, observing mentee growth or change.

"Taught me how to look after others and deal with people who are having problems."

"I know how to lead and it has made me more aware of the feelings of others especially those younger than me."

Character
1.6%
14.3%
Time & self-management, patience, responsibility, maturity, commitment, perseverance, organisational skills, standing up for own beliefs.

"It has also given me the leadership abilities and time management abilities that I need for University and general organisational skills for the real world"

"It also allowed me to ground my own values as a person and respect others.

stars

DISCUSSION

As initially stated, the aims of this collaborative research project were to: Evaluate the experiences and overall impact of Stars on Peer Mentors; investigate factors that are associated with and influence growth in PYD outcomes; and identify characteristics that distinguish returning mentors from other students. In addressing these aims, the intentions were to broaden understanding of the effectiveness of Stars and inform future programme developments. At the same time, it was hoped that this research would advance knowledge of how New Zealand youth benefit from service to others and the factors that influence longer-term service commitments. This discussion begins with consideration of the first aim.

Overview of Programme Impact and Experience Findings

The general pattern of findings suggest that Stars peer mentoring experiences do influence the development of several valuable life skills. The triangulation of the 2012 Peer Mentor life effectiveness outcome rankings, effects for the general growth trajectories, interaction effects with programme dosage, qualitative Peer Mentor reports and feedback from Peer Mentors during the results dissemination converge to indicate that self-confidence, task leadership and social competence were the strongest areas of development for mentors as they progressed through the programme experience.

It is interesting to note that the gains in self-confidence and task leadership (along with intellectual flexibility) were not evident during the programme but were one year after programme completion. The quantitative findings thus suggest that these may be latent programme effects. This highlights the importance of collecting follow up measures of outcomes when evaluating PYD programmes. The qualitative findings also suggest that confidence and competence, particularly in social and leadership areas were more salient to Peer Mentors during the follow up period.

The qualitative findings also point to the benefits gained from connecting with others, though this was a less salient theme one year post-programme in relation to confidence and competence. Unfortunately, questions about connection were not included in the questionnaires because of concerns with questionnaire length and because connectedness outcomes had been the focus of previous Stars research. In retrospect, it would have been useful to include quantitative measures of all of the "Five C's" as this would have enabled further triangulation with the qualitative themes – though these arose from an inductive process of thematic analysis. It was not initially envisioned that responses would fit so well with the Five C's theory.

The interaction effects with programme dosage (reflected by the total number of sessions the mentors attended) were of particular interest, as differential growth trajectories arising from a higher or lower programme dose show a direct connection between programme experiences and the development of outcomes (i.e. programme impact). As stated above, the interaction effects support the findings that the general growth in self-confidence, task leadership, social competence and intellectual flexibility were in part due to programme experiences. The interaction between programme dosage and active initiative also helped to clarify what was happening with the overall trend. More frequent exposure to Stars buffered the decline in active initiative that occurred for mentors who attended fewer sessions (relative to mean attendance rates).

The impact of Stars on prosocial values is less clear. Whilst significant gains in character occurred during the programme and continued through the follow up period, the fact that those who attended

fewer sessions showed increases in character as well as empathy during the programme is puzzling. As was the similar pattern of effects with programme commitment (number of sessions mentors attended of the total number that were available to them) and valuing diversity. Could it be that those who attend very frequently compared to their peers have a more realistic understanding of the difficulties involved in supporting others, causing them not to report increases in prosocial values? Perhaps those who attend only occasionally develop a more idealistic self-understanding in relation to standing their ground when things are tough, feeling sympathy for others, and valuing peers from backgrounds different to their own because they do not do the "hard yards". It was evident from their responses relating to programme challenges that difficulties, especially with mentees, often arose.

The Peer Mentors who attended the results dissemination sessions (both past and current mentors) expressed surprise at the relationship between dosage and values. Although, when discussing the dosage effects, they agreed that outcomes were different for those who attended frequently, in that those who came often gained more from their experiences. They also acknowledged that it was frustrating to work with mentors who did not attend as often. This aligns with one of the more minor subthemes found within the relational challenges theme in the qualitative data.

The dosage/commitment and prosocial values interactions may also lead one to wonder if the relationship may be curvilinear. Perhaps very low and very high levels of dosage are not conducive to cultivating prosocial values, while moderate levels of attendance are optimal. However, tinkering with dosage levels to assess the optimal amount needed to increase these values is not recommended, given the relationship between high programme doses and life skill development. Instead, it may be valuable to invest in empathy and diversity training for mentors. Peer Mentors do need to have realistic understanding of the challenges associated with supporting others, especially if there is interest in pursuing such work as a career. Providing additional support and training in these areas could be worthwhile. Peer Mentors in more than one of the dissemination sessions felt that a stronger, ongoing message about the importance of committing to the programme was needed. One made the comment that this also reflects good role modelling for the Year 9 students.

Raising academic achievement for Peer Mentors is not an explicit objective of the Stars programme. The purpose of collecting academic achievement results was thus to ascertain if involvement in the Stars programme at a critical academic transition point impeded academic achievement in any way. It was thought that committing to Stars could compete with other responsibilities (as a few Peer Mentors noted in their qualitative responses). The NCEA results for the sample of Peer Mentors in this study suggested that this is not the case. These students seemed to have higher academic achievement rates relative to the population of students attending schools within the same decile band, as well as those attending decile 4-7 schools and were comparable to rates for decile 8-10 school students. Furthermore, self-reported NCEA results were provided by mentors who tended to attend the mentoring sessions more than those who did not respond, thus higher levels of programme commitment certainly didn't seem to have any damaging effects on academic attainment. Furthermore, the mentors who responded also seemed to have higher rates of engagement in education, training or employment compared to population norms for young people aged 15-19 years.

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Importance of External Influences

Not surprisingly, many of the factors thought to be important to PYD outcomes (see Scales et al., 2000; Scales et al., 2006) were significantly associated with life effectiveness skills and prosocial values. Support from parents and engagement in school (as reported at baseline) were positively associated with several of the outcomes of interest. What was more surprising was the pervasive influence that having positive adult role models seemed to have on multiple life skills and on character, because this factor generally overrode the effects of parent factors and negative adult role models. Further, it was this factor alone (with the exception of age), that distinguished returning mentors from other students. While it may be that these types of mentors attract more positive role models to become involved in their lives and thus they could be driving the causal effect, it also seems very likely that the adults in their lives have helped them to develop these skills and values or the relationship could be bidirectional. The directional nature of this relationship should be further explored.

On the other hand, the interaction effects found with the external influences of parental support and positive adult role modelling were unexpected. These showed that having lower levels of parental support and fewer positive adult role models was associated with increases in some of the outcomes over time. This seems counterintuitive but two possible explanations are offered. Figure 6 and 7 illustrate that those with high parental support and many positive adult role models started off the programme with higher levels of social competence, intellectual flexibility, task leadership, self-confidence and valuing diversity compared to those with low support or few positive role models. It is very likely that ceiling effects are responsible for the lack of significant changes in these outcomes as the self-report scales may not have enabled some of them to report higher levels than they began the programme with. In a similar vein, the effects may be driven by regression to the mean. This is a phenomenon whereby variables that are extreme (very high or low) at the first measurement (baseline) will tend to be closer to the mean on subsequent measurements. Thus those starting with high ratings tend to score lower and those starting low tend to score higher, regardless of other effects. One should keep this in mind when interpreting all of the effects as the mentors in this sample generally scored higher than the mid-point on all self-report scales.

