Assessing Positive Youth Development Programs for

Sustainable Participant Outcomes

by

Michael Sieng

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Graduate Supervisory Committee:

Scott Cloutier, Chair
Kevin Dooley
James Eder

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ABSTRACT

Positive Youth Development (PYD) programs include intentional efforts by peers, adults, communities, schools, and organizations to provide opportunities for youth to increase their skills, abilities, and interests in positive activities. The goal of PYD is to provide positive outcomes where youth are viewed as resources to be developed rather than problems to be managed. Future generations rely on youth as active contributing members of society and PYD programs promote sustainable futures for young individuals and the community. PYD programs started in the United States and grew out of interest in prevention programs targeting risky behavior of youth.

Interest is growing in expanding PYD programs internationally as they may promote resilient characteristics and sustainable life skills. In particular, and one focus area of this dissertation, interest is growing in rural Asia. However, given the interdisciplinary nature of PYD programs, there are no standard assessment metrics or tools in place. Without standards, comparing PYD programs effectively is impossible. Within this dissertation, in four papers, I 1) develop a universal PYD assessment tool, the Positive Youth Development Sustainability Scale (PYDSS), 2) apply the PYDSS to two PYD programs in rural Thailand as a quantitative analysis, 3) use the categories of the PYDSS as a coding guide for qualitative analysis of two PYD programs in rural Thailand, and 4) assess a PYD program in the Phoenix-metro area that integrates physical activity, academics, and ethics. Results indicate that the PYDSS can be applied to PYD programs in both Thailand and Phoenix and that a mixed methods approach is a suggested form or data collection. My research could lead to the further improvement of

current PYD programs and their intervention role, while also promoting universal PYD

assessment techniques that support sustainable impacts on youth as a result of program

intervention and design.

DEDICATION

Dedicated to my loving and supportive parents Kimsuor and Pat Sieng

ACKNOWLEDGMENTS

my potential during life's greatest challenges. Thanks to all my friends that have entered my life at different points in time helping shape the person I am today. To all the youth that I worked with that motivated me to pursue my research and to all the youth of tomorrow that will shape the future of youth development.

Last but not the least; I would like to thank my family: my parents and my partner Cindy Vang for supporting me spiritually throughout writing this thesis and in my life in overall.

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INTRODUCTION

The dissertation herein consists of four manuscripts that have been submitted for publication and are currently in review. My research attempts to address the following research gaps: 1) a lack of a universal assessment tool for Positive Youth Development (PYD) programs and 2) application of universal PYD tools for assessment of PYD programs in rural Asia and the Phoenix-metro area. PYD programs are increasingly being expanded internationally as they promote resilient characteristics and life skills. Sustainability focuses on future generations and youth in these PYD programs represent that. We suggest that PYD programs are meant to provide long-term opportunities for youth to live meaningful, happy and sustainable lives. Yet, PYD program assessment tools lack sustainability and happiness measures representative of long-term impacts. In this research, we developed a globally applicable tool to effectively capture sustainability, happiness, and adapted PYD metrics that collaboratively promote future success of youth. Cohn et al. (2009) suggest that happiness, in the form of positive emotions and life-satisfaction makes one feel better and builds capacity for individuals to develop resources for living well. Happiness actively helps create desirable outcomes and promotes growth in ego-resilience, which leads to increased global life-satisfaction (Lyumbomirsky et al., 2005; Frederickson et al, 2008). In short, happier people may be more sustainable, and vice versa (Cloutier et al., 2013).

Dissertation Format

The dissertation includes six sections - an introduction and conclusion combined with four first-authored manuscripts. The first section provides an introduction to the

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research and the specific topics of each manuscript. Some of the work in the introduction is also contained in the four manuscripts. The next four sections include four manuscripts, summarized below, each submitted to peer-reviewed journals that publish positive youth development articles. The final section summarizes the major research findings, discussed contribution and limitations of this dissertation, and directions for future research. Some of the work in the summary is also contained in the four manuscripts. There is no intention of submitting the introduction or summary for publication outside of this dissertation.

For each article, I was responsible for originating the research direction, questions, and objectives in addition to deciding on primary methodology, data collection, analysis, and discussion of results. The manuscripts are titled: 1) Positive Youth Development Sustainability Scale (PYDSS): The development of a universal tool, 2) Application of the Positive Youth Development Sustainability Scale in Rural Thailand: A quantitative analysis of 2 youth programs , 3) Application of the Positive Youth Development Sustainability Scale (PYDSS) as a qualitative coding guide in Rural Thailand: An analysis of two youth programs and 4) Increasing positive youth development and positive attitudes toward physical activity: An Assessment of *Future for KIDS*. Each manuscript is summarized below, and provided in full detail in the next four sections of this dissertation.

MANUSCRIPT 1

POSITIVE YOUTH DEVELOPMENT SUSTAINABILITY SCALE (PYDSS): THE DEVELOPMENT OF A UNIVERSAL TOOL

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This study details the development of the Positive Youth Development Sustainability Scale (PYDSS) - a universal self-report tool to assess the impacts of positive youth development (PYD) programs. The PYDSS provides practitioners a tool in the field of PYD both domestically and internationally, addressing the concern of global application and sustainability criteria (e.g., resilience and happiness). First, we conducted a detailed literature review on existing PYD program assessment techniques. Next, we conducted an exploratory factor analysis, via SPSS and AMOS software, to establish the number of factors in the scale. Confirmatory factor analysis was conducted using 2 samples from rural areas of Thailand (Thai) and the Phoenix-metro area (PHX) ($n = 580$ and $n = 407$, respectively). The constructs of the 5 C's model (CITE) - competence, confidence, character, connection, and caring – along with the sixth C, contribution, and happiness were placed into six-factors. Future studies should consider the longitudinal impacts of PYD programs and in a wide range of grades, cultures, and countries to re-affirm universal application.

MANUSCRIPT 2

APPLICATION OF THE POSITIVE YOUTH DEVELOPMENT SUSTAINABILITY SCALE IN RURAL THAILAND: A QUANTITATIVE ANALYSIS OF 2 YOUTH PROGRAMS

The purpose of this paper was to assess the effectiveness of two positive youth development (PYD) programs in rural Thailand using the Positive Youth Development Sustainability Scale (PYDSS) measuring pre- and post- intervention. The intervention group attended a voluntary leadership camp and the control group attended a mandatory government run camp. Data was retrieved from five different provinces in rural

Thailand, representing 15 different secondary schools (n=779 surveys; 429 students and 350 support network). A paired *t*-test analysis indicated a statistically significant improvement between pre-test and post-test PYDSS scores. Further, while an ANCOVA analysis indicated no significant difference in overall change between the control and intervention group, the difference between the two groups were significant in four of the six categories of the PYDSS when controlling for pre-test scores. The results indicated that the PYDSS can measure PYD programs and components of PYD theory globally and change occurred in both programs. Future PYD studies can use evaluation tools like the PYDSS to determine positive change after the intervention programs.

MANUSCRIPT 3

APPLICATION OF THE POSITIVE YOUTH DEVELOPMENT SUSTAINABILITY SCALE (PYDSS) AS A QUALITATIVE CODING GUIDE IN RURAL THAILAND: AN ANALYSIS OF TWO YOUTH PROGRAMS

In this paper two positive youth development (PYD) programs in Thailand were assessed using qualitative methods with the Brighter Thailand Foundation (BTF) Camp (intervention) and Thai Scouts Camp (control). The objective was to use the PYDSS categories as a coding guide for qualitative analysis in each program. Focus groups took place in two provinces in rural Thailand, separated into groups based on their participation in the required Scouts Camp or the voluntary BTF Camp. Student support networks were also interviewed as part of this study. Thematic analysis of transcribed audio recordings was performed and results were noted for future recommendations. A total of 150 students participated in fourteen focus groups and a total of 17 of the support network participated in individual interviews. Students in the control program meet a few

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criteria of the PYDSS categories in the coding (competence, connection, caring), while the intervention group meet all the areas. Both groups showed attitude and behavior changes in their responses, but active participation in the focus groups differed among the groups, 100% (intervention) and 33% (control). This formative qualitative evaluation provides evidence that the PYDSS categories can be used as a guide for coding PYD programs that can help produce themes.

MANUSCRIPT 4

INCREASING POSITIVE YOUTH DEVELOPMENT AND POSITIVE ATTITUDES TOWARD PHYSICAL ACTIVITY: AN ASSESSMENT OF FUTURE FOR KIDS

The purpose of this paper was to assess the effectiveness of a youth program that incorporates physical activity and activities and strategies meant to foster positive youth development by examining pre- and post-test data using the Positive Youth Development Sustainability Scale (PYDSS). *Future for KIDS* is an out-of-school time (OST) program in the Phoenix-metro area emphasizing academics, athletics, and ethics. This work drew on youth sports programs in positive youth development (PYD). The objective was to test the hypotheses that 1) PYD increases based on the *Future for KIDS* program, 2) that repeat students show statistically significant increases in PYD over first-time students, and 3) *Future for KIDS* program increased positive attitudes toward physical activity. Data was retrieved from nine different program sites in the *Future for KIDS* program, (n=464 surveys; 204 students and 260 support network members). The results support our hypothesis of *Future for KIDS* improving PYDSS scores and attitude towards physical activity. The results indicate that programs like *Future for KIDS*, which include a

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physical activity component in their program design, can successfully improve PYD of

its participants in an out-of-school time program. Future studies can use the program

design of PYD programs like *Future for KIDS* that incorporate physical activity.

MANUSCRIPT 1

POSITIVE YOUTH DEVELOPMENT SUSTAINABILITY SCALE (PYDSS):

THE DEVELOPMENT OF A UNIVERSAL TOOL

This section has been co-authored with Scott Cloutier and Katherine Irimata.

ABSTRACT

Background: Our study details the development of the Positive Youth Development Sustainability Scale (PYDSS) - a universal self-report tool to assess the impacts of positive youth development (PYD) programs. The PYDSS provides practitioners a tool in the field of PYD both domestically and internationally, addressing the concern of global application and sustainability criteria (e.g., resilience and happiness).

Objective: This study will test the hypothesis that data from different countries and PYD programs can be universally applied in the development of an evaluation tool.

Methods: First, we conducted a detailed literature review on existing PYD program assessment techniques. Next we conducted an exploratory factor analysis, via SPSS and AMOS software, to establish the number of factors in the scale. The constructs of the 5 C's model - competence, confidence, character, connection, and caring – along with the sixth C, contribution, and happiness were confirmed into six-factors. Confirmatory factor analysis was conducted using 2 samples from rural areas of Thailand (Thai) and the Phoenix-metro area (PHX) (n = 580 and n = 407, respectively).

Results: Our analysis shows the factor structure was highly comparable with a mean comparative fit index (CFI) of .930 (Thai) and .933 (PHX) for grades 9-12 and 3-6, respectively.

Conclusions: Our study confirms the hypothesis that the tool can be used in different settings and demographics for PYD programs. Future studies should look at the impacts of PYD programs over long periods of time and in a wide range of grades, cultures, and countries to re-affirm universal application.

Keywords: Positive Youth Development, factor analysis, sustainability scale; Southeast Asia; Thailand

INTRODUCTION

Positive Youth Development (PYD) programs started in the United States and grew out of interest in prevention programs targeting risky behavior of youth (Bumarger & Greenberg, 2002; Lerner, 2000; Lorion & Sokoloff, 2003). PYD programs include intentional efforts by peers, adults, communities, schools, and organizations to provide opportunities for youth to increase their skills, abilities, and interests in positive activities (Catalano, Berglund, Ryan, Lonczak, & Hawkins, 2004). The goal of PYD is to provide positive outcomes for youth, viewing them as resources to be developed rather than problems to be managed. Current generations rely on youth to be future active and contributing members of society and PYD programs can promote sustainable futures for young individuals. However, while PYD programs have demonstrated success in the US, based on their own respective program measures, there is a need for a universal assessment tool for comparative analyses across culture, time and space. Without universal standards, comparing PYD programs effectively is impossible.

PYD programs are increasingly being expanded internationally as they promote resilient characteristics and life skills. We suggest that PYD programs are meant to

provide long-term opportunities for youth to live meaningful, happy and sustainable lives. Yet, PYD program assessment tools lack sustainability and happiness measures representative of long-term impacts. In this paper, we develop a globally applicable tool to effectively capture sustainability, happiness, and adapted PYD metrics that collaboratively promote future success of youth. Cohn et al. (2009) suggest that happiness, in the form of positive emotions and life-satisfaction makes one feel better and builds capacity for individuals to develop resources for living well. Happiness actively helps create desirable outcomes and promotes growth in ego-resilience, which leads to increased global life-satisfaction (Lyumbomirsky et al., 2005; Frederickson et al, 2008). According to Seligman (2011), there are five elements that drive happiness: 1) positive emotion, 2) engagement, 3) relationships, 4) meaning, and 5) achievement. Nettle (2005) suggests that, in order to flourish, we need to 1) reduce the impact of negative emotions, 2) increase positive outcomes, and 3) think about other people instead of ourselves. In short, happier people may be more sustainable, and vice versa (Cloutier et al., 2013).

Since the introduction of sustainable development in 1987 (Brundtland commission) and Agenda 21 as an action plan in 1992 (Sitarz, 1993), there have been many attempts to measure sustainability using various sustainable development indicators (UN-DESA, 2001). Researchers have also performed extensive studies on indicators of happiness and well-being and found that happiness is positively correlated with health, material comfort, social equality, and access to knowledge (Veenhoven, 1995). With respect to PYD, moving toward sustainability and happiness first requires youth to have their basic needs met in an environment that reinforces positive behavior. As basic needs

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are met, long-term happiness can be considered and achieved by focusing on higher level

needs (sustainability). There is strong evidence that sustainable development enhances

happiness and both have a reinforcing relationship (Cloutier et al., 2013; Zidansek, 2007).

Higher levels of happiness encourage youth to explore the world and to challenge

themselves to develop (Park, 2004). Park (2004), makes an argument that happiness or

social well-being (SWB) needs a role in PYD as an indicator, a predictor, a

moderator/mediator, and ultimately as a positive outcome. More, a focus on sustainability

and happiness will promote future PYD strategies and research (i.e. longitudinal studies).

The objective of this paper is to develop a universal Positive Youth Development

Inventory (PYDI) tool, hereafter referred to as the Positive Youth Development

Sustainability Scale (PYDSS) that can be applied in any setting or culture. The PYDSS is

adapted from a PYDI assessment tool developed for the 4H program (Arnold &

Meinhold, 2008). Briefly, the 4H program is the largest PYD and youth mentoring

program in the US working in partnership with over 110 universities. The 4H PYDI

assessment tool was influenced by Lerner's (2005) "*5 Cs*" model (Table 1) as a

foundational framework for measuring the assets/characteristics of a PYD program:

competence, confidence, character, character, and caring.

Table 1

The 5 C's as a Foundational PYD Framework

Assets/Characteristic	Definition	Source
Competence	Includes academic, social, vocational, and health competence	Caplan et al. 1992; Weissberg, Caplan, and Sivo, 1989
Confidence	Believing in one's self and ability	Fetterman, Kaftarian, and Wandersman, 1996
Character	Knowing what is right or wrong and how to do the right thing	Piaget, 1952, 1965; Kohlberg 1963, 1969, 1981; Hoffman, 1981
Connection	Working collaboratively with parents, peers, siblings, teachers, coaches, or other community members	Ainsworth et al. 1978; Bowlby 1973, 1979, 1982; Mahler, Pine, and Bergman 1975
Caring	A sense of compassion or social justice	Salovey and Mayer , 1989; Goleman, 1995

PYD programs show sustainable impacts in their participants in the form of how much they contribute back to their communities. When youth are demonstrating strengths in all *5 Cs*, this leads to a sixth *C*, known as *contribution* (Lerner, 2004; Lerner, Dowling, & Anderson, 2003). This means "a young person enacts behaviors indicative of the *5 Cs* by contributing positively to self, family, community, and, ultimately, civil society" (Lerner, 2005, p. 8). Lerner et al. (2004) used the *5 Cs* to demonstrate an inverse relationship among contribution and negative outcomes or behaviors. Students who had achieved high scores in the *5 Cs* were more likely to actively contribute to their local communities showing sustainable impacts of PYD programs. The PYDSS builds on Lerner et al.'s (2004) work by including sustainability metrics in happiness and resilience. Our resilience metrics were influenced by Hawkins' social development model

(Hawkins & Catalano, 1996), a model stating that youth who demonstrate active involvement in their family, school, and communities, with positive acknowledgement of their efforts, are more likely to form positive bonds and relationships that suppress risk behaviors showing the importance of support networks (Catalano et al., 2004). The objective of PYD programs is not just about making youth feel good, but should be about making them feel satisfied with their lives in the present and future. Our tool will enhance PYD programs by providing data on the life satisfaction and well-being of each participant and how support networks influence participants over time. We hypothesized that data from two different countries and PYD programs (Thailand and Phoenix, USA) can be universally applied in the development of an assessment tool for PYD programs.

METHODOLOGY
Positive Youth Development Sustainability Scale (PYDSS) development

The PYDSS was developed via a detailed search of academic literature in the areas of PYD theory and subjective well-being (happiness). First, we drew on lessons from a cross-disciplinary set of studies of six electronic databases: PubMed, PsycINFO, Web of Science, Science Direct, Scopus, and ERIC. The search was made for all English-language studies with no date limits. Search terms included "positive," "youth," "development," "happiness," "program," and "evaluation" and were mapped to database specific subject headings and/or controlled vocabulary terms when available. Common themes and findings from each tool were pulled from the literature search to develop the PYDSS. The literature was then analyzed to cross-reference types of questions or statements that reflect each category of the PYDSS and what could be used based on current tools in practice. Each statement or question had to meet the criteria that it fit into

the respective categories: 5 C's (Eccles & Gootman, 2002), Contribution (Eccles & Gootman, 2002; Lerner et al., 2005), and Happiness (Park, 2004) of the PYDSS. Questions were included if they overlapped with the PYDI or 5 *C's* framework. The sustainability component was measured by the sixth *C*, contribution, and in questions that can assess the effectiveness of PYD programs over a long period of time. The happiness component was formulated based on subjective well-being scales and other program evaluations that incorporated happiness and have tested for this component. Face validity analysis was conducted by having several PYD experts review the scale for applicability and appropriateness for the target demographic.

Participants

The PYDSS was piloted via a study in the rural areas of Thailand (primarily the Northeast region) and in the Phoenix-metro area with a local PYD program for low-income, at-risk youth- *Brighter Thailand Foundation (BTF)* and *Future for KIDS,* respectively. Eligibility criteria include students in primary and secondary school that are willing and able to participate in *BTF* and *Future for KIDS*. Method of recruitment was based working with the program director of *BTF* and *Future for Kids* based on connections by the author and the prominence of the programs by Peace Corps Volunteers in Thailand and program recognition by the Arizona Center for Afterschool Excellence in the Phoenix-metro area. The surveys were distributed and administered by *BTF* and *Future for KIDS* staff to all student participants before and after the intervention program and each member of the student support network (teachers, parents, and

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mentors). IRB approval was obtained to the legal requirements of the study country and that 'informed consent' was appropriately obtained.

Interventions

The *Brighter Thailand Foundation* hosts an overnight global leadership camp throughout rural areas of Thailand over six days that incorporates a train-the-trainer technique with 15-20 high school students and about 30 primary school students per camp. *Future for KIDS* is an out-of-school time program focusing on academics, athletics, and ethics activities that takes place during the academic school year once a week for two hours for grades 3-6. In Thailand (Thai), 580 surveys were collected and in Phoenix (PHX), 407 surveys were collected. Each survey captured how the student felt before and after the program using a Likert-scale of strongly disagree to strongly agree (1-strongly disagree, 2-disagree, 3-neutral/unsure, 4-agree, 5-strongly agree). Cronbach's Alpha was used to determine reliability and internal consistency. The objective of the study was to collect before and after effects of each PYD program using the same intervention evaluation tool.

Objectives

The objective is to test the hypothesis that data from different countries and PYD programs can be applied in the development of a universal assessment tool.

Outcomes

First, exploratory factor analysis (EFA) was used to determine how well the items reflected underlying constructs among the variables in the PYDSS. Principal components analysis and Kaiser's eigenvalue rule was used to identify the number of factors to retain

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and an oblique rotation solution (Promax) was used to identify the simplest structure that would allow for meaningful interpretation (Devellis, 1991). All data analyses were conducted using SPSS statistical software.

Second, to evaluate the overall fit of the PYDSS, several fit indices were employed based on the factor solution set obtained from the EFA above using confirmatory factor analysis (CFA). These included chi-square (χ^2), root mean square error of approximation (RMSEA), goodness-of- fit index (GFI), Tucker-Lewis Index (TLI), and comparative fit index (CFI) (Schumacker and Lomax 2004; Tanaka 1993). There is a general agreement that the values of .9 or greater for GFI, TLI, and CFI indicate a satisfactory fit to the data (Schumacker and Lomax 2004). The values of RMSEA below .06 represent acceptable model-data fit (Hu and Bentler 1999). Model fit analysis was conducted using AMOS.

Sample Size

Sample size was determined by the number of participants enrolled in each PYD program. Only students participating in the intervention programs were included in the study.

Assignment Method

The unit of assignment being used to the study condition is the number of surveys by each participant before and after the intervention. Surveys were assigned based on which program the participant participated in (*BTF* and *Future for KIDS*). To help minimize potential bias of the surveys, support networks also scored each participant in their respective groups in each program.

Blinding

Blinding did not take place. Both groups participated in two different PYD programs in two different countries.

Unit of Analysis

The units of analysis are the scores for each statement of the surveys.

Statistical Methods

The primary statistical methods used for this study included exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) using SPSS and AMOS software. There was no missing or incomplete data included in this study.

RESULTS

PYDSS Development Academic Literature Search Results

The PYDSS was developed via the academic literature review and compilation above and adapted from Arnold & Meinhold (2008) to include statements derived from a 55 question Likert-scale questionnaire as well as questions derived from various Happiness scales. The results of the PYDSS literature search are provided below in Table 2.

5 C's plus Contribution

The PYDI is a collection of items designed to measure changes in levels of PYD programs. The version produced by Arnold & Meinhold (2008) follows the 5 *C's* model of youth development, by measuring the constructs of 1) Confidence; 2) Competence; 3) Character; 4) Caring; and 5) Connection. This version also includes the measurement of a 6th *C*- Contribution. The PYDSS expands from the PYDI from a four-point scale: (1)

Strongly disagree; (2) Disagree; (3) Agree; and (4) Strongly agree to a five-point scale including a "neutral/unsure" score. With the addition of happiness construct, the total number of questions was reduced to 32 questions instead of 55. To include a resilience component, members of the students' support groups also measured the students adding depth of more than one perspective.

Table 2

PYDSS Literature Search

Happiness	Item	Source
	Happiness can be measured in the moment, overall, or as life satisfaction with measurement tools such as The Subjective Happiness Scale (SHS), the Positive and Negative Affect Schedule (PANAS), and the Satisfaction with Life Scale (SWLS).	Lyubomirsky, S., & Lepper, H., 1999; Watson, D., Clark, L. A., & Tellegen, A., 1988 ;Diener, E., Emmons, R., Larsen, J., & Griffin, S., 1985
	Life satisfaction/happiness should play a role in PYD as an indicator as 1) life satisfaction is correlated with physical health and healthy behaviors, 2) negative life satisfaction is linked to violent problem behaviors 3) negative life satisfaction is correlated with depression, anxiety, neuroticism, and loneliness, and 4) youth life satisfaction is positively correlated with desirable psychological characteristics.	Park, 2004; Valois et al., 2001; Huebner, 1991; McKnight, Huebner, and Suldo, 2002
	The ultimate goal of youth development programs should be achieving good quality of life for participants rather than just preventing or mitigating psychopathology.	Park, 2004; Coie et al., 1993; Cowen, 1994; Durlak and Wells, 1997.
Resilience	Resilience took root in the creation of positive development as a conceptual model	Benson, Scales, Hamilton, & Sesma, 2004; Masten, 2001.
	Researchers began to realize that resilience was not a trait inherent in children, but a function of their ecology. This ecological approach formed into three broad sets of protective factors embedded in resilience: 1) those within a child, 2) within the family, and 3) within the broader social ecology	Luthar, Cicchetti, & Becker, 2000; Masten & Garmezy, 1985.
	The primary means of incorporating positive development is via intervention and prevention programs. One prime example of this approach is Hawkins' social development model. Their model state that youth who experience positive developmental opportunities showcasing active involvement in their family, school, and communities, with acknowledgement of their efforts, are more likely to form positive bonds and relationships that suppress risk behaviors.	Benson et al., 2004; Catalano et al., 2004

Factor Analysis and Statistical Results

Factor Analysis

A scree plot (Cattell, 1966) verified the number of factors to be rotated using the Promax method with Kaiser Normalization. The resulting factor structure indicated that a six-factor solution provided the optimal number of interpretable factors without unduly reducing the percentage of total variance accounted for in the Thai dataset. In the Phoenix dataset, EFA indicated that a three-factor solution was optimal. To be included, an item required to load at the .40 level or higher on one factor. Three items in the Thai dataset and four items in the Phoenix dataset did not meet this criterion and were removed. The remaining 29 items (Thai) and 28 items (PHX) and their factor loadings are presented in Table 3 and 4. The factors were labeled by identifying the construct that most of the questions related to. Table 5 and 6 contains the percentage of total variance, mean, and standard deviations for each factor. The p-values for the Kaiser-Meyer-Olkin Measure of Sampling Adequacy (KMO) and Bartlett's Test of Sphericity were not statistically significant at the 5% significance level for both datasets.

