

Luminosity 2017:
Exploring Benefits of a Youth Conference on Well-Being

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Bachelor of Arts (Honours)

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Statement of Originality

This thesis contains no material which has been accepted for the award of any other degree or diploma in any university or other tertiary institution and, to the best of my knowledge and belief, contains no material previously published or written by another person, except where due reference has been made in the text. I give consent to this copy of my thesis, when deposited in the University Library, being made available for loan and photocopying subject to the copyright Act 1968.

Mariane Power

Date: 18th May 2018

Acknowledgement of Authorship

I, Mariane Power, hereby certify that the work embodied in this thesis consists of a manuscript of which I am a joint author. I have included as part of the thesis a written statement, endorsed by my supervisor, attesting to my contribution to the joint manuscript.

I also attest that I was primarily responsible for the review of the literature, recruitment of the intervention group, data analysis, and writing of the manuscript. Dana Buxton assisted with recruitment of the comparison group. I received statistical guidance from Kim Colyvas, statistical consultant, for the data analysis and results sections. My work was forwarded to my supervisor, Dr Sean Halpin, for review and amendments were made based on their feedback. I am the primary author of the work herein.

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So. Here we are. At the base camp of Magic Mountain. It's taken a lot of preparation to get here, and just like every mountaineer and explorer before me, it's taken a team of people that before we climb, I'd like to acknowledge. To my mentors and colleagues in Positive Psychology, who first inspired this adventure with their own climbs and expeditions. I am forever grateful. Keep the discoveries coming. To Kim Colyvas, your patience and perseverance bought calm to my world of chaos throughout the statistical analysis. Thank you. Dana Buxton, thank you for believing in the climb and the journey ahead, and for taking on an adventure that started without a clear map. Your enthusiasm and courage kept me going.

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Luminosity 2017:
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Abstract

The transition period between adolescence and adulthood brings many challenges, and immense opportunity for personal growth, skill acquisition and healthy identity development. Educators are readily adopting positive psychology interventions (PPIs) to promote positive well-being in schools, and communities are seeking additional ways support youth. Youth Conferences may provide alternate settings for the development of youth purpose, understood to positively impact well-being. This study utilized an Australian sample of youth aged 15 – 25 ($n = 430$) to (1) further support the reliability of a newly developed well-being measure for youth; (2) examine the psychological and demographic profiles of the Conference group compared to an online comparison group matched by age; and (3) evaluate effectiveness of an Australian Youth Conference, the Luminosity Youth Summit. Support was found for the reliability of EPOCH Adolescent Measure of Well-being, extending its generalizability to youth beyond adolescence. In contrast to previous studies, we found no association between well-being and mindset. Linear Mixed Models showed that Luminosity attendees reported significant improvement in Intelligence Mindset compared to youth in the non-attendee online comparison group and this change sustained at 6 week follow up. Luminosity attendees reported higher well-being scores and greater involvement in co-curricular activities and leadership opportunities compared to the online comparison group. Differences in group profiles was conceptualized as providing partial support for the notion that Youth Conference may promote the development of purpose, and further research into this possibility was proposed. This study extends the reach and applicability of the EPOCH Measure of Adolescent Well-being and calls for further research that investigates associations between well-being and mindset. Results provide great scope for Youth Conferences as settings that may support positive growth for youth.

Keywords: well-being, positive psychology interventions, youth, purpose, optimism, mindset, meaning, conferences

Luminosity 2017:
Fostering Youth Well-Being

The emergence of the positive psychology movement over the past two decades has seen the growth of scientific investigation into factors that promote optimal human functioning (Rusk & Waters, 2013). Positive psychology aims to promote a more balanced investigation of the human experience. Where traditional psychology focused in on repairing life's negatives, positive psychology invites us to broaden our lens, and investigate what promotes the enjoyable aspects of life (Seligman & Csikszentmihalyi, 2014). From this perspective, it is equally important to understand why things go right, learn how to cultivate personal strengths and virtues, and promote well-being (Seligman & Csikszentmihalyi, 2014).

Taking a balanced approach to psychological health is particularly relevant when considering young people, given the multiple psychological, social and biological changes that occur during this developmental phase (Barret, Cooper & Guarjardo, 2014). Adolescence and the transition to adulthood is marked by a high incidence of mental health difficulties and the development of many clinical disorders occurs during this difficult stage of life (Sawyer, Miller-Lewis, & Clark, 2007). This period of time also provides optimal opportunity to assist youth people build capacity and skills that promote positive youth development (PYD; National Scientific Council on the Developing Child, 2006).

The trend towards adopting positive psychology interventions within education and the increasing demand for positive youth based events and initiatives in community settings reflects the recent push to prioritise youth well-being (Wood & Tarrier, 2010). However, concern has been raised that despite good intentions, the current enthusiasm to implement positive interventions across different settings may be outpacing research that investigates the fundamental factors that contribute to youth well-being (Diener, Lucas, Schimmack &

Helliwell, 2009). This study aims to further explore well-being factors relevant to youth and consider the role of Youth Conferences in providing opportunities for young people to participate in conversations and activities that promote positive well-being.

Mental health and Australian youth

Youth, defined as individuals between the ages of 15 and 25, are arguably one of the most vulnerable populations at risk of mental health difficulties (Carr-Gregg, Enderby, & Grover, 2003). While many mental health disorders have an age of onset during adolescence, this transition period is also a critical time for the development of positive mental health behaviours, mindset changes and skill acquisition (Dahl, 2004; Greenberg, Domitrovich, & Bumbarger, 2001; Wood & Tarrier, 2010). Emergence into adulthood brings with it new roles and responsibilities, in addition to renegotiation of relationships with family, peers, and the community (Lerner & Steinberg, 2009; World Health Organisation, 2014a). Marked by the task of identity development (Erikson, 1994), healthy transition into adulthood involves a young person experimenting with different roles, values and goals, to find those which are personally meaningful (Arnett, 2000).

Understanding youth well-being

The fundamental goal of positive psychology is to promote mental health through enhanced well-being (Norrish, Williams, O'Connor, Robinson, 2013). Although there are no universal definitions of well-being, there is substantial consensus in the literature that well-being is a multi-dimensional construct that considers various life domains (Forgeard, Jayawickreme, Kern, & Seligman, 2011; Frey & Stutzer, 2010; Keyes, 2007). Whilst some wellbeing theories focus on experiences of positive emotion (hedonic wellbeing), others emphasize eudaimonic factors (i.e., the good and meaningful life), while others combine both (see Ryan & Deci, 2001 for review). Put more simply, well-being has been described as “the combination of feeling good and functioning well” (Huppert & Johnson, 2010, p. 264).

Perhaps the most widely accepted combined model of well-being in the positive psychology literature is Seligman's (2011) model, which conceptualises well-being in terms of five pillars: Positive Emotion, Engagement, Relationships, Meaning and Accomplishment, captured by the acronym PERMA. The five factor PERMA framework allows examination of the profile of dimensions contributing to well-being, providing opportunity to consider specific target areas for intervention and offering an overall impression of well-being when factors are combined (Kern, Waters, White, & Adler, 2014).