An alternative explanation may be that the Stars programme is more effective for those without those positive external resources. The programme may offer something to these young people that they don't already have compared to others thus they gain more from the experience and catch up to their peers. In any case, the findings suggest that it is not parental support or positive adult role models or any other potentially confounding variables that seem to be driving the growth in outcomes. In this way, the findings lend greater support for the argument that the Stars programme, not other factors, is causing the developmental effects but, how confident can one be in these conclusions? The study limitations are considered next.

Study Limitations

The plan to design a robust quasi-experimental study by creating an adequate counterfactual to the Peer Mentor group with which to compare outcomes did not come to fruition. The triangulation of effects across multiple data sources, the inclusion of numerous other theoretical confounds which were not found to offer any alternative explanations to the growth trends, and the inclusion of non-equivalent dependent variables demonstrating effects that supported our initial hypothesis help to mitigate some of the bias in the validity of the cause and effect conclusions. The large degree of

participant attrition is more problematic as it makes it very difficult to generalise the results beyond a small group of highly committed Peer Mentors. In addition, ceiling and regression to the mean effects likely mask the true developmental effects, as mentioned above.

It was challenging to get Peer Mentors to the data collection sessions or even to complete questionnaires online. This was the result of multiple factors including changes in personal contact details, poor communication between schools, Community Partners, the students and the research team, constrained school schedules, and very busy young people. The quality of the some of the data, particularly mentor attendance and NCEA results was also compromised due to incomplete or unavailable records for many participants. Real-world evaluation research is inherently messy and this was no different.

Implications and Future Directions

The methodological limitations notwithstanding, the findings indicate that by and large, the Peer Mentors enjoy and benefit from their experiences. Nevertheless, the challenges and unusual effects direct attention to potential areas for programme improvements. As signalled earlier, additional training and ongoing support for Peer Mentors seems to be needed. A focus on empathy and diversity training could be worthwhile if cultivating these values is seen to be important. This should also include a focus on a realistic understanding of the challenges and commitment required to effectively support others. Since the biggest challenges identified by Peer Mentors related to engaging and sustaining mentee attention during sessions and dealing with poor behavioural conduct, a review of the prescribed session activities and training on positive behaviour management strategies would likely also be worthwhile. Some of the Peer Mentors attending the research dissemination sessions highlighted a need for more in-depth training and for modifications to the current session activities to make them more engaging for mentees. The research team intends to pursue discussions with FYD's Programme Development and Training Manager to see if and how these ideas can be progressed.

On a more general note, it feels important to emphasise the message of how important positive adult role models are in the lives of young leaders, seeing as this was the single unique non-demographic predictor that distinguished returning mentors from other students. This suggests that all adults who surround developing young people (whether in programmes, at home, church, school or the community), should direct young people's attention to their own helping behaviours whether through observed actions or sharing stories of service.

Conclusion

This research provides converging evidence that authentic, ongoing peer mentoring experiences (like those offered through Stars) can indeed foster PYD gains for NZ youth. Emphasising ongoing engagement in the programme and supporting young leaders with in-depth training, particularly with relational challenges, is likely to further enhance the positivity of the mentoring experience. Adults hoping to recruit and retain young people in service experiences should reflect on their own modelling of helping behaviours and ensure that young people see and hear about these instances. Why is this so important? Because the evidence indicates that this is viable pathway to increased youth thriving and long-term civic engagement.

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APPENDICES

Appendix A: Preparatory Analyses of Quantitative Data

After the data from the paper-based End of Programme surveys were entered into a statistical software (SPSS) spreadsheet, a number of analyses were conducted in preparation for more meaningful analysis of mentor outcomes. The SPSS data files for each of the eight data collection time points were individually screened for data entry errors and missing values. Missing Values Analyses were conducted and missing values imputed. The subscales representing each of the theorized constructs set out at the design stage of the study were assessed for unidimensionality and internal consistency at each time point. When the results provided cross-sectional and longitudinal support for an internally consistent, unidimensional construct, the items were aggregated into a composite variable by calculating the mean score.

Due to low response rates, data from the Follow Up 1, 2, and 4 surveys were not used in the final analyses thus Table 1 provides the sample size (based on usable surveys) and internal consistency results (Chronbach's alphas) of the outcome and predictor subscales of interest for the five time points that were included (Baseline, Mid-Programme, End of Programme, Six Months Post-Programme and One Year Post-Programme) for the Peer Mentors involved in the study. The predictors (School Engagement, Extracurricular Participation, and Parental Support) used in the final analyses were based on Baseline levels, thus only these are presented in Table 1.

Table 1. Sample size and Chronbach's alphas for Variable Subscales at each data collection time point

Outcome	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP	S_ENGAGE	EXTRACUR	PAR_SUP
Baseline n = 175	.83	.80	.76	.59	.78	.77	.84	.68	.67	.61	.83	.68	.66	.80
Mid-Programme n = 99	.82	.82	.80	.64	.74	.81	.81	.78	.75	.71	.91			
End of Programme n = 97	.83	.84	.83	.60	.79	.84	.83	.83	.82	.63	.76			
Six Months Post-Programme n = 48	.84	.82	.86	.86	.64	.86	.85	.66	.73	.72	.77			
One Year Post-Programme n = 48	.78	.81	.76	.74	.80	.87	.82	.68	.88	.71	.91			

Alphas > .70 recommended

Key Outcomes:

TM = Time Management; SO = Social Competence; AM = Achievement Motivation; IF = Intellectual Flexibility; TL = Task Leadership;

AI = Active Initiative; SC = Self Confidence; CHAR = Character; VALDIV = Valuing Diversity; EMP = Empathy

Predictors:

S_ENGAGE = School Engagement; EXTRACUR = Extracurricular Involvement; PAR_SUP = Parental Support

The original scales for Intellectual Flexibility, Task Leadership, and Valuing Diversity had low internal consistency across several of the time points. For Intellectual Flexibility and Task Leadership, the internal consistency was greatly improved when one problematic item was removed thus the internal consistencies for these constructs reflect responses on only 2 items instead of the original 3. The internal consistency for Valuing Diversity and for School Engagement and Extracurricular Involvement at baseline were not improved with the deletion of any items thus the reliability for the original constructs are provided above despite these being only marginal. It was also found that the original 9-item empathy subscale presented problems with regards to unidimensionality. The reverse-coded items, in particular, were problematic. It was found that a 3-item scale of items focused on sympathy towards others who have difficulties was the most reliable thus this was retained as the measure of empathy. The distributions of each variable were then assessed for normality. The findings illustrated that most of the variable distributions deviated substantially from normality.

As the comparison group was dropped for the longitudinal analyses, data from these participants are not included in the above table. However, this group was included in the baseline comparisons to identify predictors of returning mentors, thus the internal consistency results for the full sample (n = 242) for the baseline items are reported here: TM = .79; SO = .76; AM = .77; IF = .64; TL = .78; EC = .74; AI = .83; SC = .69; CHAR = .71; VALDIV = .59; EMP = .83

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Appendix B: Descriptive Statistics

Descriptive statistics (Means and Standard Deviations) for the full original cross-sectional responses sample of Peer Mentors calculated for the outcomes of are presented in Table 2 below.