Table 3

Percentage of Total Variance, Mean, & Standard Deviation of Factors for the PYDSS Thai Dataset

Item	% of total variance	Mean	Standard deviation
Factor 1: Happiness/Confidence	42.174	4.22	.870
Factor 2: Caring	5.718	4.00	.860
Factor 3: Connection	5.123	4.12	.870
Factor 4: Contribution	4.442	3.90	.860
Factor 5: Competence	3.780	4.20	.850
Factor 6: Character	3.580	4.04	.820

Table 4

Percentage of Total Variance, Mean, & Standard Deviation of Factors for the PYDSS PHX Dataset

Item	% of total variance	Mean	Standard deviation
Factor 1: Caring/Character/Competence	44.714	3.98	1.08
Factor 2: Happiness/ Connection	5.401	4.13	1.01
Factor 3: Contribution/Confidence	4.314	3.85	1.15

Table 5

Factor Loadings of Items from the PYDSS Thai dataset (All statistically significant = factor loading >.4)

ITEM	Factor Loading
Factor 1: Happiness/Confidence	
I am happy at home	.905
I am happy at school	.691
I am happy in this program	.426
I am happy with the people in my life	.426
I am satisfied with my life	.606
I feel connected to my parents	.808
I feel like I am worth something	.431
Factor 2: Caring	
When others need help, I help them	.551
It is easy for me to know how others feel	.671
I try to encourage others when they are not as good at something as me	.780
	.764
I can be counted on to help if someone needs me	.697
I care about the feelings of my friends	
Factor 3: Connection	
I have many different types of friends	.863
My friends care about me	.775
I feel connected to my friends	.834
I feel connected to my teachers	.533
I have people in my life I look up to and admire	.650
I have close friendships	.552
Factor 4: Contribution	
I take an active role in my community	.830
I am someone who gives to benefit others	.651
I like to work with others to solve problems	.718
I have things I can offer to others	.697
It is important for me to try and make a difference in the world	.642
Factor 5: Competence	
I have goals in my life	.862
I know what I want to be when I grow up	.835
Factor 6: Character	
I like to learn new things	.427
I can manage my emotions	.765
It is important for me to do the right thing	.429
If I promise to do something I can be counted on to do it	.537

Table 6

Factor Loadings of Items from the PYDSS PHX dataset (All statistically significant = factor loading >.4)

ITEM	Factor Loading
Factor 1: Caring/Character/Competence	
It is important for me to do the right thing	.877
I like to learn new things	.737
If I promise to do something I can be counted on to do it	.648
I have goals in my life	.642
I can be counted on to help if someone needs me	.596
I can manage my emotions	.596
I try to encourage others when they are not as good at something as	.523
me	.500
I know what I want to be when I grow up	.490
I have people in my life I look up to and admire	.479
When others need help, I help them	.411
I care about the feelings of my friends	
Factor 2: Happiness/ Connection	
I am happy at home	.826
I am satisfied with my life	.761
I am happy with the people in my life	.714
I feel connected to my family	.713
I have close friendships	.694
My friends care about me	.644
I have many different types of friends	.622
I am happy in this program	.477
I feel connected to my parents	.435
Factor 3: Contribution/Confidence	
I have things I can offer to others	.888
I am someone who gives to benefit others	.727
I take an active role in my community	.700
I like to work with others to solve problems	.651
It is important for me to try and make a difference in the world	.618
It is easy for me to know how others feel	.554
I feel like I am worth something	.491
I am happy at school	.448

Reliability

The PYDSS had Cronbach's alpha reliability statistics of .951 (Thai) and .952

(PHX), which is greater than the reliability minimum of .7 (George & Mallery, 2003).

George and Mallery (2003) provide the following as guidelines: "_ > .9 – Excellent, _ >

.8 – Good, _ > .7 – Acceptable, _ > .6 – Questionable, _ > .5 – Poor, and _ < .5 –

Unacceptable" (p. 231). Table 7 and 8 includes the Cronbach's alpha reliability statistics

for each factor.

Table 7

Cronbach's alpha reliability statistics for PYDSS Factors Thai Dataset (All statistically
significant = α >.7)

Item	α
Factor 1: Happiness/Confidence	.870
Factor 2: Caring	.870
Factor 3: Connection	.856
Factor 4: Contribution	.859
Factor 5: Competence	.813
Factor 6: Character	.752

Table 8

Cronbach's alpha reliability statistics for PYDSS Factors Phoenix Dataset (All
statistically significant = α >.7)

Item	α
Factor 1: Caring/Character/Competence	.893
Factor 2: Happiness/ Connection	.896
Factor 3: Contribution/Confidence	.879

Model Fit

Model fit was calculated using the six-factor solution from the Thai dataset from the EFA and confirmed fit using CFA for both datasets analyzed. Questions were removed based on low factor loadings or redundancy. Below are Table 9, Table 10, Figure 1, and Figure 2 that displays the final output for the PYDSS.

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Table 9

Standardized Factor Loadings of Items from the PYDSS CFA Model Output

ITEM	Factor Loading Thai	Factor Loading PHX
Factor 1: Happiness/Confidence		
I am happy at home	.74	.73
I am happy at school	.79	.67
I am happy in this program	.73	.68
I am happy with the people in my life	.76	.80
I am satisfied with my life	.73	.73
I feel like I am worth something	.63	.60
Factor 2: Caring		
When others need help, I help them	.76	.75
It is easy for me to know how others feel	.72	.70
I try to encourage others when they are not as good at something	.82	.80
as me	.76	.83
I can be counted on to help if someone needs me	.72	.71
I care about the feelings of my friends		
Factor 3: Connection		
I have people in my life I look up to and admire	.63	.66
I have many different types of friends	.73	.66
My friends care about me	.81	.66
I feel connected to my friends	.79	.73
I feel connected to my teachers	.66	.72
Factor 4: Contribution		
I take an active role in my community	.67	.72
I am someone who gives to benefit others	.70	.80
I like to work with others to solve problems	.71	.71
I have things I can offer to others	.81	.66
It is important for me to try and make a difference in the world	.76	.80
Factor 5: Competence		
I have goals in my life	.82	.74
I know what I want to be when I grow up	.83	.60
Factor 6: Character		
I like to learn new things	.63	.71
It is important for me to do the right thing	.72	.73
If I promise to do something I can be counted on to do it	.66	.71

Figure 1

CFA Thai dataset
The boxes represent questions pertinent to the circled factor, the number shows the loading
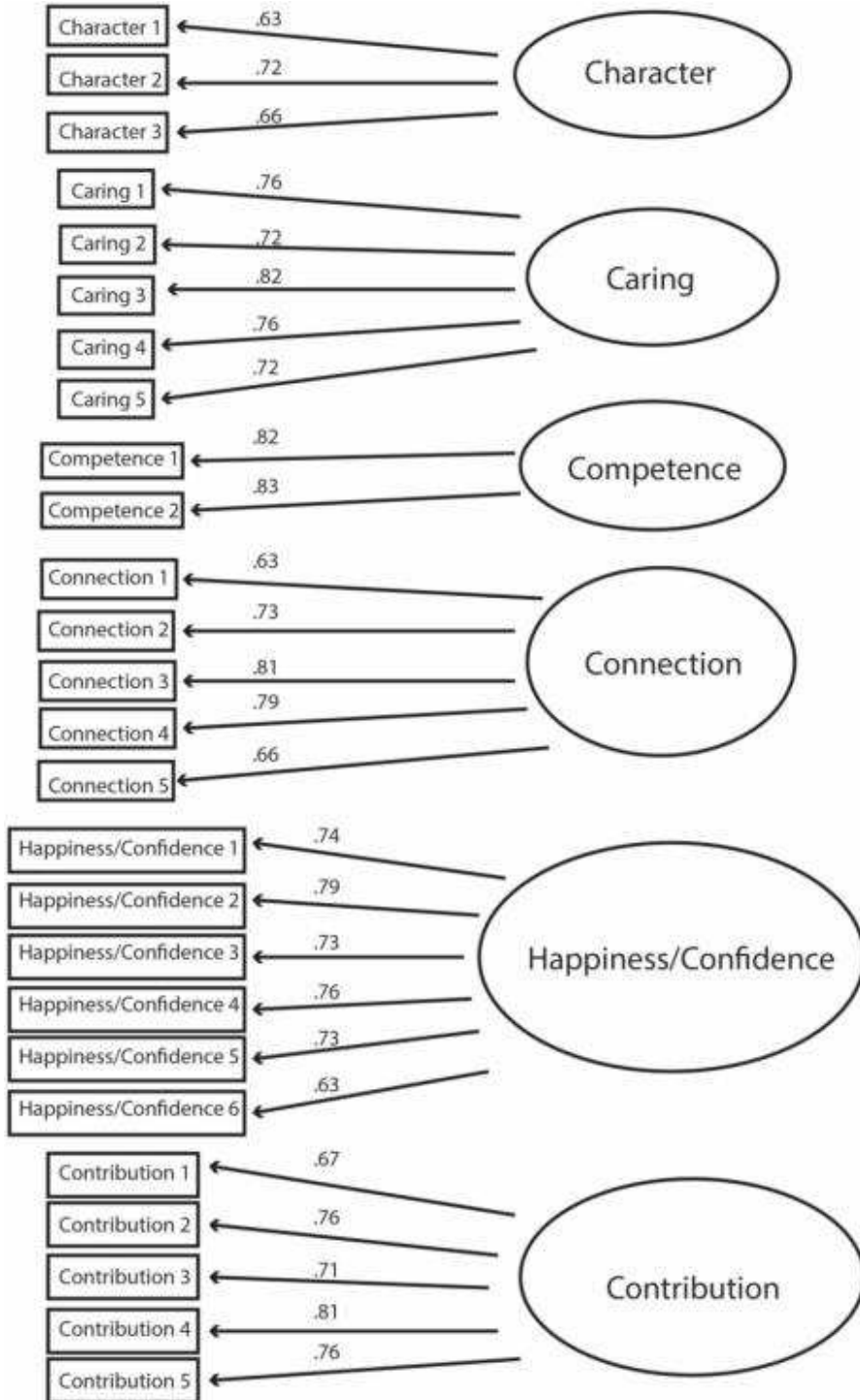
Figure 2

CFA PHX Dataset

The boxes represent questions pertinent to the circled factor, the number shows the loading
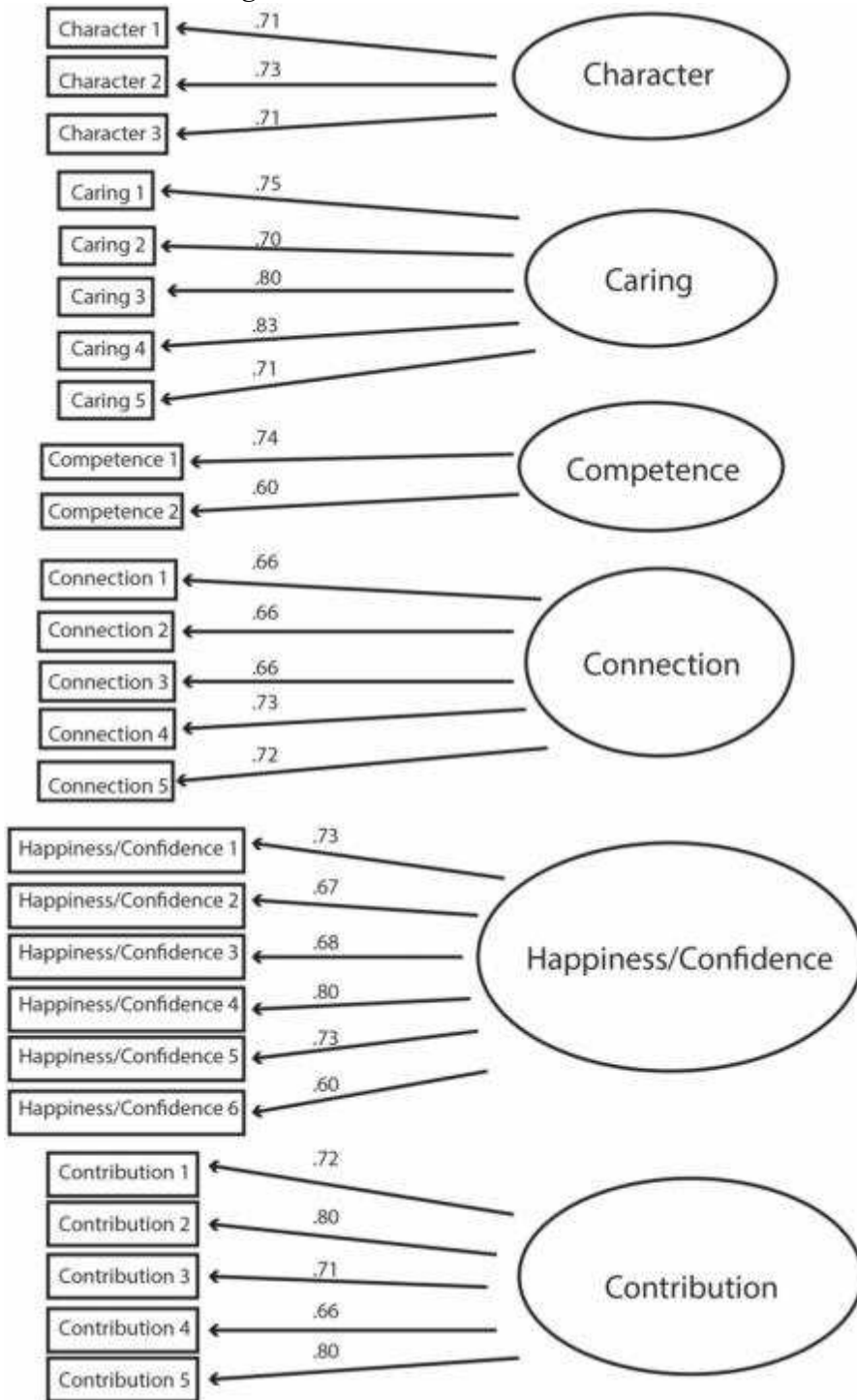
Table 10

Confirmatory Factor Analysis Model Fit Summary

	Statistical Significance	Thai Dataset	PHX Dataset
chi-square; d.f.		852.233; 284	662.954; 284
CMIN/DF	Range 2-3	3.001	2.334
RMSEA	<.06	.059	.057
GFI	>.90	.896	.888
TLI	>.90	.920	.924
CFI	>.90	.930	.933

DISCUSSION

The purpose of developing the PYDSS is to create a tool that can be used universally to measure PYD programs in multiple countries and cultures. As PYD programs continue to grow, there is a pressing need to develop globally applicable relevant measures of positive youth development (Dukakis et al. 2009). Creating a universal tool for assessing PYD programs provides guidance for future empirical research and for the evaluation of youth-serving programs seeking to promote PYD domestically and internationally. In this study we tested the hypothesis that data from different countries and cultures can be universally applied in the development of an evaluation tool. Below, we will provide a summary of the methodology, results, implications, limitations, and opportunities for future research.

Several recent reviews of the literature have presented evidence of empirical support for the validity and robustness of the Five Cs Model of PYD (Heck and Subramaniam 2009). The Positive Youth Development Index (PYDI), however, only measures the Five Cs (plus contribution) in its current form - there is a need to expand the scope to include sustainability measures like happiness. To address this concern,

exploratory factor analysis and confirmatory factor analysis of PYD programs were conducted with *Brighter Thailand Foundation* (Thai) and *Future for KIDS* (PHX) from Grades 9-12 and 3-6 respectively. These programs have similarities in the foundation of creating an environment for positive youth development, but also have strong differences in their techniques and demographics of the students. The PYDSS was created by adapting measures from the PYDI, also adding happiness as a component and surveying support networks of students in Phoenix, USA and Thailand. Model fit tests were also conducted using both data sets to assess potential for universal application to different types of PYD programming. The initial results indicate that several questions needed to be removed to ensure greater model fit for both data sets and supports the notion of global application.

The questions that were removed in the CFA model were "I can manage my emotions" and "I have close friendships" due to low factor loadings and repetition in the given category, respectively. With the removal of these questions, the PYDSS is now within statistical significance of the majority of the model fit tests we used in our CFA with both datasets, showing the ability to be used in multiple settings across different programs and demographics.

The EFA of the Thailand data indicate that 6 categories (constructs) were determined closely resembling the PYDI and PYD literature, while the Phoenix data show only 3 categories. However, both datasets fit the six-factor model developed from the EFA results for the Thai dataset, thus confirming the hypothesis that data from two different countries can be applied to a universal tool. The CFA confirmed the proposed

six-factor solution with acceptable model fit, which suggests that the 5 C's with contribution and happiness have a significant role in predicting PYD. Given high Cronbach values for both datasets (Thai dataset = .951, Phoenix dataset = .952), it is possible that more questions might be removed in future versions of the PYDSS to reduce the time required to complete the survey, while not compromising the quality of the results. Removal of additional questions could also result in better fit for the CFA model of the PYDSS.

Finally, as youth age, the importance of their relationships becomes more significant overtime. Thus, surveying all support network members including mentors, teachers, and parents provided insight on how in tune each individual is with respect to students. Even though the survey was administered to all support members of each youth participant, response rates varied and were limited in some cases. Future studies focusing on student support networks could lead to new discoveries through full participation of the study. In the conversations with support networks, we also captured their responses through interviews and in some cases this showed a willingness to participate. This could lead to future studies that focus on qualitative or a mixed methods approach in data collection.

The present research addresses limitations present in both the empirical and applied realms of PYD. Although the PYD framework has become more popular among practitioners and academics, there is some disagreement on indicators of positive development that spans across research, policy, and practice on a global scale (Moore et al. 2004). Earlier work (Lerner et al. 2005; Phelps et al. 2009) has already established the

existence of a valid measure of PYD across early adolescence in developed countries like the US. The present work extends the validity and utility of the measure to adolescents in developing countries. Researchers examining application in a rural or urban setting globally now have a valid measure to assess whether youth are developing positively. This work also affords researchers the ability to consider the relationships among PYD and sustainability measures like happiness and how they relate to one another.

Our methods have their own limitations that require future investigation. First, although our results suggest that the initial Five Cs model plus Contribution and Happiness shows fit for two distinct groups locally and globally, the conclusion was drawn based on results obtained with a sample that is different from the Phelps et al. (2009) and Arnold & Meinhold (2008) sample. It is possible that the original measurement structure does not fit all youth in all countries due to the fact every culture and every PYD program is different. One challenge with this and any evaluation tool is the time this takes away from actual programming. This survey on average took between 20-40 minutes to complete, while the ideal time would be between 10-15 minutes. Another challenge encountered in the process was translation and cultural adaptation. If expanding to other cultures in different languages, sensitivity around this area should be considered. In some cases, the PYDSS might be more effective administered orally or as a guide for interviews and focus groups for cultures and communities that are strongly influenced by oral traditions. We also captured responses to the PYDSS questions via focus groups and interviews in Thailand and in many cases participants were more open to sharing personal experience in the PYD program with specific examples of how they

changed. The PYDSS also leaves room for modification for other program specific questions or additional questions to each criterion. In the future this tool can be used as a baseline assessment of a PYD program ensuring that all areas align with PYD theory and literature. Future studies should use the PYDSS in a wide range of grade levels, culture, and countries to re-affirm universal application.

While our research is limited by our sample, measurement model, and methodology, the support we have provided for the present conceptualization of PYD enhances our understanding of application in diverse settings domestically and internationally, and of how PYD might be studied longitudinally and the PYDSS may be used in application. Therefore, future research should track youth and their support networks over long periods of time and in different countries and cultures to see how the program has impacted them. Essentially, longitudinal studies can capture sustainability of the programs impact on youth participants and their happiness after the PYD programs. The overall goal of PYD programs should be to promote happiness and life satisfaction and PYD tools like the PYDSS can track this over time.

ETHICAL APPROVAL

All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

INFORMED CONSENT

Informed consent was obtained from all individual participants included in the study.

ACCESS TO DATA

The first author takes responsibility for the integrity of the data and the accuracy of the

data analysis.

REFERENCES

Ainsworth, M. D. S., Blehar, M. C., & Waters, E. (1978). *Patterns of attachment: A psychological study of the strange situation.*

Arnold, M. E., & Meinhold, J. L. The Positive Youth Development Inventory (2008).

Benson, P. L., Scales, P. C., Hamilton, S. F., & Sesma, A. (2006). *Positive youth development: Theory, research, and applications.* John Wiley & Sons, Inc..

Bowlby, J. (1973). *Attachment and loss, vol. II: Separation.* Basic Books.

Bowlby, J. (1979). On knowing what you are not supposed to know and feeling what you are not supposed to feel. *The Canadian Journal of Psychiatry/La Revue canadienne de psychiatrie.*

Bowlby, J. (1982). Attachment and loss: retrospect and prospect. *American journal of Orthopsychiatry*, *52*(4), 664.

Bumbarger, B. K., Perkins, D. F., & Greenberg, M. T. (2012). 22 Taking Effective Prevention to Scale. *Handbook of Prevention Science*, 433.

Caplan, M., Weissberg, R. P., Grober, J. S., Sivo, P. J., Grady, K., & Jacoby, C. (1992). Social competence promotion with inner-city and suburban young adolescents: effects on social adjustment and alcohol use. *Journal of consulting and clinical psychology*, *60*(1), 56.

Catalano, R. F., & Hawkins, J. D. (1996). A theory of antisocial behavior. *Delinquency and crime: Current theories (1996)*, *149*.

Catalano, R. F., Berglund, M. L., Ryan, J. A., Lonczak, H. S., & Hawkins, J. D. (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.

Catalano, R. F., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of School Health*, *74*(7), 252-261.

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate behavioral research*, *1*(2), 245-276.

Cloutier, S., Larson, L., & Jambeck, J. (2014). Are sustainable cities "happy" cities? Associations between sustainable development and human well-being in urban areas of the United States. *Environment, development and sustainability*, *16*(3), 633-647.

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Coie, J. D., Watt, N. F., West, S. G., Hawkins, J. D., Asarnow, J. R., Markman, H. J., ... & Long, B. (1993). The science of prevention: A conceptual framework and some directions for a national research program. *American psychologist*, *48*(10), 1013.

Cohn, M. A., Fredrickson, B. L., Brown, S. L., Mikels, J. A., & Conway, A. M. (2009). Happiness unpacked: positive emotions increase life satisfaction by building resilience. *Emotion*, *9*(3), 361.

Cowen, E. L. (1994). The enhancement of psychological wellness: Challenges and opportunities. *American journal of community psychology*, *22*(2), 149-179.DeVellis, R. F. (1991). Guidelines in scale development. *Scale Development: Theory and Applications. Newbury Park, Calif: Sage*, *5191*.

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, *49*(1), 71-75.

Durlak, J. A., & Wells, A. M. (1997). Primary prevention mental health programs for children and adolescents: A meta-analytic review. *American journal of community psychology*, *25*(2), 115-152.

Dukakis, K., London, R. A., McLaughlin, M., & Williamson, D. (2009). Positive youth development: Individual, setting and system level indicators. *Issue Brief*.

Eccles, J., & Gootman, J. A. (Eds.). (2002). *Community programs to promote youth development*. National Academies Press.

Fetterman, D. M., Kaftarian, S. J., & Wandersman, A. (1996). *Empowerment evaluation: Knowledge and tools for self-assessment and accountability*. Sage.

Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of personality and social psychology*, *95*(5), 1045.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.)*. Boston: Allyn & Bacon

Goleman, D. P. (1995). Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement.

Hawkins, J. D., & Catalano, R. F. (1996). *Parents who care: A step by-step guide for families with teens*. San Francisco: Jossey-Bass/Pfeiffer.

Heck, K. E., & Subramaniam, A. (2009). *Youth development Frameworks. [Monograph]*. Davis, CA: 4-H Center for Youth Development, University of California

Hoffman, L. (1981). *Foundations of family therapy: A conceptual framework for systems change*. Basic Books.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, *6*(1), 1-55.

Huebner, E. S. (1991). Initial development of the student's life satisfaction scale. *School Psychology International*, *12*(3), 231-240.

Kohlberg, L. (1963). The development of children's orientations toward a moral order. *Human Development*, *6*(1-2), 11-33.

Kohlberg, L. (1969). *Stage and sequence: The cognitive-developmental approach to socialization*.

Kohlberg, L. (1981). *The Philosophy of Moral Development Moral Stages and the Idea of Justice /Lawrence Kohlberg*. Harper & Row.

