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## R. TUCKER THOMPSON YOUTH DEVELOPMENT

*Confidence ★ Leadership ★ Teamwork*

### RESEARCH IN TO POSITIVE YOUTH DEVELOPMENT PROGRAMMES

In 2017, the University of Otago carried out research into the benefits of youth development voyages on board the R. Tucker Thompson. This built on research carried out on other educational programmes, but there was a particular focus on assessing the benefits on young people from low socio-economic backgrounds, particularly young Māori adolescents.

Using the Positive Youth Development (PYD) approach, the research looked at the benefits of the 'Five Cs' model of competence, confidence, connection, character and caring which is a Western model. This was then compared with the *Te Whare Tapa Wha* of *wairua*, *hinengaro*, *tinana* and *whanau*. Whilst both models take a holistic approach, the key difference was how they conceptualised identity. In the Western model, society views achievement in the context on an individual basis, whereas in a Māori world view (and other Eastern societies), strength and leadership are exercised within the context of the collective or community.

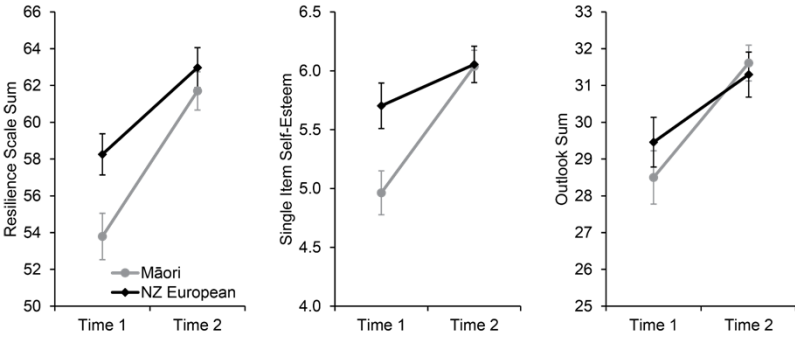
Because over 60% of the students on board the R. Tucker Thompson identify as Māori, the organisation ensures that the voyages are seen in the context of both cultures' seafaring traditions, noting that both Māori and Pākehā arrived by sea, and were sailing together side by side on board schooners similar to the vessel. The sea unites them in a common purpose, and on their voyage they are following in the footsteps of their ancestors.

Students were surveyed before and after their 7-day voyage on board the R. Tucker Thompson, as well as a control group. In addition to assessing the effect the voyages had on psychological resilience, self-esteem, and positive outlook, the research was also looking to determine the contribution of *whakawhanaungatanga* or collective identity to these outcomes.

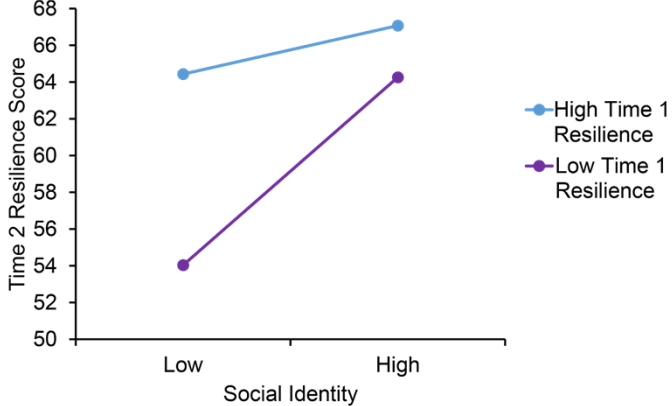
The research found that:

- Māori and European youth displayed a significant increase in **Resilience** as the result of the voyage, but when compared, Māori youth had a significantly lower level of resilience at the beginning, but were comparable by the end
- European youth showed a moderate increase in **Self-esteem**, and Māori youth a significant increase; when directly compared, Māori youth reported significantly had a significantly lower level of self-esteem but at the end the levels were comparable.
- Both Māori and European youth displayed a significant increase in **Positive Outlook** as the result of the voyage.
- The survey found that both Māori and Pākehā students benefited from a sense of **Collective identity** but that it was not directly related to the shift in self-esteem or positive outlook. This is possibly due to the fact that the research was quantitative in nature, and there are plans for more qualitative research next year.

