



MASSEY UNIVERSITY  
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# Resilience, self-efficacy, and connectedness: Changes in protective factors with Project K students



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FOUNDATION FOR  
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Maximising Youth Potential

# OUTLINE of presentation



- Background.
  - ✦ Adolescents and well-being
  - ✦ Risk and protective factors
  - ✦ Resilience, self-efficacy, connectedness, and well-being
  - ✦ Shortfalls in literature
  - ✦ Project K
  
- The study.
  - ✦ Research question
  - ✦ Methods
  - ✦ Hypotheses
  - ✦ Preliminary findings



# ADOLESCENTS and well-being



- The transition from childhood to adolescence is a pivotal period. During this transition adolescents are in the process of identity formation.
- Negative outcomes: NZ has the highest rates of unplanned pregnancy and youth suicide when compared to other OECD countries (Ministry of Health, 2002).
- Risk and protective factors impact on adolescents' well-being and influence negative outcomes.

# RISK factors



- From “at risk” literature.
- The presence of risk factors (e.g. difficult temperament, response to stress, and poor school performance) increases the likelihood of negative outcomes (e.g. low self-efficacy, poor adaptation, and increased risk taking behaviours).
- Most interventions have focused on risk factors.
- A number of limitations that have led researchers to turn their attention to protective factors
  - More useful for predicting outcomes for groups with cluster of risk factors rather than individuals.
  - A third of youth thrive despite adversity (Werner, 1971).

# PROTECTIVE factors



- From “positive psychology” literature.
- Defined as decreasing the probability of some future negative outcome when exposed to risk.
- Research suggests that:
  - Focusing on building strengths is linked to improved well-being.
  - Protective factors can influence the incidence of negative outcomes.
  - Operate as a buffer which reduces the impact of risk factors.
- Focus on protective factors in the hope it will have more benefit than solely focusing on risk.
- e.g. Resilience, self-efficacy, and quality of relationships.
- This has seen the emergence of positive youth development programmes.
- Limitations discussed under shortfalls.

## WHY these protective factors?



- Research has demonstrated that positive youth development programmes are effective.
  - Adventure education (resilience, self-efficacy)
    - ✦ Supported By (Neill & Dias, 2001; Paxton & McAvoy, 1998)
  - Mentoring (connectedness)
    - ✦ Supported by (King, Vidourek, Davis, & McClellan, 2002)
- Project K's programme outcomes based on their programme logic model related to resilience, self-efficacy, and connectedness.

# DEFINITION of variables



- **Subjective well-being:** A positive subjective experience of life, this reflects the most commonly used definition (Diener, 2009).
- **Resilience:** Process encompassing positive adaptation that may reduce negative outcomes under stressful conditions (Greenberg, 2006).
- **Connectedness:** A sense of being valued, accepted, and cared for (Mcgraw, Moore, Fuller, & Bates, 2008); and feeling attached to and engaging with family, friends, school, and the wider environment (Karcher, 2003).
- **Self-efficacy:** A young person's belief in their ability to influence situations in the future (Bandura, 1997).



# SHORTFALLS in literature



- Empirical research with New Zealand community-based positive youth development programmes has almost solely focused around the adventure education component in the form of **Outward Bound COURSES** (Carter, McGee, Taylor, & Williams, 2007; Ewert & Yoshino, 2007; Neill & Dias, 2001).
- Significantly less research on protective factors versus risk factors.

# PROJECT K



- Project K is a positive youth development programme run by The Foundation for Youth Development.
- Targets year 10 (13 – 16 year old) students with the goal of creating positive change through improving their psychological, social, and physical well-being.
- Fourteen months and has three components: a three week residential Wilderness Adventure, a non-residential 10 day Community Challenge, and students are then paired for 12 months with a mentor.
- Randomised control trial completed showing improvements in self-efficacy which were maintained at one year and three year follow up.











**Mentoring**

# THE STUDY



- Research question
- Method
- Hypotheses
- Preliminary findings



# RESEARCH question



Is Project K an effective intervention for improving students' resilience, self-efficacy, connectedness, and well-being?

