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Exploring the Relationship Between Program Experience and Youth Developmental Outcomes

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Program quality is an important topic for improving out-of-school time youth development programs. High levels of program quality may contribute to enhanced positive youth development outcomes. This paper explores aspects of program quality in the California 4-H Youth Development Program and its relationship to positive youth development outcomes. Results indicated few demographic differences in program quality as experienced and reported by youth. Youths who reported higher levels of program quality also reported higher levels of positive youth development outcomes. Emotional safety and relationship building, two aspects of program quality, were the most consistent predictors of positive youth development outcomes. Youth development programs should assess their current program quality practices to look for needs, especially related to emotional safety and relationship building. Further, program administration and staff should model critical aspects of program quality for direct service providers.

Keywords: program quality, youth program experience, 4-H, positive youth development

Introduction

The practice and scholarship of youth development have grown tremendously in the past three decades. Positive youth development (PYD) has been embraced as a guiding principle to understand, improve, and evaluate programs (Roth & Brooks-Gunn, 2016). One key element of the growing body of literature is the relationship between youth development outcomes and the program components believed to influence those outcomes (Hirsch et al., 2010; Smischney et al., 2018; Tracy et al., 2016; Yohalem & Wilson-Ahlstrom, 2010). The term *program quality* is used to characterize a set of program features and adult practices—and the implementation of these features—to achieve youth development outcomes. While the published empirical literature has expanded, Roth and Brooks-Gunn (2016) caution still that “empirical evidence that links specific program features to youth outcomes ... is rare” (p. 193). The majority of research on program quality has relied on observational protocols.

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This paper contributes to the empirical literature examining the relationship between program quality and youth development outcomes in the California 4-H Youth Development Program. We began with developing and implementing an organization-wide PYD framework, with professional development provided to volunteer educators. Volunteer educators facilitated programs and educational activities while enacting a set of practices from the PYD framework. Five years after adopting the framework, we assessed program quality and youth development outcomes as reported by young people, aged 9 to 18, through self-assessment surveys.

The Emergence of PYD Frameworks

PYD emerged as a framework in the 1990s. Early seminal research identified program components and adult practices hypothesized to improve program quality and support positive youth development. For example, the National Research Council and Institute of Medicine (NRCIM, 2002), a widely cited influential work, promoted eight program elements: (a) physical and psychological safety, (b) appropriate structure, (c) supportive relationships, (d) opportunities to belong, (e) positive social norms, (f) support for efficacy and mattering, (g) opportunities for skill building, and (h) integration of family, school, and community efforts. Another formative framework was the Search Institute's *Developmental Assets* (Benson, 2007), which described a set of twenty internal assets and twenty external assets, grouped into four categories, hypothesized to influence youths' well-being (Scales & Leffert, 2004). Benson et al. (2006) outlined general hypotheses: cumulative impact, relevant universality of the assets, and contexts matter in nurturing the assets.

Roth and Brooks-Gunn (2003) promoted the "big three" critical characteristics of youth development programs: (a) positive, sustained youth-adult relationships, (b) youth engagement in challenging and authentic activities that build important life skills, and (c) opportunities for youths to serve in leadership roles in valued program and community activities. Similarly, Smith and Hohmann's (2005) Weikart Center Youth Program Quality Assessment tool (YPQA) assessed programs based on having (a) a safe environment for physical and emotional safety, (b) a supportive environment so youths feel welcomed and engaged, (c) interaction for youths to collaborate effectively and practice leadership skills, and (d) engagement in planning, reflection, brainstorming, and goal-setting. They found that youths' engagement and quality of interactions in youth programs relate to youths' safety, interest, growth, and skill building.

A Consensus Emerges

In the early 2010s, a consensus began to emerge on a list of program components important to support positive youth development (Smith et al., 2010). There was a shift from *if* to *why* programs make a difference and a desire to seek "understanding [of] what accounts for the variation in program effectiveness and what, if anything, can be done to improve the impact of less-effective programs" (Granger, 2010, pp. 442–443). While earlier research had shown that

out-of-school time youth programs positively impacted youth development, questions remained as to the relative influence of specific program features on youth development outcomes.