# Measures



# Measures



**Promoting positive youth development in Māori and New Zealand European adolescents through an Adventure Education Program (AEP): A pilot experimental study.**

Hitaua Arahanga-Doyle<sup>1</sup>, Saleh Moradi<sup>1</sup>, Kyungho Jang<sup>1</sup>, Tia Neha<sup>2</sup>, John A. Hunter<sup>1</sup> and, Damian Scarf<sup>1\*</sup>

<sup>1</sup>Department of Psychology, University of Otago, PO Box 56, Dunedin 9054, New Zealand.

<sup>2</sup>School of Psychology, Victoria University of Wellington, PO Box 600, Wellington 6140, New Zealand.

\*Correspondence: Address correspondence to Dr. Damian Scarf, E-mail: [damian@psy.otago.ac.nz](mailto:damian@psy.otago.ac.nz), Phone: +64-3-4797636, Fax: +64-3-4798335.

Mental disorders affect 10 – 20% of children and adolescents worldwide (Kieling et al., 2011) and most adult mental disorders are extensions of mental disorders that arose during childhood and adolescence (Rueter, Scaramella, Wallace, & Conger, 1999). Aotearoa New Zealand is no exception to these general findings (Clark et al., 2013; Fergusson, Horwood, & Lynskey, 1993; Gluckman, 2011; Kim-Cohen et al., 2003). For example, data from a national survey (Youth'12) of 8,500 adolescents across 91 schools revealed that 16% of female students and 9% of male students reported levels of depression that were likely to be of clinical significance. Further, over the past 12 months, deliberate acts of self-harm (females 29% and males 18%) and suicide ideation (females 21% and males 10%) were relatively commonplace. With respect to the relationship between mental health during development and mental health in adulthood, data from the Dunedin Multidisciplinary Child Development Study revealed that among adults with a mental disorder, 74% had received a diagnosis before 18 years of age and 50% before 15 years of age, with adult disorders generally preceded by their juvenile equivalent (Kim-Cohen et al., 2003).

The mental health challenges faced by adolescents in Aotearoa New Zealand disproportionately fall on Māori, the tangata whenua (Indigenous people) of this land, and adolescents from socio-economically deprived families (Baxter, Kingi, Tapsell, Durie, & McGee, 2006; Baxter, Kokaua, Wells, McGee, & Browne, 2006; Clark et al., 2011; Clark, Robinson, Crengle, Herd, & Grant, 2008; Horwood & Fergusson, 1998). For example, relative to non-Māori adolescents, Māori adolescents experience higher rates of depression and anxiety (Marie, Fergusson, & Boden, 2008), are over-represented in admissions to in-patient facilities (van Kessel, Myers, Stanley, & Reed, 2012), and are markedly more likely to take their own life (Beautrais & Fergusson, 2006; Snowden, 2017). Although socio-economic deprivation is a key contributing factor to the poorer mental health outcomes

experienced by Māori adolescents (Gillies, Boden, Friesen, Macfarlane, & Fergusson, 2017), the impact of this deprivation is likely exacerbated by range of factors linked to colonisation including cultural alienation, living in a society that values individualism rather than collectivism, and confusion over identity (Beautrais & Fergusson, 2006; Durie, Milroy, & Hunter, 2009; Skegg, Cox, & Broughton, 1995; Te Aho Lawson, 1998).

While a great deal of literature focuses on these adverse experiences and negative outcomes, there is growing interest in positive youth (i.e., adolescent) development (PYD) approaches. In a New Zealand context, a PYD approach would not only provide balance to narratives surrounding outcomes for Māori adolescents, and those from socio-economically deprived families, but also broaden our focus on what we consider positive developmental outcomes (Anae, Moewaka Barnes, McCreanor, & Watson, 2002; Farruggia & Bullen, 2010; Jansen et al., 2010; Lerner, Almerigi, Theokas, & Lerner, 2005; Simmonds, Harre, & Crengle, 2014; Ware & Walsh-Tapiata, 2010). As Damon (2004) notes, “While the positive youth development approach recognizes the existence of adversities and developmental challenges that may affect children in various ways, it resists conceiving of the developmental process mainly as an effort to overcome deficits and risk. Instead, it begins with a vision of a fully able child eager to explore the world, gain competence, and acquire the capacity to contribute importantly to the world. The positive youth development approach aims at understanding, educating, and engaging children in productive activities rather than at correcting, curing, or treating them for maladaptive tendencies or so-called disabilities” (p. 15). Importantly, the general ethos underlying PYD is thought to map well onto Māori views of health and well-being, which tend to be holistic in nature (Anae et al., 2002; Farruggia & Bullen, 2010).