# METHODS: Participants



- Adolescents aged between 13-16 years old.
- Two groups: Project K (intervention) group, four schools (N=45) and comparison group (not taking part in intervention), one school (N=49).
- Four measurements points over 14 months (unequal spacing between time points).
- Data collection for time 1 – time 3 has been completed for the Project K group and time 1 collected for comparison group.

# METHODS: Constructs and measures



Independent variable.

- Project K

Dependent variables.

- Resilience: Resilience Scale (Wagnild & Young, 1993).
- Self-efficacy: Project K Self-efficacy Questionnaire (Moore, 2005).
- Connectedness: Hemingway Scale of Adolescent Connectedness (Karcher & Lee, 2002).
- Well-being: Affectometer-2 (Kammann & Flett, 1983)

Demographic variables.

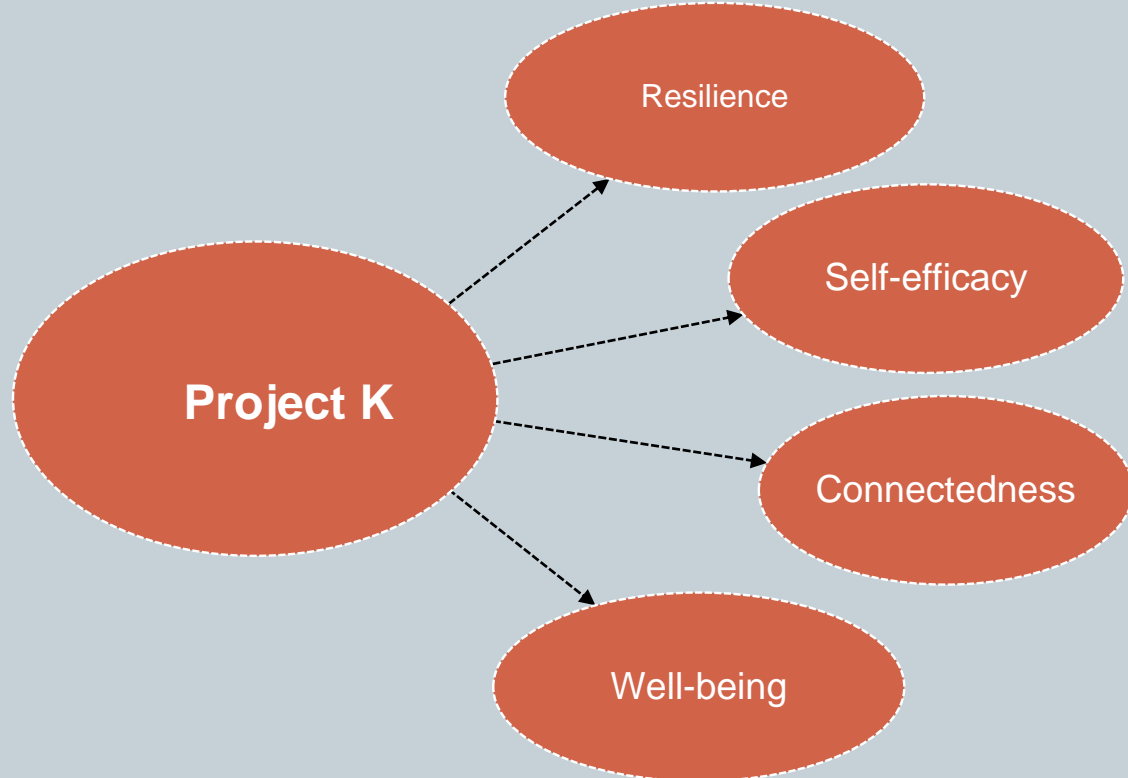
# HYPOTHESES



## Hypotheses 1-4

The intervention group will show improvements between time 1 and time 4 in:

1. resilience
2. self-efficacy
3. connectedness
4. well-being

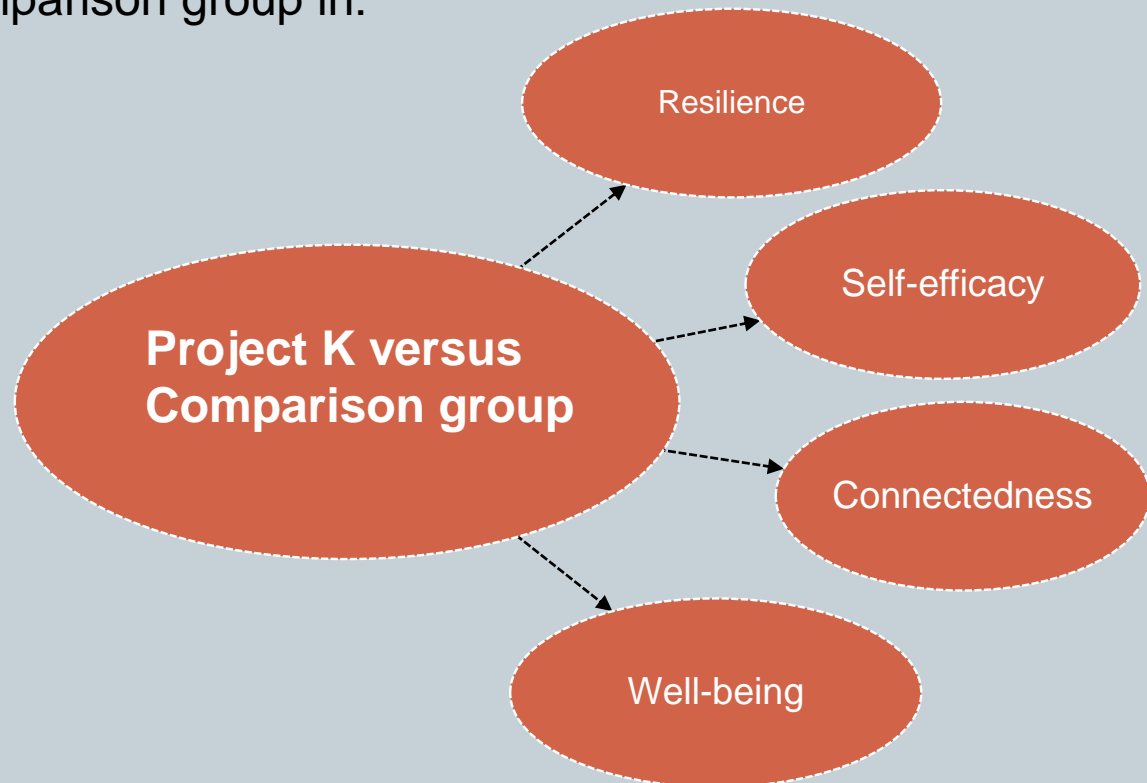


# HYPOTHESES



## Hypotheses 5-8

- The intervention group will show greater pre (time 1)-post (time 4) mean change than the comparison group in:
  5. resilience
  6. self-efficacy
  7. connectedness
  8. well-being



# HYPOTHESES



## Hypotheses 9-11

- Each component of the programme will relate to differential changes in resilience, self-efficacy, and connectedness. Given past studies and after controlling for earlier measures I would specifically expect:
  9. Resilience and self-efficacy scores to improve after completion of the Wilderness Adventure component (time 2).
  10. Connectedness scores to improve after the Community Challenge component (time 3).
  11. Self-efficacy and connectedness scores to improve after the completion of the Mentoring component (time 4).

# ANALYSIS: Why Multi-level analysis



- Allows modeling of individual change over time, not just group trends.
- Is able to handle missing data, allowing for increased statistical power.
- Time can be treated as a continuous variable, because of this, it can accommodate unequal spacing between time intervals and unbalanced data – important for Project K.