Positive wellbeing is associated with several benefits amongst youth, including preferred student outcomes such as prosocial behaviour, social, emotional, and academic capability (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011). Individuals with greater well-being demonstrate more adaptive psycho-social functioning, and decreased depression, anxiety and behavioural problems (Huebner & Alderman, 1993; Suldo & Huebner, 2006).

Despite these promising findings, empirical support for the model and measures that attempt to capture well-being as conceptualised by the PERMA model within the youth population still require attention (Butler & Kern, 2014; Kern, Waters, Adler, & White, 2015; Kern, et al., 2014). Further, studies that consider the model's applicability for youth with various backgrounds are needed. To our knowledge, samples investigating demographic differences such as geographical location are currently lacking in the literature. This is important, since factors related to city based and regional youth may impact well-being. For example, in Australia, regional youth have less access to education and health services and their families report lower incomes (Australian Institute of Health and Welfare, 2017).

Associations between well-being and growth mindset

The recent development and validation of the EPOCH Measure of Adolescent Well-being (Kern, Benson, Steinberg & Steinberg, 2016) addresses the need for measures based on

the PERMA framework within the adolescent population. In developing the measure, Kern and colleagues (2016) demonstrated moderate positive associations between well-being factors and growth mindset in tests of convergent validity. Mindsets, originally referred to as implicit theories (Dweck, 2000; Dweck, Chiu, & Hong, 1995) are defined as individual knowledge structures that include beliefs about the permanency of characteristics and attributes, and are proposed to assist organize how individuals ascribe meaning to events. The Intelligence Mindset construct was originally developed to investigate the impact of people's views of intelligence, and two distinct ways by which individuals view learning were proposed (Dweck, 2006). Individuals with a *fixed mindset* believe that their intelligence is an inherent trait that cannot be altered and individuals with a *growth mindset* believe that their intelligence is variable based on their effort and actions and can be improved over time (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 1999).

Research exploring the benefits of a growth intelligence mindset within the educational setting has demonstrated academic benefits, with students reporting higher motivation toward their studies and improved grades (Yeager & Dweck, 2012; Blackwell et al., 2007; Green, Norrish, Vella-Brodrick, 2014). Mindset research has expanded to include traits such as Personality Mindset (Chiu, Hong, et al., 1997; Yeager & Dweck, 2012) and Morality Mindset (Tamir, John, Srivastava & Gross, 2007), with reported benefits including greater resilience in the face of peer exclusion (Yeager, Johnson, Spitzer, & Dweck, 2012) and academic difficulty (Paunesku et al., 2012).

To our knowledge, the original validation of the Intelligence Mindset scale demonstrated that mindset was distinct from, and unassociated with, well-being factors such as optimism and confidence in the world and other people (as cited in Dweck, Chiu & Hong, 1995) and self-esteem (Coopersmith, 1967). Despite this, a recent study by Tongeren & Burnette (2016) utilized the mindset principles to develop a happiness mindset scale and

demonstrated a positive association between a growth mindset of happiness and greater well-being and relationship satisfaction. Further, Intelligence Mindset has recently been utilized to assist with the development of well-being measures with promising findings. A recent study exploring the PERMA framework demonstrated a positive association between Intelligence Growth Mindset and the accomplishment factor of well-being, in addition to a negative association between Intelligence Growth Mindset and depression symptomology in youth (Kern, Waters, Adler & White, 2014). Findings were preliminary, and additional research investigating the role of Intelligence Mindset in promoting youth well-being is needed. Further, an understanding of how more recent Mindset measures (Morality and Personality) relate to wellbeing may provide a more detailed understanding of mindset as it relates to well-being.

Enhancing youth well-being through applied positive psychology

Positive Psychology Interventions (PPIs) are “aimed at cultivating positive feelings, positive behaviours, or positive cognitions” (Sin & Lyubomirsky, 2009, p. 467). Schools provide a unique setting for delivering PPIs (Seligman, 2011; Green, Norrish, Vella-Brodrick & Grant, 2014) and these PPIs have demonstrated promising benefits (White, Slemp & Murray, 2017). However, school leavers require additional contexts to continue developing positive characteristics. When considering interventions that target youth, experiences that influence a young person’s development of well-being and mindset need not be confined to the school context (Arnold, Cohen & Warner, 2009; Bronk, 2013). Bundick (2011) recently demonstrated that conversations with young people about the things that matter to them, even when brief, may contribute to changes and factors thought to build purpose. Purpose, described as future oriented and goal focused (Yeager & Bundick, 2009), contributes to later development of meaning, one of the five factors highlighted in the PERMA framework, and defined in the literature as a sense of value and significance in life (Emmons, 2003). Settings

that facilitate exposure to meaningful conversations may provide unique opportunity for studies of how youth foster meaning as a factor that contributes to overall well-being (Bundick, 2011).

Youth Conferences. Youth Conferences, defined as organized events where “youth from different backgrounds are brought together to talk about solutions to social problems that affect their own lives” (Pancer, Rose-Krasnor, & Loiselle, 2002, p. 50) facilitate exposure to a diversity of people with different life experiences (Sanders, Movit, Mitra & Perkins, 2007) and may provide such a setting. In Australia, Youth Conferences differ within their objectives and delivery methods. For example, the United Nations Youth Australia holds a national conference annually in addition to state chapter conferences, with an aim to bring together emerging youth leaders in an environment that facilitates conversation around matters of global importance (www.unyouth.org.au). Halogen Australia holds state based conferences for primary and secondary youth, with a focus on exploring what it takes to be an effective leader (www.halogen.org.au), whilst church based organisations, such as Ignite Youth, aim to inspire youth to live a life of faith and service (www.igniteyouth.com). Conferences that specifically target youth well-being are emerging. For example, the Burn Bright National Leadership Program is an immersive youth based leadership conference that “focuses on developing personal character and a sense of value, identity and purpose whilst also enhancing leadership and character resiliency skills” (www.burnbright.org.au). The Luminosity Youth Summit is another youth conference that aims to inspire youth for a positive future by sharing stories of success from a range of speakers.

Interest into the possible positive effects of youth conferences emerged over a decade ago (Pancer et al., 2002), however, to our knowledge, they have received little to no attention in more recent years. Further, youth conferences have attracted little to no interest in the positive psychology literature since the development of more recent well-being models such

as PERMA. An early study utilised onsite qualitative evaluation methodology to investigate a conference that aimed to provide youth with the opportunity to explore social issues relevant to their communities (Pancer et al., 2002). Increased feelings of self-efficacy and confidence, empowerment and greater hope for the future was reported amongst youth attendees. Early investigations proposed that Youth Conferences may provide an opportunity for students to develop a sense of agency, belonging and competence and an understanding of the value of diversity (Sanders et al., 2007). Subsequent qualitative findings revealed that youth reported conference experiences as significant life events that influenced their discovery of purpose (Arnold, Cohen, & Warner, 2009). Combined, these preliminary findings suggest possible enhancement of engagement (Pancer et al., 2002), mindset and perspective (Sanders et al., 2002) and meaning (Arnold, Cohen, & Warner, 2009), highlighting the possibility that Youth Conferences may provide a suitable context for fostering youth well-being and mindset. Further rigorous research that utilizes quantitative measures to confirm qualitative findings is an important next step.