Table 2. Means and standard deviations on outcomes of interest for Peer Mentors (original cross-sectional responses)

Outcome	Baseline	Mid-Programme	End of Programme	Six-Months Post-Programme	One-Year Post-Programme
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)
Time Management	5.38 (1.40)	5.34 (1.29	5.54 (1.35	5.61 (1.27)	5.65 (1.13)
Social Competence	5.79 (1.28)	6.07 (1.18)	6.23 (1.12)	6.42 (1.05)	6.37 (1.05)
Achievement Motivation	6.72 (.97)	6.62 (1.17)	6.78 (1.01)	7.04 (.91)	6.78 (.83)
Intellectual Flexibility	6.60 (1.02)	6.38 (1.02)	6.53 (.96)	6.71 (1.22)	6.90 (.97)
Task Leadership	6.38 (1.25)	6.39 (1.12)	6.54 (1.03)	6.92 (.98)	6.82 (.96)
Emotional Control	5.94 (1.25)	5.88 (1.22)	5.87 (1.24)	5.95 (1.36)	6.13 (1.12)
Active Initiative	6.60 (1.23)	6.52 (1.23)	6.69 (1.20)	6.99 (1.08)	6.87 (1.10)
Self Confidence	6.44 (1.17)	6.44 (1.18)	6.62 (1.12)	6.90 (.94)	6.99 (.79)
Character	3.48 (.44)	3.62 (.41)	3.58 (.42)	3.72 (.32)	3.68 (.41)
Valuing Diversity	3.46 (.48)	3.58 (.46)	3.61 (.44)	3.52 (.49)	3.54 (.50)
Empathy	3.57 (.58)	3.67 (.61)	3.61 (.49)	3.71 (.48)	3.60 (.57)

Because we are interested in the development of life skills, character and caring over the duration of the programme, the descriptive statistics presented in Table 2 are problematic as the same individuals did not respond at each of the different time points. As a result, we also calculated the descriptive statistics for those who responded at all time points during the programme (see Table 3) and for those who responded to all 5 time points (see Table 4).

Table 3. Means and standard deviations on outcomes of interest for Peer Mentors who responded at all three time points during the programme.

Outcome	Baseline	Mid-Programme	End of Programme
N = 75	*Mean (SD)*	*Mean (SD)*	*Mean (SD)*
Time Management	5.55 (1.38)	5.45 (1.31)	5.67 (1.32)
Social Competence	5.78 (1.32)	6.15 (1.08)	6.25 (1.11)
Achievement Motivation	6.85 (.76)	6.68 (1.05)	6.83 (1.00)
Intellectual Flexibility	6.73 (.99)	6.47 (.87)	6.59 (.88)
Task Leadership	6.46 (1.24)	6.45 (1.00)	6.58 (.89)
Emotional Control	5.97 (1.22)	5.96 (1.17)	6.04 (1.14)
Active Initiative	6.64 (1.32)	6.59 (1.17)	6.74 (1.19)
Self Confidence	6.48 (1.23)	6.57 (1.06)	6.71 (1.08)
Character	3.49 (.45)	3.62 (.43)	3.59 (.43)
Valuing Diversity	3.52 (.44)	3.61 (.43)	3.61 (.45)
Empathy	3.58 (.56)	3.63 (.65)	3.61 (.51)

Table 4. Means and standard deviations on outcomes of interest for Peer Mentors responded to each of the five total timepoints.

Outcomes	Baseline	Mid-Programme	End of Programme	Six Months Post-Programme	One Year Post-Programme
n = 31	*Mean (SD)*	*Mean (SD)*	*Mean (SD)*	*Mean (SD)*	*Mean (SD)*
Time Management	5.57 (1.59)	5.55 (1.58)	5.94 (1.20)	5.73 (1.32)	5.60 (1.10)
Social Competence	5.95 (1.22)	6.26 (.99)	6.55 (.99)	6.74 (.94)	6.43 (1.07)
Achievement Motivation	6.92 (.93)	6.94 (.93)	7.09 (.75)	7.04 (1.02)	6.86 (.90)
Intellectual Flexibility	6.95 (.99)	6.60 (.95)	6.79 (.74)	6.79 (1.15)	6.98 (1.04)
Task Leadership	6.55 (1.14)	6.56 (.95)	6.71 (.72)	7.03 (.87)	6.79 (.94)
Emotional Control	5.99 (1.13)	6.18 (1.08)	6.18 (.97)	6.17 (1.22)	6.17 (1.06)
Active Initiative	6.75 (1.34)	6.81 (1.25)	7.23 (.87)	7.06 (1.10)	6.88 (1.11)
Self Confidence	6.46 (1.44)	6.76 (.93)	7.00 (.71)	6.91 (.96)	6.96 (.85)
Character	3.57 (.34)	3.70 (.37)	3.69 (.37)	3.75 (.33)	3.74 (.36)
Valuing Diversity	3.47 (.44)	3.66 (.45)	3.65 (.36)	3.51 (.55)	3.57 (.52)
Empathy	3.60 (.69)	3.74 (.45)	3.72 (.52)	3.72 (.48)	3.65 (.43)

Table 5. Means and standard deviations comparing Returning Mentors to New Mentors and Other Senior Students on characteristics of interest (at baseline)

Baseline Characteristics	Returning Mentors	New Mentors	Other Senior Students
Sample size (n)	n = 48	n = 109	n = 68
	Mean (SD)	*Mean (SD)*	*Mean (SD)*
Life Effectiveness Skills			
Time Management	5.58 (1.37)	3.33 (1.45)	5.34 (1.21)
Social Competence	6.29 (1.00)	5.62 (1.33)	5.67 (1.27)
Achievement Motivation	6.85 (.94)	6.72 (.97)	6.50 (1.24)
Intellectual Flexibility	6.87 (.76)	6.51 (1.09)	6.22 (1.27)
Task Leadership	6.78 (.89)	6.28 (1.32)	5.84 (1.58)
Emotional Control	6.14 (1.13)	5.89 (1.33)	5.66 (1.41)
Active Initiative	6.97 (.98)	6.51 (1.33)	6.46 (1.29)
Self Confidence	6.88 (.98)	6.28 (1.20)	6.44 (1.17)
Positive Values			
Character	3.49 (.47)	3.49 (.44)	3.43 (.51)
Empathy	3.52 (.64)	3.60 (.56)	3.63 (.57)
Other Personal Characteristics			
School Engagement	2.23 (.36)	2.31 (.37)	2.30 (.38)
Prosocial Involvement (Volunteering)	1.67 (1.40)	1.46 (1.63)	1.49 (1.68)
Sports Involvement	2.29 (1.84)	1.38 (1.59)	1.93 (1.73)
School Club Involvement	2.10 (1.51)	1.41 (1.51)	1.62 (1.78)
Religious Involvement	1.85 (1.58)	2.04 (1.74)	1.81 (1.84)
Adult Influences			
Parental Support	3.97 (.81)	4.05 (.82)	4.06 (.78)
Positive Parental Role Models	3.94 (.98)	3.91 (.93)	4.00 (.93)
Family Cohesion	4.65 (2.51)	5.13 (2.14)	4.46 (2.21)
Positive Adult Role Models	3.66 (.75)	3.13 (1.10)	2.91 (1.13)
Negative Adult Role Models	2.00 (1.52)	1.49 (1.47)	1.37 (1.47)

Appendix C: Multilevel Regression Effects

The regression weights and associated t-values for each regression model are provided in the table below (* p < .05; ** p< .01, *** p. < .001). The pink cells indicate significant effects of time (i.e. increases or decreases over time); the yellow cells indicate significant main effects for predictors; the green cells indicated significant interaction effects; and the peach cells indicate marginally significant effects. When robust standard error estimates could be generated by the HLM software these estimates are reported because these estimates are robust against data that deviate from normality. As indicated in Appendix A, many of the variables of interest were non-normal hence the decision to report robust standard errors. At times, they couldn't be generated (e.g. for ethnicity effects). When this occurred, it is indicated in the table.