By way of example, a popular western PYD model is the Five Cs model (Lerner et al., 2005; Lerner, Fisher, & Weinberg, 2000; Roth & Brooks-Gunn, 2003). The Five Cs model holds that the presence of 1) competence in social, cognitive, and vocational settings, 2) a feeling of overall self-worth and self-efficacy (i.e., confidence), 3) positive bonds with people and institutions (i.e., connection), 4) respect and integrity (i.e., character) and, 5) empathy for others (i.e., caring) are integral to positive development. Similarly, Durie's (1994) *Te Whare Tapa Wha* model of health is holistic, suggesting *wairua* (spiritual), *hinengaro* (thoughts and feelings), *tinana* (physical), and *whānau* (family) are integral to good health and well-being. Although both models are holistic, an important distinction can be drawn between how western models of PYD and Māori models of health conceptualise identity. Indeed, as Macfarlane and colleagues (2008) note "In New Zealand, and in many other western societies, the self is largely constructed within the context of individualism, and individual achievement... in a Māori worldview qualities such as personal autonomy, independence, leadership, and prestige are all learned and exercised within a social context in which people share a powerful collective identity. Personal autonomy, strength and leadership are always exercised within the context of *whanaungatanga*, of nurturing and caring relationships. The self is therefore conceptualized within the context of the collective or community, and not as a totally autonomous and separate entity" (pp. 118-119). This property of many western societies is exemplified by the fact that, in the Five Cs model, identity is situated within the construct of confidence, while one could argue a Māori worldview would situate it within the construct of connection.

For PYD in New Zealand, the potential importance of *whānau* and *whanaungatanga* becomes even more salient because they are central concepts in Māori views of human development. As Macfarlane and colleagues (2008) note *whānau* and *whanaungatanga*

“...indicate both a sense of belonging to and a sense of relating to others, within a context of collective identity and responsibility” (p. 107). One category of PYD programs that may help to foster both a powerful collective identity and sense of belonging are Adventure Education Programs (AEPs) (Breunig, O’Connell, Todd, Anderson, & Young, 2010; Jostad, Sibthorp, Pohja, & Gookin, 2015; Larson, 2000; O’Connell, Howard, & Lathrop, 2016; Scarf, Hayhurst, et al., 2017; Scarf et al., 2016). Of course, AEPs come in many different forms, some of which may focus on individualism and may neglect a Māori cultural worldview (*Te Ao Māori*). Therefore, it is important to emphasize that our focus is on AEPs that take a place-based approach (Brown, 2008, 2009; Cosgriff et al., 2012; Townsend, 2011; Wattchow & Brown, 2011). A place-based approach revolves around the AEP taking place in a locale that has meaning for the youth involved and an appreciation of the cultural meaning and significance of place. To quote Brown (2008) “...one’s sense of belonging and connection with the land, one’s sense of place, from both a Māori and non-Māori perspective is an issue that is central to being a New Zealander... we could do well to understand our own and others values in relation to land and it’s meanings for our identity” (p. 14).

The specific focus of the current study are the 7-day youth development voyages run on the R. Tucker Thompson, a traditional gaff-rigged schooner based in the Bay of Islands, Northland, Aotearoa New Zealand. The voyages draw youth exclusively from the Northland region of Aotearoa New Zealand, an area characterised by a large Māori population and a number of low socio-economic indicators (e.g., low educational achievement, high unemployment, etc.). The voyages run from April to November each year and involve youth aged 13 to 18 years. The youth that take part are predominantly Māori. With respect to the voyage, there are a number of important aspects that link with the concepts of *whanaungatanga* and collective identity (Macfarlane et al., 2008) and place (Brown, 2008).

For example, there is a particular emphasis on linking the sea and voyaging tradition back to youth's ancestors, noting that regardless of culture, their *tupuna* (grandparent or ancestor) would have sailed on schooners similar to the R. Tucker Thompson. Before youth step on board the boat there is first a *mihi* (welcome) and then *whakawhanaungatanga* is established by way of a young crew member facilitating a set of games and activities that provide the opportunity for the youth to talk to one another and become comfortable with one another. The games and activities are run until the awkwardness is seen to disappear. Establishing *whakawhanaungatanga* before youth step on board the ship ensures that when they do step on board, they do so as a collective or group. Once on board, youth are encouraged to “self-discipline” through a “*tātou*” process, whereby they establish as a group what is acceptable behaviour. If a member of the group pushes the boundaries during the voyage the group revisits the rules they established during this process. Throughout the voyage, a number of historical *pā* sites (villages or defensive settlements) are passed and for which stories are inevitably shared, the specific sites that are passed vary between voyages but all involve the Northland region of Aotearoa New Zealand. Although not a component of every voyage, aspects of celestial navigation are included when the opportunity to have specific guests on board (e.g., Ngatiwai Kaumatua) or visit specific places (e.g., Hekenukumai (Hec) Busby's purpose built star compass) arises.