Lerner, R. M. (2000). Developing civil society through the promotion of positive youth development. Journal of Developmental and Behavioral Pediatrics, Vol 21(1), Feb 2000, 48-49.

Lerner, R. M., Dowling, E. M., & Anderson, P. M. (2003). Positive youth development: Thriving as the basis of personhood and civil society. *Applied Developmental Science*, *7*(3), 172-180.

Lerner, R. M. (2004). *Liberty: Thriving and civic engagement among America's youth*. Sage Publications.

Lerner, R. M. (2005, September). Promoting positive youth development: Theoretical and empirical bases. In *White paper prepared for the workshop on the science of adolescent health and development, national research council/institute of medicine. Washington, DC: National Academies of Science*.

Lorion, R. P., & Sokoloff, H. (2003). Building assets in real-world communities. In *Developmental assets and asset-building communities* (pp. 121-156). Springer US.

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child development*, *71*(3), 543-562.

Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social indicators research*, *46*(2), 137-155.

Lyubomirsky, S., King, L., & Diener, E. (2005). The benefits of frequent positive affect: does happiness lead to success?. *Psychological bulletin*, *131*(6), 803.

Mahler, M. S., Pine, F., & Bergman, A. (1975). The psychological birth of the infant. *New York: Basic*.

Masten, A. S., & Garmezy, N. (1985). Risk, vulnerability, and protective factors in developmental psychopathology. In *Advances in clinical child psychology* (pp. 1-52). Springer US.

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American psychologist*, *56*(3), 227.

Mayer, J. D., & Salovey, P. (1993). The intelligence of emotional intelligence. *Intelligence*, *17*(4), 433-442.

Moore, K. A., Lippman, L., & Brown, B. (2004). Indicators of child well-being: The promise for positive youth development. *Annals of the American Academy of Political and Social Science. Special Issue: Positive Development: Realizing the Potential of Youth, 591*, 125–145.

McKnight, C. G., Huebner, E. S., & Suldo, S. (2002). Relationships among stressful life events, temperament, problem behavior, and global life satisfaction in adolescents. *Psychology in the Schools*, *39*(6), 677-687.

Nettle, D. (2005). An evolutionary approach to the extraversion continuum. *Evolution and Human Behavior*, *26*(4), 363-373.

Park, N. (2004). The role of subjective well-being in positive youth development. *The Annals of the American Academy of Political and Social Science*, *591*(1), 25-39.

Phelps, E., Zimmerman, S., Warren, A. A., Jelicic, H., von Eye, A., & Lerner, R. M. (2009). The structure and developmental course of positive youth development (PYD) in early adolescence: Implications for theory and practice. *Journal of Applied Developmental Psychology*, *30*(5), 571–584.

Piaget, J. (1952). *The origins of intelligence in children* (Vol. 8, No. 5, pp. 18-1952). New York: International Universities Press.

Piaget, J. (1965). The stages of the intellectual development of the child. *Educational psychology in context: Readings for future teachers*, 98-106.

Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling*. Psychology Press.

Seligman, M. E. (2011). *Learned optimism: How to change your mind and your life*. Vintage.

Sitarz, D. (1993). *Agenda 21: The Earth summit strategy to save our planet*. United States: Boulder, CO (United States); EarthPress.

Tanaka, J. S. (1993). Multifaceted conceptions of fit in structural equation models. *Sage focus editions*, *154*, 10-10.

UN-DESA (2001). Energy for Sustainable Development of the Least Developed Countries in Africa. *New York: United Nations*.

Valois, R. F., Zullig, K. J., Huebner, E. S., & Drane, J. W. (2001). Relationship between life satisfaction and violent behaviors among adolescents. *American Journal of Health Behavior*, *25*(4), 353-366.

Veenhoven, R., & Ehrhardt, J. (1995). The cross-national pattern of happiness: Test of predictions implied in three theories of happiness. *Social Indicators Research*, *34*(1), 33-68.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, *54*(6), 1063.

Weissberg, R.; Caplan, M.; Sivo, P. (1989). A new conceptual framework for establishing school-based social competence promotion programs. Primary prevention and promotion in the schools., (pp. 255-296). Thousand Oaks, CA, US: Sage Publications, Inc, 452 pp.

Zidanšek, A. (2007). Sustainable development and happiness in nations. *Energy*, *32*(6), 891-897.

MANUSCRIPT 2
APPLICATION OF THE POSITIVE YOUTH DEVELOPMENT SUSTAINABILITY

SCALE IN RURAL THAILAND:

A QUANTITATIVE ANALYSIS OF 2 YOUTH PROGRAMS

This section has been co-authored with Scott Cloutier and Katherine Irimata.

ABSTRACT
The purpose of this paper is to assess the effectiveness of two positive youth development (PYD) programs in rural Thailand using the Positive Youth Development Sustainability Scale (PYDSS) measuring pre- and post- intervention. The intervention group attended a voluntary leadership camp and the control group attended a mandatory government run camp. Data was retrieved from five different provinces in rural Thailand, representing 15 different secondary schools (n=779 surveys; 429 students and 350 support network). A paired *t*-test analysis indicates a statistically significant improvement between pre-test and post-test PYDSS scores. Further, while an ANCOVA analysis indicates no significant difference in overall change between the control and intervention group, the difference between the two groups were significant in four of the six categories of the PYDSS when controlling for pre-test scores. The results indicate that the PYDSS can measure PYD programs and components of PYD theory globally and change occurred in both programs.

Keywords: Positive Youth Development, Thailand, program evaluation, intervention; sustainability; scale

INTRODUCTION

Positive Youth Development (PYD) grew out of prevention programs targeting

risky behaviors of youth in the United States (Bumarger & Greenberg, 2002; Lerner,

2000; Lorion & Sokoloff, 2003). PYD programs include intentional stakeholder (e.g.,

peers, adults, communities, schools, and organizations) efforts to provide opportunities

for youth to increase their skills, abilities, and interests in positive activities to become

contributing members of society (Catalano et al., 2004). Specifically, PYD programs treat

youth as resources to be developed rather than problems to be managed in an

environment that promotes positive outcomes (Sieng et al., In Review). We suggest that

PYD programs can promote sustainable futures for young individuals, while current

generations rely on youth to be future active and contributing global citizens. PYD

programs have been successful primarily in the US, and there is a need for application in

different countries across culture, programs, and geographical space.

In a recent review paper, Shek & Lu (2011) concluded that youth development

programs in Asia were far less in number than those in the US. The researchers

highlighted the Positive Adolescent Training through Holistic Social Programmes

(P.A.T.H.S.) in Hong Kong as one of the larger PYD studies that are based on the 15

positive youth development constructs identified by Catalano et al. (2004). PYD

programs in Asia, however, are not assessed with an established universal evaluation

tool, but with evaluation tools specific to each program (e.g., the 90-item Chinese

Positive Youth Development Scale) (CPYDS) (Shek et al., 2007). The lack of a universal

PYD assessment tool is a challenge as researchers and practitioners are unable to

compare baseline effectiveness across multiple PYD programs globally. Sieng et al. (In

Review) addressed this issue by developing the Positive Youth Development

Sustainability Scale (PYDSS), intended to be a globally applicable PYD evaluation tool

based on tools currently used in the US such as the Positive Youth Development

Inventory (PYDI) (Arnold & Meinhold, 2008). The PYDSS was developed to measure 5

C's, the 6th C-contribution, and sustainability metrics including happiness.

Within Thailand, there have been some studies conducted with Thai youth that

focus on prevention intervention programs rather than strictly PYD intervention

programs. For instance, studies exist on youth prevention programs around drugs (Seal,

2006) and sex (Sherman, S.G. et al, 2009; Siriarunart, S., 2010; Sommart, J & Sota, C.,

2013;). A lack of holistic PYD program analyses is an issue, as alternative programs

typically focus on youth as problems to be managed, rather than future contributing

members of society. In this paper, we address an existing research gap by applying the

PYDSS (Sieng et al., In Review) to two programs in Thailand. The research conducted

by Sieng et al. (In Review) addresses limitations present in both the empirical and applied

realms of PYD. Although the PYD framework has become more popular among

academics and practitioners, there is some disagreement on indicators of positive

development that spans across research, policy, and practice on a global scale (Moore et

al. 2004). Earlier work (Lerner et al. 2005; Phelps et al. 2009) has already established the

existence of a valid measure of PYD across early adolescence in developed countries like

the US. The work conducted by Sieng and colleagues (In Review) extends the validity

and utility of the measure to adolescents in developing countries. Researchers examining

application in a rural or urban setting globally now have a valid measure to assess

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whether youth are developing positively. This work also affords researchers the ability to consider the relationships among PYD and sustainability measures like happiness and how they relate to one another. The conceptual framework for these PYD programs aligns with the 5 C's model developed by Lerner et al. (2000) and is evaluated with a tool that also incorporates this framework. We present the results of a large, randomized, controlled trial of two PYD programs in Thailand, conducted by independent evaluators.

Finally, we discuss the implications of the PYDSS as a globally applicable assessment tool and the potential outcomes of PYD programs on youth.

METHODS

Setting and Participants

Participants in the study were 9th- to 12th-grade students from 15 public (government) secondary schools in five provinces in the rural areas of Thailand (Figure 3). The student's parents, peers, mentors, and teachers were also included in the study known colloquially categorically as their "support network." Four of the provinces were located in the Northeast region (considered the poorest region of Thailand) and the fifth province located in the central region. All students at all sites were considered ethnically Thai and there were no other minority groups represented.

Figure 3

Map of Thailand (Areas highlighted are provinces where data was collected)

Participant selection and inclusion criteria followed efficacy trial protocols, with minor adaptations. Individuals, not schools, were the unit of analysis. Students were

selected from each school's pool of those who participated in the voluntary intervention program and those who participated in the required control program, in addition to their respective support networks. The student's assent and a signed parental and support network consent were required.

Participants who completed the questionnaire at baseline (pre-test) and at the end of the program (post-test) were given surveys based on one of two groups: the experimental/intervention group, consisting of students who participated in the voluntary Brighter Thailand Foundation (BTF) camp, or the control group, consisting of students who were required to participate in the Scouts Camp. A summary of each program can be found in Table 11. A total of 779 surveys were collected in the PYDSS study for 2015-2016. These surveys represented 429 students and 350 support network individuals were assigned to the intervention group (n = 531) or the control group (n =248).

Scouts Control

All Thai youth are required to participate in Scouts as part of the public school curriculum. The fundamental principles include: 1) adherence to spiritual values, 2) loyalty to country, 3) promotion of world brotherhood, 4) helping others, 5) the practice of the Scout oaths and laws, and 6) "voluntary" participation in community services and various program activities. Thai Scouts come from all regions of the country and participate in a variety of training activities annually during the school year (typically in two to three day overnight camps). The overnight camp covers topics such as national development and public services which include cleaning up public areas, first aid, traffic control, disaster-relief, summer public services and particularly the environmental and

natural conservation. Activities are led by on-site staff and are administered in a top-down hierarchical fashion that is consistent with the cultural norms of Thai society. During the Thai school calendar year of 2015-2016, every school participated in the annual scouts camp in their respective provinces but data was only collected from five schools across Nongbua Lamphu province in rural Thailand, with 190 control student participants and 58 support network individuals.

BTF Intervention

The BTF program consists of a six-day overnight camp during the school year, taken as a voluntary activity to learn about leadership and becoming a global citizen. Additional staff is recruited from local universities in Thailand and collaborate with active Peace Corps Volunteers and their counterparts, who are often government officials in schools or local municipalities. The staff is selected given their familiarity working with youth and abilities to create and sustain a positive, supportive environment. The curriculum consists of structured participatory activities and reflective discussion, focusing on five core values in a train-the-trainer format. The first three days are used to introduce students to the activities, games and discussions, where students establish a daily pattern of actively participating in new activities and engaging in thoughtful conversations about life-skills applications, while the BTF staff set the tone and precedence for the students to follow.

All activities require full participation by students and staff and some aspects of cultural norms are modified creating a unique environment many rural students in Thailand have never been exposed to. On day four, the primary students arrive and

secondary students are now responsible for taking care of these students and teaching

them the activities that were taught to them by the staff in the first three days. Everyone

engages in full participation to ensure the environment is positive and working toward the

goals of developing relationships and meaning. Each student is responsible for a task

related to an activity including introducing the next activity, explaining the activity, and

then leading the discussion on how the activity relates to the core values and application

to their lives back home. Each activity follows a basic structure where lesson components

are timed, the daily concept is outlined, students participate in specific skill-building

activities, and then follow a reflect/connect/apply (RCA) discussion afterward. During

the Thai school calendar year of 2015-2016, a total of eight BTF camps (Chaiyaphum

(x2), Korat (x2), Loei, Nakhon Pratom, and Nongbua Lamphu (x2)) took place consisting

of 239 student participants and 292 support network individuals.

Table 11

Summary of differences between BTF Camp and Scout Camp

	BTF	Scouts*
Duration	6 Days	3 Days
Location	National Park, Community Center, Temple, or Military Training Camp	National Park or Military Training Camp
Staff	Local BTF staff, local university students, Peace Corps Volunteers (PCVs), and Counterparts of PCVs	Military Staff and Teachers
Staff to Student Ratio	1:3	1:40
Contents	Leadership, ethics, community service, self-confidence, and team-work	Community service, first aid, traffic control, disaster-relief, public services, and environmental and natural conservation
Method of Teaching	Train-the-trainer working outside cultural norms.	Top-down hierarchal structure within cultural norms.

| Participation | Voluntary. Full participation among staff and students. | Required. Full participation of students supervised by staff. |

*There will be some variation between Scout Camps pending budget and resource constraints, but this is a general template.

Measures

The measurement tool used in this study was the Positive Youth Development Sustainability Scale (PYDSS) developed by Sieng et al. (In Review). The PYDSS is a collection of items designed to measure PYD metrics before and after intervention of PYD programs and follows the 5 *C's* model plus the 6th *C* of youth development, by measuring the constructs of 1) Confidence; 2) Competence; 3) Character; 4) Caring; and 5) Connection and 6) Contribution (Lerner et al, 2003). The PYDSS includes a 5-point Likert-scale: (1) Strongly disagree; (2) Disagree; (3) Neutral/Unsure, (4) Agree; and (5) Strongly Agree. The categories for this scale include six constructs: Competence, Character, Confidence/Happiness, Connection, and Caring. The PYDSS consists of 32 questions and an additional six program specific questions. To include a resilience component, members of the students' support networks (e.g., parents, mentors, teachers, etc.) also assessed and scored the students adding depth of more than one perspective. Table 12 summarizes the categories of the PYDSS.

Table 12

Categories of the PYDSS

Assets/Characteristic	Definition	Source
Competence	Includes academic, social, vocational, and health competence	Caplan et al. 1992; Weissberg, Caplan, and Sivo, 1989
Confidence/Happiness	Believing in one's self and ability	Fetterman, Kaftarian, and Wandersman, 1996
	As basic needs are met, long-term happiness can be considered and achieved by focusing on higher level needs (sustainability).	Cloutier et al., 2013; Zidansek, 2007
Character	Knowing what is right or wrong and how to do the right thing	Piaget, 1952, 1965; Kohlberg 1963, 1969, 1981; Hoffman, 1981
Connection	Working collaboratively with parents, peers, siblings, teachers, coaches, or other community members	Ainsworth et al. 1978; Bowlby 1973, 1979, 1982; Mahler, Pine, and Bergman 1975
Caring	A sense of compassion or social justice	Salovey and Mayer , 1990; Goleman, 1995
Contribution	Contributing positively to self, family, community, and, ultimately, civil society	Lerner, 2004; Lerner, Dowling, & Anderson, 2003; Lerner, 2005

Statistical Analysis

The statistical analysis for this study included both a paired *t*-test and an analysis of covariance (ANCOVA). Paired *t*-tests are a form of blocking, and have greater power than unpaired tests when the paired units are similar with respect to "noise factors" that are independent of membership in the two groups being compared (Rice, 2006). ANCOVA is a general linear model which blends ANOVA and regression and evaluates whether population means of a dependent variable (DV) are equal across levels of a categorical independent variable (IV), while statistically controlling for the effects of other continuous variables that are not of primary interest, known as covariates (CV). ANCOVA decomposes the variance in the DV into variance explained by the CV(s),

variance explained by the categorical IV, and residual variance (Keppel, 1991). All

analyses were conducted using SPSS Software.

Paired t-test

A paired *t*-test was first used to evaluate the change in the pre- and post- PYDSS

scores. The null hypothesis tested was no change after the PYD program ($\mu_d = 0$) and the

alternative hypothesis was a positive change after participating in the PYD program ($\mu_d >$

0). For this analysis, the significance level was set to $0.05/7=0.007$ to account for the

multiple comparisons across the PYDSS constructs and the total score with a Bonferroni

correction. The Bonferroni correction compensates for the likelihood of incorrectly

rejecting the null hypothesis by testing each individual hypothesis at a significance level

of α/m, where α is the desired overall alpha level and m is the number of hypotheses

(Miller, 1966). Using data collected from both the control and intervention groups, we

conducted a matched-pairs *t*-test between the pre- and post- scores. Given the large

sample size, the central limit theorem (CLT) was used establishing that, when

independent random variables are added, their sum tends toward a normal distribution

even if the original variables themselves are not normally distributed (Rice, 1996). The

paired t-test was conducted for the overall scores and for each category of the PYDSS,

and Cohen's d Effect Size was evaluated.

ANCOVA

Pre- and post-test outcome changes were then compared between all experimental

and control group participants. An initial ANOVA was run to determine if there is a

statistical difference between the control and intervention groups using the pre-test data.

The assumption of homogeneity of regression was tested using analysis of covariance

(ANCOVA) while controlling for the pretest score. These models estimated the effects of intervention (assignment to intervention vs. control group). Program effects were assessed by comparing pre- and post-intervention.

RESULTS

A total of 779 participants including students and support networks completed the PYDSS survey before the youth program and after the youth program.

Paired *t*-test

A paired sample *t*-test was conducted to evaluate whether a statistically significant difference existed between the mean scores of the PYDSS before and after the PYD programs (n=779). Assumption testing indicated no gross violation of the assumptions. A Bonferroni correction was used to account for the multiple comparisons for each category. The significance level for each analysis was 0.007. The results of the paired sample *t* test were significant, $t(778) = 34.27$, $p < .001$, $\eta2 = .018$, indicating that there is a significant increase in scores from the pre-test ($\bar{x} = 3.738$, SD = .557) to the post-test ($\bar{x} = 4.344$, SD = .407) for the overall score and each of the six constructs. The effect size was large (1.23) based on Cohen's conventions (1988). The mean increase was .606, with the 95% confidence interval from the difference between the means of .571 to .641. We rejected the null hypothesis that stated there was no change between pre-test and post-test scores. The results for the other categories of the PYDSS can be found in Table 13.

Table 13

PYDSS Pre-test/Post-test Paired t-test Results

	Mean	*Std. Deviation*	*Std. Error Mean*	*95 % Confidence Interval of Difference*		*t*	*df*	*Sig (2-tailed)*	*Cohen's d (Effect Size)*
				Lower	*Upper*				
Overall	.606	.494	.018	.571	.641	34.265	778	.000	1.23
Competence	.686	.779	.028	.631	.741	24.586	778	.000	1.05
Confidence/Happiness	.628	.582	.021	.597	.668	30.098	778	.000	0.88
Caring	.426	.685	.025	.378	.474	17.350	778	.000	1.07
Character	.618	.589	.021	.576	.659	29.290	778	.000	0.62
Connection	.618	.575	.021	.577	.658	29.985	778	.000	1.08
Contribution	.661	.570	.020	.621	.701	32.386	778	.000	1.16

ANCOVA

For the initial ANOVA test on the control and intervention group, we did not find a statistically significant difference in the pre-test scores for the control and intervention groups on the pre-test (p=0.252). The second assumption of homogeneity of regression was also met (p=0.660). The results of the ANCOVA are shown in Table 14. The control versus intervention group did not have a statistically significant difference when controlling for the pre-test scores (p=0.064). A Bonferroni correction was also used to account for the multiple comparisons for each category of the PYDSS. For the PYDSS categories, with exception to competence and confidence/happiness, four (caring, character, connection, and contribution) had statistically significant relationships (p<.007) with respect to the Bonferroni correction when controlling for the pre-test scores. Findings failed to support the hypothesis of overall positive change in the intervention group (BTF) versus the control group (Scouts) analyzing overall score.

Table 14

PYDSS ANCOVA Results (Intervention vs. Control) controlling for pre-test scores

	Df	Mean Square	F	Sig	Partial Eta Squared
Overall	1	.421	3.453	.064	.004
Competence	1	.178	.595	.441	.001
Confidence/Happiness	1	.949	5.218	.023	.007
Caring	1	9.517	39.940	.000	.049
Character	1	3.825	19.464	.000	.024
Connection	1	1.332	7.408	.007	.009
Contribution	1	6.150	31.622	.000	.039

Table 15 displays the effect of additional covariates beyond the intervention and control groups. The ANCOVA results show males and females score significantly different on the post-test as well as between the support networks and students. There is a significant interaction between gender and student/support network (males and females of different groups score significantly different) as well as between the intervention/control group and the student/support networks. We do not see a significant interaction between Intervention/control groups and gender so there was no evidence that being in the intervention or control group affected males or females differently.

Table 15

PYDSS ANCOVA Results Other Variables controlling for pre-test scores

	Df	Mean Square	F	Sig	Partial Eta Squared
Student or Support	1	7.027	63.412	.000	.076
Male or Female	1	.995	8.982	.003	.012
(Intervention or Control)*(Student or Support)	1	1.066	9.623	.002	.012
(Intervention or Control)*(Male or Female)	1	.007	.062	.804	.000
(Student or Support)*(Male or Female)	1	.946	8.541	.004	.001
(Intervention or Control)*(Student or Support)* (Male or Female)	1	.120	1.081	.299	.001

DISCUSSION

The purpose of this paper was to compare two PYD programs in rural Thailand using the PYDSS (Sieng et al., In Review). PYD programs continue to expand in developing countries and assessing program impacts with a universal evaluation tool would allow for baseline comparison across all PYD programs in different countries, cultures, and methodologies. Currently, some assessment tools are available for PYD programs such as the PYDI (Arnold & Meinhold, 2008) in countries like the US and the CYPDS (Shek et al., 2007) used in Hong Kong. However, these tools lack sustainability metrics like happiness, which play a crucial role in sustainable development.

Additionally, PYD programs have not been extensively studied and evaluated in Southeast Asia as compared to developed countries like the United States. To address these concerns, we conducted a quasi-experimental design of two youth development

programs that are made accessible to rural populations in Thailand. The control group participated in only the government mandatory Scouts camp and the intervention group participated in the voluntary leadership camp through the Brighter Thailand Foundation. The PYDSS was used to evaluate both PYD programs was based on Lerner's PYD theory while incorporating sustainability metrics like resilience and happiness.

Overall, findings from the PYDSS Scale provide evidence of change between pre-test and post-test scores for both PYD programs through a paired *t*-test analysis, indicating that both the BTF and Scouts program result in a significant improvement in PYD. Specifically, both programs are effective overall in producing positive change in students. The ANCOVA analysis failed to support the claim that the intervention group (BTF) had a significantly larger impact than the control group (Scouts). When considering the six different categories of the PYDSS, however, positive change was statistically significantly higher for the intervention group in four of the six categories (caring, character, connection, and contribution), while controlling for pre-test scores. The results could be attributed to the differences in methodologies and specific focus of each of the PYD programs. Also, various components of the setting and design might not be able capture nuances outside of the scope of the PYDSS. The analysis also shows significant differences in post-test scores between support networks and students as well as between males and females. The results highlight the importance of including support networks in this study and future studies. As more scores from multiple individuals/perspectives are included, the "true score" will begin to normalize. It is possible, given that students self-report that responses are inflated or deflated as

compared to the observations of their support networks. The differences in may also be consistent with cultural norms, but there could be additional insights if sexual orientation is also considered as this could be another factor that can help explain the influence on post-test scores (Marshal et al., 2008). In a rural Thai setting, individual opinions, especially in the form of a survey, are not that common as many decisions are made either for them from an authority figure (i.e. parents, teachers, elders) or done in a collective manner (i.e. peer influence).

The four categories of the PYDSS that showed positive change on post-test scores between the intervention group and control group were caring, connection, character, and contribution. Based on the ANCOVA analysis, these four categories are statistically significant when controlling for pre-test scores. This can be attributed to the design of the program where BTF focuses on building relationships with younger peers and promoting global citizenship. While in the Scouts camp, the focus is on developing survival skills and discipline that heavily focuses on the PYDSS category of competency. The ANCOVA results also showed significant differences in the relationship between the support networks and intervention/control groups as well as the support networks and male/female groups. This highlights the importance of capturing the perspectives of support networks and having them integrated in the program evaluation process.