Aims and Hypotheses

The current study aimed to investigate the effects of an Australian Youth Conference, The Luminosity Youth Summit, on youth well-being and mindset. Further, the study built on on Kern's (2016) research by assessing the reliability of the EPOCH measure in a sample of Australian youth. The study had two secondary aims. First, to examine associations between well-being factors and various types of mindset. Second, to compare the demographic and psychological profiles of the Youth Conference attendees with a matched-age comparison group who self-selected to complete an online questionnaire about youth well-being and mindset.

It was hypothesised that the EPOCH Measure of Adolescent Well-being would be reliable in a diverse Australian youth sample. It was hypothesised that there would be a

significant effect of Youth Conference attendance on well-being and mindset factors. Specifically, attendees would report greater increase in all well-being and mindset scores compared to non-attendees. It was hypothesised that overall well-being and mindset scores would be positively associated and that well-being would be positively associated with high mindset scores across all three mindset attributes.

Method

Participants

The study included an intervention group of Luminosity attendees and a non-attendee comparison group. For both groups, participants included English speaking Australian youth aged 15 to 25. An incentive to participate was entry into a random draw to win a \$100 gift card at baseline and follow-up survey time points, and participants provided email addresses at baseline if they wished to partake in the follow up surveys.

The Luminosity group was recruited at the outset of Luminosity by the principal researcher, who announced the study on the mainstage. A total of 238 participants provided data at baseline (T1), however, 51 participants who failed to provide a unique identifier code were excluded due to the inability to match their results with subsequent time points, leaving a total of 187 who met inclusion criteria for the initial survey. Of the 97 participants who completed the second time point survey at the conclusion of Luminosity (T2), 29 were excluded due to failure to provide unique identifier codes, leaving a total of 68 participants. A total of 25 participants completed the 6 week follow up (T3) in this group, of which 13 provided results across all time points, five at T2 and T3 only and seven at T3 only.

The comparison group were recruited online via Facebook targeted advertising of an online survey about youth well-being. The comparison group resided throughout NSW, Australia. A total of 261 participants provided data at the initial time point, 18 of whom provided partial demographics and dropped out of the study, leaving a total of 243

participants at baseline, 188 of whom agreed to be contacted for the 6 week follow up survey via email. A total of 58 participants completed the follow up survey, of which 46 could be matched using the unique identifier code.

In total, 430 participants from both groups provided data at baseline. Specific demographic details from each group are presented in results (Table 1), and attrition is discussed further in results.

Procedure

Luminosity participants were recruited at the commencement of the event through an announcement made by the principal researcher. The 3 day Luminosity Youth Summit consisted of keynotes and workshops presented by experts from diverse industry backgrounds, with presentations aimed at assisting participants explore future pathways, interests and purpose. The conference was organised entirely by a volunteer committee, who made all decisions regarding the speakers who attended. Themes addressed by the speakers at the conference included the power of courage when faced by adversity, the value of creativity for innovation and big ideas, the importance of following your passion, the importance of collaboration, and the importance of adopting a belief that you can achieve anything you put your mind to. Speakers were from a diverse range of professional backgrounds, and shared stories on the different ways they had achieved their goals. Workshops focused on the practical entrepreneurial skills required to follow through on a business idea, such as marketing, the process of establishing a business or not for profit, finances and sales. Further workshops offered opportunity to explore interests and passions, such as creative design, dance, yoga and music. At the completion of the conference, attendees were invited to write a letter to their future self, whereby they reflected on what they had learnt and articulated their hopes and dreams. Highlights were recorded by event co-ordinators and made available via their website (www.luminosityyouthsummit.com.au), along with a full list of speakers.

Comparison group participants received no intervention between survey collection points.

Survey administration.

Luminosity group. Participants were invited to complete surveys at three time points: at commencement of the Summit (Time 1: T1), conclusion of the Summit (Time 2: T2) and at 6 week-follow up (Time 3: T3). Participants were directed to an online link which comprised an information statement and link to the survey items which when accessed, provided implied consent. Anonymity was ensured with a participant-created code identifier. Each survey took 10 minutes to complete. Demographics, The EPOCH measure of Adolescent Well-being and the Dweck Mindset Instruments were administered to participants at T1. The same survey battery was administered at T2 with the addition of a Summit feedback survey, which was not reported on within this study. Participants provided their email address for the purpose of being entered into a randomly generated draw to win a \$100 gift card and to receive invitation for a second chance to enter by completing the survey online at T3. Due to lack of electronic devices and poor internet connection, a number of participants completed a pen and paper copy of the online survey (T1 $n = 53$; T2 $n = 41$).

Online Comparison Group. Participants completed online surveys at two time points: in a two week period around the commencement of the Luminosity Youth Summit (T1), and at 6-week follow-up (T3). Survey format, information and consent procedures and incentives matched the Luminosity Group format. Ethical clearance was provided by the University of Newcastle Human Research Ethics Committee (Approval Number H-2017-0078).

Measures

Demographics. All participants provided answers to demographic questions established by the researchers (Appendix C) including country of residence, postcode, age, gender, education and employment, extra-curricular activities, leadership experience and

study habits (Table 1).

The EPOCH measure of adolescent well-being (EPOCH; Kern, Benson, Steinberg & Steinberg, 2016). The EPOCH is a 20-item self-report measure that assesses subjective well-being based on Seligman's (2011) PERMA theory of flourishing. Items capture five domains of adolescent well-being: engagement, perseverance, optimism, connectedness and happiness. Statements pertaining to each domain (e.g. *In uncertain times, I expect the best*) are rated using a 5-point Likert scale. Scores within each domain are averaged and provide a profile of well-being. An overall well-being score is obtained by averaging scores across all 20 items.

The Dweck Mindset Instrument (Dweck, 2006). This instrument consists of three subscales that aim to capture individual mindsets of intelligence, morality and personality. The Intelligence Mindset scale is comprised of four items, two of which are reversed scored, whereas the Morality and Personality Mindset scales each consist of three items. Participants rate their level of agreement for each of the items on a 6-point Likert scale. Each scale is intended to be used separately (Dweck, 2006). Averaging the items for each scale provides a Mindset attribute total score, with higher scores associated with a Growth Mindset. An example Intelligence Mindset item is *You can always substantially change how intelligent you are*. The Intelligence Mindset scale has demonstrated strong reliability in the adolescent population, with Cronbach $\alpha = .85$ (Kern, Waters, Adler & White, 2015). In the current study, each mindset scale demonstrated sound reliability, with Cronbach's α being .76 for Intelligence Mindset, .84 for Morality Mindset, and .87 for Personality Mindset.

Summit Feedback Survey. The Luminosity Group feedback battery asked attendees to provide quantitative and qualitative feedback regarding speakers and workshops. This survey was not analysed for the purposes of the current study, but is provided in Appendix B.

Results

Statistical analyses

IBM SPSS Statistics for Windows (version 25.0; SPSS, Chicago, IL, USA) was used to conduct statistical analyses with a type 1 error of $\alpha = .05$ unless otherwise stated.