With respect to more general aspects of the voyage, it is widely known that sail training AEPs are especially challenging. In addition to being away from home, a challenge common to most AEPs, youth must adjust to the tight quarters of a ship and it is not uncommon for youth to have to deal with sea sickness. Against this back drop, youth must learn how to sail the ship, complete a range of daily tasks required to keep the ship running, and take part in a number of group-based activities. Importantly, youth are not allowed to



take their mobile phones on board, meaning that they must look to their fellow voyage members for support when things become difficult.

The aim of the current study pilot experimental study was to assess changes in three PYD outcomes (i.e., psychological resilience, self-esteem, and positive outlook) as a result of the voyage. In addition, to determine the contribution of *whakawhanaungatanga* to these outcomes, on the final day of the voyage we measured collective identity and assessed how the development of a collective identity contributed to changes in the three PYD outcomes listed above. Drawing from the social psychology and social identity literature, we measured collective identity using four items, with a focus on the belonging dimension of social identity (Scarf et al., 2016). We had two primary hypotheses. First, we hypothesized that psychological resilience, self-esteem, and positive outlook would all increase from the first day to the last day of the voyage. Second, we hypothesized that collective identity measure on the last day of the voyage would predict increases in each of the PYD outcomes.

## **Method**

### *Participants*

Ninety-one adolescents (55 females) participated in the current study. Of those, 54 (59.3%; 28 females; Mean age = 15 years 4 months; Range = 13 years 3 months to 17 years 11 months) self-identified as Māori and 37 (40.7%; 27 females; Mean age = 15 years 2 months; Range = 13 years 2 months to 17 years 2 months) as New Zealand European. Within the Māori group, 41 adolescents identified solely as Māori, 5 as Māori and New Zealand European, 3 as Māori, New Zealand European, and Pacific Island, 2 as Māori and Pacific Island, 2 as Māori and other, and 1 as Māori, New Zealand European, and other. Within the New Zealand European group, 32 adolescents identified solely as New Zealand European and

5 as New Zealand European and other. Although prioritising participants into Māori or New Zealand European categories is far from ideal (Cormack & Robson, 2010; Didham & Callister, 2012), the current data set was limited by a) how ethnicity was recorded and, b) the relatively small sample size.

All participants had taken part in a 7-day youth voyages on the R. Tucker Thompson. With respect to the participants in the current study, using the Aotearoa New Zealand secondary school decile rating categories to represent socioeconomic status (Wikaire et al., 2017), 35 (64.8%) of Māori participants were in the lowest category (i.e., high deprivation), 9 (16.7%) in the middle category (i.e., medium deprivation), and 1 (1.9%) in the highest category (i.e., low deprivation). The remaining Māori adolescents were in partnership schools ( $n = 3$ , 5.6%) or other education providers for which decile was not available ( $n = 1$ , 1.9%), in a support service ( $n = 3$ , 5.6%), or did not provide a response ( $n = 2$ , 3.7%). For New Zealand European adolescents 10 (27.0%) were in the lowest category, 20 (54.1%) were in the middle category, 2 (5.4) were in the highest category, and the remaining 5 (13.5%) were in correspondence schools for which decile was not available.

### *Design and Analysis*

The resilience, self-esteem, and positive outlook of voyage participants was assessed at two time points; on the first day of the voyage (Time 1) and the last day of the voyage (Time 2). Social identity and social support were assessed only at Time 2. With respect to analysis, changes in resilience, self-esteem, and outlook over the course of the voyage were assessed using repeated measures Analysis of Variance (ANOVA). To assess the contribution of social identity and social support to this change, bivariate correlations and standard multiple regression were conducted.