In the category of *caring*, the following statements on the PYDSS were scored and assessed: 1) When others need help, I help them, 2) It is easy for me to know how others feel, 3) I try to encourage others when they are not as good at something as me, 4) I can be counted on to help if someone needs me, and 5) I care about the feelings of my

friends. The common theme among these statements is the idea of connectedness across various social domains such as families, schools, and communities. The state of belonging works in a reciprocal fashion where connectedness involves both caring about the social environment and feeling cared for themselves (Guerra & Bradshaw, 2008). The category of *connection* focused on the following statements of the PYDSS: 1) I have people in my life I look up to and admire, 2) I have many different types of friends, 3) My friends care about me, 4) I feel connected to my friends, 5) I feel connected to my teachers. Connection has overlapping themes with caring. According to Brandtstädter (2006), "when developmental regulations are mutually beneficial (to both individual and context), they may be termed *adaptive developmental regulations*." These regulations align with the individual (physiology, mental functioning, and behavior) and at levels associated with their ecology (i.e. peer and family relations, connections to schools, and to community institutions) (Gestsdottir & Lerner, 2007).

Character in the PYDSS was measured with the following statements: 1) I like to learn new things, 2) It is important for me to do the right thing, and 3) If I promise to do something I can be counted on to do it. This category focuses on the characteristic of building an ethical and moral compass. One study conducted by Ebstyne King & Furrow (2004), found that youth active in religious activities had higher levels of social capital. However, this sample was conducted in the US, so global application has some limitations. Lastly, *contribution*, the 6th *C* of Lerner et al.'s (2005) model was assessed in the PYDSS with the following statements: 1) I take an active role in my community, 2) I am someone who gives to benefit others, 3) I like to work with others to solve problems,

4) I have things I can offer to others, and 5) It is important for me to try and make a difference in the world. In order for youth to be considered thriving is a developmental concept that determines a positive change process linking youth transforming to adulthood status enabling the surrounding community to be populated with healthy individuals trained to interactively serve self and civil society (Lerner et al., 2003)

The application of the PYDSS was able to capture change in students participating in PYD programs as evident with the paired t-test analysis, but failed to produce exact results in the ANCOVA analysis when looking at overall change across all six categories. The PYDSS can potentially highlight the differences in each program, not to indicate that one is better than the other, but that both PYD programs have strengths and weaknesses in regards to the six categories of the scale. The results could inform programing if a certain focus of one or more of the categories of the PYDSS is the main objective as an outcome for the program. For instance, if a PYD program is focusing on the outcome of contribution as the end goal of having youth becoming active contributing members of society, the activities and curriculum should have recurring themes focused on enhancing contribution (i.e. contribution to community). Activities could include skits, role-play, and/or team building activities that focus on helping a community. Further, the theme could be reinforced with active discussions after the activities on the importance of community and how each participant will engage within a given community. The efforts would then align with the PYDSS evaluation tool on the category of contribution and should be able to capture change before and after programing.

The PYDSS was developed to assess both sustainability and happiness implications of PYD programs as an important research gap. Moving toward sustainability and happiness first requires youth to have their basic needs met in an environment that reinforces positive behavior. As basic needs are met, long-term happiness can be considered and achieved by focusing on higher level needs (sustainability). There is strong evidence that sustainable development enhances happiness and both have a reinforcing relationship (Cloutier et al., 2013; Zidansek, 2007). Further, higher levels of happiness encourage youth to explore the world and to challenge themselves to develop (Park, 2004). As these youth develop, they must be in a positive state so that they can be productive members of society creating a sustainable impact on the community.

Our methods have their own limitations that require further investigation. First, although our results suggest that there is overall change in the paired *t*-test, we cannot confidently claim that the intervention group had a significantly greater change overall compared to the control group. It is possible that the method of data collection might not be appropriate for rural populations and should also consider a culturally appropriate qualitative or mixed methods approach. For instance, illiteracy or low levels of reading proficiency, and a lack of interest may have prevented some students' improvement and encouraged completing the survey with a test taking mentality to score the highest possible number. This issue could potentially be caused by survey or cultural bias as in the study conducted by Bédard et al. (2014). Further, students who have exposed themselves to multiple types of PYD programs can easily compare impacts from program

to program, while those students who have limited exposure can only compare relative to their experiences. This could be the case for the group of students who voluntarily participated in the BTF camp that also were required to participate in Scouts camp in their respective year. The students who have exposure to both camps might have a unique perspective compared to those students who only did the required Scouts camp. Lastly, as our study is limited as a cross-sectional analysis, future analyses are needed over longer periods of time to see if there are other factors that contribute to students' development outside of PYD programs. Future studies should incorporate a mixed methods approach that compares control and intervention groups in addition to surveys such as interviews, focus groups, and activity analysis using the PYDSS metrics as an evaluation standard.

While our research is limited by our sample, measurement model, and methodology, the support we have provided for the evaluation of two PYD programs in Thailand shows that one can evaluate programs using the PYDSS to identify positive change before and after youth development programs and specifically within the six categories of the scale. Future research, therefore, should continue to track youth and their support networks using universal evaluation tools such as the PYDSS over long periods of time and with different PYD programs within the country to determine where the greatest impact is in the categories of the PYDSS. Essentially, longitudinal studies and universal tools like the PYDSS can capture sustainability of the programs impact on youth participants and their happiness after the PYD programs. The overall goal of PYD program evaluation is to determine change before and after the program intervention and the PYDSS provides a tool that allows these programs to capture this and provide

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justification to expand programming and opportunities for youth in their respective

communities.

REFERENCES

Ainsworth, M. D. S., Blehar, M. C., & Waters, E. (1978). *Patterns of attachment: A psychological study of the strange situation*.

Arnold, M. E., & Meinhold, J. L. The Positive Youth Development Inventory (2008).

Bédard, K., Bouffard, T., & Pansu, P. (2014). The risks for adolescents of negatively biased self-evaluations of social competence: The mediating role of social support. *Journal of adolescence*, *37*(6), 787-798.

Bowlby, J. (1973). *Attachment and loss, vol. II: Separation*. Basic Books.

Bowlby, J. (1979). On knowing what you are not supposed to know and feeling what you are not supposed to feel. *The Canadian Journal of Psychiatry/La Revue canadienne de psychiatrie*.

Bowlby, J. (1982). Attachment and loss: retrospect and prospect. *American journal of Orthopsychiatry*, *52*(4), 664.

Brandtstädter, J. (2006). Action perspectives on human development. In W. Damon (Series Ed.) & R. M. Lerner (Ed.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 516 –568). Hoboken, NJ: Wiley.

Bumbarger, B., & Greenberg, M. T. (2002). Next steps in advancing research on positive youth development.

Caplan, M., Weissberg, R. P., Grober, J. S., Sivo, P. J., Grady, K., & Jacoby, C. (1992). Social competence promotion with inner-city and suburban young adolescents: effects on social adjustment and alcohol use. *Journal of consulting and clinical psychology*, *60*(1), 56.

Catalano, R. F., Berglund, M. L., Ryan, J. A., Lonczak, H. S., & Hawkins, J. D. (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.

Catalano, R. F., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of School Health*, *74*(7), 252-261.

Cloutier, S., Larson, L., & Jambeck, J. (2014). Are sustainable cities "happy" cities? Associations between sustainable development and human well-being in urban areas of the United States. *Environment, development and sustainability*, *16*(3), 633-647.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences Lawrence Earlbaum Associates. *Hillsdale, NJ*, 20-26.

Ebstyne King, P., & Furrow, J. L. (2008, August). Religion as a resource for positive youth development: religion, social capital, and moral outcomes. In *Meeting of the Society for Research in Child Development, Apr, 2001, Minneapolis, MN, US; A previous version of this article was presented at the aforementioned conference.* (No. 1, p. 34). Educational Publishing Foundation.

Fetterman, D. M., Kaftarian, S. J., & Wandersman, A. (1996). *Empowerment evaluation: Knowledge and tools for self-assessment and accountability*. Sage.

Giordani, B., Hodges, E. K., Guire, K. E., Ruzicka, D. L., Dillon, J. E., Weatherly, R. A., ... & Chervin, R. D. (2012). Changes in neuropsychological and behavioral functioning in children with and without obstructive sleep apnea following Tonsillectomy. *Journal of the International Neuropsychological Society*, *18*(02), 212-222.

Gestsdóttir, S., & Lerner, R. M. (2007). Intentional self-regulation and positive youth development in early adolescence: findings from the 4-h study of positive youth development. *Developmental psychology*, *43*(2), 508.

Goleman, D. P. (1995). Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement.

Guerra, N. G., & Bradshaw, C. P. (2008). Linking the prevention of problem behaviors and positive youth development: Core competencies for positive youth development and risk prevention. *New directions for child and adolescent development*, *2008*(122), 1-17.

Hoffman, L. (1981). *Foundations of family therapy: A conceptual framework for systems change*. Basic Books.

Keppel, G. (1991). *Design and analysis: A researcher's handbook* (3rd ed.). Englewood Cliffs: Prentice-Hall, Inc

Kohlberg, L. (1963). The development of children's orientations toward a moral order. *Human Development*, *6*(1-2), 11-33.

Kohlberg, L. (1969). *Stage and sequence: The cognitive-developmental approach to socialization*.

Kohlberg, L. (1981). *The Philosophy of Moral Development Moral Stages and the Idea of Justice /Lawrence Kohlberg*. Harper & Row.

Lerner, R. M. (2000). Developing civil society through the promotion of positive youth development. Journal of Developmental and Behavioral Pediatrics, Vol 21(1), Feb 2000, 48-49.

Lerner, R. M., Dowling, E. M., & Anderson, P. M. (2003). Positive youth development: Thriving as the basis of personhood and civil society. *Applied Developmental Science*, *7*(3), 172-180.

Lerner, R. M. (2004). *Liberty: Thriving and civic engagement among America's youth*. Sage Publications.

Lerner, R. M. (2005, September). Promoting positive youth development: Theoretical and empirical bases. *In White paper prepared for the workshop on the science of adolescent health and development, national research council/institute of medicine. Washington, DC: National Academies of Science*.

Lorion, R. P., & Sokoloff, H. (2003). Building assets in real-world communities. In *Developmental assets and asset-building communities* (pp. 121-156). Springer US.

Mahler, M. S., Pine, F., & Bergman, A. (1975). The psychological birth of the infant. *New York: Basic*.

Marshal, M. P., Friedman, M. S., Stall, R., King, K. M., Miles, J., Gold, M. A., Buksetin, O.G., Morse, J. Q. (2008). Sexual orientation and adolescent substance use: a meta-analysis and methodological review. *Addiction*, *103*(4), 546-556.

Miller, R. G. (1966). *Simultaneous Statistical Inference*. Springer.

Piaget, J. (1952). *The origins of intelligence in children* (Vol. 8, No. 5, pp. 18-1952). New York: International Universities Press.

Piaget, J. (1965). The stages of the intellectual development of the child. *Educational psychology in context: Readings for future teachers*, 98-106.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, cognition and personality*, *9*(3), 185-211.

Seal, Nuananong. 2006. "Preventing Tobacco and Drug Use among Thai High School Students through Life Skills Training." *Nursing and Health Sciences* 8(3): 164–68.

Sherman, S. G., Sutcliffe, C., Srirojn, B., Latkin, C. A., Aramratanna, A., & Celentano, D. D. (2009). Evaluation of a peer network intervention trial among young methamphetamine users in Chiang Mai, Thailand. *Social Science & Medicine*, *68*(1), 69-79.

Siriarunrat, Supit, Punyarat Lapvongwatana, Arpaporn Powwattana, and Prasit Leerapan. 2010. "Development of a Model for Parent-Adolescent Daughter Communication about Sexuality." *Southeast Asian Journal of Tropical Medicine and Public Health* 41(4): 961–72.

Shek, D. T., Siu, A. M., & Lee, T. Y. (2007). The Chinese positive youth development scale: A validation study. *Research on Social Work Practice*, *17*(3), 380-391.

Shek, D. T., & Yu, L. (2011). A review of validated youth prevention and positive youth development programs in Asia. *International Journal of Adolescent Medicine and Health*, *23*(4), 317-324.

Sieng, M., Cloutier, S., Irimata, K. (2017). *Positive Youth Development Sustainability Scale (PYDSS): The development of a universal tool*. Manuscript submitted for publication.

Sommart, J., & Sota, C. (2013). The effectiveness of a school-based sexual health education program for junior high school students in Khon Kaen, Thailand. *Procedia-Social and Behavioral Sciences*, *91*, 208-214.

Rice, John (1995), *Mathematical Statistics and Data Analysis* (Second ed.), Duxbury Press, ISBN 0-534-20934-3

Rice, John (2006), *Mathematical Statistics and Data Analysis* (Third Edition), Duxbury Advanced.

Weissberg, R.; Caplan, M.; Sivo, P. (1989). A new conceptual framework for establishing school-based social competence promotion programs. Primary prevention and promotion in the schools., (pp. 255-296). Thousand Oaks, CA, US: Sage Publications, Inc, 452 pp.

Zidanšek, A. (2007). Sustainable development and happiness in nations. *Energy*, *32*(6), 891-897.

MANUSCRIPT 3

APPLICATION OF THE POSITIVE YOUTH DEVELOPMENT SUSTAINABILITY

SCALE (PYDSS) AS A QUALITATIVE CODING GUIDE IN RURAL THAILAND:

AN ANALYSIS OF TWO YOUTH PROGRAMS

This section has been co-authored with Scott Cloutier, Tiffany Le, and Maria Gutierrez

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ABSTRACT

Two positive youth development (PYD) programs in Thailand were assessed using qualitative methods with the Brighter Thailand Foundation (BTF) Camp (intervention) and Thai Scouts Camp (control). The objective was to use the PYDSS categories as a coding guide for qualitative analysis in each program. Focus groups took place in two provinces in rural Thailand, separated into groups based on their participation in the required Scouts Camp or the voluntary BTF Camp. Student support networks were also interviewed as part of this study. Thematic analysis of transcribed audio recordings was undertaken and results were noted for future recommendations. A total of 150 students participated in fourteen focus groups and a total of 17 of the support network participated in individual interviews. Students in the control program meet a few criteria of the PYDSS categories in the coding (competence, connection, caring), while the intervention group meet all the areas. Both groups showed attitude and behavior changes in their responses, but active participation in the focus groups differed among the groups, 100%

(intervention) and 33% (control). This formative qualitative evaluation provides evidence that the PYDSS categories can be used as a guide for coding PYD programs that can help produce themes.

INTRODUCTION

Positive Youth Development (PYD) started from prevention programs aimed at risky behaviors of youth in the United States (Bumarger & Greenberg, 2002; Lerner, 2000; Lorion & Sokoloff, 2003). PYD programs include intentional stakeholder such as peers, adults, communities, schools, and organizations, with efforts to provide opportunities for youth to increase their skills, abilities, and interests in positive activities to become active members of society (Catalano et al., 2004). Specifically, PYD programs approach youth as resources to be developed rather than problems to be managed in a setting that promotes positive outcomes (Sieng et al., In Review). PYD programs can promote sustainable futures for young individuals, while current generations rely on youth to be future active and contributing global citizens. PYD programs have been successful primarily in the US, and there is a need for application in different countries across culture, programs, and geographical space.

A recent review paper concluded that youth development programs in Asia were far less in number than those in the US (Shek & Lu, 2011). Shek & Lu (2011) highlighted the Positive Adolescent Training through Holistic Social Programmes (P.A.T.H.S.) in Hong Kong as one of the larger PYD studies that are based on the 15 positive youth

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development constructs identified by Catalano et al. (2004). PYD programs in Asia, however, are not assessed with an established universal evaluation tool, but with evaluation tools specific to each program (e.g., the 90-item Chinese Positive Youth Development Scale) (CPYDS) (Shek et al., 2007). The lack of a universal PYD assessment tool is a challenge as researchers and practitioners are unable to compare baseline effectiveness across multiple PYD programs globally. Sieng et al. (In Review) addressed this issue by developing the Positive Youth Development Sustainability Scale (PYDSS), intended to be a globally applicable PYD evaluation tool based on tools currently used in the US such as the Positive Youth Development Inventory (PYDI) (Arnold & Meinhold, 2008). The PYDSS was developed to measure 5 C's (competence, confidence, character, caring, and connection), the 6th C-contribution, and sustainability metrics including happiness.

Many programs focus primarily on quantitative analysis using their own respective scales and should consider a mixed methods approach or an approach that is most cultural appropriate for the given demographic. In collective cultures that have a rich oral traditions, data collection methods should be cultural sensitive and mirror how that culture operates.

Within Thailand, there have been some studies conducted with Thai youth that focus on prevention intervention programs rather than strictly PYD intervention programs. For instance, studies exist on youth prevention programs around drugs (Seal, 2006) and sex (Sherman, S.G. et al, 2009; Siriarunart, S., 2010; Sommart, J & Sota, C., 2013;). A lack of holistic PYD program analyses is an issue, as alternative programs

typically focus on youth as problems to be managed, rather than future contributing members of society. In this paper, we address an existing research gap by applying the PYDSS (Sieng et al., In Review) to two programs in Thailand using a qualitative approach both in the form of focus groups and interviews. The research conducted by Sieng et al. (In Review) addresses limitations present in both the empirical and applied realms of PYD. Although the PYD framework has become more popular among academics and practitioners, there is some disagreement on indicators of positive development that spans across research, policy, and practice on a global scale (Moore et al. 2004). Earlier work (Lerner et al. 2005; Phelps et al. 2009) has already established the existence of a valid measure of PYD across early adolescence in developed countries like the US. The work conducted by Sieng and colleagues (In Review) extends the validity and utility of the measure to adolescents in developing countries. Researchers examining application in a rural or urban setting globally now have a valid measure to assess whether youth are developing positively. This work also affords researchers the ability to consider the relationships among PYD and sustainability measures like happiness and how they relate to one another. The conceptual framework for these PYD programs aligns with the 5 C's model developed by Lerner et al. (2000) and is evaluated with a tool that also incorporates this framework.

We present the results of focus groups and interviews of two PYD programs in Thailand, conducted by independent evaluators and how the PYDSS can be used as a guide for evaluation in qualitative analysis.

METHODS

The qualitative analysis follows the framework by Wolcott (1994b) discussing the importance of forming a description from the data and relating it back to the literature and cultural themes. The responses in the focus groups and interviews were translated in English and transcribed on a word document for analysis. Each of the two independent (TL & MG) researchers received a copy of the transcriptions and coded the responses separately using an initial coding template. The coding was cross-checked by an expert in the field and discrepancies were discussed as well as any additional codes they thought should be added with the two researchers. The data was coded and analyzed again with the new coding structure by two independent researchers (TL & MG) who did not participate in the data collection process, and the final coding was further cross-checked by an expert in the field until consensus was achieved.

The coding system was based on the categories of the PYDSS and the researchers determined if the responses meet the criteria for each category and also determined if any additional codes could be identified outside of the PYDSS categories. If the responses in the transcriptions aligned with any of the categories of the PYDSS, then the independent researchers would mark which respective category was met. Multiple categories of the PYDSS could be applied to one response. After several rounds of coding discussion, the researchers analyzed the data and determined if there were any themes or broad categories based on how the responses were coded. Any discrepancies were discussed with the researchers and a consensus was determined before moving forward. The analytic approach was informed by thematic analysis (Guest, 2012).

In addition to responses being recorded and transcribed, the number of active participants in the focus groups was noted as well. "Active participation "was determined by students responding to at least one question during the entire duration of the focus group to provide cultural context of the setting and responses.

Coding

The Positive Youth Development Sustainability Scale (PYDSS) developed by Sieng et al. (In Review) was used as an initial guide for coding with the categories of the scale. Additional coding was based on the independent researcher's feedback analyzing the transcripts. In this study, the additional codes included "attitude change" and "behavior change." The PYDSS is a collection of items designed to measure PYD metrics before and after intervention of PYD programs and follows the 5 *C's* model plus the 6th *C* of youth development, by measuring the constructs of 1) Confidence; 2) Competence; 3) Character; 4) Caring; and 5) Connection and 6) Contribution (Lerner et al, 2003). The categories for this scale include six constructs: Competence, Character, Confidence/Happiness, Connection, and Caring. Table 16 summarizes the categories of the PYDSS.

Table 16

Categories of the PYDSS

Assets/Characteristic	Definition	Source
Competence	Includes academic, social, vocational, and health competence	Caplan et al. 1992; Weissberg, Caplan, and Sivo, 1989
Confidence/Happiness	Believing in one's self and ability As basic needs are met, long-term happiness can be considered and achieved by focusing on higher level needs (sustainability).	Fetterman, Kaftarian, and Wandersman, 1996 Cloutier et al., 2013; Zidansek, 2007
Character	Knowing what is right or wrong and how to do the right thing	Piaget, 1952, 1965; Kohlberg 1963, 1969, 1981; Hoffman, 1981
Connection	Working collaboratively with parents, peers, siblings, teachers, coaches, or other community members	Ainsworth et al. 1978; Bowlby 1973, 1979, 1982; Mahler, Pine, and Bergman 1975
Caring	A sense of compassion or social justice	Salovey and Mayer , 1990; Goleman, 1995
Contribution	Contributing positively to self, family, community, and, ultimately, civil society	Lerner, 2004; Lerner, Dowling, & Anderson, 2003; Lerner, 2005

The semi-structured questions asked in the study for the intervention and control focus groups can be found in Table 17 and for the support network interviews in Table 18.

Table 17

Semi-structured Focus Group Questions

Question 1	What was your overall experience like in this program? Did you feel like you changed?
Question 2	What did you learn about competence in this program and did it change?
Question 3	What did you learn about confidence and did it change?
Question 4	What did you learn about connection and did it change?
Question 5	What did you learn about caring and did it change?
Question 6	What did you learn about character and did it change?
Question 7	What did you learn about happiness and did it change? What do you need in your life to be happy?
Question 8	What did you learn about contribution and did it change?
Question 9	If you had an opportunity to do this program again would you do it? Would you do Scouts again if it was optional [Intervention Only]?
Question 10	Any additional comments or final thoughts? Any questions?

Table 18

Semi-structured Interview Questions

Question 1	What was your overall experience like in the programs?
Question 2	Do you feel like the students changed? How many? By how much?
Question 3	What about in terms of competence?
Question 4	What about in terms of confidence?
Question 5	What about in terms of connection?
Question 6	What about in terms of caring?
Question 7	What about in terms of character?
Question 8	What about in terms of happiness?
Question 9	What about in terms of contribution?
Question 10	Any additional observations in terms of attitude change? Behavior change?
Question 11	What is the major difference between BTF Camps and Traditional Thai programs (i.e. Scouts Camp)?
Question 12	Any additional comments or final thoughts?

Setting and Participants

        Student participants of the focus group in the study were 9th- to 12th-grade students from 9 public (government) secondary schools in two provinces in the rural areas of Thailand (Figure 4). The student's parents, peers, mentors, and teachers were asked to participate in the study known colloquially as their "support network." Individual interviews were conducted with the support network individuals. Both of the provinces of the focus groups were located in the Northeast region (considered the poorest region of Thailand). All students at all sites were considered ethnically Thai and there were no other minority groups represented.

Figure 4

Map of Thailand (Areas highlighted are provinces where focus groups took place)

Students were selected from each school's pool of those who participated in the

voluntary intervention program and those who participated in the required control

program, in addition to their respective support networks. The student's assent and a signed parental and support network consent were required.

Focus groups were based on their participation in one of the youth intervention programs: the experimental/intervention group, consisting of students who participated in the voluntary Brighter Thailand Foundation (BTF) camp, or the control group, consisting of students who were required to participate in the Scouts Camp.

A total of 14 student focus groups (5 control and 9 intervention, n=150) and 17 support network individual interviews were conducted in PYDSS study for 2015-2016. Participants included in the interviews were those who staffed both of the PYD programs in this study. Program summaries can be found in Table 19.

Scouts Control

All Thai youth are required to participate in Scouts as part of the public school curriculum. The fundamental principles include: 1) adherence to spiritual values, 2) loyalty to country, 3) promotion of world brotherhood, 4) helping others, 5) the practice of the Scout oaths and laws, and 6) "voluntary" participation in community services and various program activities. Thai Scouts come from all regions of the country and participate in a variety of training activities annually during the school year (typically in two to three day overnight camps). The overnight camp covers topics such as national development and public services which include cleaning up public areas, first aid, traffic control, disaster-relief, summer public services and particularly the environmental and natural conservation. Activities are led by on-site staff and are administered in a top-down hierarchical fashion that is consistent with the cultural norms of Thai society.

During the Thai school calendar year of 2015-2016, every school participated in the annual Scouts camp in their respective provinces but focus groups were only collected from five schools across the Nongbua Lamphu province in rural Thailand.

BTF Intervention

The BTF program consists of a six-day overnight camp during the school year, taken as a voluntary activity to learn about leadership and becoming a global citizen. Additional staff is recruited from local universities in Thailand and collaborate with active Peace Corps Volunteers and their counterparts, who are often government officials in schools or local municipalities. The staff is selected given their familiarity working with youth and abilities to create and sustain a positive, supportive environment. The curriculum consists of structured participatory activities and reflective discussion, focusing on five core values in a train-the-trainer format. The first three days are used to introduce students to the activities, games and discussions, where students establish a daily pattern of actively participating in new activities and engaging in thoughtful conversations about life-skills applications, while the BTF staff set the tone and precedence for the students to follow.