To examine whether demographics contributed to selection bias and likelihood to complete follow up surveys, adjusted standardized residuals $> |2|$ were calculated to help in identifying the important effects in tables with more than two levels for the demographic variables. No significant effects were found to indicate that demographic differences contributed to attrition rates, so all available data was included in the subsequent analyses. To accommodate for varied data time point collections across groups, a Linear Mixed Models (LMM) analysis approach was used to facilitate repeated measures data analysis due to the attrition over time in the study. All observations are used by this approach, not only data for which all 3 times points are available as in repeated measures ANOVA. The between group variable condition had 2 levels; Luminosity and Comparison, and the within subject variable time 3 levels; baseline, post conference and 6 weeks follow up. The interaction between condition and time was tested in all models to assess if the Luminosity group changed over time differently to the comparison group. A compound symmetry residual covariance structure was used to allow for correlation between repeated scores over time within the same subject. The LMM approach also provided an intention to treat analysis by inclusion of all available participant data whilst making adjustments for baseline scores under the Missing at Random Assumption (MRA; Brown & Prescott, 2006).

To assess the primary question, LMM's were fitted for all subscales of EPOCH (Engagement, Perseverance, Optimism, Connectedness, Happiness and Overall Well-being) and the Dweck Mindset Instrument (Intelligence Mindset, Morality Mindset and Personality Mindset). This enabled comparison of changes reported by both groups across time points.

Cronbach alpha was calculated for each of the EPOCH subscale scores and overall

score, and for each of the Mindset attributes to determine internal reliability of the scales amongst the study samples.

Chi-squared tests were used to assess the presence of demographic differences between groups, supplemented with Monte Carlo exact tests as a cross check on the correctness of the significance tests. Where significance was consistent between the two tests, the Pearson's chi-squared test was reported for consistency with the literature.

Correlation between the EPOCH subscales and Mindset attributes were examined. As there was evidence of non-normality in the distribution of subscales, Spearman's rho was used to check Pearson's correlation coefficient. As the difference between the two correlation measures was minimal, Pearson's r was reported to facilitate ease of comparison with similar studies in the literature.

Descriptive statistics and demographic differences between groups

An independent t-test revealed that participants in the Luminosity Group ($M = 17.38$, $SD = 2.55$) averaged 2.51 years younger than the comparison group ($M = 19.88$, $SD = 2.69$), $t(427) = -9.81$, $p < .001$, two tailed. There was no significant association between condition and country of living, although there was a significant association between condition and postcode $\chi^2(134) = 409.92$, $p < .001$ with the biggest difference being that Luminosity participants reported postcodes that clustered around the regional mid-north coast NSW, while the comparison group represented a diverse spread of NSW postcodes.

As shown in Table 1, there was a higher proportion of females than male participants in both groups, however the difference was significantly greater in the comparison group. The percentage of students in full time studies was significantly higher in the Luminosity group than the comparison group, and a significantly higher proportion of participants in the Luminosity group reported being in grades lower than year 10 compared to the comparison group. The rate of involvement in full time work was significantly higher in the comparison

group, however the number of reported leadership and co-curricular involvements was significantly higher in the Luminosity group than the comparison group. No significant association between condition and number of hours spent studying was found.

Table 1.
Demographic Profiles of Youth and Score Differences

Variable		Luminosity Group		Comparison Group		df	χ^2
		Frequency	Percent (%)	Frequency	Percent (%)		
Biological Gender	Male	73	39.0	50	20.6	1	17.63
	Female	114	61.0	193	79.4	.	.
	Total	187	100.0	243	100.0	.	.
Current Study	Full Time	136	72.7	139	57.4	3	11.81
	Part Time	13	7.0	21	8.7	.	.
	None	38	20.3	82	33.9	.	.
	Total	187	100.0	242	100.0	.	.
Study Habits	0-5 hours	114	60.6	137	57.1	.	.
	6-10 hours	35	18.6	49	20.4	.	.
	11-15 hours	17	9.0	25	10.4	.	.
	16-20 hours	15	8.0	16	6.7	.	.
	21+	7	3.7	13	5.4	.	.
	Total	188	100.0	240	100.0	.	.
Highest Education Level	Below Year 10	51	27.3	5	2.1	6	91.34
	Completed Year 10	81	43.3	70	29.2	.	.
	Completed Year 12	33	17.6	80	33.3	.	.
	Non-university post-school qualification	11	5.9	31	12.9	.	.
	Completed some university education	6	3.2	28	11.7	.	.
	University bachelor degree	4	2.1	24	10.0	.	.
	University postgraduate degree	1	0.5	2	0.8	.	.
	Total	187	100.0	240	100.0	.	.

Note. * $p < .01$ ** $p < .001$

Continued next page

Table 1. *Continued*
Demographic Profiles of Youth and Score Differences

Variable		<i>Luminosity Group</i>		<i>Comparison Group</i>		<i>df</i>	<i>χ²</i>
		Frequency	Percent (%)	Frequency	Percent (%)		
Current Employment	Full Time Work	16	8.5	53	22.1	3	14.40*
	Part Time Work	104	55.3	115	47.9	.	.
	Not Currently Working	68	36.2	72	30.0	.	.
	Total	188	100.0	240	100.0	.	.
Number	0	15	8.0	68	28.3	11	43.96**
Co-Curricular Activities	1-3	151	80.3	141	62.9	.	.
	4-5	20	14.9	14	5.9	.	.
	6-8	2	1.0	4	2.8	.	.
	9-11	0	0.0	3	1.8	.	.
	Total	188	100.0	240	100.0	.	.
Number	0	32	16.9	16	32.9	.	.
Leadership Opportunities	1	94	49.7	13	28.7	5	26.60**
	2	45	23.8	240	22.5	.	.
	3	12	6.3	5	11.7	.	.
	4	4	2.1	70	3.3	.	.
	5	2	1.1	80	0.8	.	.
	Total	189	100.0	31	100.0	.	.

Note. * $p < .01$ ** $p < .001$

EPOCH reliability

Reliability statistics for the 5 subscales and overall well-being score were determined using Cronbach's alpha, following procedures by Kern et al (2016). Reliability for the measure was largely consistent with Kern et al's (2016) sample, with Cronbach's α being .82 for engagement, .79 for perseverance, .85 for optimism, .82 for connectedness, .90 for happiness and .85 for overall well-being.

Effectiveness of the Luminosity Youth Summit

Attendance at Luminosity did not significantly predict higher scores over time on any of the well-being factors (E, P, O, C, H and overall well-being score) when compared to the non-attendee group. None of the condition by time interactions were significant (See Table 6, Appendix A). However, as shown in Table 2, condition was a significant predictor of well-being scores, with those in the Luminosity group reporting higher scores than those in the comparison group on overall well-being, engagement, perseverance, optimism connectedness and happiness.