## *Measures*

Resilience was assessed using 10-items drawn from Wagnild and Young's (1993) Resilience Scale. The 10-items were based on those used by Neil and Dias' (2001) to measure changes in resilience brought about by outdoor interventions (e.g., 'I usually manage one way or another', Cronbach's  $\alpha$  = Māori: .903, New Zealand European: .832). Self-esteem was assessed using Robins, Hendin, and Trzesniewski's (2001) Single Item Self-Esteem Scale (i.e., 'I have high self-esteem'). Outlook was assessed using 5 of the positively worded items from Beck, Weissman, Lester, and Trexler's (1974) Hopelessness Scale (e.g., 'When I look ahead to the future, I expect I will be happier than I am now', Cronbach's  $\alpha$  = Māori: .909, New Zealand European: .823). Social identity was measured using a single item from Ellemers, Kortekaas, and Ouwerkerk (1999) self-categorisation subscale (i.e., 'I identify with other members of my voyage group') and all three items from Sheldon and Bettencourt's (2002) inclusion scale (e.g., 'I feel a sense of belonging with this voyage group', Cronbach's  $\alpha$  = Māori: .875, New Zealand European: .959). Finally, a single item drawn from Neil and Dias' (2001) Social Support scale was used to assess how supportive individuals judged their group to be (i.e., 'How supportive, to you personally, have you found the other members of your voyage group to be throughout the voyage?'). Responses on all scales were scored on 7-point Likert scales. Resilience, self-esteem, outlook, and belonging were rated from Strongly Disagree (1) to Strongly Agree (7), while the social support question was rated from Not at All (1) to A Great Deal (7). The full list of measures is provided in the Appendix. All measures were completed with respect to how participants felt 'right now'.

## **Results**

## Resilience

Preliminary analysis showed no main or interaction effects for gender, and therefore, gender was excluded from further analysis. Four outliers were identified whereby two youth had an extremely low score at Time 1 and two had an extremely low score at Time 2. Following Tabachnik and Fidell (2007), each value was transformed so that the value outside the mean value  $\pm 3$  SD was equal to the next closest value (i.e., a value within 3 SD) + 1. For Resilience Scale scores, we conducted a 2 (Ethnicity: Māori and New Zealand European) x 2 (Time of measurement: Time 1 and Time 2) mixed model analysis of variance (ANOVA). Cell means and standard deviations are presented in Table 1. There was a marginal main effect of Ethnicity,  $F(1, 89) = 3.816, p = .054, \eta^2 = .041$ , a significant effect of Time,  $F(1, 89) = 63.093, p < .001, \eta^2 = .415$ , and a significant Ethnicity by Time interaction,  $F(1, 89) = 4.043, p = .047, \eta^2 = .043$ . Post-hoc planned comparisons revealed Māori,  $t(53) = 7.412, p < .001$ , and New Zealand European youth,  $t(36) = 4.202, p < .001$ , displayed a significant increase in resilience from Time 1 to Time 2 (Figure 1A). When directly compared, Māori youth reported significantly lower levels of resilience than New Zealand European youth at Time 1,  $t(89) = 2.501, p = .014$ , but a comparable level of resilience at Time 2,  $t(89) = .822, p = .414$ .

**Table 1.**

	Māori		NZ European		1	2	3	4
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
1. Resilience at Time 1	53.79	9.28	58.26	6.81	-	.482***	-.091	.039
2. Resilience at Time 2	61.70	7.64	62.97	6.61	.585***	-	.488***	.449***
3. Social Identity	25.68	3.80	25.70	4.12	.245	.547***	-	.854***
4. Social Support	6.24	1.35	6.34	1.03	-.102	.122	.649***	-

*Notes.* Correlations for Māori participants appear below the diagonal; correlations for NZ European participants appear above the diagonal.

\*\*Correlation is significant at the 0.05 level (2-tailed).

\*\*\*Correlation is significant at the 0.01 level (2-tailed).

With respect to correlational analyses for social identity and social support, while all participants completed the group belonging questions, 8 Māori (14.8%) and 2 New Zealand European (5.4%) youth did not complete the social support question. This is likely due to the fact the social support question was the final question of the questionnaire and in a different format, due to the change in the scale from Strongly Disagree (1) and Strongly Agree (7) to Not at All (1) and A Great Deal (7). Correlations between variables are shown in Table 1. For both Māori and New Zealand European youth there was a strong relationship between resilience at Time 1 and resilience at Time 2, resilience at Time 2 and social identity, and social identity and social support. The sole difference between groups was a relationship between resilience at Time 2 and social support for New Zealand European, but not Māori, youth.