All activities require full participation by students and staff and some aspects of cultural norms are modified creating a unique environment many rural students in Thailand have never been exposed to. On day four, the primary students arrive and secondary students are now responsible for taking care of these students and teaching them the activities that were taught to them by the staff in the first three days. Everyone engages in full participation to ensure the environment is positive and working toward the

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goals of developing relationships and meaning. Each student is responsible for a task

related to an activity including introducing the next activity, explaining the activity, and

then leading the discussion on how the activity relates to the core values and application

to their lives back home. Each activity follows a basic structure where lesson components

are timed, the daily concept is outlined, students participate in specific skill-building

activities, and then follow a reflect/connect/apply (RCA) discussion afterward. During

the Thai school calendar year of 2015-2016, a total of nine focus groups were conducted

in the provinces of Korat and Nongbua Lamphu.

Table 19

Summary of differences between BTF Camp and Scout Camp

	BTF	Scouts*
Duration	6 Days	3 Days
Location	National Park, Community Center, Temple, or Military Training Camp	National Park or Military Training Camp
Staff	Local BTF staff, local university students, Peace Corps Volunteers (PCVs), and Counterparts of PCVs	Military Staff and Teachers
Staff to Student Ratio	1:3	1:40
Contents	Leadership, ethics, community service, self-confidence, and team-work	Community service, first aid, traffic control, disaster-relief, public services, and environmental and natural conservation
Method of Teaching	Train-the-trainer working outside cultural norms.	Top-down hierarchal structure within cultural norms.
Participation	Voluntary. Full participation among staff and students.	Required. Full participation of students supervised by staff.

*There will be some variation between Scout Camps pending budget and resource constraints, but this is a general template.

Data Collection

In the first portion of the focus group, students filled out a brief questionnaire on some demographic questions about who they are and what PYD programs they have participated in (i.e. BTF or Scouts) and was reminded about the context of the study. Then a member of the research team, accompanied by a local government official helped guide a discussion on the students experience in their respective PYD programs. With the assistance of the local schools and government staff, the time allotted for the focus groups was open to however long the students wanted to discuss the topic. Questions were semi-structured and explored students feelings and involvement with the PYD programs and how those programs impacted them during and after the program. Each focus group discussion was audiotaped and later translated and transcribed for analysis.

Similarly, questions for the support network individuals were semi-structured and explored how each person felt about both the BTF camps and the Scouts camps in their respective sites. Each interview was audiotaped and later translated (if applicable) and transcribed for analysis.

RESULTS

Overview

Table 20 summarizes the characteristics of the 150 participants in each of the 14 focus groups in rural Thailand. Among participants who took part in the focus group, the rate of active participation was 33% (n = 22/66) in the control groups and 100% among the intervention groups (n=84/84). The average time for each focus group was 51.4 minutes for the intervention group and 35.2 minutes and for control group. With

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exception to one control group outlier (Nong Rua in Nongbua Lamphu), responses in the

control groups tended to be short in length and in some cases provided no response at all

to several questions.

Table 20

Focus Group Participants Summary

School (Province)	Control/Intervention	# of Participants	% of Active Participants	Actual Time of Focus Groups
Chumphuang Suksa (Korat)	Intervention	5 (2 male/3 female)	100%	54 min
Talad (Korat)	Intervention	5 (2 male/3 female)	100%	39 min
Pikutong (Korat)	Intervention	10 (4 male/6 female)	100%	35 min
Anuban Chumphuang Wittaya (Korat)	Intervention	18 (8 male/10 female)	100%	53 min
Talad (Nongbua Lamphu)	Intervention	6 (0 male/6 female)	100%	57 min
	Control	7 (3 male/4 female)	28.5%	32 min
Non Sang (Nongbua Lamphu)	Intervention	18 (7 male/11 female)	100%	76 min
	Control	20 (6 male/14 female)	45%	33 min
Nong Kung (Nongbua Lamphu)	Intervention	11 (5 male/6 female)	100%	72 min
	Control	10 (5 male/5 female)	30%	26 min
Baan Khok (Nongbua Lamphu)	Intervention	6 (2 male/4 female)	100%	41 min
	Control	14 (6 male/8 female)	28.5%	31 min
Nong Rua (Nongbua Lamphu)	Intervention	5 (2 male/3 female)	100%	36 min
	Control*	15 (5 male/10 female)	33.3%	54 min

*Outlier

Table 21 summarizes the characteristics of the 17 participants in each of the support network interviews in rural Thailand. Among participants who took part in the support network interview, five of the participants were local Thai university students and the rest were Peace Corps Volunteers serving in Thailand during the duration of the study. The average time for each focus group was 51.4 minutes for the intervention group and 35.2 minutes and for control group. With exception to one control group outlier (Nong Rua in Nongbua Lamphu), responses in the control groups tended to be short in length and in some cases provided no response at all to several questions.

Table 21

Interview Participants Summary

Title	Home Site	Gender	Program
Peace Corps Volunteer	Surat Thani	Male	TCCS
Peace Corps Volunteer	Nan	Female	YinD
Peace Corps Volunteer	Lampang	Male	YinD
Peace Corps Volunteer	Prachin Buri	Female	YinD
Peace Corps Volunteer	Kalasin	Female	YinD
Peace Corps Volunteer	Rayong	Male	TCCS
Peace Corps Volunteer	Burirum	Male	YinD
Peace Corps Volunteer	Loei	Male	TCCS
Peace Corps Volunteer	Phetchabun	Female	YinD
Peace Corps Volunteer	Nongbua Lamphu	Female	YinD
University Student	Khon Kaen	Male	International Business
University Student	Khon Kaen	Female	Law
University Student	Loei	Female	Food Science
University Student	Udon Thani	Female	Food Science
Peace Corps Volunteer	Nakhon Pathom	Female	TCCS
University Student	Kalasin	Female	Business Administration
Peace Corps Volunteer	Sukothai	Female	TCCS

TCCS = Teacher Collaborator & Community Service (Co-teaching English)
YinD = Youth in Development

Themes of the Scouts and BTF PYD programs

Gaining new skills

Student participants believed that the PYD programs they were involved in increased their skills in certain areas they did not have before. Students in the control group mentioned new skills particularly in the area of "survival skills" and "team building," while in the intervention group, the focus was more on "leadership" and "self-confidence."

> *We learned survival skills and how to be prompt with time. [Control Group 5]*

> *I changed in learning more about leadership and how to use it. This camp helped me be more confident in front of others. [Intervention 7]*

In regards to the PYDSS categories, the intervention group applied to all categories, while the control group tended to apply to competence, confidence, and connection.

> *I did a few Scout camps at site. As far as the camps go, the length of time is shorter than the BTF camps. Giving more time to allow for growth to take place is really important. I think also there is a lot more flexibility in the BTF setup and stress on there isn't a right answer or a right way to do something. A lot of the questions are framed as open-ended questions and the BTF staff stress there is no right or wrong answer. We just wanted them to use their thoughts and opinion. I don't think that is the case in Scouts camp or classroom settings. It is expected from them [students] to know the right answer and to say the right thing. I think there is a spirit of comradery in both settings, but it is a bit more positive in BTF with the team building activities. But in the Scouts there is some teambuilding, but it is mostly physical things that you have to do before you can move on. There is a little bit of a difference in the intentions of those activities. [Support 8]*

Attitude or Behavior Change

The PYD programs the students participated in included attitude and/or behavior change during and after the program.

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Before I always had thoughts about how to answer questions or share my opinion, but I would just wait for other respond first. Now I just say whatever I am thinking and I am not afraid or scared about what will come out. I have never been in a camp like this before so I didn't know what to expect. I wanted to go home since I saw so many foreigners and couldn't speak English well. In the first camp I was reluctant, but with the fun activities this helped make things easier. In the second camp I wouldn't stop talking [Intervention 4]

I felt I cared more about my school work. The program helped, but I also chose to change myself. [Control 3]

The support networks noted that the quantity of students that changed during the BTF camp ranged from "some," "majority," and even as far as "all" in their perspective. The degree of change ranged from "a little" to "significant" depending on the category. For many of the support networks, their involvement in the program also changed their perspective on things.

It was incredibly transformational. Not only for the kids themselves but for the volunteers too like myself. It was certainly an out-of-the box way to approach camp [in Thailand] in terms of letting the kids lead after a few days. The word transformation came up the most in my head during the days and also the new themes that were brought to the kids. Such as a tool box of life-skills, being able to report back on their feelings, and call other people out for the good things that they were doing. So like bringing a group cohesion in an already community society was neat to see. [Support 4]

Concept of Happiness

Student participants in both the intervention and control groups generally had fun during both programs and were able to define what happiness means to them. In both groups "family" and "friends" were always mentioned in things they need in their life to be happy. However, in the intervention group, the students were able to explain this in more depth.

I am happy because I get to be with my family and friends. [Control 4]

For me I have thought about this from a future perspective. I have asked myself what I need to do in order to make my parents happy forever and into the future. How to make the people I care about around me comfortable. We don't know how much longer the people we love will be around with us. So I want to be able to stretch that time as much as possible. I want to finish school fast and be able to come back and support my parents. I want to make sure my parents are ok. When I see the smiles of those around me that makes me happy. Not everyone has the same definition of happiness. We should do the things that we love so that way it makes us happy. It really starts from us. You can see those who struggle, but then they smile and laugh and you know that it really is about how we perceive life. [Intervention 6]

A Thai university student (support network) compares both programs and claims which program the student would be happier in.

Without a doubt, there is greater change in the BTF camp than in the Scouts camp. Let me give you an example. If one student goes into one camp [BTF] it is like setting you free becoming yourself, while in the other [Scouts] you have to go following the rules being under an authoritative figure. If one student had to pick between one over the other, I am confident 100% that they would pick BTF. I am also certain that the student who attended BTF would be happier and they are able to show who they are as a person versus the traditional camp. [Support 11]

Opportunities and Experiences
If given another opportunity to participate in their respective programs again, all the students in the intervention group unanimously said "yes." In the control groups, the general consensus was "yes," but the idea of having an option seemed foreign as several students noted that "it is required."

If I had a choice, I would do it again [Control 4]

When asking students in the intervention groups if they would participate in the required Scouts program if they had an option, students tended to say no, citing that the program was not "fun" relative to the BTF program they participated in.

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If I had a choice, I would not do Scouts. It was not fun. It is like being a solider…I can learn those things myself… it is tiring. I don't like when things are forced. [Intervention 9]

Those in the support network who experienced both camps first hand offer their

perspective on why a student might want to participate in one program over the other.

There are activities that they [Thai] put a lot of effort into, but do it just because it is what they do… I feel like the difference with BTF is that they are really thoughtful about the outcomes they want to produce. I think BTF is challenging a lot of restrictive Thai norms, but in a way that is flexible and familiar enough in Thai culture that it is not totally written off. It is close enough to what they are used to in order to be comfortable, but enough of a stretch to push participants. The Scout master usually would have this giant ruler and yelling at the kids like a drill sergeant, and the students are all standing there terrified. I know the students love the teacher [in this case the Scout master] and was great in a lot of ways, but that situation doesn't allow for students to act and allow freedom of expression for them to learn from that… I think the BTF model is meant to allow for students to change and develop. The other model is more to mold students into 'what they already should have been.' BTF says to the students there is a world of possibilities to who you can be and how you can be that person and a lot of other [Thai] activities are 'this is how you need to be.' The BTF model is more exploratory. The students follow the guidelines, but not being afraid of screwing up. [Support 17]

Level of Curiosity
All focus groups at the end of the discussion had an opportunity to ask the

researcher some questions about anything and both groups showed some level of

curiosity. For the control group, questions tended to be focused on the researcher

conducting the discussion.

What is your ethnicity?   How long have you lived in Thailand? Do you have a girlfriend? Where did you meet her? [Control 4]

For the intervention group, questions tended to move beyond the researcher and

into the realm of how the students can experience life outside of the village.

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What universities do students prefer to study at in America? What types of Universities are in Boston? Do they have summer programs in America? What types of places are ideal for camping/hiking in America? [Intervention 6]

In comparing both programs, a Thai university student provides some insight as to how the students developed their curiosity within cultural context.

BTF is more international than Thai camps. Thai camps are more about teamwork only. BTF is about teamwork as well, but focuses on attitude and giving them courage to speak out. Scouts is very simple, BTF is really taking a deep dive into who they are. There isn't just one path with BTF, where everyone is about paving their own way. BTF is showing the students what their abilities are and how they can use them in their everyday life. [Support 12]

As for several members of the support network, their curiosity was in the form of sustainability of the impacts after the program.

I think it is a great opportunity to work with kids. It is something that is done differently than they are used to. The kids definitely benefit from it. The only the thing is it is a little too short to notice change and that you will need to re-implement it back at site. Once they are out of that safe zone you have setup for them, are they still going to still continue to stick to the behavior change that we want? We really setup a safe environment for them so you have to wonder what happens once they go back to the school environment again. [Support 2]

DISCUSSION

In PYD studies in Asia, many programs focus primarily on quantitative analysis. This might be the case due to resource constraints such as time, finances, and scale, but a single method approach can limit the overall story within a cultural context. Because of the limited qualitative studies in positive youth development, academics and practitioners are informed primarily by quantitative studies. In our study, we conducted a qualitative investigation with student participants in rural Thailand in two PYD programs and asked about their experience in the required Scouts camp and/or the voluntary BTF camp. We

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also interviewed support networks that worked directly with students that participated in both programs and recorded their perspectives. The PYDSS categories (competence/happiness, confidence, connection, caring, character, and contribution) were used as a foundation for coding with the addition of attitude and behavior change. The advantage of having a coding template allows for a more efficient process in coding responses when time and resources are limited. Findings from our analysis show that the application of the PYDSS as a template for coding can be transferable to other PYD programs globally, but can be specifically applied to rural Thailand.

Results from our analysis show that the categories of the PYDSS can be applied in the thematic analysis of two youth development programs in rural Thailand. Our findings suggest that both PYD programs have changes in attitude and behavior, but the BTF (intervention) program meets more criteria of codes based on the categories of the PYDSS than the Scouts (control) program. The categories that showed change in the majority of the Scouts program were "competence," "confidence," "connection," and in some groups "caring." There was one outlier in the control group, where high performing (honor) students were hand selected by the school to participate in the focus group and their responses were thorough, but despite the responses, only a few students in this group actively participated while the rest of the students sat there quietly. The responses of the students in both PYD programs were also verified in the interviews conducted with support networks consisting of Peace Corps Volunteers and local university students. In comparing programs, most of the support network participants believed there was more change in students in the BTF camp compared to the Scouts camp overall. Gender did not

play as much of a role in the intervention groups due to full active participation, but in the control groups, females tended to be more responsive to questions. The results in this study challenges the quantitative study results, particularly in the ANCOVA analysis, conducted by Sieng et al. (In Review) that compared both the BTF program and Scouts program via pre-test/post-test questionnaires in several villages throughout Thailand. In the quantitative analysis conducted by Sieng and colleagues (In Review), results showed that the difference between the intervention and control group overall was not significant, when controlling for pre-test scores. Within the categories of the PYDSS that did not show significant difference between the intervention and control groups were the following categories (competence and confidence/happiness), that also seem to challenge the results. However, the results of this qualitative study and the quantitative study conducted by Sieng and colleagues (In Review) both align in the *t*-test results that changes occurred in both programs.

One of the main challenges in this study included the level of participation of the students, particularly in the Scouts group (28.5% to 45%). This could be due to cultural norms of students being shy and lack of experience answering open-ended questions. Even the students in the BTF camp exhibited this behavior at the beginning of the program as one of the support network individuals notes, "I remember the activity we did at the beginning there was lots of hesitation, self-consciousness, fear, and unassured-ness about themselves that was completely gone by the end of the camp." With the average time of the Scouts camp focus groups being significantly less, the level of engagement and display of confidence was less than their peers who participated in the BTF camp.

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The setting and experience of the programs could potentially play a large a role in the impacts on the students, particularly in the categories of the PYDSS. As one support network participant notes:

> *For the length of the camp, I think the maturity levels were the biggest difference. If I compare to camps at my site such as Scouts camp, I would say there is much more of a focus on responsibility in the BTF camps. I noticed a bigger change in students at the BTF versus the other camps at my site [not BTF camps]. I think the responsibility in the BTF camps is the main difference between the camps. The leaders have responsibilities for each other. [In the other Thai camps] teachers will have some students take the bamboo and chop it up with their machetes and turn them into things like chairs or other furniture, cook food over fire, etc. But the change in maturity levels just weren't the same as the BTF camp. [Support 3]*

There were certainly some limitations to this study. It is possible that the perspectives of some of the students may not have been captured in this study. Student participants were recruited through the schools' contacts, and consequently, perspectives may be overrepresented by those who only had a positive experience in the camps. We attempted to get as many perspectives as possible, but due to consent and time constraints, those potential students and support networks opted not to participate in this study. Students that were part of the intervention group also participated in the Scouts program and this could have affected the results of the intervention group responses. However, one of the support networks noticed that there was definitely an increase in students that did the BTF camp more than once:

> *The camps where you would have them multiple times at one site, it was an eye opener to be able to see the growth during the week and then the second one 6 or 8 months later and it wasn't entirely the same group, maybe 4 or 5 repeat students that overlapped. The ones that had already participated in the camp were clearly more comfortable with their leadership skills and responsibilities.*

Also acting in between leadership positions and helping their peers achieve the same levels. [Support 8]

Another limitation was this focus group only captured the perspectives from two provinces, but BTF camps and Scout camps took place in multiple locations. Also, we only conducted the focus groups once after the intervention program (cross-sectional) so long-term impacts should be considered (longitudinal study).

The study was strengthened by including support networks in this study to emphasize multiple perspectives on how many and how much students changed in each program. This provided a rich understanding of another perspective aside from self-reflection from the students in the focus groups in both programs. Future studies should continue to incorporate support networks of the students in their evaluations to truly get a sense of how students are changing and in what particular areas of the PYDSS.

The formative qualitative evaluation provided evidence that the PYDSS categories can be used as guide in qualitative assessment of PYD programs globally. Exploring two PYD programs in rural Thailand in a similar quasi-experimental design resulted in challenging results conducted in an earlier study by Sieng et al (In Review). The findings of this qualitative study support the notion of a mixed methods approach or a data collection method that is most cultural appropriate for a given target demographic.

REFERENCES

Ainsworth, M. D. S., Blehar, M. C., & Waters, E. (1978). *Patterns of attachment: A psychological study of the strange situation.*

Arnold, M. E., & Meinhold, J. L. The Positive Youth Development Inventory (2008).

Bédard, K., Bouffard, T., & Pansu, P. (2014). The risks for adolescents of negatively biased self-evaluations of social competence: The mediating role of social support. *Journal of adolescence*, *37*(6), 787-798.

Bowlby, J. (1973). *Attachment and loss, vol. II: Separation.* Basic Books.

Bowlby, J. (1979). On knowing what you are not supposed to know and feeling what you are not supposed to feel. *The Canadian Journal of Psychiatry/La Revue canadienne de psychiatrie.*

Bowlby, J. (1982). Attachment and loss: retrospect and prospect. *American journal of Orthopsychiatry*, *52*(4), 664.

Brandtstädter, J. (2006). Action perspectives on human development. In W. Damon (Series Ed.) & R. M. Lerner (Ed.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 516 –568). Hoboken, NJ: Wiley.

Bumbarger, B., & Greenberg, M. T. (2002). Next steps in advancing research on positive youth development.

Caplan, M., Weissberg, R. P., Grober, J. S., Sivo, P. J., Grady, K., & Jacoby, C. (1992). Social competence promotion with inner-city and suburban young adolescents: effects on social adjustment and alcohol use. *Journal of consulting and clinical psychology*, *60*(1), 56.

Catalano, R. F., Berglund, M. L., Ryan, J. A., Lonczak, H. S., & Hawkins, J. D. (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.

Catalano, R. F., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of School Health*, *74*(7), 252-261.

Cloutier, S., Larson, L., & Jambeck, J. (2014). Are sustainable cities "happy" cities? Associations between sustainable development and human well-being in urban areas of the United States. *Environment, development and sustainability*, *16*(3), 633-647.

Ebstyne King, P., & Furrow, J. L. (2008, August). Religion as a resource for positive youth development: religion, social capital, and moral outcomes. In *Meeting of*

the Society for Research in Child Development, Apr, 2001, Minneapolis, MN, US; A previous version of this article was presented at the aforementioned conference. (No. 1, p. 34). Educational Publishing Foundation.

Fetterman, D. M., Kaftarian, S. J., & Wandersman, A. (1996). *Empowerment evaluation: Knowledge and tools for self-assessment and accountability*. Sage.

Giordani, B., Hodges, E. K., Guire, K. E., Ruzicka, D. L., Dillon, J. E., Weatherly, R. A., ... & Chervin, R. D. (2012). Changes in neuropsychological and behavioral functioning in children with and without obstructive sleep apnea following Tonsillectomy. *Journal of the International Neuropsychological Society*, *18*(02), 212-222.

Gestsdóttir, S., & Lerner, R. M. (2007). Intentional self-regulation and positive youth development in early adolescence: findings from the 4-h study of positive youth development. *Developmental psychology*, *43*(2), 508.

Goleman, D. P. (1995). Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement.

Guest G. Applied thematic analysis Thousand Oaks, CA: Sage; 2012.

Guerra, N. G., & Bradshaw, C. P. (2008). Linking the prevention of problem behaviors and positive youth development: Core competencies for positive youth development and risk prevention. *New directions for child and adolescent development*, *2008*(122), 1-17.

Hoffman, L. (1981). *Foundations of family therapy: A conceptual framework for systems change*. Basic Books.

Keppel, G. (1991). *Design and analysis: A researcher's handbook* (3rd ed.). Englewood Cliffs: Prentice-Hall, Inc

Kohlberg, L. (1963). The development of children's orientations toward a moral order. *Human Development*, *6*(1-2), 11-33.

Kohlberg, L. (1969). *Stage and sequence: The cognitive-developmental approach to socialization*.

Kohlberg, L. (1981). *The Philosophy of Moral Development Moral Stages and the Idea of Justice /Lawrence Kohlberg*. Harper & Row.

Lerner, R. M. (2000). Developing civil society through the promotion of positive youth development. Journal of Developmental and Behavioral Pediatrics, Vol 21(1), Feb 2000, 48-49.

Lerner, R. M., Dowling, E. M., & Anderson, P. M. (2003). Positive youth development: Thriving as the basis of personhood and civil society. *Applied Developmental Science*, *7*(3), 172-180.

Lerner, R. M. (2004). *Liberty: Thriving and civic engagement among America's youth*. Sage Publications.

Lerner, R. M. (2005, September). Promoting positive youth development: Theoretical and empirical bases. *In White paper prepared for the workshop on the science of adolescent health and development, national research council/institute of medicine. Washington, DC: National Academies of Science*.

Lorion, R. P., & Sokoloff, H. (2003). Building assets in real-world communities. In *Developmental assets and asset-building communities* (pp. 121-156). Springer US.

Mahler, M. S., Pine, F., & Bergman, A. (1975). The psychological birth of the infant. *New York: Basic*.

Marshal, M. P., Friedman, M. S., Stall, R., King, K. M., Miles, J., Gold, M. A., Buksetin, O.G., Morse, J. Q. (2008). Sexual orientation and adolescent substance use: a meta-analysis and methodological review. *Addiction*, *103*(4), 546-556.

Miller, R. G. (1966). *Simultaneous Statistical Inference*. Springer.

Piaget, J. (1952). *The origins of intelligence in children* (Vol. 8, No. 5, pp. 18-1952). New York: International Universities Press.

Piaget, J. (1965). The stages of the intellectual development of the child. *Educational psychology in context: Readings for future teachers*, 98-106.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, cognition and personality*, *9*(3), 185-211.

Seal, Nuananong. 2006. "Preventing Tobacco and Drug Use among Thai High School Students through Life Skills Training." *Nursing and Health Sciences* 8(3): 164–68.

Sherman, S. G., Sutcliffe, C., Srirojn, B., Latkin, C. A., Aramratanna, A., & Celentano, D. D. (2009). Evaluation of a peer network intervention trial among young methamphetamine users in Chiang Mai, Thailand. *Social Science & Medicine*, *68*(1), 69-79.

Siriarunrat, Supit, Punyarat Lapvongwatana, Arpaporn Powwattana, and Prasit Leerapan. 2010. "Development of a Model for Parent-Adolescent Daughter Communication about Sexuality." *Southeast Asian Journal of Tropical Medicine and Public Health* 41(4): 961–72.

Shek, D. T., Siu, A. M., & Lee, T. Y. (2007). The Chinese positive youth development scale: A validation study. *Research on Social Work Practice*, *17*(3), 380-391.

Shek, D. T., & Yu, L. (2011). A review of validated youth prevention and positive youth development programs in Asia. *International Journal of Adolescent Medicine and Health*, *23*(4), 317-324.

Sieng, M., Cloutier, S., Irimata, K. (2017). *Positive Youth Development Sustainability Scale (PYDSS): The development of a universal tool*. Manuscript submitted for publication.