Table 2

Comparison of Mean Scores Across Well-being Subscales, by Condition

	F (Numerator df, Denominator df)	Condition	Mean	Std. error	df	95% CI
Engagement	(1, 547.74) = 40.70***	Luminosity	3.42	.07	584.99	(3.29, 3.55)
		Comparison	2.79	.06	582.58	(2.67, 2.91)
Perseverance	(1, 566.02) = 9.30**	Luminosity	3.65	.06	582.92	(3.53, 3.76)
		Comparison	3.36	.06	574.64	(3.25, 3.47)
Optimism	(1, 566.56) = 41.34***	Luminosity	3.58	.07	583.02	(3.44, 3.71)
		Comparison	2.90	.06	575.03	(2.78, 3.02)
Connectedness	(1, 553.78) = 4.23*	Luminosity	4.12	.07	584.83	(3.99, 4.25)
		Comparison	3.89	.06	580.23	(3.76, 4.01)
Happiness	(1, 552.59) = 39.77***	Luminosity	3.79	.07	584.93	(3.65, 3.93)
		Comparison	3.10	.07	581.07	(2.95, 3.21)
Total	(1, 564.26) = 40.49***	Luminosity	3.71	.05	583.56	(3.61, 3.81)
		Comparison	3.20	.05	576.30	(3.12, 3.30)

Note. * $p < .05$ ** $p < .01$ *** $p < .001$

Table 3 summarises effects on mindset and demonstrates that attendance at Luminosity was a significant predictor of scores on Intelligence Mindset, with those in the Luminosity group reporting a significant increase in Intelligence Mindset over time compared to those in the Comparison group $F(1, 185.32) = 21.40, p < .001$.

Table 3
Effect of Summit on Mindset Subscales

	Time	Condition	Mean	Std. error	df	95% CI
Intelligence Mindset	1	Luminosity	2.39*	.08	554.33	(2.23, 2.53)
		Comparison	2.79*	.07	508.25	(2.66, 2.91)
	2	Luminosity	2.43*	.09	525.82	(2.25, 2.60)
		Comparison	.	.	.	.
	3	Luminosity	3.50*	.19	231.42	(3.12, 3.90)
		Comparison	3.10*	.10	352.44	(2.85, 3.30)
Personality Mindset	1	Luminosity	3.91	.07	584.83	(3.99, 4.25)
		Comparison	3.72	.06	580.23	(3.76, 4.01)
	2	Luminosity	3.41	1.11	536.03	(3.20, 3.62)
		Comparison	.	.	.	.
	3	Luminosity	3.60	.20	309.59	(3.21, 3.98)
		Comparison	3.82	.13	386.25	(3.56, 4.08)
Morality Mindset	1	Luminosity	3.29	.10	565.35	(3.10, 3.48)
		Comparison	3.10	.08	521.73	(2.93, 3.26)
	2	Luminosity	2.95	.11	533.56	(2.74, 3.17)
		Comparison	.	.	.	.
	3	Luminosity	3.12	.20	304.79	(2.73, 3.52)
		Comparison	3.22	.14	382.16	(2.96, 3.45)

Note. * $p < .05$.

Table 4 shows that no significant interaction of time and condition was found for Morality or Personality Mindset scores. Time was a significant predictor of changes in Intelligence Mindset scores $F(2, 185.32) = 21.40, p < .001$ and Personality Mindset scores $F(1, 226.14) = 5.44, p = .005$ (see Table 4). Condition did not act as a significant predictor of Intelligence, Personality or Morality mindset scores.

Table 4
Effect of Time on Mindset Subscales for all Participants

	Time	Mean	Std. error	df	95% CI
Intelligence Mindset	1	2.59*	.05	543.72	(2.49, 2.69)
	2	2.42*	.89	525.83	(2.25, 2.60)
	3	3.30*	.11	256.03	(3.06, 3.48)
Personality Mindset	1	3.81*	.06	561.10	(3.70, 4.00)
	2	3.41*	.11	536.03	(3.20, 3.62)
	3	3.71*	.12	332.04	(3.47, 3.94)
Morality Mindset	1	3.19	.06	554.99	(3.10, 3.31)
	2	2.95	.11	533.56	(2.74, 3.17)
	3	3.17	.12	327.44	(2.94, 3.41)

Note. * $p < .05$.

Associations between well-being and mindset

All well-being factors across groups were positively associated with each other. All mindset attributes across groups were positively associated with each other. However, there were no significant correlations between any of the well-being factors and the mindset attributes. A summary of mean scores, standard deviations and Pearson correlations is provided in Table 5.

Table 5

Descriptive Statistics and Correlations for Total EPOCH Scores and Mindset Score

Variable	1	2	3	4	5	6	7	8	9
1 Engagement	-	.51*	.50*	.40*	.53*	.74*	.02	.01	.10
2 Perseverance		-	.62*	.40*	.54*	.77*	-.06	-.10	-.10
3 Optimism			-	.56*	.68*	.84*	-.05	.00	-.01
4 Connectedness				-	.66*	.75*	-.02	.01	-.06
5 Happiness					-	.86*	-.03	.04	-.02
6 Overall EPOCH						-	-.03	-.01	-.02
7 Intelligence Mindset							-	.29*	.44*
8 Personality Mindset								-	.70*
9 Morality Mindset									-
M	3.10	3.51	3.18	4.04	3.43	3.44	2.64	3.77	3.17
SD	.817	.817	.980	.900	1.01	.730	1.010	1.187	1.249
n	395	395	395	395	395	395	377	385	379

Note. * Correlation is significant at the 0.001 level (two-tailed)

Do change scores depend on initial value?

Given the differences discovered between groups on well-being and demographic factors, a secondary analysis was conducted to investigate whether there was a relationship between initial value and the change in outcome scores (Bland & Altman, 1986). A mean score for the two time periods was correlated with the difference score for the two time periods. Bonferonni adjustment was utilized to adjust for false positives that can occur from multiple tests, with the alpha set for significance, $\alpha = .0055$. Spearman's rho was used to manage unusual distributions and confirm Pearson correlation significance. With these corrections, no significant associations between initial values and outcome scores were found, and this was true across all demographic, EPOCH and Mindset factors.

Discussion

The current study aimed to further support existing well-being measures and investigate the possible positive effects of a Youth Conference, The Luminosity Youth Summit. Specifically, the study (1) aimed to provide further support for the use of the EPOCH Measure of Well-being, a newly developed measure of adolescent well-being based on Seligman's (2011) PERMA framework, and to explore proposed associations between dimensions of well-being and mindset (2) compare the psychological and demographic profiles of Luminosity attendees and an online comparison group matched by age (3) explore whether Luminosity, aimed at promoting the development of purpose in youth, had positive benefits on well-being and mindset.

Well-being Measurement. Results supported the EPOCH Measure of Adolescent Well-being (Kern, Benson, Steinberg & Steinberg, 2016) as a reliable tool to measure psychological well-being in the current youth sample. To our knowledge, this is the first study that investigated the reliability of the EPOCH measure using a large sample of youth aged 15 to 25 from a diverse range of educational, social and geographical backgrounds. This provides support for the use of EPOCH beyond adolescence and into emerging adulthood. Consistent with previous studies (Kern et al., 2016), positive associations between each of the well-being factors was supported.