To determine the extent to which social identity and social support contributed to increased resilience at Time 2 we conducted standard multiple regression. Due to the relatively low sample size for the current regression model, and those that follow, we did not conduct separate regressions for each ethnicity or add an interaction term. With respect to resilience, resilience at Time 2 was entered as the dependent variable. Resilience at Time 1, ethnicity, social identity, and social support were entered as predictor variables. The overall model was significant,  $R^2 = .351$ ,  $F(4, 75) = 10.142$ ,  $p < .001$ . Inspection of beta weights revealed that only resilience at Time 1,  $\beta = +.482$ ,  $p < .001$ , and social identity,  $\beta = +.384$ ,  $p = .005$ , but not social support  $\beta = +.006$ ,  $p = .964$  or ethnicity  $\beta = -.107$ ,  $p = .278$ , made a unique contributions to resilience at Time 2.

## Self-Esteem

Preliminary analysis showed no main or interaction effects for gender, and therefore, gender was excluded from further analysis. Three outliers were identified whereby one youth had an extremely low score at Time 1 and two had an extremely low score at Time 2. Following Tabachnik and Fidell (2007), each value was transformed so that the value outside the mean value  $\pm 3$  SD was equal to the next closest value (i.e., a value within 3 SD) + 1. For self-esteem, we conducted a 2 (Ethnicity: Māori and New Zealand European) x 2 (Time of measurement: Time 1 and Time 2) mixed model analysis of variance (ANOVA). Cell means and standard deviations are presented in Table 2. There was a marginal main effect of Ethnicity,  $F(1, 89) = 3.323, p = .072, \eta^2 = .036$ , and a significant main effect of Time,  $F(1, 89) = 29.600, p < .001, \eta^2 = .250$ , qualified by a significant Ethnicity by Time interaction,  $F(1, 89) = 7.609, p = .007, \eta^2 = .079$ . Post-hoc planned comparisons revealed Māori youth displayed a marked increase in self-esteem from Time 1 to Time 2,  $t(53) = 5.936, p < .001$ , while New Zealand European youth displayed a moderate increase,  $t(36) = 2.017, p = .051$  (Table 2). When directly compared, Māori youth reported significantly lower level of self-esteem than New Zealand European youth at Time 1,  $t(89) = 2.673, p = .009$ , but a comparable level of self-esteem at Time 2,  $t(89) = .501, p = .081$ .

**Table 2.**

	Māori		NZ European		1	2	3	4
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
1. Self-esteem at Time 1	4.96	1.37	5.70	1.18	-	.517**	-.088	.003
2. Self-esteem at Time 2	6.04	1.01	6.05	0.94	.410**	-	.305	.305
3. Social Identity	25.68	3.80	25.70	4.12	.023	.205	-	.854***
4. Social Support	6.24	1.35	6.34	1.03	-.241	.142	.649***	-

*Notes.* Correlations for Māori participants appear below the diagonal; correlations for NZ European participants appear above the diagonal.

\*\*Correlation is significant at the 0.05 level (2-tailed).

\*\*\*Correlation is significant at the 0.01 level (2-tailed).

Correlations between variables for both groups are shown in Table 2. Similar to resilience, there was a strong relationship between self-esteem at Time 1 and self-esteem at Time 2. Surprisingly, there was no relationship between self-esteem at Time 2 and social identity. To investigate whether social identity and social support contributed to increased self-esteem at Time 2 we conducted standard multiple regression. Self-esteem at Time 2 was entered as the dependent variable. Self-esteem at Time 1, ethnicity, social identity, and social support were entered as predictor variables. The overall model was significant,  $R^2 = .254$ ,  $F(4, 75) = 6.400$ ,  $p < .001$ . Consistent with the simple correlations between variables, inspection of beta weights revealed that only self-esteem at Time 1,  $\beta = +.481$ ,  $p < .001$ , but not social identity,  $\beta = +.069$ ,  $p = .631$ , social support  $\beta = +.227$ ,  $p = .117$  or ethnicity  $\beta = -.172$ ,  $p = .108$ , made a unique contributions to self-esteem at Time 2.