Building on Roth and Brooks-Gunn (2003), Lerner (2007) promoted the “big three” of youth programs while advancing the five C’s youth development outcome indicators (competence, confidence, connection, character, caring), and a sixth that progresses when the others are present: contribution (Lerner et al., 2013). An important work from this time was Durlak et al.’s (2010) research on assessing afterschool programs and youth outcomes based on four metrics (SAFE): (a) Sequenced: a connected and coordinated set of activities to achieve skill development, (b) Active: active forms of learning to help youth learn new skills, (c) Focused: at least one component devoted to developing personal or social skills, and (d) Explicit: target specific personal or social skills. Durlak et al. (2010) associated SAFE programs with increases in youths’ self-perceptions, bonding to school, positive social behaviors, and academic achievement.

The period also saw the emergence of measurement strategies. Yohalem and Wilson-Ahlstrom (2010) examined nine observational instruments and discovered almost all measured aspects of youth-adult relationships, program climate and setting (including emotional safety), youth engagement, social and behavioral norms, skill building opportunities, and activity structure and routines. They found, however, “more differences in terms of how quality is *measured* or how the instruments are structured and used, than we did in terms of how quality is *defined*” (Yohalem & Wilson-Ahlstrom, 2010, p. 354). The tools differed in who collects the data, level of inference required by the rater, rating scales, and psychometric properties.

Recent Literature

While there is a growing consensus about the features of high-quality programs, the specific mechanisms through which they realize outcomes are still in the early stages. Multiple frameworks have advanced to support out-of-school time youth development programs to guide their staff, yet do not provide detailed enough evidence on their relative weight and importance in achieving youth development outcomes. However, there is some consistent evidence that critical components include relationships between adults and youths (i.e., developmental relationships), a sense of belonging, and involvement in/with the community.

Kuperminc et al. (2019) tested a systems model of program quality as reported by staff and young people in the Boys and Girls Club program. They found that staff teamwork, community engagement, and staff identifying with youths’ experiences associate with youths’ perceptions of quality. Akiva et al. (2013) focused their work on young people’s sense of belonging and cognitive engagement in organized activities during out-of-school time programs. They found that increased youths’ attendance in programs and staff practices of welcoming and active-skill-building are associated with an increased sense of belonging and cognitive engagement. In terms of content type, arts and enrichment activities positively associate with youths’ sense of belonging and cognitive engagement, whereas academic and free choice activities were not.

Other work has focused on community involvement. Ramey et al. (2018) looked at young people's civic engagement as an indicator for PYD. They found that positive program features and youth-adult partnerships, which were identified elements of program quality in out-of-school time programs, related to youth's greater sociopolitical empowerment and sense of community. They also related positive program features to youth's civic engagement. Youth-adult partnership relates to youth's sense of community belonging and support.

Arnold (2018) and Arnold and Gagnon (2019) advanced a relational framework examining the relationships between thriving, program context, and outcomes. In the model, the developmental context (sparks, program quality, and developmental relationships) mediated by youth thriving (challenge and discovery, hopeful purpose, transcendent awareness, pro-social orientation, positive emotionality, and intentional self-regulation) contributes to development outcomes (social competence, personal standards, connection, contribution, academic attitudes, confidence, and caring).

The growth of published literature in PYD is now affording opportunities to conduct meta-analyses; however, the few published articles provided mixed results. While Durlak et al. (2010) found increases in youth development outcomes, a later meta-analysis of 30 studies found no significant association between SAFE programs and academic outcomes or behavioral outcomes (Lester et al., 2020).

Methodologies to Assess Program Quality

The prevalent methodology to assess program quality has been observational. For example, Tracy et al. (2016) reported on an observational tool, the Assessment of Program Practices Tool (APT), that measures supportive social environment (welcoming, supportive, positive relations), program organization and structure (space, program offerings, behavior guidance), and opportunities for engagement in learning and skill building (autonomy, leadership, participation, homework support, pedagogy). An internal observer from the program and an external observer rated each item on a 4-point scale.

Only a handful of studies employed self-assessment strategies to ask youths to report on program quality. For example, Smischney et al. (2018) used a youth self-report post-test Likert-scale survey with 22-items asking youths to rate program quality on five of eight components from the NRCIM (2002) report. Kataoka and Vandell (2013) reported on a youth self-report survey of 23-items asking participants about their feelings of emotional support from adult staff, positive relationships with peers, and opportunities for autonomy.