Well-being and Mindset as related constructs. In contrast to Kern et al, (2014), we did not find the expected association between mindset and well-being scores. Previous papers have supported the association between perseverance (as measured by EPOCH) and grit (Von Kulin, Tsukayama & Duckworth, 2014), and additional papers have demonstrated association between grit and mindset, potentially leading to prior assumptions that the three are related constructs (Kern et al, 2014). It is possible that in extending the age of the sample into emerging adulthood, the current study was unable to replicate associations found in

previous studies that utilised younger samples. Future studies might compare age groups and explore this possibility further. Alternatively, although perseverance, grit and mindset may share motivational properties (West, Finn, Duscworth, Gabrieli & Gabrieli, 2014), it is possible they also share distinct differences that have contributed to the results in this study. Recent findings from neuroscience have demonstrated distinct associations and disassociations between neural correlates of growth mindset and grit, a construct associated with the perseverance factor as measured by EPOCH (Kern et al, 2014) and one that is defined as “trait level perseverance and passion for long term goals” (Duscworth & Quinn, 2009). Findings provided support for the two constructs being associated with networks responsible for cognitive behavioural control. However, whilst grit was associated with connectivity of networks in brain regions implicated in delay and receipt of reward and perseverance, mindset was more greatly associated with regions important for error monitoring, suggesting differences. Further studies that work to investigate the conditions under which well-being, perseverance, grit and mindset might relate across the youth span are warranted, to better inform interventions that target positive youth development outcomes.

Luminosity Benefits. Results provided some support for the hypothesis that youth may benefit from attendance at Luminosity Youth Summit. The Luminosity Group participants demonstrated a significant increase in Intelligence Mindset scores compared to the online comparison group, and these sustained at the 6-week follow up. Whilst these results suggest promising evidence that The Luminosity Youth Summit is beneficial in increasing Intelligence Mindset, two limitations should be considered. Firstly, the attrition rates within this study by the 6 week follow up were high. While the statistical analysis utilised was chosen for its ability to manage differences in sample sizes, it is possible that selection bias may have attributed to the scores. Secondly, the Intelligence Mindset increased mean participant scores showed improvement that reached the *Unclear Mindset* range, as

defined by Dweck (2006). Previously demonstrated benefits from Intelligence Mindset relate to the presence of *Growth Mindset* (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 2006), so real world implications and clinical implications of the findings in this study are unknown. However, it could be argued that a small significant shift may represent a realistic estimation of change within the timeframe of the study, with the possibility of ongoing improvement over time. This reduces the likelihood that improvement was a factor of selection bias, and provides a strong rationale for further studies.

Despite the demonstrated associations, the shift in Intelligence Mindset alone supports the possibility that the three constructs are also distinct and worth measuring separately, as previously argued by (Yeager & Dweck, 2012). Investigating the factors that influence the likelihood of increased scores across the mindset attributes is beyond the scope of this study. However, the consistent messaging from speakers of the conference may help to explain why greater Intelligence Mindset scores were reported. Intelligence mindset is thought to be implicated in the motivational mechanisms related to academic resilience, and the speakers carried the message ‘that you can achieve your dreams and be successful in anything you put your mind to’ across the three days of the Luminosity Youth Summit. Our current education system places heavy focus on academic capacity for career pursuits, and so this messaging may have had greater weighting on thoughts around academic capacity for this sample of predominantly school and university based youth. Morality and Personality Mindset have been demonstrated to be relevant where social resilience is required, such as in the instance of verbal and physical aggression (Yeager, Miu, Powers & Dweck, 2013). Had this conference spoken more to matters of social responsibility, it is possible a greater shift in these two other mindset measures may have been observed, and future research exploring this possibility is warranted.

Luminosity and Comparison Group Differences. The psychological and

demographic profiles of the Luminosity and comparison groups were significantly different across a number of factors. Overall, the Luminosity Group captured a slightly younger group who identified as school students and reported greater co-curricular and leadership involvement than the comparison group, who were represented by a slightly older group who reported greater involvement in full time work and less previous involvement in leadership and co-curricular activities overall. Luminosity, by nature of the event, may have attracted a sample of highly driven and motivated youth. Whilst no ceiling effects of well-being were found amongst this group, there is no way of knowing from this study the possible effects of a conference of this type on youth who are less engaged in their community, and lower at baseline on well-being scores. Future studies that select samples of this kind may provide greater understanding of the range of possible benefits, and may also consider how conferences like these might attract such samples. Of interest, scores on engagement and optimism represented the largest differences between group scores, with the Luminosity Group reporting higher scores than the comparison group.

An alternate explanation for the differences in baseline is that the Luminosity Summit may have attracted a group of purpose driven youth. Previous research has demonstrated that a greater sense of purpose is associated with high engagement and optimism (George & Park, 2013). Of interest, scores on engagement and optimism represented the largest differences between group scores, with the Luminosity Group reporting higher scores than the comparison group. Theoretically speaking, youth engaged in developing their purpose are more likely than youth without purpose to make positive contributions to their community and report positive well-being (Bronk, 2013; Bronk, Hill, Lapsley, Talib, & Finch, 2009; Burrow & Hill, 2011). Combined, these findings may support the proposed notion that Youth Conferences are unique settings to explore the characteristics of youth who are engaged in developing purpose and understand further the association between meaning and

purpose and how it relates to well-being amongst youth (Kern, Waters, Adler & White, 2015).

Study Limitations and Future Directions.

The current study suffered high rates of attrition, particularly in the Luminosity Group. Smaller numbers at follow up may have negatively impacted on the ability to find significant changes in well-being and mindset scores over time. Follow up methodology may have contributed to attrition. Amongst daily distractions and competing homework demands, a chance to win incentive may not have been sufficient for this youth group and immediate incentives, such as access to video of highlights from the Conference, may support higher completion rates. Findings from a meta-analysis examining the response rates of online surveys (Cook, Heath & Thompson, 2000) demonstrated that personalized contacts, pre-contacts and the number of contacts via email were the factors associated with higher response rates in the online studies analyzed. Future online studies with youth may benefit from incorporating these findings.

One of the challenges in capturing the impact of new positive interventions and settings is choosing and utilizing the most appropriate, valid and reliable measures that reflect the constructs of interest. To our knowledge, this was the first study to attempt to quantitatively examine the possible effects of a Youth Conference. Measures were selected in an attempt to best reflect previous qualitative findings that suggest Youth Conferences are beneficial for youth. However, well-being as measured by EPOCH and the Mindset Scales may not have captured all areas of growth at this particular conference, and future investigations may benefit from utilising additional measures that capture constructs of growth, such as youth purpose (as discussed above), motivation and confidence. A further challenge is in selecting the appropriate quantitative measures based on the conference of interest, since conferences differ in the topics of exploration and their organisational

structure. Whilst this conference was predominantly organised by an adult committee, others are the result of student led initiatives. The autonomy provided for youth in the latter conference type would likely result in different growth opportunities than the first, whereby the conference attendee is a passive recipient of adult initiated activities.

Further, whilst this conference spoke to matters of career aspiration and success in an effort to broaden youth perspectives on available opportunities, other conferences that address social justice or religious thinking would likely impact different growth areas for youth. Such variation across events limits the generalisability of the current study's findings, and presents a challenge for future endeavours to investigate potential benefits of conferences in general. If we are to design conferences as interventions that target specific areas of growth amongst our youth, conference co-ordinators may benefit from considering intentional selection of youth development goals at the outset, and incorporating current evidence based interventions that compliment these goals. The distinct demographic and well-being differences between groups begs the question, 'how can conferences engage youth who are lower on well-being'? This question is beyond the scope of this study, however, in investigating this question, future efforts might consider existing research on the development of factors related to youth well-being.