### *Outlook*

Preliminary analysis showed no main or interaction effects for gender, and therefore, gender was excluded from further analysis. Three outliers were identified whereby two youth had an extremely low score at Time 1 and one had an extremely low score at Time 2. Following Tabachnik and Fidell (2007), each value was transformed so that the value outside the mean value  $\pm 3$  SD was equal to the next closest value (i.e., a value within 3 SD) + 1. For outlook, we conducted a 2 (Ethnicity: Māori and New Zealand European) x 2 (Time of measurement: Time 1 and Time 2) mixed model analysis of variance (ANOVA). Cell means and standard deviations are presented in Table 3. There was a significant effect of Time,  $F(1, 89) = 22.298$ ,  $p < .001$ ,  $\eta^2 = .200$ , but no effect of Ethnicity,  $F(1, 89) = .184$ ,  $p = .669$ ,  $\eta^2 =$

.002, or Ethnicity by Time interaction,  $F(1, 89) = 1.476, p = .228, \eta^2 = .016$  (Figure 1C). Post-hoc planned comparisons revealed Māori,  $t(53) = 4.418, p < .001$ , and New Zealand European youth,  $t(36) = 2.488, p = .018$ , displayed a significant increase in positive outlook from Time 1 to Time 2. When directly compared, Māori and New Zealand European youth displayed a comparable level of positive outlook at Time 1,  $t(89) = .923, p = .359$ , and Time 2,  $t(89) = .404, p = .687$ .

**Table 3.**

	Māori		NZ European		1	2	3	4
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>				
1. Outlook at Time 1	28.50	5.33	29.46	4.11	-	.345**	-.130	-.075
2. Outlook at Time 2	31.61	3.57	31.30	3.73	.378**	-	.540***	.470***
3. Social Identity	25.68	3.80	25.70	4.12	.238	.599***	-	.854***
4. Social Support	6.24	1.35	6.34	1.03	-.036	.245	.649***	-

*Notes.* Correlations for Māori participants appear below the diagonal; correlations for NZ European participants appear above the diagonal.

\*\*Correlation is significant at the 0.05 level (2-tailed).

\*\*\*Correlation is significant at the 0.01 level (2-tailed).

Correlations between variables for both groups are shown in Table 3. Identical to the findings for resilience, for both Māori and New Zealand European youth there was a significant relationship between outlook at Time 1 and outlook at Time 2 and outlook at Time 2 and social identity. To investigate whether social identity and social support contributed to positive outlook at Time 2 we conducted standard multiple regression. Outlook at Time 2 was entered as the dependent variable. Outlook at Time 1, ethnicity, social identity, and social support were entered as predictor variables. The overall model was significant,  $R^2 = .254, F(4, 75) = 6.400, p < .001$ . Inspection of beta weights revealed that only outlook at Time 1,  $\beta$



= +.481,  $p < .001$ , but not social identity,  $\beta = +.069$ ,  $p = .631$ , social support  $\beta = +.227$ ,  $p = .117$  or ethnicity  $\beta = -.172$ ,  $p = .108$ , made a unique contributions to outlook at Time 2.

## **Discussion**

The current study investigated the relationship between the social/collective identity youth develop with their voyage group over the course of a 7-day voyage on the R. Tucker Thompson and three PYD outcomes (i.e., psychological resilience, self-esteem, and positive outlook). Our findings for both Māori and New Zealand European youth support our first hypothesis, with psychological resilience, self-esteem, and positive outlook increasing from the first day to the last day of the voyage. Support for our second hypothesis was mixed. For both Māori and New Zealand European youth, social/collective identity correlated with increases in psychological resilience from the first day to the last day of the voyage. However, social/collective identity did not predict the changes observed for self-esteem or positive outlook. The absence of a relationship between social/collective identity and self-esteem is surprising given recent work demonstrating a clear relationship between the two measures following a developmental voyage similar to that of the R. Tucker Thompson (Scarf, Kafka, et al., 2017). A potential explanation for this failure to find is that a single-item self-esteem scale was used in the current study. While single item scales provide a reliable and valid measure of self-esteem, they often lack the predictive validity of multi-item scales (Gosling, Rentfrow, & Swann, 2003).

Our findings for psychological resilience are consistent with a growing body of work demonstrating that, rather than being a property of the individual and static in nature, psychological resilience is built on a foundation of collective/social identity (Scarf, Hayhurst, et al., 2017; Scarf et al., 2016; Ungar, 2005). With respect to the marked increases in