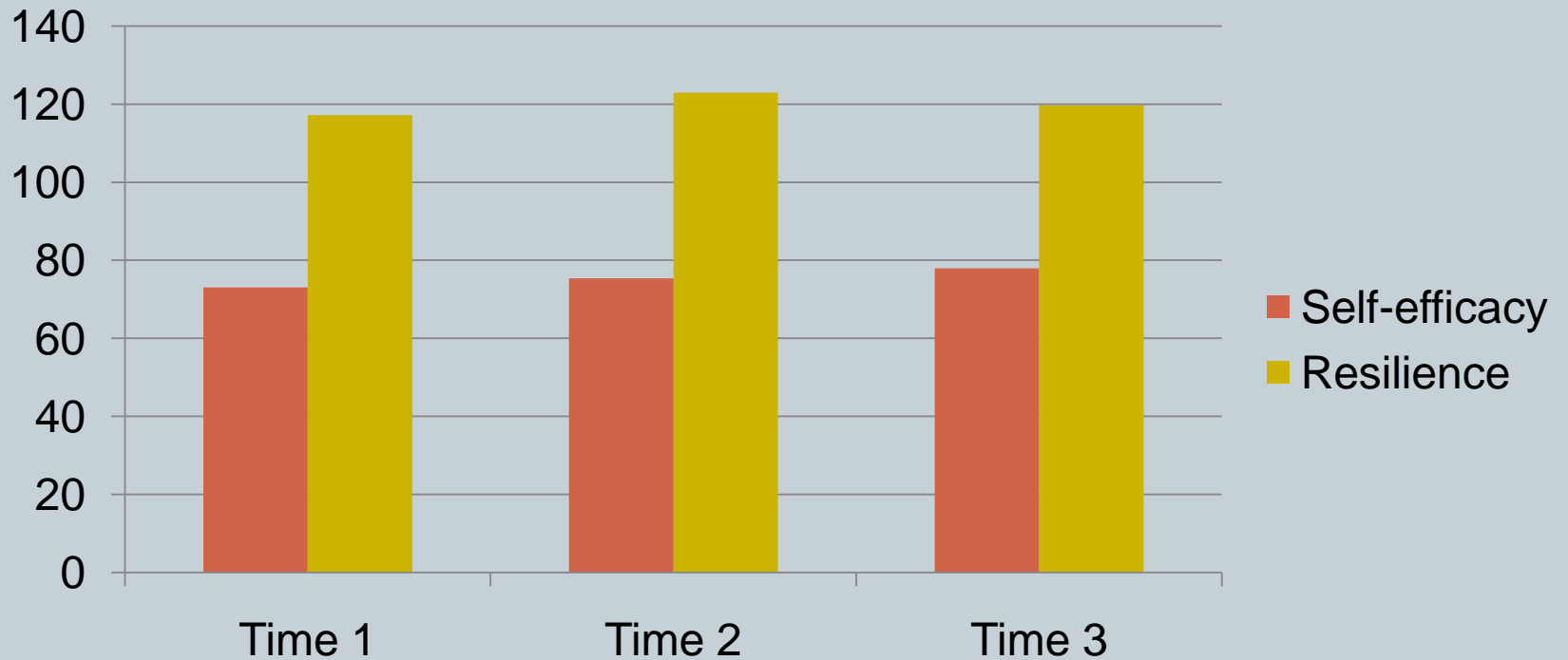
# PRELIMINARY findings: Cronbach's $\alpha$