Short Term Outcomes											
TIME TRAJECTORIES											
	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
	Time Management	Social Competence	Achievement Motivation	Intellectual Flexibility	Task Leadership	Emotional Control	Active Initiative	Self-Confidence	Character	Valuing Diversity	Empathy
3 Time Points	Int = 5.56	Int = 5.87	Int = 6.679	Int = 6.67	Int = 6.55	Int = 6.00	Int = 6.79	Int = 6.50	Int = 3.54	Int = 3.51	Int = 3.57
Time	B = .01; t = .12	B = .26, t = 4.38***	B = -.04, t = -0.98	B = -.07, t = -.85	B = .04, t = .62	B = -.03, t = -.61	B = -0.06, t = -.64	B = .04, t = 0.60	B = .04, t = 1.97* p = .05	B = .05, t = 2.38*	B = .03, t = 1.11
5 Time Points	Int = 5.54	Int = 5.92	Int = 6.79	Int = 6.62	Int = 6.54	Int = 5.96	Int = 6.76	Int = 6.46	Int = 3.54	Int = 3.52	Int = 3.60
Time	B = .03, t = 1.00	B = .16, t = 2.96***	B = -.01, t = -0.60	B = .03, t = 2.58*	B = .08, t = 4.68***	B = .02, t = .47	B = 0.00, t = 0.01	B = .10, t = 5.88***	B = .04, t = 5.10***	B = .01, t = 1.20	B = -.005, t = -0.31
	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
	Time Management	Social Competence	Achievement Motivation	Intellectual Flexibility	Task Leadership	Emotional Control	Active Initiative	Self-Confidence	Character	Valuing Diversity	Empathy
MODERATORS											
Mentor Type (New/Return)	*uncentered*										
3 Time Points	Int = 5.64	Int = 6.06	Int = 6.82	Int = 6.78	Int = 6.69	Int = 6.08	Int = 6.93	Int = 6.64	Int = 3.55	Int = 3.56	Int = 3.56
Time	B = -.00, t = -0.07	B = .23, t = 4.00***	B = -.05, t = -1.02	B = -.09, t = -1.30	B = .02, t = .45	B = -.04, t = -.93	B = -.13, t = 1.76[a]	B = -.04, t = -.65	B = .05, t = 3.12**	B = .04, t = 1.56	B = 0.06, t = 1.99*

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	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
Mentor Type	B = .37, t = 2.19*	B = .81, t = 3.32***	B = .09, t = .66	B = .50, t = 3.45***	B = .66, t = 5.90***	B = .31, t = 2.55*	B = .63, t = 6.96***	B = .61, t = 6.55***	B = .04, t = 1.15	B = .22, t = 3.02**	B = -.07, t = -1.09
Time x Mentor Type	B = -.04, t = -.60	B = -.13, t = -1.24	B = -.05, t = -.28	B = -.08, t = -0.80	B = -.07, t = -0.69	B = -.04, t = -.33	B = -.32, t = -2.21*	B = -.35, t = -1.74[a]	B = .02, t = .74	B = -.07, t = -1.55	B = .11, t = 3.75***
5 Time Points	Int = 5.43	Int = 5.73	Int = 6.78	Int = 6.49	Int = 6.36	Int = 5.91	Int = 6.62	Int = 6.34	Int = 3.53	Int = 3.47	Int = 3.60
Time	B = .01, t = .30	B = .17, t = 6.46***	B = -.02, t = -1.39	B = .05, t = 2.97**	B = .09, t = 4.29***	B = .00, t = 0.05	B = .03, t = 0.97	B = .13, t = 5.27***	B = .04, t = 6.09***	B = .02, t =.85	B = -.01, t = -.65
Mentor Type	B = .31, t = 1.60	B =.74, t = 2.73**	B = .04, t = .28	B = .49, t = 3.20**	B = .62, t = 4.41***	B = .21, t = 1.33	B = .53, t = 5.90***	B = .49, t = 4.38***	B = .05, t = 1.81[a]	B = .18, t = 2.27*	B = -.03, t = -.32
Time x Mentor Type	B = .09, t = 1.83[a]	B = -.02, t = -.25	B = .07, t = .66	B = -.09, t = -1.06	B = -.01, t = -0.18	B = .08, t = .57	B = -.12, t = -1.02	B = -.14, t = -.98	B = -.01, t = -1.25	B = .00, t = .10	B = .04, t = .67
Dosage (TYAttend)	*grand mean centered*										
3 Time Points	Int = 5.57	Int = 5.88	Int = 6.79	Int = 6.68	Int = 6.55	Int = 6.02	Int = 6.81	Int = 6.52	Int = 3.54	Int = 3.50	Int = 3.57
Time	B = -.01, t = -.16	B = .23, t = 5.68***	B = -.06, t = -1.06	B = -.10, t = -1.31	B = .03, t = .55	B = -.05, t = -1.29	B = -.09, t = -1.09	B = -.01, t = -.16	B = .06, t = 3.00**	B = .06, t = 1.80	B = .05, t = 1.85
Dosage	B = .01, t = 2.78**	B = -.04, t = -3.87***	B = .01, t = .86	B = -.01, t = -3.76***	B = -.02, t = -1.66	B = -.03, t = -5.74***	B = -.01, t = -.79	B = -.02, t = -13.05***	B = -.00, t = -.93	B = -.01, t = -4.20***	B = .00, t = .65
Time x Dosage	B = .00, t = .56	B = .02, t = 2.07*	B = .01, t = 1.04	B = .02, t = 2.84**	B = .01, t = 1.04*	B = .02, t = 5.87***	B = .02, t = 1.50*	B = .03, t = 4.47***	B = -.01, t = -5.74***	B = .00, t = .08	B = -.01, t = -6.09***
5 Time Points	Int = 5.55	Int = 5.93	Int = 6.79	Int = 6.63	Int = 6.53	Int = 5.98	Int = 6.79	Int = 6.48	Int = 3.54	Int = 3.53	Int = 3.59
Time	B = .01, t = .56	B = .15, t = 18.23***	B = -.02, t = -0.81	B = .01, t = .45	B = .09, t = 5.11***	B = .00, t = .06	B = -.03, t = -1.57	B = .07, t = 2.42*	B = .04, t = 4.88***	B = .01, t = .74	B = .00, t = .76
Dosage	B = .01, t = 2.07*	B = -.03, t = -5.34***	B = .10, t = 1.03	B = -.01, t = -3.03**	B = -.01, t = -1.82[a]	B = -.03, t = -2.86**	B = -.01, t = -.88	B = -.02, t = -7.49***	B = -.01, t = -1.56	B = -.01, t = -5.41***	B = -.00, t = -0.08
Time x Dosage	B = .00, t = .67	B = .007, t = 5.21***	B = .00, t = 0.85	B = .01, t = 2.00*	B = -.00, t = -1.72[a]	B = .008, t = 1.26	B = .01, t = 4.56***	B = .01, t = 4.03***	B = -.00, t = -.84	B = .004, t = 1.94[a]	B = -.01, t = -3.16**
	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
	Time Management	Social Competence	Achievement Motivation	Intellectual Flexibility	Task Leadership	Emotional Control	Active Initiative	Self-Confidence	Character	Valuing Diversity	Empathy