Sieng, M., Cloutier, S., Irimata, K. (2017). *Application of the Positive Youth Development Sustainability Scale (PYDSS) in Rural Thailand: A quantitative analysis of two youth program*. Manuscript submitted for publication.

Sommart, J., & Sota, C. (2013). The effectiveness of a school-based sexual health education program for junior high school students in Khon Kaen, Thailand. *Procedia-Social and Behavioral Sciences*, *91*, 208-214.

Weissberg, R.; Caplan, M.; Sivo, P. (1989). A new conceptual framework for establishing school-based social competence promotion programs. Primary prevention and promotion in the schools., (pp. 255-296). Thousand Oaks, CA, US: Sage Publications, Inc, 452 pp.

Zidanšek, A. (2007). Sustainable development and happiness in nations. *Energy*, *32*(6), 891-897.

MANUSCRIPT 4
INCREASING POSITIVE YOUTH DEVELOPMENT AND POSITIVE ATTITUDES
TOWARD PHYSICAL ACTIVITY:
AN ASSESSMENT OF *FUTURE FOR KIDS*

This section has been co-authored with Scott Cloutier and Katherine Irimata.

ABSTRACT

Background: The purpose of this paper is to assess the effectiveness of a youth program that incorporates physical activity and activities and strategies meant to foster positive youth development by examining pre- and post-test data using the Positive Youth Development Sustainability Scale (PYDSS). *Future for KIDS* is an out-of-school time (OST) program in the Phoenix-metro area emphasizing academics, athletics, and ethics. This work draws on youth sports programs in positive youth development (PYD).

Objective: The objective is to test the hypotheses that 1) PYD increases based on the *Future for KIDS* program, 2) that repeat students show statistically significant increases in PYD over first-time students, and 3) *Future for KIDS* program increases positive attitudes toward physical activity.

Methods: Data was retrieved from nine different program sites in the *Future for KIDS* program, (n=464 surveys; 204 students and 260 support network members).

Results: A paired *t*-test analysis indicates a statistically significant improvement between pre-test and post-test PYDSS scores overall and attitudes towards physical activity. However, an ANCOVA analysis indicates no significant difference in overall change between the repeat and first-time students, when controlling for pre-test scores.

Conclusion: The results support our hypothesis of *Future for KIDS* improving PYDSS scores and attitude towards physical activity. The results of the PYDSS scale show that programs like *Future for KIDS*, which include a physical activity component in their program design, can successfully improve PYD of its participants in an out-of-school time program.

Keywords: Positive Youth Development, Phoenix, program evaluation, intervention, physical activity, STEM

INTRODUCTION

Positive Youth Development (PYD) evolved from prevention programs addressing risky behaviors of adolescence in the US (Bumarger & Greenberg, 2002; Lerner, 2000; Lorion & Sokoloff, 2003). PYD programs should include active stakeholder engagement (e.g., communities, schools, and organizations) efforts to provide opportunities for youth to increase their skills, abilities, and interests in positive activities to become contributing members of society (Catalano et al., 2004). Specifically, PYD programs should consider youth as resources to be developed rather than problems to be managed in a setting that promotes positive outcomes (Sieng et al., In Review). We suggest that PYD programs can promote sustainable futures for adolescents, while current generations rely on youth to be active and contributing global citizens in the future.

One avenue for PYD programs has been to incorporate sports or physical activity into the program. Lerner and colleagues' Model of National Youth Policy (2000) suggests that participating youth will demonstrate five 'C's (competence, connection,

caring, character, and confidence) of positive youth development if policies are developed to allow families and programs to foster and promote positive development. If the five C's are achieved collectively, these processes can then lead to the sixth 'C' of positive youth development: contribution. Fraser-Thomas and colleagues (2005) discussed how youth sport programs could provide an avenue for PYD. They proposed that physical activity assures positive outcomes through developmental design and supportive adult relationships and demonstrated how these programs can bring about the five C's of positive development (Lerner et al., 2000). In Particular, Fraser-Thomas et al. (2005) mention the Developmental Model of Sport Participation (DMSP) (Cote, 1999; Cote & Hay, 2002; Cote et al., 2003) focuses on designing sport programs that take into account physical, psychological, social, and intellectual development of youth. PYD is not guaranteed through sports and physical activity; rather, it is dependent upon a multitude of factors that must be considered when planning and designing youth sport programs (Fraser-Thomas et al., 2005).

Most of the research on sport participation and educational achievement has taken place in the US where sport participation is institutionally linked with things like schools, attendance patterns, eligibility to play school sports, formal team selection processes, grades, and social status among peers and teachers (Coakley, 2011). As Spaaij (2009) cautioned, it is important to "avoid naive and unrealistic generalizations about the transformative capacity of sport" (p. 1266), but there is also a need for theoretically informed explanations of the ways that sports and physical activity participation can be organized and designed with other activities for the purpose of empowering young people

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to make choices about positive civic engagement even if they have factors in their life that can negatively affect them.

Simply playing sports or engaging in physical activity does not ensure that young people will learn the skills and develop the attitudes that will prepare them for productive futures. There is growing evidence, that if sport activities are structured, specifically in the design of the program and young people are surrounded by trained caring adult mentors and other support networks, positive youth development is more likely to occur (Petitpas et al. 2004). We are interested in programs that incorporate physical activity in combination with other factors that are important to PYD, thus we have decided to assess *Future for KIDS*. Within Phoenix, Arizona, there have been some PYD studies such as New Beginnings (Wolchik et al. 2000; 2002; 2007) focusing on mother-child relationships. However, most studies focus on prevention intervention in order to reduce crime and promote public safety such as Police Athletic League (PAL), City Streets, Streets Outreach Program and Kool Kids (McCann & Peters, 1996; Pitter & Andrews, 1997). A lack of holistic PYD programs that focus on positive alternatives such as sports or physical activity is an issue, as alternative programs typically focus on youth as problems to be managed, rather than future contributing members of society. In this paper, we address an existing research gap by assessing a prominent PYD program in the Phoenix-metro area, *Future for KIDS*. This organization is a non-profit dedicated to helping at-risk youth succeed through academics, athletics, and ethics. They incorporate their programing through three distinct programs: 1) The out-of-school time (OST) program "Discover Your Future" 2) several Sports and Fitness Camps (one day) and 3)

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Summer Program (five-days). This program takes on a holistic approach of PYD in their design by incorporating physical activity as one of the many components of their OST program. In this type of design, *Future for KIDS* could promote student sustainability by fostering positive relationships that build on community resilience and happiness. Our study focuses on evaluating the OST program for the 2017-2017 school year.

We assessed *Future for KIDS* using the Positive Youth Development Sustainability Scale (PYDSS) (Sieng et al., In Review), which is intended to be a globally applicable PYD evaluation tool based on tools currently used in the US such as the Positive Youth Development Inventory (PYDI) (Arnold & Meinhold, 2008). The PYDSS was developed to measure the 5 C's, the 6th *C*-contribution, and additional sustainability metrics including happiness. Our study also affords researchers and practitioners, the ability to consider the relationships among PYD and sustainability measures like happiness and how they relate to one another. It is important to measure sustainability metrics like happiness because if students are not enjoying the physical activity or other aspects of the program, they may not continue participation. Further, physical activity is an important component of sustainability (Rhodes & Fiala, 2009), resilience (Martinek & Hellison, 1997) and happiness (Wang et al., 2012) especially in a program designed like *Future for KIDS*. The conceptual framework of *Future for KIDS* aligns with the 5 C's model developed by Lerner et al. (2000) and is evaluated with a tool that also incorporates this framework. We present the results of a large controlled trial of the Discover Your Future program in the Phoenix-metro area, conducted by independent evaluators.

METHODS

Participants

Participants in the study were part of the *Future for KIDS* (FFK) program

Discover Your Future that includes students in grades 3-6. We drew on all active students

participating in the *Future for KIDS* program and our survey, described below, was

administered by the FFK staff with supervision of an independent researcher. Students

are eligible based on their ability to find transportation to and from the program site and

enrollment is usually capped around 50 students per site. Students were directly recruited

at the site location or through word-of-mouth from friends or family. In many cases

students are recruited from the Sports and Fitness camps as well as the Summer Program.

This program is considered an out-of-school time (OST) program that is a two-hour

session, once a week, for an entire school year. The setting of the program and evaluation

took place at one of the nine program sites at the start and at the end of the program. See

Table 22 for a detailed list of each site. Settings include schools or youth centers (i.e.

Boys and Girls Club). IRB approval was obtained to the legal requirements and

"informed consent" was appropriately obtained by parents and students through FFK.

Table 22

Program site information

Program site	Location	Number of student participants
Boys and Girls Club Guadalupe	Guadalupe, Arizona	21 (9 male, 12 female)
Boys and Girls Club Mesa	Mesa, Arizona	26 (8 male, 18 female)
Boys and Girls Club North Tempe	Tempe, Arizona	24 (9 male, 15 female)
Cesar Chavez Elementary	Phoenix, Arizona	32 (16 male, 16 female)
Coral Canyon Housing Complex	Phoenix, Arizona	17 (9 male, 8 female)
Eagle Ridge Elementary	Phoenix, Arizona	23 (14 male, 9 female)
IG Conchos Elementary	Phoenix, Arizona	22 (5 male, 17 female)
Sequoia Charter School	Mesa, Arizona	16 (10 male, 6 female)
Whispering Wind Academy	Phoenix, Arizona	23 (17 male, 5 female)
	Total	204 (97 male, 107 female)

Interventions

The *Future for KIDS* Discover your Future program focuses on PYD concepts particularly in the areas of ethics, physical activity, and "STEAM" also known as science, technology, engineering, art, and math. Content was based on the curriculum developed by FFK and was administered by FFK staff. Students were separated into smaller groups based on grade for some activities. The research setting was either indoors or outdoors at the program site depending on what was appropriate for the activity (i.e. physical activity was outside). Each week, the program consists of three parts: 1) Ethics, 2) Physical Activity, and 3) STEAM activity. The intervention program takes place for a duration of 22-weeks during the academic school year. Incentives included no cost to participate, free snacks, prizes, and additional access to special free FFK events (e.g., Winter Games, Sports Camps).

Objectives

The objective is to test the hypotheses that 1) PYD increases based on the *Future for KIDS* program, 2) that repeat students show statistically significant increases in PYD over first-time students, and 3) *Future for KIDS* program increases positive attitudes toward physical activity.

Outcomes

Outcomes were measured based on the PYDSS Likert-scale survey and the 6 categories of the scale in addition to program specific questions on physical activity. The measurement tool used in this study was the Positive Youth Development Sustainability Scale (PYDSS) developed by Sieng et al. (In Review). The PYDSS is a collection of items designed to measure PYD metrics before and after intervention of PYD programs and follows the 5 *C's* model plus the 6th *C* of youth development, by measuring the constructs of 1) Confidence; 2) Competence; 3) Character; 4) Caring; and 5) Connection and 6) Contribution (Lerner et al, 2003). The PYDSS includes a 5-point Likert-scale: 1) Strongly disagree; 2) Disagree; 3) Neutral/Unsure, 4) Agree; and 5) Strongly Agree. The categories for this scale include six constructs: Competence, Character, Confidence/Happiness, Connection, and Caring. The PYDSS used for *Future for KIDS* consists of 32 questions and an additional 20 program specific questions that can be found by contacting the *Future for KIDS* programming staff directly. The specific questions asked about physical activity include: 1) "I enjoy physical activity", 2) "I like to try new physical activity" and 3) "I like to be more physically active." To include a resilience component, members of the students' support networks (e.g., parents, mentors,

and teachers) also assessed and scored the students adding depth of more than one

perspective. Table 23 summarizes the categories of the PYDSS.

Table 23

Categories of the PYDSS

Assets/Characteristic	Definition	Source
Competence	Includes academic, social, vocational, and health competence	Caplan et al. 1992; Weissberg, Caplan, and Sivo, 1989
Confidence/Happiness	Believing in one's self and ability As basic needs are met, long-term happiness can be considered and achieved by focusing on higher level needs (sustainability).	Fetterman, Kaftarian, and Wandersman, 1996 Cloutier et al., 2013; Zidansek, 2007
Character	Knowing what is right or wrong and how to do the right thing	Piaget, 1952, 1965; Kohlberg 1963, 1969, 1981; Hoffman, 1981
Connection	Working collaboratively with parents, peers, siblings, teachers, coaches, or other community members	Ainsworth et al. 1978; Bowlby 1973, 1979, 1982; Mahler, Pine, and Bergman 1975
Caring	A sense of compassion or social justice	Salovey and Mayer , 1990; Goleman, 1995
Contribution	Contributing positively to self, family, community, and, ultimately, civil society	Lerner, 2004; Lerner, Dowling, & Anderson, 2003; Lerner, 2005

Sample Size

Sample size was determined based on all active students and their support networks who participated in the FFK program.

Assignment Method

Students were assigned based on program site.

Blinding (masking)

Blinding did not take place in this study.

Unit of Analysis

The smallest unit that was being analyzed to assess the intervention effects was at the individual level (student).

Statistical Methods

The statistical analysis for this study included both a paired *t*-test and an analysis of covariance (ANCOVA). Paired *t*-tests are a form of blocking, and have greater power than unpaired tests when the paired units are similar with respect to "noise factors" that are independent of membership in the two groups being compared (Rice, 2006). ANCOVA is a general linear model which blends ANOVA and regression and evaluates whether population means of a dependent variable (DV) are equal across levels of a categorical independent variable (IV), while statistically controlling for the effects of other continuous variables that are not of primary interest, known as covariates (CV). ANCOVA decomposes the variance in the DV into variance explained by the CV(s), variance explained by the categorical IV, and residual variance (Keppel, 1991)**.** All analyses were conducted using SPSS Software 23 and incomplete or missing data was not included in this study.

Paired t-test

A paired *t*-test was first used to evaluate the change in the pre- and post- PYDSS scores and attitudes about physical activity. The null hypothesis tested was no change after the PYD program ($\mu_d = 0$) and the alternative hypothesis was a positive change after participating in the PYD program ($\mu_d > 0$). A Bonferroni correction was used to account for the multiple comparisons for each category. The significance level for each analysis was 0.007 (0.05/7=0.007). The Bonferroni correction compensates for the likelihood of incorrectly rejecting the null hypothesis by testing each individual hypothesis at a significance level of α/m,

where α is the desired overall alpha level and *m* is the number of hypotheses (Miller, 1966).

Using data collected from both the control and intervention groups, we conducted a matched-pairs *t*-test between the pre- and post- scores. Given the large sample size, the central limit theorem (CLT) was used establishing that, when independent random variables are added, their sum tends toward a normal distribution even if the original variables themselves are not normally distributed (Rice, 1996). The paired t-test was conducted for the overall scores and for each category of the PYDSS in addition to program specific questions on physical activity, and Cohen's d Effect Size was evaluated.

ANCOVA

Pre- and post-test outcome changes were then compared between first time and repeat participants. Students are considered "repeat," if they have participated in the *Future for KIDS* program more than once. An initial ANOVA was run to determine if there is a statistical difference between the repeat and first-time participants using the pre-test data. The assumption of homogeneity of regression was tested using analysis of covariance (ANCOVA) while controlling for the pretest score. These models estimated the effects of intervention (repeat vs. first-time participants). Program effects were assessed by comparing pre- and post-intervention.

RESULTS

A total of 464 PYDSS surveys were completed by students and support networks before the youth program and after the youth program, the results of which are provided in the sections below.

Paired *t*-test

A paired sample *t*-test was conducted to evaluate whether a statistically significant difference existed between the mean scores of the PYDSS and attitudes of physical activity before and after the PYD programs (n=464). Assumption testing indicated no gross violation of the assumptions. A Bonferroni correction was used to account for the multiple comparisons for each category. The significance level for each analysis was 0.007. The paired sample *t* test for the overall PYDSS score indicated significant increase in scores from the pre-test ($\overline{x}$ = 3.688, SD = .817) to the post-test ($\overline{x}$ = 4.098, SD = .753), *t* (463) = 11.588, p < .001, η2 = .035. The effect size was medium (0.538) based on Cohen's conventions (1988). The mean increase in the overall score was .410, with the 95% confidence interval from the difference between the means of .341 to .480. Each of the six constructs of the PYDSS and average Physical Activity score also had statistically significant improvements in the post-scores. The results for the other categories of the PYDSS in addition to the average score of the physical activity questions can be found in Table 24.

Table 24

PYDSS Pre-test/Post-test Paired t-test Results

	Mean	*Std. Deviation*	*Std. Error Mean*	*95 % Confidence Interval of Difference*		*t*	*df*	Sig (2-tailed)	Cohen's d (Effect Size)
				Lower	*Upper*				
Overall	0.410	0.763	0.035	0.341	0.480	11.588	463	<0.0001	0.538
Competence	0.541	1.028	0.048	0.447	0.635	11.336	463	<0.0001	0.526
Confidence/Happiness	0.441	0.904	0.042	0.359	0.524	10.513	463	<0.0001	0.488
Caring	0.363	0.960	0.045	0.275	0.450	8.131	463	<0.0001	0.377
Character	0.396	0.935	0.043	0.311	0.481	9.117	463	<0.0001	0.423
Connection	0.347	0.926	0.043	0.262	0.431	8.062	463	<0.0001	0.374
Contribution	0.414	0.906	0.042	0.331	0.496	9.835	463	<0.0001	0.457
Average Physical Activity Score	0.269	0.965	0.045	0.181	0.357	6.000	465	<0.0001	0.279

ANCOVA

For the initial ANOVA test on the returning students and first-time participants,

we did not find a statistically significant difference in the pre-test scores for the different

Future for KIDS sites on the pre-test (p=0.681). The second assumption of homogeneity

of regression was also met (p=0.288). The results of the ANCOVA overall and for each

of the PYDSS constructs are shown in Table 25. The returning students versus first-time

participants did not have a statistically significant difference when controlling for the pre-

test scores (p=0.256). A Bonferroni correction was also used to account for the multiple

comparisons for each category of the PYDSS. For the PYDSS categories, none of the

categories had statistically significant relationships (p<.007) with respect to the

Bonferroni correction when controlling for the pre-test scores. Findings failed to support

the hypothesis of overall positive change in the returning students versus the first-time

participants analyzing overall score and among all 6 categories of the PYDSS in addition

to attitudes towards physical activity.

Table 25

PYDSS ANCOVA Results (Repeat vs. First-time participants) controlling for pre-test scores

	Df	Mean Square	F	Sig	Partial Eta Squared
Overall	1	.462	1.131	.288	.002
Competence	1	.206	.289	.591	.001
Confidence/Happiness	1	.054	.099	.753	.000
Caring	1	1.353	2.141	.144	.005
Character	1	.075	.124	.725	.000
Connection	1	.169	.276	.599	.001
Contribution	1	.632	1.119	.291	.002
Average Physical Activity Score	1	.355	.492	.483	.001

Table 26 displays the effect of additional covariates on the overall score. The

ANCOVA results show there is a significant interaction between gender and program

sites (males and females at different locations score significantly different) as well as

between support networks and grade level (support networks and students at different

grade levels score significantly different). We do not see a significant interaction between

repeat/first-time participants and gender so there was no evidence that repeating the

program affected males or females differently.

Table 26

PYDSS ANCOVA Results Other Variables controlling for pre-test scores

	Df	Mean Square	F	Sig	Partial Eta Squared
(Repeat or First-time) * Support	1	.042	.115	.734	.000
(Repeat or First-time)* Location	6	.313	.865	.521	.020
(Repeat or First-time) * Gender	1	.432	1.192	.276	.005
(Repeat or First-time) * Grade	4	.368	1.015	.400	.015
Support * Location	8	.337	.930	.492	.028
Support * Gender	1	.117	.324	.570	.001
Support * Grade	8	.867	2.393	.017	.069
Location * Gender	8	.831	2.293	.022	.066
Location * Grade	34	.485	1.339	.108	.149
Gender * Grade	6	.175	.483	.821	.011

DISCUSSION

The purpose of this paper was to assess the positive youth development (PYD) implications of *Future for KIDS*, an after school program in Phoenix, Arizona. Our hypotheses were 1) PYD increases based on participation in the *Future for KIDS* program, 2) that repeat students show statistically significant increases in PYD over first-time students, and 3) the *Future for KIDS* program increases positive attitudes toward physical activity. This analysis determined if students changed positively at the end of the

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program in addition to comparing repeat and first-time students in the *Future for KIDS*

Discover Your Future program that emphasizes physical activity in the metro Phoenix

area PYD programs continue to expand around the world and are incorporating positive

alternatives like sports or physical activity. Further, out-of-school time (OST) PYD

programs have not been extensively studied and evaluated in the Phoenix-metro area.

Our study looked to address these research gaps by conducting an evaluation of a

PYD program that has been in in operation for over 25 years, *Future for KIDS*, which

specifically targets adverse and at-risk populations in the Phoenix-metro area. We

separated the groups based on first-time participants and repeat students who have

participated in the program more than once to see if there were any significant

differences. We evaluated both groups in the *Future for KIDS* program using the Positive

Youth Development Sustainability Scale (PYDSS) (Sieng et al., In Review), which draws

on Lerner's PYD theory while incorporating sustainability metrics like resilience and

happiness as well as program specific questions on attitudes toward physical activity.

Overall, our results indicate changes between pre-test and post-test scores for both

groups tested through a paired *t*-test analysis, indicating that both first-time and repeat

students in the program experience a statistically significant improvement in PYD and

physical activity attitudes. Specifically, both new and returning students experience

positive development, assessed as the 5 C's, sustainability metrics (happiness and

contribution), and improved attitudes towards physical activity. The ANCOVA analysis

failed to support the claim that the returning students had a significantly larger impact

than the first-time participants. This was also the case when considering the six different

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categories of the PYDSS and average physical activity score, while controlling for pre-test scores. The results could be attributed to the data collection method or FFK programming creating similar positive changes in both groups. Also, various components of the setting and design might not be able capture nuances outside of the scope of the PYDSS and program metrics.

The analysis also shows significant differences in post-test scores between support networks and grade levels. The results highlight the importance of including support networks in this study and future studies. This could also explain how certain volunteer mentors could interact differently based on their ability to connect with students of different age groups. More participation by support networks (community resilience) can lead to greater sustainability of program impacts and the sustainability of the OST program itself. Finally, it is possible, given that students self-report, that responses are inflated/deflated as compared to the observations of their support networks.

The ANCOVA results also showed significant differences in the relationship between program site and gender. This highlights the importance of programming and how certain activities could cater to one gender over the other. Also, the way a program site is staffed with volunteers may play a role, as each program site has a different set of volunteer mentors assigned to that site and to different grade levels, which can lead to different variability in skillsets and their ability to connect with youth. The relationship between youth and support networks could be related to the sustainable impacts of the PYD program. Rhodes (2004) concludes that caring youth-staff relationships directly influence youth's participation and developmental benefits they derive from programs in

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an after-school setting (community resilience). Also, the site itself might have certain infrastructure that supports physical activity better than others (i.e. large indoor/outdoor playing field or various sports equipment). Finally, Seefeldt & Ewing (1997) found that youth dropped out of sports programs because of a lack of fun or interest in the program (i.e. lack of happiness in the program). The youth that dropped out, however, mentioned they would return if improvements were made in staff, scheduling, organization, and programming (Seefeldt & Ewing, 1997).

The PYDSS and *Future for KIDS* metrics were able to capture change in students participating in PYD programs as evident in the paired *t*-test analysis, but failed to produce exact results in the ANCOVA analysis when looking at overall change across all six categories and attitudes of physical activity. The PYDSS and program specific metrics can potentially highlight the differences in each participant among different groups and program sites in *Future for KIDS* Discover Your Future program - not to indicate that one is better than the other. There might be some strengths and weaknesses in regards to the six categories of the scale as well as other program specific metrics and which sites provide the proper support to foster the program's objectives. The results could inform programing if a certain focus of one or more of the categories of the PYDSS is the main objective as an outcome for the program. For instance, if a PYD program is focusing on the outcome of contribution as the end goal of having youth becoming active contributing members of society, the activities and curriculum should have recurring themes focused on enhancing contribution (i.e. contribution to community). Activities could include skits, role-play, and/or team building activities that focus on helping a

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community through sports activities. Further, the theme could be reinforced with active discussions after the activities on the importance of community and how each participant will engage within a given community.

Our methods have their own limitations that require further investigation. First, although our results suggest that there is overall change in the paired *t*-test, we cannot confidently claim that the returning students had a significantly greater change overall and in attitude towards physical activity compared to first-time participants. It is possible that the method of data collection might not be appropriate for these demographic of students who struggle academically and should also consider a culturally appropriate qualitative or mixed methods approach. For instance, illiteracy or low levels of reading proficiency, and a lack of interest may have prevented some students' improvement and encouraged completing the survey. This issue could potentially be caused by survey or cultural bias as in the study conducted by Bédard et al. (2014). This can be addressed in the future by giving those students, who struggle based on their academic history, an alternative way to share their information.