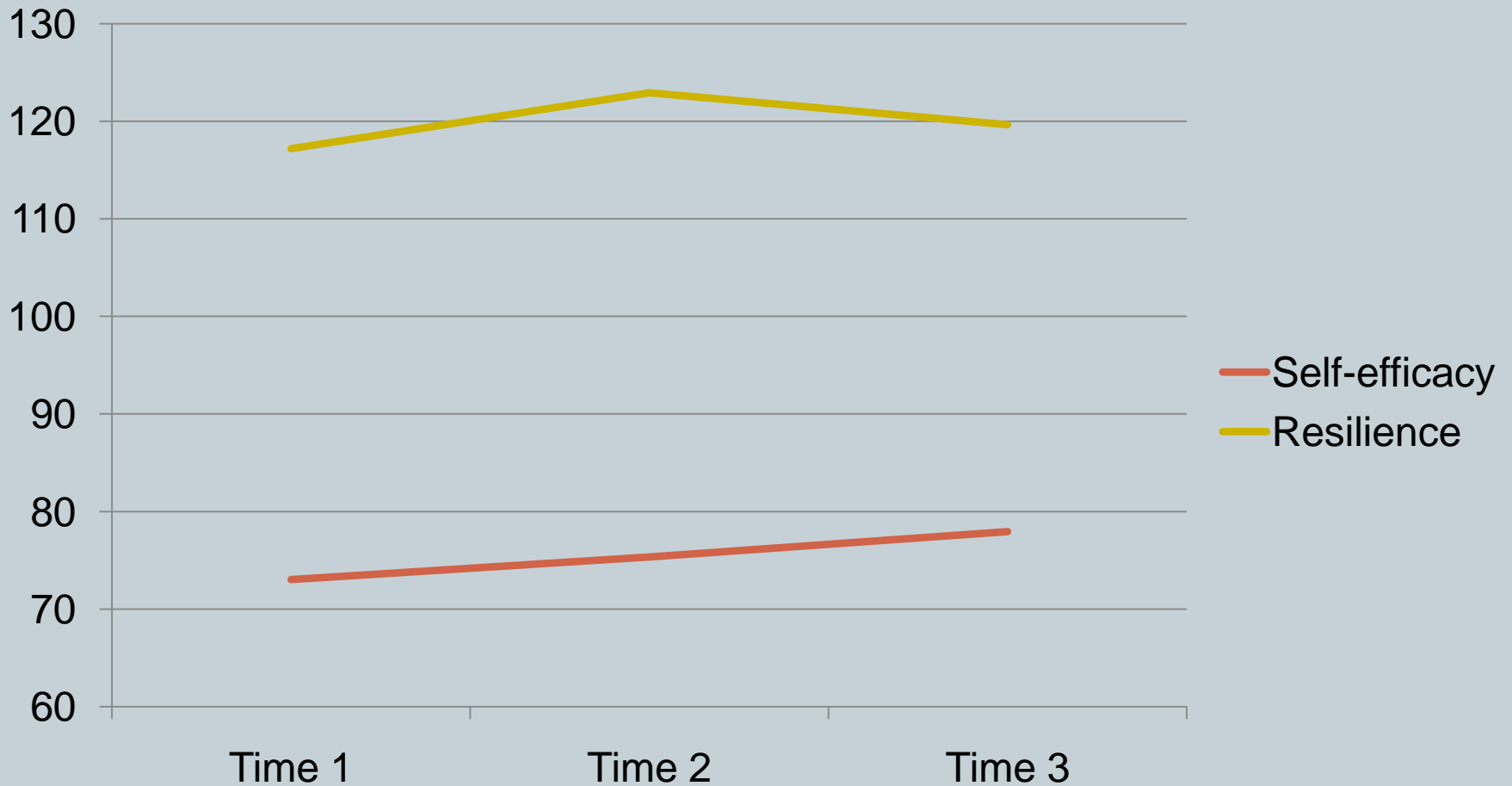
- Internal consistency good on both scales.
  - Self-efficacy:  $\alpha = .924$  (20 items).
  - Resilience:  $\alpha = .924$  (26 items).
- Connectedness and well-being preliminary findings not yet complete.



# PRELIMINARY findings: Means



# PRELIMINARY findings: Means



# PRELIMINARY findings: Within subjects tests



Construct	P value for effect of time
Self-efficacy	.005
Resilience	.052

# PRELIMINARY findings: Pairwise comparisons



Time		P value: Self-efficacy	P value: Resilience
1	2	.045	.001
	3	.006	.281*
2	3	.133*	.262*

# WHAT next?



- Consider the role of other explanatory variables (mediating) and appropriate statistical tests e.g. regression equations.
- Add another two measurement points to strengthen the research design.



“It was odd but it was because of Project K that I stopped rebelling. I stopped smoking weed. Um, I stopped drinking for like a whole year afterwards. Um, I stayed in school. I finished fifth, sixth and seventh. All with level one, two and three and yeah, it changed everything for me. It changed my perspective on life.”