Commitment (TYPercent)	grand mean centered										
3 Time Points	Int = 5.54	Int = 5.91	Int = 6.79	Int = 6.67	Int = 6.57	Int = 6.05	Int = 6.77	Int = 6.51	Int = 3.54	Int = 3.53	Int = 3.59
Time	B = .01, t = .27	B = .24, t = 4.01***	B = -.05, t = -1.18	B = -.06, t = -.84	B = .04, t = .96	B = -.03, t = -.78	B = -.08, t = -1.01	B = -.00, t = -0.06	B = .05, t = 2.80**	B = .08, t = 13.84***	B = .05, t = 1.58
Commitment	B = .00, t = 1.25	B = -.01, t = -1.33	B = -.00, t = -.14	B = .00, t = .24	B = -.00, t = -.78	B = -.00, t = -3.22**	B = .00, t = .39	B = -.00, t = -1.58	B = -.00, t = -2.22*	B = -.00, t = -1.24	B = -.00, t = -1.32
Time x Commitment	B = -.00, t = -.56	B = .00, t = 1.42	B = .00, t = 1.86[a]	B = -.00, t = -.44	B = .00, t = -.09	B = .00, t = .46	B = .00, t = .63	B = .004, t = 2.43**	B = -.00, t = -.24	B = -.002, t = -2.49**	B = -.00, t = -2.13*
5 Time Points	Int = 5.52	Int = 5.95	Int = 6.79	Int = 6.62	Int = 6.58	Int = 6.03	Int = 6.74	Int = 6.47	Int = 3.54	Int = 3.54	Int = 3.63
Time	B = .03, t = 2.27*	B = .16, t = 19.20***	B = -.01, t = -.81	B = .03, t = 1.35	B = .09, t = 4.77***	B = .03, t = 1.46	B = -.01, t = -.69	B = .09, t = 9.55***	B = .04, t = 7.60***	B = .03, t = 4.96***	B = -.00, t = .30
Commitment	B = .00, t = 1.10	B = -.00, t = -0.90	B = -.00, t = .04	B = -.00, t = -0.25	B = -.00, t = -.99	B = -.00, t = -2.88**	B = -.00, t = .42	B = -.00, t = -1.12	B = -.00, t = -3.57***	B = -.00, t = -1.19	B = -.00, t = --2.46*
Time x Commitment	B = -.00, t = -.57	B = 00, t = .33	B = .00, t = .64	B = .00, t = .27	B = -.00, t = .05	B = -.00, t = -.45	B = .00, t = .83	B = .00, t = 1.86[a]	B = .00, t = .60	B = -.00, t = -1.15	B = -.00, t = -2.78**
Gender	uncentered										
3 Time Points	Int = 5.56	Int = 5.88	Int = 6.79	Int = 6.68	Int = 6.50	Int = 6.08	Int = 6.80	Int = 6.50	Int = 3.51	Int = 3.50	Int = 3.54
Time	B = .01, t = .12	B = .24, t = 4.87***	B = -.04, t = -1.02	B = -.07, t = -1.08	B = .05, t = 1.03	B = -.04, t = -.89	B = -.07, t = -.97	B = .06, t = 1.06	B = .05, t = 2.00*	B = .04, t = 1.57	B = .02, t = .67
Gender	B = .01, t = .07	B = .08, t = .39	B = .01, t = .08	B = .05, t = .32	B = -.27, t = -1.16	B = .36, t = 4.11***	B = .02, t = .10	B = -.01, t = -.06	B = -.15, t = -4.55***	B = -.01, t = -.09	B = -.16, t = -2.47*
Time x Gender	B = -.01, t = .11	B = -.08, t = -0.70	B = -.02, t = -26	B = -.03, t = -.26	B = .09, t = .61	B = -.02, t = -.33	B = -.04, t = -0.34	B = 1.00, t = .66	B = .03, t = .95	B = -.03, t = -.62	B = -.03, t = -.48
5 Time Points	Int = 5.54	Int = 5.93	Int = 6.79	Int = 6.63	Int = 6.50	Int = 6.04	Int = 6.78	Int = 6.47	Int = 3.52	Int = 3.53	Int = 3.56
Time	B = .02, t = .57	B = .15, t = 7.11***	B = -.01, t = -0.89	B = .02, t = 1.99*	B = .09, t = 5.10***	B = .01, t = .19	B = -.02, t = -.74	B = .09, t = 6.19***	B = .04, t = 3.41***	B = .00, t = .20	B = -.01, t = -.69
Gender	B = .01, t = .02	B = .05, t = .28	B = .01, t = 0.10	B = .04, t = .27	B = -.26, t = -1.35	B = .35, t = 3.04**	B = .05, t = .16	B = .03, t = .17	B = -.13, t = -4.23***	B = .01, t = .15	B = -.15, t = -2.38*
Time x Gender	B = .02, t = -.15	B = -.05, t = -0.71	B = -03, t = -.69	B = -.05, t = -1.14	B = .03, t = .71	B = -.04, t = -.72	B = -.09, t = -.83	B = -.05, t = -1.14	B = -.01, t = -.38	B = -.08, t = -2.35*	B = -.03, t = -.82

	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
	Time Management	Social Competence	Achievement Motivation	Intellectual Flexibility	Task Leadership	Emotional Control	Active Initiative	Self-Confidence	Character	Valuing Diversity	Empathy
Age	grand mean centered										
3 Time Points	Int = 5.62	Int = 5.89	Int = 6.80	Int = 6.69	Int = 6.59	Int = 6.02	Int = 6.80	Int = 6.54	Int = 3.54	Int = 3.51	Int = 3.57
Time	B = .01, t = .12	B = .26, t = 3.66***	B = -.04, t = -.99	B = -.07, t = -.83	B = .04, t = .59	B = -.03, t = -.57	B = -.06, t = -.65	B = .04, t = .58	B = .04, t = 2.42**	B = .05, t = 2.32*	B = .03, t = 1.19
Age	B = .32, t = 2.54**	B = .11, t = .81	B = .25, t = 4.09***	B = .23, t = 3.36*	B = .28, t = 3.95***	B = .14, t = 1.12	B = .10, t = 1.19	B = .26, t = 2.09*	B = .10, t = 5.50***	B = .04, t = 0.92	B = .05, t = 1.16
Time x Age	B = .03, t = 1.14	B = .04, t = 1.38	B = -.03, t = -1.10	B = -.02, t = -.32	B = .01, t = .09	B = .07, t = 1.26	B = -.03, t = -.37	B = -.00, t = -.00	B = -.05, t = -2.77**	B = -.01, t = -.16	B = -.02, t = -1.46
5 Time Points	Int = 5.58	Int = 5.94	Int = 6.80	Int = 6.64	Int = 6.58	Int = 5.97	Int = 6.77	Int = 6.49	Int = 3.54	Int = 3.52	Int = 3.59
Time	B = .05, t = 2.82**	B = .17, t = 17.30***	B = .00, t = .17	B = .03, t = 1.92a	B = .09, t = 7.80***	B = .03, t = 1.07	B =.03, t = .39	B = .11, t = 7.15***	B = .03, t = 6.45***	B = .02, t = 2.05	B = -.00, t = -.15
Age	B = .26, t = 1.54	B = .09, t = .66	B = .21, t = 3.00**	B = .22, t = 2.57*	B = .28, t = 3.90***	B = .14, t = 1.07	B = .01, t =.46	B = .24, t = 1.83a	B = .09, t = 6.54***	B = .02, t = .39	B = .04, t = 0.90
Time x Age	B = .10, t = 1.45	B = .07, t = 3.55***	B = .03, t = 1.06	B = -.01, t = -.17	B = .02, t = .48	B = .05, t = .78	B = .06, t = 1.08	B = .02, t = .43	B = -.03, t = -4.78***	B = .03, t = 1.14	B = .01, t = .39
Ethnicity	uncentered. NOTE: these are fixed effects, robust standard errors couldn't be modelled for ethnicity models.										
3 Time Points	Int = 5.71	Int = 6.11	Int = 6.85	Int = 6.76	Int = 6.64	Int = 6.16	Int = 6.88	Int = 6.53	Int = 3.58	Int = 3.59	Int = 3.57
Time	B = -.01, t = -0.15	B = .19, t = 2.50*	B = -.06, t = -.82	B = -.04, t = -.56	B = .00, t = .04	B = -.04, t = -.48	B = -.12, t = -1.43	B = -.02, t = -.21	B = .04, t = 1.49	B = .04, t = 1.26	B = .04, t = .82
Maori	B = -.09, t = -.29	B = .72, t = 2.61**	B = -.01, t = -.02	B = .21, t = .92	B = .36, t = 1.35	B = .40, t = 1.40	B = .48, t = 1.75	B = .08, t = .29	B = .15, t = 1.63	B = .32, t = 3.18*	B = .02, t = 0.15
Pacific	B = .12, t = .47	B = .03, t = .11	B = -.06, t = -.34	B = .07, t = .38	B = .34, t = 1.62	B = .25, t = 1.10	B = .41, t = 1.86	B = .22, t = 1.01	B = .08, t = 1.06	B = .19, t = 2.34	B = .10, t = .91
Asian	B = .76, t = 2.75**	B = .25, t = 1.01	B = .31, t = 1.47	B = .09, t = .46	B = .10, t = .47	B = .27, t = 1.05	B = .06, t = .25	B = .11, t = .46	B = .02, t = .26	B = .07, t = .73	B = -.08, t = -.67
Maori x Time	B = -.00, t = -.00	B = -.21, t = -1.41	B = -.07, t = -.49	B = .00, t = .02	B = -.15, t = -.93	B = -.06, t = -.40	B = -.25, t = -1.50	B = -.22, t = -1.29	B = .01, t = .09	B = -.03, t = -.50	B = -.03, t = -.33