Further, this study does not highlight the difference between students who participated in the Discover Your Future program versus those who did not (i.e. control group in a quasi-experimental design). The design of this study was to compare students who have participated in the program more than once versus those who participated for the first time. We wanted to explore the idea of more exposure versus less exposure of the same program. Lastly, as our study is limited as a cross-sectional analysis, future analyses are needed over longer periods of time to see if there are other factors that

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contribute to students' development outside of PYD programs. Future studies should incorporate a mixed methods approach that compares internal groups within the program such as program sites, gender, and repeat student groups in addition to surveys such as interviews, focus groups, and activity analysis using the PYDSS metrics and program specific metrics as an evaluation standard.

While our research is limited by our sample, measurement model, and methodology, the support we have provided for the evaluation of two groups in the *Future for KIDS* program shows that participants experience positive change before and after youth development programs and specifically within the six categories of the scale as well as their attitudes towards physical activity. Future research should continue to track youth and their support networks in programs that support integrating physical activity in the design of their program over long periods of time, paying particular attention to the relationships these programs foster building on community resilience. Essentially, longitudinal studies can capture sustainability of the programs impact on youth participants and their attitudes toward physical activity after the PYD programs. The overall goal of this study was to determine change before and after the PYD program Discover Your Future and the PYDSS in addition to program specific metrics provides a tool that shows it can be applied to programs that promote sports and physical activity in their programming.

ETHICAL APPROVAL

All procedures performed in studies involving human participants were in accordance

with the ethical standards of the institutional and/or national research committee and with

the 1964 Helsinki declaration and its later amendments or comparable ethical standards.

INFORMED CONSENT

Informed consent was obtained from all individual participants included in the study.

ACCESS TO DATA

The first author takes responsibility for the integrity of the data and the accuracy of the

data analysis.

REFERENCES

Ainsworth, M. D. S., Blehar, M. C., & Waters, E. (1978). *Patterns of attachment: A psychological study of the strange situation*.

Arnold, M. E., & Meinhold, J. L. The Positive Youth Development Inventory (2008).

Bédard, K., Bouffard, T., & Pansu, P. (2014). The risks for adolescents of negatively biased self-evaluations of social competence: The mediating role of social support. *Journal of adolescence*, *37*(6), 787-798.

Bowlby, J. (1973). *Attachment and loss, vol. II: Separation*. Basic Books.

Bowlby, J. (1979). On knowing what you are not supposed to know and feeling what you are not supposed to feel. *The Canadian Journal of Psychiatry/La Revue canadienne de psychiatrie*.

Bowlby, J. (1982). Attachment and loss: retrospect and prospect. *American journal of Orthopsychiatry*, *52*(4), 664.

Brandtstädter, J. (2006). Action perspectives on human development. In W. Damon (Series Ed.) & R. M. Lerner (Ed.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 516 –568). Hoboken, NJ: Wiley.

Bumbarger, B., & Greenberg, M. T. (2002). Next steps in advancing research on positive youth development.

Caplan, M., Weissberg, R. P., Grober, J. S., Sivo, P. J., Grady, K., & Jacoby, C. (1992). Social competence promotion with inner-city and suburban young adolescents: effects on social adjustment and alcohol use. *Journal of consulting and clinical psychology*, *60*(1), 56.

Catalano, R. F., Berglund, M. L., Ryan, J. A., Lonczak, H. S., & Hawkins, J. D. (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.

Catalano, R. F., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of School Health*, *74*(7), 252-261.

Cloutier, S., Larson, L., & Jambeck, J. (2014). Are sustainable cities "happy" cities? Associations between sustainable development and human well-being in urban areas of the United States. *Environment, development and sustainability*, *16*(3), 633-647.

Coakley, J. (2011). Youth sports: What counts as "positive development?". *Journal of Sport and Social Issues, 35*(3), 306-324.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences Lawrence Earlbaum Associates. *Hillsdale, NJ*, 20-26.

Coˆteˊ, J. (1999) The influence of the family in the development of talent in sport, *The Sport Psychologist*,13, 395–417.

Coˆteˊ, J., Baker, J. & Abernethy, B. (2003) From play to practice: a developmental framework for the acquisition of expertise in team sport, in: J. Starkes & K. A. Ericsson (Eds) *Recent advances in research on sport expertise* (Champaign, IL, Human Kinetics), 89–114.

Coˆteˊ, J. & Hay, J. (2002) Children's involvement in sport: a developmental perspective, in: J. M. Silva & D. E. Stevens (Eds) *Psychological foundations of sport* (Boston, MA, Allyn & Bacon), 484–502

Dormody, T. J., Seevers, B. S., & Clason, D. L. (1993). Youth Leadership Life Skills Development Scale.

Ebstyne King, P., & Furrow, J. L. (2008, August). Religion as a resource for positive youth development: religion, social capital, and moral outcomes. In *Meeting of the Society for Research in Child Development, Apr, 2001, Minneapolis, MN, US; A previous version of this article was presented at the aforementioned conference.* (No. 1, p. 34). Educational Publishing Foundation.

Seefeldt, V. D., & Ewing, M. E. (1997). Youth sports in America: An overview. *President's Council on Physical Fitness and Sports Research Digest.* Fetterman, D. M., Kaftarian, S. J., & Wandersman, A. (1996). *Empowerment evaluation: Knowledge and tools for self-assessment and accountability*. Sage.

Fraser-Thomas, J. L., Côté, J., & Deakin, J. (2005). Youth sport programs: An avenue to foster positive youth development. *Physical Education & Sport Pedagogy*, 10(1), 19-40.

Giordani, B., Hodges, E. K., Guire, K. E., Ruzicka, D. L., Dillon, J. E., Weatherly, R. A., ... & Chervin, R. D. (2012). Changes in neuropsychological and behavioral functioning in children with and without obstructive sleep apnea following Tonsillectomy. *Journal of the International Neuropsychological Society*, *18*(02), 212-222.

Gestsdóttir, S., & Lerner, R. M. (2007). Intentional self-regulation and positive youth development in early adolescence: findings from the 4-h study of positive youth development. *Developmental psychology*, *43*(2), 508.

Goleman, D. P. (1995). Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement.

Guerra, N. G., & Bradshaw, C. P. (2008). Linking the prevention of problem behaviors and positive youth development: Core competencies for positive youth development and risk prevention. *New directions for child and adolescent development*, *2008*(122), 1-17.

Hoffman, L. (1981). *Foundations of family therapy: A conceptual framework for systems change*. Basic Books.

Keppel, G. (1991). *Design and analysis: A researcher's handbook* (3rd ed.). Englewood Cliffs: Prentice-Hall, Inc

Kohlberg, L. (1963). The development of children's orientations toward a moral order. *Human Development*, *6*(1-2), 11-33.

Kohlberg, L. (1969). *Stage and sequence: The cognitive-developmental approach to socialization*.

Kohlberg, L. (1981). *The Philosophy of Moral Development Moral Stages and the Idea of Justice /Lawrence Kohlberg*. Harper & Row.

Lerner, R. M. (2000). Developing civil society through the promotion of positive youth development. Journal of Developmental and Behavioral Pediatrics, Vol 21(1), Feb 2000, 48-49.

Lerner, R. M., Dowling, E. M., & Anderson, P. M. (2003). Positive youth development: Thriving as the basis of personhood and civil society. *Applied Developmental Science*, *7*(3), 172-180.

Lerner, R. M. (2004). *Liberty: Thriving and civic engagement among America's youth*. Sage Publications.

Lerner, R. M. (2005, September). Promoting positive youth development: Theoretical and empirical bases. *In White paper prepared for the workshop on the science of adolescent health and development, national research council/institute of medicine. Washington, DC: National Academies of Science*.

Lorion, R. P., & Sokoloff, H. (2003). Building assets in real-world communities. In *Developmental assets and asset-building communities* (pp. 121-156). Springer US.

Mahler, M. S., Pine, F., & Bergman, A. (1975). The psychological birth of the infant. *New York: Basic*.

Marshal, M. P., Friedman, M. S., Stall, R., King, K. M., Miles, J., Gold, M. A., Buksetin, O.G., Morse, J. Q. (2008). Sexual orientation and adolescent substance use: a meta-analysis and methodological review. *Addiction*, *103*(4), 546-556.

Martinek, T. J., & Hellison, D. R. (1997). Fostering resiliency in underserved youth through physical activity. *Quest, 49*(1), 34-49.

McCann, R., & Peters, C. D. (1996). At-Risk Youth the Phoenix Phenomenon. *Journal of Physical Education, Recreation & Dance*, *67*(2), 38-40.

Miller, R. G. (1966). *Simultaneous Statistical Inference*. Springer.

Petitpas, A. J., Van Raalte, J. L., Cornelius, A., and Presbrey, J. (2004) 'A life skills development program for high school student-athletes', *Journal of Primary Prevention*, 24: 325–34

Piaget, J. (1952). *The origins of intelligence in children* (Vol. 8, No. 5, pp. 18-1952). New York: International Universities Press.

Piaget, J. (1965). The stages of the intellectual development of the child. *Educational psychology in context: Readings for future teachers*, 98-106.

Pitter, R., & Andrews, D. L. (1997). Serving America's underserved youth: Reflections on sport and recreation in an emerging social problems industry. *Quest*, *49*(1), 85-99.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, cognition and personality*, *9*(3), 185-211.

Shek, D. T., Siu, A. M., & Lee, T. Y. (2007). The Chinese positive youth development scale: A validation study. *Research on Social Work Practice*, *17*(3), 380-391.

Sieng, M., Cloutier, S., Irimata, K. (2017). *Positive Youth Development Sustainability Scale (PYDSS): The development of a universal tool*. Manuscript submitted for publication.

Spaaij, R. (2009). Personal and social change in and through sport: Cross-cutting themes. *Sport in Society*, 12, 1265-1268.

Rice, John (1995), Mathematical Statistics and Data Analysis (Second ed.), Duxbury Press, ISBN 0-534-20934-3

Rice, John (2006), *Mathematical Statistics and Data Analysis*, Third Edition, Duxbury Advanced.

Rhodes, J. E. (2004). The critical ingredient: Caring youth-staff relationships in after-school settings. *New Directions for Student Leadership*, 2004(101), 145-161.

Rhodes, R. E., & Fiala, B. (2009). Building motivation and sustainability into the prescription and recommendations for physical activity and exercise therapy: the evidence. *Physiotherapy theory and practice*, 25(5-6), 424-441.

Wang, F., Orpana, H. M., Morrison, H., De Groh, M., Dai, S., & Luo, W. (2012). Long-term association between leisure-time physical activity and changes in happiness: analysis of the Prospective National Population Health Survey. *American journal of epidemiology*, *176*(12), 1095-1100.

Weissberg, R.; Caplan, M.; Sivo, P. (1989). A new conceptual framework for establishing school-based social competence promotion programs. Primary prevention and promotion in the schools., (pp. 255-296). Thousand Oaks, CA, US: Sage Publications, Inc, 452 pp.

Wolchik, S., West, S., Sandler, I. (2000). An experimental evaluation of theory-based mother and mother-child programs for children of divorce. J Consult Clin Psychol; 68:843–56.

Wolchik, S., Sandler, I. , Millsap, R. (2002). Six-year follow-up of preventive interventions for children of divorce. JAMA;288: 1874–81.

Wolchik S, Sandler, I., Weiss L., (2007). New beginnings: An empirically-based intervention program for divorced mothers to promote resilience in their children. In: Briesmeister JM, Schaefer CE, eds. Handbook of Parent Training: Helping Parents Prevent and Solve Problem Behaviors. New York, NY: John Wiley & Sons, 2007:25–62.

Zidanšek, A. (2007). Sustainable development and happiness in nations. *Energy*, *32*(6), 891-897.

SUMMARY

This dissertation explored the following research gaps: 1) the lack of a universal assessment tool for Positive Youth Development (PYD) programs and 2) the application of universal PYD tools and assessment of PYD programs in rural Asia and the Phoenix-metro area. Sustainability is about future generations and youth in these PYD programs represent that. We suggest that PYD programs are meant to provide long-term opportunities for youth to live meaningful, happy and sustainable lives. Yet, PYD program assessment tools lack sustainability and happiness measures representative of long-term impacts. In this research, we developed a globally applicable tool to effectively capture sustainability, happiness, and adapted PYD metrics that collaboratively promote future success of youth. Happiness actively helps create desirable outcomes and promotes growth in ego-resilience, which leads to increased global life-satisfaction (Lyumbomirsky et al., 2005; Frederickson et al, 2008). Happier people may be more sustainable, and vice versa (Cloutier et al., 2013). We applied the Positive Youth Development Scale (PYDSS) to two PYD programs in Thailand, *Brighter Thailand Foundation* (BTF)_and Scouts Camp, and one PYD program in the Phoenix-metro area, *Future for KIDS*.

The purpose of developing the PYDSS is to create a tool that can be used universally to measure PYD programs in multiple countries and cultures. As PYD programs continue to grow, there is a pressing need to develop globally applicable relevant measures of positive youth development (Dukakis et al. 2009). Creating a

universal tool for assessing PYD programs provides guidance for future empirical

research and for the evaluation of youth-serving programs seeking to promote PYD

domestically and internationally. In this research we compiled four manuscripts for

publication.

The first manuscript tested the hypothesis that data from different countries and

cultures can be universally applied in the development of an evaluation tool. To address

this, exploratory factor analysis (EFA) and confirmatory factor analysis (CFA) of PYD

programs were conducted with *Brighter Thailand Foundation* (Thai) and *Future for

KIDS* (PHX) from Grades 9-12 and 3-6 respectively. Model fit tests were also conducted

using both data sets to assess potential for universal application to different types of PYD

programming. The initial results indicate that several questions needed to be removed to

ensure greater model fit for both data sets and supports the notion of global application.

The EFA of the Thailand data indicate that 6 categories (constructs) were determined

closely resembling the PYDI and PYD literature, while the Phoenix data show only 3

categories. However, both datasets fit the six-factor model developed from the EFA

results for the Thai dataset, thus confirming the hypothesis that data from two different

countries can be applied to a universal tool. The CFA confirmed the proposed six-factor

solution with acceptable model fit, which suggests that the 5 C's with contribution and

happiness have a significant role in predicting PYD. Given high Cronbach values for both

datasets (Thai dataset = .951, Phoenix dataset = .952), it is possible that more questions

might be removed in future versions of the PYDSS to reduce the time required to

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complete the survey, while not compromising the quality of the results. Removal of additional questions could also result in better fit for the CFA model of the PYDSS.

The second manuscript compared two PYD programs in rural Thailand using the PYDSS (Sieng et al., In Review). PYD programs have not been extensively studied and evaluated in Southeast Asia as compared to developed countries like the United States. To address these concerns, we conducted a quasi-experimental design of two youth development programs that are made accessible to rural populations in Thailand. The control group participated in only the government mandatory Scouts camp and the intervention group participated in the voluntary leadership camp through the Brighter Thailand Foundation. Overall, findings from the PYDSS Scale provide evidence of change between pre-test and post-test scores for both PYD programs through a paired *t*-test analysis, indicating that both the BTF and Scouts program result in a significant improvement in PYD. Specifically, both programs are effective overall in producing positive change in students. The ANCOVA analysis failed to support the claim that the intervention group (BTF) had a significantly larger impact than the control group (Scouts). When considering the six different categories of the PYDSS, however, positive change was statistically significantly higher for the intervention group in four of the six categories (caring, character, connection, and contribution), while controlling for pre-test scores. The results could be attributed to the differences in methodologies and specific focus of each of the PYD programs. Also, various components of the setting and design might not be able capture nuances outside of the scope of the PYDSS. The analysis also shows significant differences in post-test scores between support networks and students

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as well as between males and females. The results highlight the importance of including support networks in this study and future studies. It is possible, given that students self-report, that responses are inflated/deflated as compared to the observations of their support networks. The differences in may also be consistent with cultural norms, but there could be additional insights if sexual orientation is also considered as this could be another factor that can help explain the influence on post-test scores (Marshal et al., 2008). In a rural Thai setting, individual opinions, especially in the form of a survey, are not that common as many decisions are made either for them from an authority figure (i.e. parents, teachers, elders) or done in a collective manner (i.e. peer influence).

The third manuscript was a qualitative analysis of the same two PYD programs in the second manuscript. Because of the limited qualitative studies in positive youth development, academics and practitioners are informed primarily by quantitative studies. In our study, we conducted a qualitative investigation with student participants in rural Thailand in two PYD programs and asked about their experience in the required Scouts camp and/or the voluntary BTF camp. We also interviewed support networks that worked directly with students that participated in both programs and recorded their perspectives. The PYDSS categories (competence/happiness, confidence, connection, caring, character, and contribution) were used as a foundation for coding with the addition of attitude and behavior change. Findings from our analysis show that the application of the PYDSS as a template for coding can be transferable to other PYD programs globally, but can be specifically applied to rural Thailand. The results in this study challenges the quantitative study results, particularly in the ANCOVA analysis in manuscript 2 that compared both

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the BTF program and Scouts program via pre T test/post T test questionnaires in several villages throughout Thailand. The results of this qualitative study and the quantitative study in manuscript 2 both demonstrate changes in participant outcomes in the *t*-test results.

The fourth manuscript assessed the effectiveness of *Future for KIDS*, a youth program that incorporates physical activity and activities and strategies meant to foster positive youth development by examining pre- and post-test data using the Positive Youth Development Sustainability Scale (PYDSS). *Future for KIDS* is an out-of-school time (OST) program in the Phoenix-metro area emphasizing academics, athletics, and ethics. The objective was to test the hypotheses that 1) PYD increases based on the *Future for KIDS* program, 2) that repeat students show statistically significant increases in PYD over first-time students, and 3) *Future for KIDS* program increases positive attitudes toward physical activity. A paired *t*-test analysis indicated a statistically significant improvement between pre-test and post-test PYDSS scores overall and attitudes towards physical activity. However, an ANCOVA analysis indicated no significant difference in overall change between the repeat and first-time students, when controlling for pre-test scores. The results supported our hypothesis of *Future for KIDS* improving PYDSS scores and attitude towards physical activity. The results of the PYDSS scale show that programs like *Future for KIDS*, which include a physical activity component in their program design, can successfully improve PYD of its participants in an out-of-school time program.

As youth age, the importance of their relationships becomes more significant overtime. Thus, incorporating all support network members including mentors, teachers, and parents via surveys or interviews provide insight on how in tune each individual is with respect to students. The program design is just as important as the program evaluation and should produce an environment that fosters positive sustainable growth. The present research addresses limitations present in both the empirical and applied realms of PYD. Although the PYD framework has become more popular among practitioners and academics, there is some disagreement on indicators of positive development that spans across research, policy, and practice on a global scale (Moore et al. 2004). Earlier work (Lerner et al. 2005; Phelps et al. 2009) has already established the existence of a valid measure of PYD across early adolescence in developed countries like the US. The research within this dissertation contributes to the validity and utility of the measure to adolescents in developing countries. Researchers examining application in a rural or urban setting globally can build upon this work as a valid measure to assess whether youth are developing positively and sustainably. This work also affords researchers the ability to consider the relationships among PYD and sustainability measures like happiness and how they relate to one another.

The PYDSS and additional program specific metrics (i.e. physical activity) can be used as a baseline assessment of a PYD program ensuring that all areas align with PYD theory and literature. Future studies should use the PYDSS and incorporate program specific metrics in a wide range of grade levels, culture, and countries to re-affirm universal application and sustainability impacts. While our research is limited by our

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sample, measurement model, and methodology, the support we have provided for the present conceptualization of PYD enhances our understanding of application in diverse settings domestically and internationally, and of how PYD might be studied longitudinally and the PYDSS may be used in application. Also, due to different results in the quantitative and qualitative assessment of the two PYD programs in rural Thailand, a mixed-methods approach is highlight recommended to ensure quality and accuracy of the data. Cultural nuances should also be considered on what is the most appropriate form of data collection aligning with cultural norms. Data should also be collected at multiple points in time to determine long-term effects. Therefore, future research should track youth and their support networks over long periods of time and in different countries and cultures to see how the program has impacted them. Essentially, longitudinal studies can capture sustainability of the programs impact on youth participants and their happiness after the PYD programs. The overall goal of PYD programs should be to promote happiness and life satisfaction (sustainability) and PYD tools like the PYDSS in addition to program specific metrics can track this over time.

REFERENCES

Ainsworth, M. D. S., Blehar, M. C., & Waters, E. (1978). *Patterns of attachment: A psychological study of the strange situation.*

Arnold, M. E., & Meinhold, J. L. The Positive Youth Development Inventory (2008).

Bédard, K., Bouffard, T., & Pansu, P. (2014). The risks for adolescents of negatively biased self-evaluations of social competence: The mediating role of social support. *Journal of adolescence*, *37*(6), 787-798.

Benson, P. L., Scales, P. C., Hamilton, S. F., & Sesma, A. (2006). *Positive youth development: Theory, research, and applications.* John Wiley & Sons, Inc..

Bowlby, J. (1973). *Attachment and loss, vol. II: Separation.* Basic Books.

Bowlby, J. (1979). On knowing what you are not supposed to know and feeling what you are not supposed to feel. *The Canadian Journal of Psychiatry/La Revue canadienne de psychiatrie.*

Bowlby, J. (1982). Attachment and loss: retrospect and prospect. *American journal of Orthopsychiatry*, *52*(4), 664.

Brandtstädter, J. (2006). Action perspectives on human development. In W. Damon (Series Ed.) & R. M. Lerner (Ed.), *Handbook of child psychology: Vol. 1. Theoretical models of human development* (6th ed., pp. 516 –568). Hoboken, NJ: Wiley.

Bumbarger, B. K., Perkins, D. F., & Greenberg, M. T. (2012). 22 Taking Effective Prevention to Scale. *Handbook of Prevention Science*, 433.

Caplan, M., Weissberg, R. P., Grober, J. S., Sivo, P. J., Grady, K., & Jacoby, C. (1992). Social competence promotion with inner-city and suburban young adolescents: effects on social adjustment and alcohol use. *Journal of consulting and clinical psychology*, *60*(1), 56.

Catalano, R. F., & Hawkins, J. D. (1996). A theory of antisocial behavior. *Delinquency and crime: Current theories (1996)*, *149*.

Catalano, R. F., Berglund, M. L., Ryan, J. A., Lonczak, H. S., & Hawkins, J. D. (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.

Catalano, R. F., Oesterle, S., Fleming, C. B., & Hawkins, J. D. (2004). The importance of bonding to school for healthy development: Findings from the Social Development Research Group. *Journal of School Health*, *74*(7), 252-261.

Cattell, R. B. (1966). The scree test for the number of factors. *Multivariate behavioral research*, *1*(2), 245-276.

Cloutier, S., Larson, L., & Jambeck, J. (2014). Are sustainable cities "happy" cities? Associations between sustainable development and human well-being in urban areas of the United States. *Environment, development and sustainability*, *16*(3), 633-647.

Coˆteˊ, J. & Hay, J. (2002) Children's involvement in sport: a developmental perspective, in: J. M. Silva & D. E. Stevens (Eds) *Psychological foundations of sport* (Boston, MA, Allyn & Bacon), 484–502

Coˆteˊ, J. (1999) The influence of the family in the development of talent in sport, *The Sport Psychologist*,13, 395–417.

Coˆteˊ, J., Baker, J. & Abernethy, B. (2003) From play to practice: a developmental framework for the acquisition of expertise in team sport, in: J. Starkes & K. A. Ericsson (Eds) *Recent advances in research on sport expertise* (Champaign, IL, Human Kinetics), 89–114.

Coakley, J. (2011). Youth sports: What counts as "positive development?". *Journal of Sport and Social Issues, 35*(3), 306-324.

Cohen, J. (1988). Statistical power analysis for the behavioral sciences Lawrence Earlbaum Associates. *Hillsdale, NJ*, 20-26.

Cohn, M. A., Fredrickson, B. L., Brown, S. L., Mikels, J. A., & Conway, A. M. (2009). Happiness unpacked: positive emotions increase life satisfaction by building resilience. *Emotion*, *9*(3), 361.

Coie, J. D., Watt, N. F., West, S. G., Hawkins, J. D., Asarnow, J. R., Markman, H. J., ... & Long, B. (1993). The science of prevention: A conceptual framework and some directions for a national research program. *American psychologist*, *48*(10), 1013.

Cowen, E. L. (1994). The enhancement of psychological wellness: Challenges and opportunities. *American journal of community psychology*, *22*(2), 149-179.DeVellis, R. F. (1991). Guidelines in scale development. *Scale Development: Theory and Applications. Newbury Park, Calif: Sage*, *5191*.

Diener, E. D., Emmons, R. A., Larsen, R. J., & Griffin, S. (1985). The satisfaction with life scale. *Journal of personality assessment*, *49*(1), 71-75.

Dormody, T. J., Seevers, B. S., & Clason, D. L. (1993). Youth Leadership Life Skills Development Scale.

Dukakis, K., London, R. A., McLaughlin, M., & Williamson, D. (2009). Positive youth development: Individual, setting and system level indicators. *Issue Brief*.

Durlak, J. A., & Wells, A. M. (1997). Primary prevention mental health programs for children and adolescents: A meta-analytic review. *American journal of community psychology*, *25*(2), 115-152.