The current findings offer opportunity to further consider Youth Conferences as an additional positive setting whereby the develop of youth purpose may be promoted and subsequent PPIs be delivered. Based on the purpose literature (Damon et al., 2003; Bronk 2013), PPIs recommended for investigation, based on their reported benefit on the development of youth purpose, include time management skills, goal setting, character strength recognition and teachings around optimistic thinking styles.

Conclusion.

In evaluating an Australian Youth Conference, this study has successfully supported

greater generalizability of the EPOCH Measure of Adolescent Well-being (Ker et al., 2014), utilising a large Australian sample of youth aged 15 - 25 from diverse educational and geographical backgrounds. Previous studies that had provided support for the measure had utilized samples of either adolescent males or females, often within city based school settings. The study failed to support the previously demonstrated association between well-being and mindset. This is an important finding that warrants further investigation, since many PPIs incorporate activities intended to promote growth mindset with the assumption that this will positively impact well-being (Blackwell, Trzesniewski, & Dweck, 2007; Dweck, 1999; 2007). Further investigation into how the two constructs might relate within youth is necessary to ensure that interventions are evidence based.

Previous research investigating Youth Conferences have produced qualitative findings that promote Conferences as unique settings where young people can explore and develop their identity. The current study builds on these initial findings, demonstrating increased scores in Intelligence Mindset amongst attendees. Further, the opportunity to explore the characteristics of youth who attended the Luminosity Youth Summit compared to those who didn't provided insight into the profile of youth that may typify Youth Conference attendees. Youth Conferences may provide a setting for future studies wishing to investigate PPIs amongst high well-being and community engaged youth. Additionally, future studies may wish to further explore the possibility that Youth Conferences may provide a unique setting to explore the development of purpose, a developmental asset understood to benefit both the individual, and the communities to which they contribute (Bundick, 2011).

The positive psychology movement provides opportunity to equip our young people with psychological tools necessary for a healthy and purposeful adulthood. By incorporating newly developed measures into positive psychology studies, we ensure the science of positive psychology remains robust and relevant, and by exploring varied settings and contexts for the

delivery of knowledge, resources and skills that promote youth well-being, we further expand the possible reach of delivery for the delivery of intentional activities supported by the science of positive psychology. This is a valuable goal to maintain, given the benefits PPIs promise: the knowledge and skills necessary to live what Seligman (2011) calls a good and meaningful life.

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Appendix A

Table 6.

Table 6

Effect of Summit on Wellbeing Factors

	Time	Condition	Mean	Std. error	df	95% CI
EPOCH Total	1	Luminosity	3.75	.05	577.47	(3.65, 3.85)
		Comparison	3.23	.05	517.04	(3.14, 3.31)
	2	Luminosity	3.75.	.06	555.83	(3.64, 3.86)
		Comparison	.	.	.	.
	3	Luminosity	3.63	.09	262.49	(3.44, 3.81)
		Comparison	3.17	.07	387.37	(3.01, 3.30)
Engagement	1	Luminosity	3.45	.06	584.25	(3.33, 3.60)
		Comparison	2.78	.06	540.85	(2.70, 2.89)
	2	Luminosity	3.34	.01	542.90	(3.24, 3.53)
		Comparison	.	.	.	.
	3	Luminosity	3.41	.14	301.94	(3.15, 3.68)
		Comparison	2.80	.09	383.58	(2.62, 2.98)
Perseverance	1	Luminosity	3.67	.10	575.94	(3.56, 3.79)
		Comparison	3.40	.05	512.74	(3.30, 3.50)
	2	Luminosity	3.68	.70	557.23	(3.56, 3.81)
		Comparison	.	.	.	.
	3	Luminosity	3.60	.11	256.10	(3.34, 3.80)
		Comparison	3.32	.08	386.40	(3.17, 3.47)

Continued Next Page

Table 6. *Continued*
Effect of Summit on Wellbeing Factors Cont.

	Time	Condition	Mean	Std. error	df	95% CI
Optimism	1	Luminosity	3.60	.07	576.29	(3.47, 3.74)
		Comparison	2.89	.06	514.96	(2.77, 3.01)
	2	Luminosity	3.63	.08	558.04	(3.49, 3.79)
		Comparison	.	.	.	.
	3	Luminosity	3.49	.12	261.11	(3.25, 3.73)
		Comparison	2.90	.09	390.76	(2.73, 3.07)
Connectedness	1	Luminosity	4.19	.07	581.30	(4.10, 4.32)
		Comparison	3.93	.06	524.39	(3.82, 4.05)
	2	Luminosity	4.16	.08	546.34	(4.01, 4.31)
		Comparison	.	.	.	.
	3	Luminosity	4.00	.13	267.39	(3.75, 4.30)
		Comparison	3.84	.10	373.23	(3.70, 4.01)
Happiness	1	Luminosity	3.85	.07	582.13	(3.71, 3.98)
		Comparison	3.13	.06	528.47	(3.01, 3.25)
	2	Luminosity	3.86	.08	545.80	(3.71, 4.10)
		Comparison	.	.	.	.
	3	Luminosity	3.66	.14	275.50	(3.40, 3.93)
		Comparison	3.03	.10	376.34	(2.84, 3.21)

Appendix B

**HUMAN RESEARCH ETHICS COMMITTEE****Notification of Expedited Approval**

To Chief Investigator or Project Supervisor: Cc Co-investigators / Research Students:

Re Protocol:

Date: Reference No: Date of Initial Approval:

Doctor Sean Halpin

Mrs Mariane Power Miss Dana Buxton

Luminosity Conference: Improving Student Well-Being and Growth Mindset

08-May-2017 H-2017-0078 08-May-2017

Thank you for your **Response to Conditional Approval (minor amendments)** submission to the Human Research Ethics Committee (HREC) seeking approval in relation to the above protocol.

Your submission was considered under **Expedited** review by the Ethics Administrator.

I am pleased to advise that the decision on your submission is **Approved** effective **08-May-2017**.

In approving this protocol, the Human Research Ethics Committee (HREC) is of the opinion that the project complies with the provisions contained in the National Statement on Ethical Conduct in Human Research, 2007, and the requirements within this University relating to human research.

Approval will remain valid subject to the submission, and satisfactory assessment, of annual progress reports. *If the approval of an External HREC has been "noted" the approval period is as determined by that HREC.*

The full Committee will be asked to ratify this decision at its next scheduled meeting. A formal *Certificate of Approval* will be available upon request. Your approval number is **H-2017-0078**.

If the research requires the use of an Information Statement, ensure this number is inserted at the relevant point in the Complaints paragraph prior to distribution to potential participants You may then proceed with the research.

Conditions of Approval

This approval has been granted subject to you complying with the requirements for *Monitoring of Progress, Reporting of Adverse Events, and Variations to the Approved Protocol* as detailed below.