	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
Pacific x Time	B = -.04, t = -.29	B = .03, t = .22	B = .11, t = .97	B = -.05, t = -.43	B = -.12, t = -.96	B = -.09, t = -.65	B = -.02, t = -.17	B = -.04, t = -.31	B = .04, t = 0.92	B = -.04, t = -.65	B = .10, t = 1.34
Asian x Time	B = -.07, t = -.49	B = .00, t = .01	B = .03, t = .22	B = .28, t = 2.10*	B = .07, t = .48	B = .11, t = .75	B = -.00, t = .01	B = -.04, t = .31	B = -.02, t = -.38	B = -.02, t = -.27	B = .10, t = 1.19
	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
	Time Management	Social Competence	Achievement Motivation	Intellectual Flexibility	Task Leadership	Emotional Control	Active Initiative	Self-Confidence	Character	Valuing Diversity	Empathy
5 Time Points	*uncentered. NOTE: these are fixed effects, robust standard errors couldn't be modelled for ethnicity models.*										
Time	B = -.02, t = -.38	B =.09, t = 1.96[a]	B = -.04, t = -1.03	B = .01, t = .30	B = .04, t = .87	B = -.01, t = -.20	B = -.04, t = -1.03	B = .06, t = 1.14	B = .04, t = 2.24*	B = .01, t = .66	B = .00, t = .06
Maori	B = -.05, t = -.18	B = .73, t = 2.77**	B = .00, t = .02	B = .26, t = 1.16	B = .33, t = 1.33	B = .41, t = 1.50	B = .43, t = 1.64	B = .03, t = .14	B = .16, t = 1.81	B = .33, t = 3.28***	B = .01, t = .07
Pacific	B = .18, t = .78	B = .04, t = .17	B =-.03, t = -.18	B = .07, t = .44	B = .28, t = 1.46	B = .23, t = 1.05	B = .46, t = 2.23*	B = .23, t = 1.18	B = .10, t = 1.46	B = .18, t = 2.24*	B = .15, t = 1.45
Asian	B = .83, t = 3.22**	B = .28, t = 1.19	B = .36, t = 1.80[a]	B = .20, t = 1.03	B = .18, t = .85	B = .29, t = 1.18	B = .11, t = .49	B = .15, t = .71	B = .02, t = .25	B = .06, t = .64	B = -.02, t = -.19
Maori x Time	B = -.03, t = -0.27	B = -.21, t = -2.36*	B = -.10, t = -1.26	B = -.09, t = -1.08	B = -.12, t = .87	B = -.10, t = -1.01	B = -.13, t = -1.39	B = -.13, t = -1.37	B = -.01, t = -.18	B = -.03, t = -.66	B = .01, t = .19
Pacific x Time	B = -.19, t = -2.40*	B = -.01, t = -.18	B = .05, t = .85	B = -.03, t = -.43	B = -.02, t = -.28	B = -.06, t = -.78	B = -.11, t = -1.55	B = -.06, t = -.79	B = -.00, t = -.03	B = -.00, t = -0.10	B = .01, t = .35
Asian x Time	B = -.18, t = -2.16*	B = -.06, t = -.76	B = -.03, t = -.46	B = .12, t = 1.64	B = -.04, t = -.50	B = .03, t = .43	B = -.07, t = -.94	B = -.00, t = -.04	B = -.01, t = -.43	B = .01, t = .34	B = .02, t = .35
Disengagement (Baseline)	*grand mean centered*										
3 Time Points	Int = 5.56	Int = 5.86	Int = 6.79	Int = 6.66	Int = 6.54	Int = 5.99	Int = 6.78	Int = 6.50	Int = 3.54	Int = 3.50	Int = 3.57
Time	B = .01, t = .13	B = .25, t = 3.43***	B = -.04, t = -1.02	B = -.07, t = -.85	B = .04, t = .62	B = -.03, t = -.66	B = -.06, t = -.59	B = .03, t = .50	B = .04, t = 1.99*	B = .05, t = 2.53*	B = .03, t = 1.02
Disengage	B = 1.34, t = 3.82***	B = .43, t = 2.33*	B = .51, t = 4.38***	B = .78, t = 4.82***	B = .90, t = 4.05***	B = .71, t = 3.30***	B = .92, t = 2.65**	B = .56, t = 1.77[a]	B = .16, t = 2.55*	B = .19, t = 2.75**	B = .06, t = 1.28
Time x Disengage	B = -.24, t = -2.47*	B = -.06, t = 0.39	B = -.13, t = -1.20	B = -.30, t = -2.02*	B = -.29, t = -1.43	B = -.05, t = -0.27	B = -.39, t = -1.66	B = .07, t = 0.28	B = -.06, t = -1.46	B = -.10, t = -1.32	B =.11, t = 1.74
5 Time Points	Int = 5.53	Int = 5.91	Int = 6.78	Int = 6.60	Int = 6.53	Int = 5.94	Int = 6.76	Int = 6.45	Int = 3.54	Int = 3.52	Int = 3.59
Time	B = .02, t = 1.11	B = .16, t = 11.60***	B = -.01, t = -.50	B = .03, t = 2.81**	B = .08, t = 4.63***	B = .02, t = .49	B = -.00, t = -.01	B = .10, t = 6.11***	B = .04, t = 5.44***	B = .08, t = 1.16	B = -.00, t = -.28