Ebstyne King, P., & Furrow, J. L. (2008, August). Religion as a resource for positive youth development: religion, social capital, and moral outcomes. In *Meeting of the Society for Research in Child Development, Apr, 2001, Minneapolis, MN, US; A previous version of this article was presented at the aforementioned conference.* (No. 1, p. 34). Educational Publishing Foundation.

Eccles, J., & Gootman, J. A. (Eds.). (2002). *Community programs to promote youth development*. National Academies Press.

Fetterman, D. M., Kaftarian, S. J., & Wandersman, A. (1996). *Empowerment evaluation: Knowledge and tools for self-assessment and accountability*. Sage.

Fraser-Thomas, J. L., Côté, J., & Deakin, J. (2005). Youth sport programs: An avenue to foster positive youth development. *Physical Education & Sport Pedagogy*, 10(1), 19-40.

Fredrickson, B. L., Cohn, M. A., Coffey, K. A., Pek, J., & Finkel, S. M. (2008). Open hearts build lives: positive emotions, induced through loving-kindness meditation, build consequential personal resources. *Journal of personality and social psychology*, *95*(5), 1045.

George, D., & Mallery, P. (2003). *SPSS for Windows step by step: A simple guide and reference. 11.0 update (4th ed.)*. Boston: Allyn & Bacon

Gestsdóttir, S., & Lerner, R. M. (2007). Intentional self-regulation and positive youth development in early adolescence: findings from the 4-h study of positive youth development. *Developmental psychology*, *43*(2), 508.

Giordani, B., Hodges, E. K., Guire, K. E., Ruzicka, D. L., Dillon, J. E., Weatherly, R. A., ... & Chervin, R. D. (2012). Changes in neuropsychological and behavioral functioning in children with and without obstructive sleep apnea following Tonsillectomy. *Journal of the International Neuropsychological Society*, *18*(02), 212-222.

Goleman, D. P. (1995). Emotional intelligence: Why it can matter more than IQ for character, health and lifelong achievement.

Guerra, N. G., & Bradshaw, C. P. (2008). Linking the prevention of problem behaviors and positive youth development: Core competencies for positive youth development and risk prevention. *New directions for child and adolescent development*, *2008*(122), 1-17.

Guest G. Applied thematic analysis Thousand Oaks, CA: Sage; 2012.

Hawkins, J. D., & Catalano, R. F. (1996). *Parents who care: A step by-step guide for families with teens.* San Francisco: Jossey-Bass/Pfeiffer.

Heck, K. E., & Subramaniam, A. (2009). *Youth development Frameworks. [Monograph].* Davis, CA: 4-H Center for Youth Development, University of California

Hoffman, L. (1981). *Foundations of family therapy: A conceptual framework for systems change.* Basic Books.

Hu, L. T., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural equation modeling: a multidisciplinary journal*, *6*(1), 1-55.

Huebner, E. S. (1991). Initial development of the student's life satisfaction scale. *School Psychology International*, *12*(3), 231-240.

Keppel, G. (1991). *Design and analysis: A researcher's handbook* (3rd ed.). Englewood Cliffs: Prentice-Hall, Inc

Kohlberg, L. (1963). The development of children's orientations toward a moral order. *Human Development*, *6*(1-2), 11-33.

Kohlberg, L. (1969). *Stage and sequence: The cognitive-developmental approach to socialization.*

Kohlberg, L. (1981). *The Philosophy of Moral Development Moral Stages and the Idea of Justice /Lawrence Kohlberg.* Harper & Row.

Lerner, R. M. (2000). Developing civil society through the promotion of positive youth development. Journal of Developmental and Behavioral Pediatrics, Vol 21(1), Feb 2000, 48-49.

Lerner, R. M. (2004). *Liberty: Thriving and civic engagement among America's youth.* Sage Publications.

Lerner, R. M. (2005, September). Promoting positive youth development: Theoretical and empirical bases. *In White paper prepared for the workshop on the science of adolescent health and development, national research council/institute of medicine. Washington, DC: National Academies of Science.*

Lerner, R. M., Dowling, E. M., & Anderson, P. M. (2003). Positive youth development: Thriving as the basis of personhood and civil society. *Applied Developmental Science*, *7*(3), 172-180.

Lorion, R. P., & Sokoloff, H. (2003). Building assets in real-world communities. In *Developmental assets and asset-building communities* (pp. 121-156). Springer US.

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The construct of resilience: A critical evaluation and guidelines for future work. *Child development*, *71*(3), 543-562.

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Lyubomirsky, S., & Lepper, H. S. (1999). A measure of subjective happiness: Preliminary reliability and construct validation. *Social indicators research*, *46*(2), 137-155.

Mahler, M. S., Pine, F., & Bergman, A. (1975). The psychological birth of the infant. *New York: Basic*.

Marshal, M. P., Friedman, M. S., Stall, R., King, K. M., Miles, J., Gold, M. A., Buksetin, O.G., Morse, J. Q. (2008). Sexual orientation and adolescent substance use: a meta-analysis and methodological review. *Addiction*, *103*(4), 546-556.

Martinek, T. J., & Hellison, D. R. (1997). Fostering resiliency in underserved youth through physical activity. *Quest, 49*(1), 34-49.

Masten, A. S. (2001). Ordinary magic: Resilience processes in development. *American psychologist*, *56*(3), 227.

Masten, A. S., & Garmezy, N. (1985). Risk, vulnerability, and protective factors in developmental psychopathology. In *Advances in clinical child psychology* (pp. 1-52). Springer US.

Mayer, J. D., & Salovey, P. (1993). The intelligence of emotional intelligence. *Intelligence*, *17*(4), 433-442.

McCann, R., & Peters, C. D. (1996). At-Risk Youth the Phoenix Phenomenon. *Journal of Physical Education, Recreation & Dance*, *67*(2), 38-40.

McKnight, C. G., Huebner, E. S., & Suldo, S. (2002). Relationships among stressful life events, temperament, problem behavior, and global life satisfaction in adolescents. *Psychology in the Schools*, *39*(6), 677-687.

Miller, R. G. (1966). *Simultaneous Statistical Inference*. Springer.

Moore, K. A., Lippman, L., & Brown, B. (2004). Indicators of child well-being: The promise for positive youth development. *Annals of the American Academy of Political and Social Science. Special Issue: Positive Development: Realizing the Potential of Youth, 591*, 125–145.

Nettle, D. (2005). An evolutionary approach to the extraversion continuum. *Evolution and Human Behavior*, *26*(4), 363-373.

Park, N. (2004). The role of subjective well-being in positive youth development. *The Annals of the American Academy of Political and Social Science*, *591*(1), 25-39.

Petitpas, A. J., Van Raalte, J. L., Cornelius, A., and Presbrey, J. (2004) 'A life skills development program for high school student-athletes', *Journal of Primary Prevention*, 24: 325–34

Phelps, E., Zimmerman, S., Warren, A. A., Jelicic, H., von Eye, A., & Lerner, R. M. (2009). The structure and developmental course of positive youth development (PYD) in early adolescence: Implications for theory and practice. *Journal of Applied Developmental Psychology, 30*(5), 571–584.

Piaget, J. (1952). *The origins of intelligence in children* (Vol. 8, No. 5, pp. 18-1952). New York: International Universities Press.

Piaget, J. (1965). The stages of the intellectual development of the child. *Educational psychology in context: Readings for future teachers*, 98-106.

Pitter, R., & Andrews, D. L. (1997). Serving America's underserved youth: Reflections on sport and recreation in an emerging social problems industry. *Quest, 49*(1), 85-99.

Rhodes, J. E. (2004). The critical ingredient: Caring youth-staff relationships in after-school settings. *New Directions for Student Leadership*, 2004(101), 145-161.

Rhodes, R. E., & Fiala, B. (2009). Building motivation and sustainability into the prescription and recommendations for physical activity and exercise therapy: the evidence. *Physiotherapy theory and practice*, 25(5-6), 424-441.

Rice, John (1995), Mathematical Statistics and Data Analysis (Second ed.), Duxbury Press, ISBN 0-534-20934-3

Rice, John (2006), *Mathematical Statistics and Data Analysis*, Third Edition, Duxbury Advanced.

Salovey, P., & Mayer, J. D. (1990). Emotional intelligence. *Imagination, cognition and personality, 9*(3), 185-211.

Schumacker, R. E., & Lomax, R. G. (2004). *A beginner's guide to structural equation modeling*. Psychology Press.

Seal, Nuananong. 2006. "Preventing Tobacco and Drug Use among Thai High School Students through Life Skills Training." *Nursing and Health Sciences* 8(3): 164–68.

Seefeldt, V. D., & Ewing, M. E. (1997). Youth sports in America: An overview. *President's Council on Physical Fitness and Sports Research Digest.*Fetterman, D. M., Kaftarian, S. J., & Wandersman, A. (1996). *Empowerment evaluation: Knowledge and tools for self-assessment and accountability*. Sage.

Seligman, M. E. (2011). *Learned optimism: How to change your mind and your life*. Vintage.

Shek, D. T., & Yu, L. (2011). A review of validated youth prevention and positive youth development programs in Asia. *International Journal of Adolescent Medicine and Health, 23*(4), 317-324.

Shek, D. T., Siu, A. M., & Lee, T. Y. (2007). The Chinese positive youth development scale: A validation study. *Research on Social Work Practice*, *17*(3), 380-391.

Sherman, S. G., Sutcliffe, C., Srirojn, B., Latkin, C. A., Aramratanna, A., & Celentano, D. D. (2009). Evaluation of a peer network intervention trial among young methamphetamine users in Chiang Mai, Thailand. *Social Science & Medicine*, *68*(1), 69-79.

Sieng, M., Cloutier, S., Irimata, K. (2017). *Application of the Positive Youth Development Sustainability Scale (PYDSS) in Rural Thailand: A quantitative analysis of two youth program.* Manuscript submitted for publication.

Sieng, M., Cloutier, S., Irimata, K. (2017). *Positive Youth Development Sustainability Scale (PYDSS): The development of a universal tool*. Manuscript submitted for publication.

Siriarunrat, Supit, Punyarat Lapvongwatana, Arpaporn Powwattana, and Prasit Leerapan. 2010. "Development of a Model for Parent-Adolescent Daughter Communication about Sexuality." *Southeast Asian Journal of Tropical Medicine and Public Health* 41(4): 961–72.

Sitarz, D. (1993). *Agenda 21: The Earth summit strategy to save our planet*. United States: Boulder, CO (United States); EarthPress.

Sommart, J., & Sota, C. (2013). The effectiveness of a school-based sexual health education program for junior high school students in Khon Kaen, Thailand. *Procedia-Social and Behavioral Sciences*, *91*, 208-214.

Spaaij, R. (2009). Personal and social change in and through sport: Cross-cutting themes. *Sport in Society*, 12, 1265-1268.

Tanaka, J. S. (1993). Multifaceted conceptions of fit in structural equation models. *Sage focus editions*, *154*, 10-10.

UN-DESA (2001). Energy for Sustainable Development of the Least Developed Countries in Africa. *New York: United Nations*.

Valois, R. F., Zullig, K. J., Huebner, E. S., & Drane, J. W. (2001). Relationship between life satisfaction and violent behaviors among adolescents. *American Journal of Health Behavior*, *25*(4), 353-366.

Veenhoven, R., & Ehrhardt, J. (1995). The cross-national pattern of happiness: Test of predictions implied in three theories of happiness. *Social Indicators Research*, *34*(1), 33-68.

Wang, F., Orpana, H. M., Morrison, H., De Groh, M., Dai, S., & Luo, W. (2012). Long-term association between leisure-time physical activity and changes in happiness:

analysis of the Prospective National Population Health Survey. *American journal of epidemiology*, *176*(12), 1095-1100.

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of personality and social psychology*, *54*(6), 1063.

Weissberg, R.; Caplan, M.; Sivo, P. (1989). A new conceptual framework for establishing school-based social competence promotion programs. Primary prevention and promotion in the schools., (pp. 255-296). Thousand Oaks, CA, US: Sage Publications, Inc, 452 pp.

Wolchik S, Sandler, I., Weiss L., (2007). New beginnings: An empirically-based intervention program for divorced mothers to promote resilience in their children. In: Briesmeister JM, Schaefer CE, eds. Handbook of Parent Training: Helping Parents Prevent and Solve Problem Behaviors. New York, NY: John Wiley & Sons, 2007:25–62.

Wolchik, S., Sandler, I. , Millsap, R. (2002). Six-year follow-up of preventive interventions for children of divorce. JAMA;288: 1874–81.

Wolchik, S., West, S., Sandler, I. (2000). An experimental evaluation of theory-based mother and mother-child programs for children of divorce. J Consult Clin Psychol; 68:843–56.

Zidanšek, A. (2007). Sustainable development and happiness in nations. *Energy*, *32*(6), 891-897.

APPENDIX A

CO-AUTHOR PERMISSION

I declare that I have obtained permission from the relevant co-authors for including four manuscripts as sections in this dissertation. They are:

Scott Cloutier (Manuscripts 1, 2, 3, and 4)

Katherine Irimata (Manuscripts 1, 2, and 4)

Tiffany Le (Manuscript 3)

Maria Gutierrez (Manuscript 3)

APPENDIX B

IRB EXEMPT LETTER

ASU Knowledge Enterprise Development

EXEMPTION GRANTED

Scott Cloutier
Sustainability, School of
-
Scott.Cloutier@asu.edu

Dear Scott Cloutier:

On 1/11/2016 the ASU IRB reviewed the following protocol:

Type of Review:	Initial Study
Title:	Tools for Evaluation of Positive Youth Development Programs: A case study in rural Thailand
Investigator:	Scott Cloutier
IRB ID:	STUDY00003349
Funding:	Name: Graduate Education
Grant Title:	
Grant ID:	
Documents Reviewed:	• AboutBTF.pdf, Category: Recruitment Materials; • BTF Camp Curriculum, Category: Resource list; • Social Network Tool, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Control Survey, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • Focus Group Questions, Category: Measures (Survey questions/Interview questions /interview guides/focus group questions); • HRP-502a-TemplateConsentSocialBehavioral_01-09-15_Control.docx, Category: Consent Form; • Assent-Forms_Control.doc, Category: Consent Form; • About BTF, Category: Recruitment materials/advertisements /verbal scripts/phone scripts; • BTF_CampApplication.docx, Category: Screening forms;

	• Global Leadership Camp Curriculum 2013 - Revised (1).doc, Category: Recruitment Materials; • Dr Scott Cloutier IRB, Category: Non-ASU human subjects training (if taken within last 3 years to grandfather in); • Activity Analysis Tool, Category: Measures (Survey questions/Interview questions/interview guides/focus group questions); • HRP-503a-TEMPLATE_PROTOCOL_SocialBehavioralV02-10-15.docx, Category: IRB Protocol; • Interview Questions, Category: Measures (Survey questions/Interview questions/interview guides/focus group questions); • GPSA Research Grant Application.PDF, Category: Sponsor Attachment; • Arizona State University Mail - IRB request.pdf, Category: Other (to reflect anything not captured above); • HRP-502a-TemplateConsentSocialBehavioral_01-09-15_Intervention.docx, Category: Consent Form; • Assent-Forms_Intervention.doc, Category: Consent Form; • Intervention Survey, Category: Measures (Survey questions/Interview questions/interview guides/focus group questions);

The IRB determined that the protocol is considered exempt pursuant to Federal Regulations 45CFR46 (1) Educational settings on 1/11/2016.

In conducting this protocol you are required to follow the requirements listed in the INVESTIGATOR MANUAL (HRP-103).

Sincerely,

IRB Administrator

cc: Michael Sieng
        Michael Sieng

APPENDIX C

BTF STUDENT SURVEY ENGLISH VERSION

Name_____ Gender _____

School Name _____ Grade__ ____

STUDENT

Instructions: Each statement has two parts. For each question please rate your level of agreement with each statement first by how you felt BEFORE the program, and now by how you feel AFTER the program.

Please check your agreement (X, /,✓) below: 1) Strongly Disagree 2) Disagree 3) Neutral 4) Agree 5) Strongly Agree

	Before the Program					Now (After the Program)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I like to learn new things										
2. I am a creative person										
3. I can manage my emotions										
4. I have goals in my life										
5. I know what I want to be when I grow up										
6. It is important for me to do the right thing										
7. It is important for me to do my best										
8. It is important that others can count on me										
9. If I promise to do something I can be counted on to do it										
10. I have people in my life I look up to and admire										
11. I have many different types of friends										
12. My friends care about me										
13. I feel connected to my friends										
14. I feel connected to my teachers										
15. I feel connected to my parents										
16. When others need help, I help them										
17. It is easy for me to know how others feel										
18. I try to encourage others when they are not as good at something as me										
19. I can be counted on to help if someone needs me										
20. I care about the feelings of my friends										
21. I feel good about my grades in school										
22. I am satisfied with how I look										
23. I feel like I am worth something										

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	Before the Program					Now (After the Program)				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
24. I feel accepted by my friends										
25. I have close friendships										
26. I take an active role in my community										
27. I am someone who gives to benefit others										
28. I like to work with others to solve problems										
29. I have things I can offer to others										
30. It is important for me to try and make a difference in the world										
31. I am happy at home										
32. I am happy at school										
33. I am happy in this program										
34. I am happy with the people in my life										
35. I am satisfied with my life										
36. *I thought this program would be safe*/ I felt this program was safe										
37. *I thought I would learn something new*/ I learned something new in this program										
38. *I wanted to do this program by choice*/ I would do this program again if I had the opportunity										
39. *My friends recommended this program*/I would recommend this program to my friends										
40. *I thought this program would change my life*/ This program changed my life										

41. What were your favorite activity/activities?

_____
_____

42. What was your least favorite activity?

_____
_____

43. Do you have any comments or suggestions?

_____

_____

APPENDIX D

BTF STUDENT SURVEY THAI VERSION

STUDENT

คำสั่ง: แบบสำรวจนี้แบ่งออกเป็นสองส่วน คือ ก่อนเข้าร่วมโครงการ และ หลังเข้าร่วมโครงการ โปรดให้คะแนนตามระดับ ดังต่อไปนี้ (X, /, ✓)
1) ไม่เห็นด้วยอย่างยิ่ง 2) ไม่เห็นด้วย3)เป็นกลาง4) เห็นด้วย 5) เห็นด้วยอย่างยิ่ง ให้ตอบคล้องกับความเป็นจริงมากที่สุด

	ก่อนเข้าร่วมโครงการ					หลังเข้าร่วมโครงการ				
	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	เป็นกลาง	เห็นด้วย	เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	เป็นกลาง	เห็นด้วย	เห็นด้วยอย่างยิ่ง
1. ฉันชอบเรียนรู้สิ่งใหม่ๆ										
2. ฉันเป็นคนที่มีความคิดสร้างสรรค์										
3. ฉันสามารถควบคุมอารมณ์ได้										
4. ฉันมีเป้าหมายในชีวิต										
5. ฉันรู้ว่าฉันอยากจะทำอาชีพอะไร										
6. ฉันให้ความสำคัญในการทำสิ่งที่ถูกต้อง										
7. ฉันทำทุกสิ่งอย่างเต็มความสามารถของฉัน										
8. คุณคิดว่ามันสำคัญไหมในการช่วยเหลือผู้อื่น										
9. เมื่อฉันสัญญาว่าจะทำสิ่งใดแล้ว ฉันทำได้ตามที่ฉันพูด (ฉันไม่ผิดคำพูด)										
10. ฉันมีคนที่ฉันเคารพและชื่นชม										
11. ฉันมีเพื่อนมากและหลากหลาย										
12. เพื่อนของฉันห่วงใยฉัน										
13. ฉันรู้สึกใกล้ชิดกับเพื่อนของฉัน										
14. ฉันรู้สึกใกล้ชิดกับครูของฉัน										
15. ฉันมีความรู้สึกใกล้ชิดกับพ่อแม่										
16. ฉันเสนอตัวที่จะช่วยเหลือผู้อื่นทุกครั้งที่มีโอกาส										
17. ฉันเข้าใจความรู้สึกของผู้อื่นได้ง่าย										
18. ฉันให้กำลังใจผู้ที่ด้อยกว่าฉัน										
19. ผู้อื่นสามารถพึ่งพาฉันได้										
20. ฉันแคร์ความรู้สึกของเพื่อนของฉัน										

	ก่อนเข้าร่วมโครงการ					หลังเข้าร่วมโครงการ				
	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	เป็นกลาง	เห็นด้วย	เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วยอย่างยิ่ง	ไม่เห็นด้วย	เป็นกลาง	เห็นด้วย	เห็นด้วยอย่างยิ่ง
21. ฉันภูมิใจในความสามารถทางวิชาการของฉัน										
22. ฉันพอใจในรูปร่างหน้าตาของฉัน										
23. ฉันคิดว่าฉันเป็นคนที่ไม่มีค่า										
24. เพื่อนๆยอมรับฉัน										
25. ฉันมีเพื่อนสนิท										
26. ฉันมีบทบาทสำคัญในชุมชนของฉัน										
27. ฉันสามารถทำประโยชน์ให้แก่ผู้อื่นได้										
28. ฉันชอบทำงานเป็นทีมในการแก้ไขปัญหาต่างๆ										
29. ฉันมีความสามารถพอดีที่จะช่วยเหลือผู้อื่นได้										
30. ฉันพยายามทำให้โลกนี้ดีขึ้น										
31. ฉันมีความสุขที่บ้าน										
32. ฉันมีความสุขที่โรงเรียน										
33. ฉันมีความสุขที่ค่ายนี้										
34. ฉันมีความสุขกับผู้คนในชีวิตของฉัน										
35. ฉันพอใจกับชีวิตของฉัน										
36. ฉันรู้สึกปลอดภัยในค่ายนี้										
37. ฉันคิดว่าจะได้เรียนรู้สิ่งใหม่ๆ ในค่ายนี้										
38. ฉันจะเข้าค่ายนี้อีกครั้งถ้าฉันได้มีโอกาส										
39. ฉันจะแนะนำค่ายนี้ให้เพื่อนของฉันทำ										
40. ฉันคิดว่าค่ายนี้จะเปลี่ยนแปลงชีวิตของฉัน										

41. คุณชอบกิจกรรมอะไรบ้างในค่ายนี้

_____

_____

_____

42. คุณอยากเปลี่ยนกิจกรรมอะไรบ้างในค่ายนี้

_____
_____
_____
_____

43. คุณมีความคิดเห็นหรือคำแนะนำรึป่าว

_____
_____
_____
_____

APPENDIX E

FUTURE FOR KIDS STUDENT SURVEY

FUTURE for KIDS

Name_____ Gender _____

Program Location_____ School Name _____ Grade ____

STUDENT

Instructions: Each statement has two parts. For each question please rate your level of agreement with each statement first by how you felt BEFORE the program and how you feel AFTER the program.

Please mark your agreement below: 1) Strongly Disagree 2) Disagree 3) Neutral/Unsure 4) Agree 5) Strongly Agree

	Before the Program						After the Program				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
1. I like to learn new things											
2. I am a creative person											
3. I can manage my emotions											
4. I have goals in my life											
5. I know what I want to be when I grow up											
6. It is important for me to do the right thing											
7. It is important for me to do my best											
8. It is important that others can count on me											
9. If I promise to do something I can be counted on to do it											
10. I have people in my life I look up to and admire											
11. I have many different types of friends											
12. I feel connected to my friends											
13. I feel connected to my teachers											
14. My friends care about me											
15. I feel connected to my mentor											
16. When others need help, I help them											
17. It is easy for me to know how others feel											
18. I try to encourage others when they are not as good at something as me											
19. I can be counted on to help if someone needs me											
20. I care about the feelings of my friends											
21. I feel good about my grades in school											
22. I am satisfied with how I look											

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	Before the Program						After the Program				
	Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree		Strongly Disagree	Disagree	Neutral	Agree	Strongly Agree
23. I feel like I am worth something											
24. I feel accepted by my friends											
25. I have close friendships											
26. I take an active role in my community											
27. I am someone who gives to benefit others											
28. I like to work with others to solve problems											
29. I have things I can offer to others											
30. It is important for me to try and make a difference in the world											
31. I am happy at home											
32. I am happy at school											
33. I am happy in this program											
34. I am happy with the people in my life											
35. I am satisfied with my life											
36. I enjoy going to school											
37. I get help with my homework at home											
38. Someone reads to me at home											
39. I want to read more at home											
40. I have books to read at home											
41. I enjoy physical activity											
42. I like to try new physical activity											
43. I want to be more physically active.											
44. I want to be like my mentor and volunteer in my community											
45. *I think this program will be safe*/ I felt this program was safe											
46. *I think I will learn something new*/ I learned something new in this program											
47. *I want to do this program by choice*/ I would do this program again if I had the opportunity											
48. *My friends recommended this program*/I would recommend this program to my friends											
49. *I think this program will change my life*/ This program changed my life											

50. What were your favorite activity/activities in this program?

_____
_____
_____
_____
_____

51. What was your least favorite activity in this program?

_____
_____
_____
_____
_____

52. What can you tell us about your mentor?

_____
_____
_____
_____
_____