PLEASE NOTE: In the case where the HREC has "noted" the approval of an External HREC, progress reports and reports of adverse events are to be submitted to the External HREC only. In the case of Variations to the approved protocol, or a Renewal of approval, you will apply to the External HREC for approval in the first instance and then Register that approval with the University's HREC.

Monitoring of Progress

Other than above, the University is obliged to monitor the progress of research projects involving human participants to ensure that they are conducted according to the protocol as approved by the HREC. A progress report is required on an annual basis. Continuation of your HREC approval for this project is conditional upon receipt, and satisfactory assessment, of annual progress reports. You will be advised when a report is due.

Reporting of Adverse Events

- It is the responsibility of the person **first named on this Approval Advice** to report adverse events.
- Adverse events, however minor, must be recorded by the investigator as observed by the investigator or as volunteered by a participant in the research. Full details are to be documented, whether or not the investigator, or his/her deputies, consider the event to be related to the research substance or procedure.
- Serious or unforeseen adverse events that occur during the research or within six (6) months of completion of the research, must be reported by the person first named on the Approval Advice to the (HREC) by way of the Adverse Event Report form (via RIMS at <https://rims.newcastle.edu.au/login.asp>) within 72 hours of the occurrence of the event or the investigator receiving advice of the event.
- Serious adverse events are defined as: Causing death, life threatening or serious disability. Causing or prolonging hospitalisation. Overdoses, cancers, congenital abnormalities, tissue damage, whether or not they are judged to be caused by the investigational agent or procedure. Causing psycho-social and/or financial harm. This covers everything from perceived invasion of privacy, breach of confidentiality, or the diminution of social reputation, to the creation of psychological fears and trauma. Any other event which might

affect the continued ethical acceptability of the project.

- Reports of adverse events must include: Participant's study identification number; date of birth; date of entry into the study; treatment arm (if applicable); date of event; details of event; the investigator's opinion as to whether the event is related to the research procedures; and action taken in response to the event.
- Adverse events which do not fall within the definition of serious or unexpected, including those reported from other sites involved in the research, are to be reported in detail at the time of the annual progress report to the HREC.

Variations to approved protocol

If you wish to change, or deviate from, the approved protocol, you will need to submit an *Application for Variation to Approved Human Research* (via RIMS at <https://rims.newcastle.edu.au/login.asp>). Variations may include, but are not limited to, changes or additions to investigators, study design, study population, number of participants, methods of recruitment, or participant information/consent documentation. **Variations must be approved by the (HREC) before they are implemented** except when Registering an approval of a variation from an external HREC which has been designated the lead HREC, in which case you may proceed as soon as you receive an acknowledgement of your Registration.

Linkage of ethics approval to a new Grant

HREC approvals cannot be assigned to a new grant or award (ie those that were not identified on the application for ethics approval) without confirmation of the approval from the Human Research Ethics Officer on behalf of the HREC.

Best wishes for a successful project.

■  ■
Associate Professor Helen Warren-Forward

Chair, Human Research Ethics Committee

For communications and enquiries:

Human Research Ethics Administration

Research & Innovation Services Research Integrity Unit NIER, Block C The University of Newcastle
Callaghan NSW 2308

T +61 2 492 17894

Human-Ethics@newcastle.edu.au RIMS website - <https://RIMS.newcastle.edu.au/login.asp> **Linked University of Newcastle administered funding:**

Funding body	Funding project title	First named investigator	Grant Ref

Appendix C

Demographics Survey

Thank you for agreeing to participate in our study. We hope to learn more about youth well-being in our area! So that we can compare your responses across surveys and maintain your confidentiality, we would like you to create your own unique code. You will use this each time you complete a survey for this study. Create your 6 digit code using your mother's initials, your year of birth, and father's initials (first name and surname) .

For example, if my mother's name was Sally Frost, my birth year was 1999 and father's name was Jack Frost, my 6 digit code would be :

SR99JF

Store your unique code somewhere you won't lose it – like in your phone. We'll ask you for it again next time!

Please answer the following questions.

Age

Biological sex

- ☐ Male
- ☐ Female
- ☐ Other, please specify:

Country of birth

Country where you currently live

Postcode where you currently live

Please select the responses that best apply to you.

Current Study

- ☐ Full time study
- ☐ Part time study
- ☐ Not currently studying

Study Habits

Please indicate below how many hours a week you study outside of formal classes

- ☐ 0 – 5 hrs
- ☐ 5 – 10 hrs
- ☐ 10 – 15hrs
- ☐ 15 – 20 hrs
- ☐ 20 hrs or more

Highest level of Previous Education

- ☐ Less than year 10 at high school
- ☐ Completed year 10 at high school
- ☐ Completed year 12 schooling or equivalent
- ☐ Non-University post-school qualification (eg technical and further education)
- ☐ Completed some University education
- ☐ University Bachelor degree
- ☐ University postgraduate degree

Current Employment

- ☐ Full time work
- ☐ Part time work
- ☐ Not currently working

Co-Curricular

Please indicate whether you engage in any of the following activities

- ☐ Individual sport
- ☐ Team sport
- ☐ Music
- ☐ Drama
- ☐ Chess
- ☐ Debating
- ☐ Social club
- ☐ Community Volunteering
- ☐ Other, please specify:

Leadership

Please indicate whether you have held any of the following positions

- ☐ School leadership or captain, primary school
- ☐ School leadership or captain, high school
- ☐ University student leadership
- ☐ Mentor
- ☐ Manager at workplace
- ☐ Leadership position in community organisation
- ☐ Other, please specify:

Appendix D

EPOCH Measure of Adolescent Well-being

This is a survey about you! Please read each of the following statements. For each statement, click on the response that best describes you. Please be honest – there are no right or wrong answers!

		Almost Never	Sometime	Often	Very Often	Almost Always
1	When something good happens to me, I have people who I like to share the good news with	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	I finish whatever I begin	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	I am optimistic about my future	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
4	I feel happy	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
5	When I do an activity, I enjoy it so much that I lose track of time	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
6	I have a lot of fun	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
7	I get completely absorbed in what I am doing	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
8	I love life	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
9	I keep at my school work or study until I am done with it	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
10	When I have a problem, I have someone who will be there for me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
11	I get so involved in activities that I forget about everything else	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
12	When I am learning something new, I lose track of how much time has passed.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
13	In uncertain times, I expect the best.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
14	There are people in my life who really care about me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
15	I think good things are going to happen to me.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
16	I have friends that I really care about.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
17	Once I make a plan to get something done, I stick to it.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
18	I believe that things will work out, no matter how difficult they seem	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
19	I am a hard worker.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
20	I am a cheerful person.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

This questionnaire has been designed to investigate ideas about morality.

There are no right or wrong answers. We are interested in your ideas.

Using the scale below, please indicate the extent to which you agree or disagree with each of the following statements by clicking the number that corresponds to your opinion on the statement.

		Strongly Disagree	Disagree	Mostly Disagree	Mostly Agree	Agree	Strongly Agree
1	Your moral character is something basic about you and you can't change it much.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
2	Whether you are responsible and sincere or not is deeply ingrained in your personality. It can't be changed very much.	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>
3	There is not much that can be done to change your moral traits (e.g., conscientiousness, uprightness, and honesty).	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>	<input type="radio"/>

Thank You!!!