resilience displayed by Māori youth, our findings are consistent with recent work involving Aboriginal youth in Canada (Ritchie et al., 2015; Ritchie, Wabano, Russell, Enosse, & Young, 2014). For example, Ritchie et al. (2014) developed and implemented a 10-day wilderness canoe expedition with youth from Wikwemikong Unceded Indian Reserve in northern Ontario, Canada. Much like Māori youth in Aotearoa New Zealand, Aboriginal youth in Canada experience higher rates of mental illness (NCCA, 2012) and suicide (Kirmayer et al., 2007) compared to non-Aboriginal populations. Using a slightly longer version of the resilience scale employed in the current study, Ritchie et al. (2014) reported a significant increase in resilience from one day before the expedition to one month after. Moving beyond the quantitative approach employed in the current study, Ritchie et al. (2015) collected qualitative data in the field, through participant interviews, journals, focus groups, and talking circles, with the aim of understanding how the expedition promoted resilience. Although using different methods, similar to the present study, connection was identified as a central concept that helps to promote resilience. Their qualitative approach, however, provided a much richer view of connection, with the expedition providing "...opportunities for connecting with their ancestors, each other, their culture, their community and, ultimately, with their own sense of identity" (p. 9). The expedition was also said to result "...in a spiritual realization for many youth that could also be described as re-connecting or awakening. In other words, many of the connections were already there, but were not necessarily noticed or realized until the experience reached a threshold level, where the connections became apparent" (p. 9).

Ritchie et al.'s (2015; 2014) research and methods provide a sound framework for building on the current pilot experimental study. Indeed, although the quantitative approach taken to the concepts of social/collective identity allows us to connect it to a much wider

literature on the connection between social/collective identity and multiple aspects of health (Cruwys, Haslam, Dingle, Haslam, & Jetten, 2014; Haslam, Jetten, Postmes, & Haslam, 2009; Jetten, Haslam, & Haslam, 2012), it provides a somewhat shallow view of concepts such as identity and connection. The next step will be to employ qualitative measures that not only involve the voices of the youth that take part in the voyage but also their *whānau*. In addition, ethnographic methods could be employed to provide a much richer and more thorough understanding of youth in the context of their voyage on the R. Tucker Thompson. Combined, these qualitative and ethnographic methods will provide us with a much more complete picture of the mechanisms underlying the increases in resilience, self-esteem, and outlook that follow a voyage on the R. Tucker Thompson.

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Name:

Date of birth:

Please use the scale below to describe how you feel right now (even if you have felt differently at other times).

	<b>Strongly disagree</b>		<b>Neutral</b>			<b>Strongly agree</b>	
	1	2	3	4	5	6	7
1. <u>When I make plans I follow through with them</u>	1	2	3	4	5	6	7
2. <u>I usually manage one way or another</u>	1	2	3	4	5	6	7
3. <u>I feel proud that I have accomplished things in my life</u>	1	2	3	4	5	6	7
4. <u>I usually take things in my stride</u>	1	2	3	4	5	6	7
5. <u>I am friends with myself</u>	1	2	3	4	5	6	7
6. <u>I am determined</u>	1	2	3	4	5	6	7
7. <u>I have self-discipline</u>	1	2	3	4	5	6	7
8. <u>I keep interested in things</u>	1	2	3	4	5	6	7
9. <u>I can usually find something to laugh about</u>	1	2	3	4	5	6	7
10. <u>My belief in myself gets me through hard times</u>	1	2	3	4	5	6	7
11. <u>I can usually look at a situation in a number of ways</u>	1	2	3	4	5	6	7
12. <u>My life has meaning</u>	1	2	3	4	5	6	7
13. <u>When I am in a difficult situation, I can usually find my way out of it</u>	1	2	3	4	5	6	7
14. <u>I have enough energy to do what I have to do</u>	1	2	3	4	5	6	7
15. <u>In most ways my life is close to my ideal</u>	1	2	3	4	5	6	7
16. <u>I have high self-esteem</u>	1	2	3	4	5	6	7
17. <u>I look forward to the future with hope and enthusiasm</u>	1	2	3	4	5	6	7
18. <u>When things are going badly, I am helped by knowing they can't stay that way forever</u>	1	2	3	4	5	6	7
19. <u>When I look ahead to the future, I expect I will be happier than I am now</u>	1	2	3	4	5	6	7
20. <u>I have great faith in the future</u>	1	2	3	4	5	6	7
21. <u>I can look forward to more good times than bad times</u>	1	2	3	4	5	6	7
22. <u>I identify with other members of my voyage group</u>	1	2	3	4	5	6	7
23. <u>I feel included in this voyage group</u>	1	2	3	4	5	6	7
24. <u>I feel well integrated with the others in this voyage group</u>	1	2	3	4	5	6	7
25. <u>I feel a sense of belonging with this voyage group</u>	1	2	3	4	5	6	7
26. How supportive, to you personally, have you found the other members of your voyage group to be throughout the voyage?							
	<b>Not at all</b>						<b>A great deal</b>
	1	2	3	4	5	6	7