# Thank you!



# REFERENCES



- Bandura, A. (1997). *Self-efficacy: The exercise of control*. New York: Freeman.
- Carter, M., McGee, R., Taylor, B., & Williams, S. (2007). Health outcomes in adolescence: Associations with family, friends and school engagement. *Journal of Adolescence*, 30(1), 51-62. doi: 10.1016/j.adolescence.2005.04.002
- Catalano, R. F., Berglund, M. L., Ryan, J. A. M., Lonczak, H., S., & Hawkins, D., J. (2004). Positive Youth Development in the United States: Research Findings on Evaluations of Positive Youth Development Programs. *The Annals of the American Academy of Political and Social Science*, 591(1), 98-124.
- Deane, K., Harre, N., & Moore, J. (2009). *Individual growth in a community-based youth development program*. Paper presented at the 117th Annual Convention of the American Psychological Association Toronto, Canada.
- Diener, E. (Ed.). (2009). *Subjective Well-Being: The collected works of Ed Diener* (Vol. 37). Champaign: Springer Netherlands.
- Durlak, J. (1998). Common risk and protective factors in successful prevention programs. *American journal of orthopsychiatry*, 68(4), 512-520. doi: 10.1037/h0080360
- Eccles, J., & Gootman, J. A. (Eds.). (2002). *Community programs to promote youth development*. Washington, DC: National Academy Press.
- Ewert, A., & Yoshino, A. (2007). *A Preliminary Exploration of the Influence of Short-Term Adventure-Based Expeditions on Levels of Resilience*.
- Kammann, R., & Flett, R. (1983). *Sourcebook for well-being with Affectometer2*. Dunedin: Why Not? Foundation.
- Karademas, E. C. (2006). Self-efficacy, social support and well-being: The mediating role of optimism. *Personality and Individual Differences*, 40(6), 1281-1290. doi: 10.1016/j.paid.2005.10.019.
- Karcher, M. J. (2003). The Hemingway: Measure of adolescent connectedness: Validation studies
- Karcher, M. J., & Lee, Y. (2002). Connectedness among taiwanese middle school students: a validation study of the hemingway measure of adolescent connectedness. *Asia Pacific Education Review*, 3(1), 92-114. doi: 10.1007/bf03024924
- King, K. A., Vidourek, R. A., Davis, B., & McClellan, W. (2002). Increasing Self-Esteem and School Connectedness Through a Multidimensional Mentoring Program. *Journal of School Health*, 72(7), 294-299. doi: 10.1111/j.1746-1561.2002.tb01336.x
- Masten, A. S., Best, K. M., & Garmezy, N. (1990). Resilience and development: Contributions from the study of children who overcome adversity. *Development and Psychopathology*, 2(04), 425-444. doi: doi:10.1017/S0954579400005812
- Mcgraw, K., Moore, S., Fuller, A., & Bates, G. (2008). Family, peer and school connectedness in final year secondary school students. *Australian Psychologist*, 43(1), 27 - 37.
- Ministry of Health. (2002). Youth health: A guide to action. Retrieved from [http://www.moh.govt.nz/moh.nsf/wpg\\_Index/Publications-Youth+Health:+A+Guide+to+Action](http://www.moh.govt.nz/moh.nsf/wpg_Index/Publications-Youth+Health:+A+Guide+to+Action)
- Moore, J. (2005). *Self-Efficacy and Health Behaviours: A Test of Measures to Assess the Effectiveness of a Youth Development Programme*. Master of Arts, The University of Auckland, Auckland.
- Neill, J., & Dias, K. (2001). Adventure education and resilience: The double-edged sword. *Journal of Adventure Education & Outdoor Learning*, 1(2), 35-42. doi: 10.1080/14729670185200061
- Paxton, T., & McAvoy, L. (1998). Self-Efficacy and Adventure Programs: Transferring Outcomes to Everyday Life.
- Pollard, J., Hawkins, J., & Arthur, M. (1999). Risk and protection: Are both necessary to understand diverse behavioral outcomes in adolescence? *Social Work Research*, 23(3).
- Qiao, C., & McNaught, H. (2007). Evaluation of Project K (C. f. S. R. a. Evaluation, Trans.). Wellington: Ministry of Social Development.
- Resnick, M. D. (2000). Protective factors, resiliency, and healthy youth development. *Adolescent Medicine: State of the Art Reviews*, 11(1), 157-164.
- Rew, L., & Horner, S., D. (2003). Youth resilience framework for reducing health-risk behaviours in adolescents. *Journal of Pediatric Nursing*, 18(6), 379-388.
- Rutter, M. (Ed.). (1990). *Psychosocial resilience and protective mechanisms*. Cambridge: Cambridge University Press.
- Ungar, M. (2008). Resilience across cultures. *British Journal of Social Work*, 38, 218-235.
- Wagnild, G. M., & Young, H. (1993). Development and psychometric evaluation of the Resilience Scale. *Journal of nursing measurement*, 1(2), 165.