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Disengage	B = 1.30, t = 3.30***	B = .40, t = 2.32*	B = .39, t =2.61*	B = .58, t = 4.13***	B = .75, t = 5.42***	B = .69, t = 2.50*	B = .79, t = 2.93**	B = .57, t = 2.29*	B = .12, t = 2.29*	B = .15, t = 2.67**	B = .12, t = 1.74 [a]
Time x Disengage	B = -.20, t = -1.41	B = -.03, t = 0.31	B = .08, t = 1.00	B = .08, t = .81	B = -.00, t =-.03	B = -.03, t = -.75	B = -.12, t = -4.23***	B = .05, t = 0.81	B = -.01, t = .49	B = -.00, t = -.03	B =.01, t = .15

	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
	Time Management	Social Competence	Achievement Motivation	Intellectual Flexibility	Task Leadership	Emotional Control	Active Initiative	Self-Confidence	Character	Valuing Diversity	Empathy
Parent Support (Baseline)	*grand mean centered*										
3 Time Points	Int = 5.53	Int = 5.86	Int = 6.79	Int = 6.67	Int = 6.53	Int = 5.99	Int = 6.78	Int = 6.48	Int = 3.54	Int = 3.50	Int = 3.57
Time	B = .01, t = .21	B = .25, t = 3.69***	B = -.04, t = -.86	B = -.07, t = -1.02	B = .03, t = .71	B = -.03, t = -.53	B = -.06, t = -.61	B = .04, t = .64	B = .04, t = 2.02*	B = .05, t = 2.71**	B = .03, t = 1.02
Parent Support (Baseline)	B = .29, t = 1.82	B = .32, t = 2.33*	B = 0.11, t = 1.20	B = .24, t = 5.02***	B = .41, t = 6.20***	B = .28, t = 1.85[a]	B = .22, t = 2.63**	B = .33, t = 3.84***	B = .09, t = 3.11**	B = .14, t = 4.54***	B = .10, t = 2.41*
Time x Parent Support	B = .01, t = 0.13	B = -.14, t = -2.73**	B = 0.03, t = .42	B = -.17, t = -2.75**	B = -.16, t = -2.67**	B = .01, t = .18	B = -.02, t = -0.29	B = -.01, t = -0.17	B = .08, t = 0.24	B = -.06, t = -2.04*	B = -.04, t = -1.11
5 Time Points	Int = 5.52	Int = 5.91	Int = 6.79	Int = 6.61	Int = 6.52	Int = 5.95	Int = 6.75	Int = 6.45	Int = 3.54	Int = 3.52	Int = 3.59
Time	B = .03, t = .98	B = .17, t = 22.06***	B = -.01, t = 1.73	B = .03, t = 5.53***	B = .09, t = 3.82***	B = .02, t = .58	B = .00, t = .03	B = .10, t = 5.70***	B = .04, t = 4.87***	B = .02, t = 1.49	B = -.00, t = -.13
Parent Support (Baseline)	B = .30, t = 1.86	B = .30, t = 2.53*	B = 0.12, t = 1.73	B = .19, t = 3.83***	B = .36, t = 4.52***	B = .30, t = 2.03*	B = .22, t = 1.83[a]	B = .35, t = 4.17***	B = .10, t = 2.58**	B = .13, t = 3.99***	B = .09, t = 2.66**
Time x Parent Support	B = -.01, t = -.35	B = -.11, t = -4.06***	B = 0.01, t = .59	B = -.07, t = -2.45*	B = -.09, t = -5.19***	B = -.02, t = -.42	B = -.01, t = -0.94	B = -.05, t = -2.51*	B = -.01, t = -0.33	B = -.03, t = -2.24*	B = -.03, t = -1.46
Extracurricular (Baseline)	*grand mean centered*										
3 Time Points	Int = 5.55	Int = 5.83	Int = 6.79	Int = 6.66	Int = 6.51	Int = 5.98	Int = 6.73	Int = 6.47	Int = 3.54	Int = 3.50	Int = 3.57
Time	B = .00, t = .08	B = .26, t = 3.42***	B = -.04, t = -1.03	B = -.07, t = -.84	B = .04, t = .72	B = -.03, t = -.56	B = -.05, t = -.56	B = .04, t = .59	B = .04, t = 1.92 [a]	B = .05, t = 2.50*	B = .03, t = 1.10
Extracurricular (Baseline)	B = .01, t = .10	B = .25, t = 3.95***	B = -0.01, t = -.15	B = .19, t = 4.80***	B = .33, t = 8.95***	B = .19, t = 6.30***	B = .39, t = 3.24**	B = .27, t = 9.10***	B = .07, t = 1.92 [a]	B = .04, t = 1.26	B = .03, t = 0.59
Time x Extracurricular	B = .06, t = 1.05	B = -.05, t = -0.97	B = 0.01, t = .26	B = -.09, t = -2.27*	B = -.08, t = -2.84**	B = -.03, t = -0.92	B = -.08, t = -1.44	B = -.05, t = -3.15**	B = -.08, t = -1.02	B = -.01, t = -0.24	B = -.01, t = -.20

	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
	Time Management	Social Competence	Achievement Motivation	Intellectual Flexibility	Task Leadership	Emotional Control	Active Initiative	Self-Confidence	Character	Valuing Diversity	Empathy
5 Time Points	Int = 5.53	Int = 5.88	Int = 6.79	Int = 6.60	Int = 6.50	Int = 5.93	Int = 6.71	Int = 6.44	Int = 3.54	Int = 3.52	Int = 3.59
Time	B = .03, t = 1.03	B = .17, t = 17.57***	B = -.01, t = -.89	B = .03, t = 2.44*	B = .08, t = 4.54***	B = .02, t = .51	B = .00, t = 0.16	B = .10, t = 5.61***	B = .04, t = 4.69***	B = .02, t = 1.32	B = -.00, t = -.27
Extracurricular (Baseline)	B = .05, t = .41	B = .25, t = 3.29***	B = -0.02, t = -.28	B = .15, t = 5.00***	B = .29, t = 6.38***	B = .18, t = 5.17***	B = .38, t = 3.88***	B = .26, t = 8.22***	B = .07, t = 2.03*	B = .04, t = 1.56	B = .04, t = 0.90
Time x Extracurricular	B = -.01, t = -.29	B = -.03, t = -1.18	B = 0.03, t = 1.28	B = -.02, t = -.71	B = -.01, t = -.49	B = .02, t = 1.06	B = -.05, t = -3.30***	B = -.05, t = -1.70[a]	B = -.01, t = -1.34	B = -.01, t = -1.09	B = -.02, t = -.86

Positive Parent RM (Baseline)	grand mean centered										
3 Time Points	Int = 5.53	Int = 5.85	Int = 6.79	Int = 6.66	Int = 6.52	Int = 5.97	Int = 6.78	Int = 6.49	Int = 3.54	Int = 3.50	Int = 3.57
Time	B = .01, t = .20	B = .26, t = 3.30***	B = -.04, t = -1.03	B = -.07, t = -.90	B = .04, t = .78	B = -.03, t = -.55	B = -.05, t = -.63	B = .04, t = .59	B = .04, t = 1.94[a]	B = .05, t = 2.51*	B = .03, t = 1.11
PosParRM (Baseline)	B = .22, t = .4.85***	B = .29, t = 7.07***	B = .08, t = 1.39	B = .15, t = 2.09*	B = .29, t = 3.93***	B = .38, t = 3.98***	B = .11, t = 2.03*	B = .26, t = 3.22**	B = .09, t = 2.98***	B = .10, t = 2.51*	B = .05, t = 2.53*
Time x PosParRM	B = -.06, t = -1.60	B = -.14, t = -7.44***	B = 0.07, t = -1.66[a]	B = -.12, t = -2.50*	B = -.18, t = -3.65****	B = -.07, t = -1.34	B = -.04, t = -.88	B = -.15, t = -5.84***	B = -.00, t = -.06	B = -.02, t = -0.81	B = .00, t = .18
5 Time Points	Int = 5.51	Int = 5.89	Int = 6.79	Int = 6.61	Int = 6.51	Int = 5.93	Int = 6.71	Int = 6.45	Int = 3.54	Int = 3.51	Int = 3.59
Time	B = .03, t = 1.12	B = .17, t = 18.40***	B = -.01, t = -1.04	B = .03, t = 2.96**	B = .09, t = 3.93***	B = .02, t = .57	B = -.00, t = -0.04	B = .11, t = 5.57***	B = .04, t = 4.89***	B = .02, t = 1.19	B = -.00, t = -.22
PosParRM (Baseline)	B = .20, t = 3.53***	B = .26, t = 5.44***	B = -0.03, t = .59	B = .09, t = 1.39	B = .22, t = 3.29***	B = .37, t = 5.40***	B = .08, t = 1.57	B = .20, t = 2.61**	B = .09, t = 4.61***	B = .10, t = 3.64***	B = .06, t = 3.06**
Time x PosParRM	B = -.01, t = -.31	B = -.06, t = -3.44***	B = 0.02, t = .82	B = -.01, t = -.31	B = -.06, t = -2.08*	B = -.03, t = -1.11	B = .01, t = .93	B = -.04, t = -1.91[a]	B = -.01, t = -.52	B = -.00, t = -.033	B = -.02, t = -2.32*

Positive Adult RM (Baseline)	grand mean centered										
3 Time Points	Int = 5.54	Int = 5.84	Int = 6.79	Int = 6.65	Int = 6.49	Int = 5.98	Int = 6.73	Int = 6.47	Int = 3.54	Int = 3.50	Int = 3.57
Time	B = .00, t = .11	B = .26, t = 3.69***	B = -.04, t = -1.00	B = -.07, t = -.85	B = .04, t = .83	B = -.03, t = -.58	B = -.05, t = -.58	B = .04, t = .63	B = .04, t = 2.22*	B = .05, t = 2.68**	B = .03, t = 1.14
PosAdRM (Baseline)	B = .06, t = 1.15	B = .38, t = 3.95***	B = .09, t = 2.55*	B = .25, t = 4.18***	B = .45, t = 13.46***	B = .26, t = 5.02***	B = .37, t = 11.81***	B = .30, t = 5.23***	B = .06, t = 2.16*	B = .09, t = 2.60*	B = .01, t = 0.29

	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
Time x PosAdRM	B = .04, t = .55	B = -.10, t = -2.80**	B = 0.06, t = 1.33	B = -.09, t = -1.53	B = -.12, t = -1.97a	B = -.01, t = -0.26	B = -.03, t = -.50	B = -.07, t = -2.25*	B = .03, t = 1.86 a	B = -.02, t = -1.57	B = -.01, t = .50
5 Time Points	Int = 5.52	Int = 5.88	Int = 6.78	Int = 6.60	Int = 6.49	Int = 5.94	Int = 6.71	Int = 6.44	Int = 3.54	Int = 3.51	Int = 3.59
Time	B = .03, t = 1.06	B = .17, t = 27.17***	B = -.01, t = -.54	B = .03, t = 2.85**	B = .09, t = 7.39***	B =.02, t = .55	B = .00, t = 0.18	B = .10, t = 5.24***	B = .04, t = 50.7***	B = .02, t = 1.37	B = -.00, t = -.30
Pos AdRM (Baseline)	B = .09, t = 1.06	B = .37, t = 10.36***	B = .12, t = 3.62***	B = .24, t = 4.74***	B = .41, t = 7.39***	B = .26, t = 3.71***	B = .38, t = 13.60***	B = .30, t = 4.41***	B = .07, t = 2.38*	B = .08, t = 2.82**	B = .02, t = 0.55
Time x PosAdRM	B = -.00, t = -.11	B = -.07, t = -3.27***	B = -0.01, t = -.30	B = -.07, t = -2.59*	B = -.06, t = -5.50***	B = .00, t = .34	B = -.05, t = -6.26***	B = -.08, t = 5.08***	B = .00, t = .18	B = -.01, t = -2.09*	B = -.01, t = -.36
	TM	SO	AM	IF	TL	EC	AI	SC	CHAR	VALDIV	EMP
	Time Management	Social Competence	Achievement Motivation	Intellectual Flexibility	Task Leadership	Emotional Control	Active Initiative	Self-Confidence	Character	Valuing Diversity	Empathy
Negative Adult RM (Baseline)	grand mean centered										
3 Time Points	Int = 5.57	Int = 5.87	Int = 6.79	Int = 6.67	Int = 6.55	Int = 5.99	Int = 6.79	Int = 6.50	Int = 3.54	Int = 3.51	Int = 3.57
Time	B = .00, t = .07	B = .25, t = 3.87***	B = -.03, t = -0.85	B = -.07, t = -.93	B = .03, t = .48	B = -.04, t = -1.02	B = -.05, t = -.51	B = .04, t = .64	B = .05, t = 1.99*	B = .05, t = 2.63**	B = .03, t = .99
NegAdRM (Baseline)	B = -.25, t = -2.42*	B = .04, t = 1.07	B = -0.11, t = -2.04*	B = .01, t = 0.24	B = .03, t = .60	B = -.04, t = -1.04	B = .02, t = .27	B = -.01, t = -.09	B = -.02, t = -.80	B = .02, t = 1.31	B = -.03, t = 1.74a
Time x NegAdRM	B = .04, t = 1.86a	B = -.03, t = -0.91	B = 0.06, t = 6.77***	B = -.02, t = -.65	B = -.03, t = -.63	B = -.06, t = -1.51	B = .06, t = 1.41	B = -.01, t = -.41	B = .02, t = 1.42	B = .00, t = .18	B =.00, t =.12
5 Time Points	Int = 5.54	Int = 5.92	Int = 6.78	Int = 6.61	Int = 6.54	Int = 5.95	Int = 6.76	Int = 6.46	Int = 3.54	Int = 3.52	Int = 3.59
Time	B = .02, t = 1.00	B = .16, t = 12.03***	B = -.01, t = -.81	B = .02, t = 1.04	B = .08, t = 4.41***	B = .02, t = .39	B = .00, t = 0.07	B = .10, t = 9.21***	B = .04, t = 4.69***	B = .02, t = .95	B = -.01, t = -.51
Neg AdRM (Baseline)	B =-.25, t =-2.26	B = .03, t = .80	B = -0.07, t = -1.19	B = .05, t = .91	B = .05, t = .74	B = -.06, t = 1.67 a	B = .06, t = 1.09	B = .01, t = .12	B = -.01, t = -.49	B = .03, t = 2.87**	B = -.03, t = -1.54
Time x NegAdRM	B = .03, t = .90	B = -.03, t = -6.34***	B = -0.03, t = -1.63	B = -.10, t = -9.42***	B = -.06, t = -11.47***	B = -.01, t = -1.54	B = -.02, t = -1.15	B = -.05, t = -2.80**	B = .00, t = .02	B = -.03, t = -3.28***	B = -.01, t = -1.84a