The Case for the Present Study

There are several gaps in the scholarly literature we sought to address in the present study. Methodologically, researchers assessing program quality have predominately relied on

observational protocols. We used a youth self-report survey instead of a third-party observational tool to assess young people's program experience.

Contextually, the prevailing research typically focuses on afterschool program contexts, with paid staff as the direct educator. Some youth development programs place volunteers in the direct educator role. Volunteers, on average, have a longer tenure in the program, are older than the average afterschool line staff, and oversee their own children besides other people's children, which may lead to more personal investment (Culp et al., 2005; Loblely, 2008; White & Arnold, 2003). We explored program quality and youth development outcomes within the California 4-H Youth Development Program (CA 4-H), with adult volunteers as the educators.

Organizationally, large-scale studies have often sampled across organizational boundaries (Akiva et al., 2013). The disadvantage of doing so is that each organization may offer a distinct PYD framework, instructions regarding desired practices, and cultural norms on the implementation of program features. Granger (2010) argued that there is a need to explore intentional quality improvement efforts through professional development interventions. We report on an effort to improve program quality through the development of an organization-wide youth development framework, followed by professional development for volunteers.

In summary, we sought to contribute to three gaps in the scholarly literature linking program quality to youth development outcomes in out-of-school time (1) using self-report measures, (2) where adult volunteers led programs within (3) one organizational context with intentional professional development.

4-H Youth Development Program

The 4-H Youth Development Program relies on over 500,000 adult volunteers to serve nearly 6 million young people annually across the United States (U.S. Department of Agriculture [USDA], n. d.). The 4-H Youth Development Program is administered by Cooperative Extension, a partnership between the USDA, 100 public Land-grant universities, and local governments (USDA, n.d.). In 2019, the CA 4-H Youth Development Program reached approximately 150,000 young people between the ages of 5 and 18, where nearly 6,500 youth volunteers and 14,500 adult volunteers delivered programs.

In 2012, CA academics developed a program framework (Dogan et al., 2012) informed by NRCIM (2002) and Community Action Framework for Youth Development (Connell & Gambone, 2002; Gambone et al., 2002). The framework specified youth development practices and educational practices and their theorized relationship to youth development and educational outcomes. They provided professional development to local staff and volunteers on adapting programs to incorporate the practices. We used data from 2017 and 2018 – five years after adopting the framework – to explore relationships between the practices and expected outcomes. The research questions we sought to address included:

- (1) What do CA 4-H youths report for their program experience, and does it vary by youths' demographics?
- (2) Is there a difference in youth developmental outcomes between high and low program experience?
- (3) Which subscales of program experience are the best predictors of youth developmental outcomes?

We hypothesized there would be no differences in program experience based on demographics; program experience would not vary by age, years in 4-H, ethnicity, race, age, residence type, or gender. We also hypothesized that youths reporting a more positive experience would have higher scores on youth developmental outcomes than youths reporting a less positive experience.

As outlined in the CA 4-H program framework, safety, relationship building, and youth engagement are foundational aspects on which volunteer educators are expected to focus before integrating the more advanced aspects such as skill building, awareness of self and others, and teaching methods. Therefore, it is likely that most youths experience foundational features then the advanced features. We hypothesized program experience subscales related to safety, relationship building, and youth engagement would be stronger and more consistent predictors of youth developmental outcomes than program experience scales that include skill building, awareness of self and others, and teaching methods. Relatedly, Arnold (2018) outlined that thriving indicators mediate program quality effects on youth development outcomes. Therefore, we hypothesized program experience would have more consistent effects on similar thriving indicators (e.g., PYD, growth mindset) than more distal youth development outcomes (e.g., academic effort, self-esteem).

Methods

Participants included 971 CA youths (aged 9 to 18) who participated in a 4-H club during the 2017-2018 program year. We collected data from youths near the end of the program year. Youths completed surveys online using the 4-H Online Record Book (ORB; Lewis & Worker, 2016), Qualtrics, or paper and pencil. We invited all youths aged 9 to 18 and enrolled in a 4-H club the opportunity to complete the surveys. Each survey (i.e., the measure of program experience and the different PYD outcomes) in ORB or Qualtrics were individual surveys that youths could complete at their own pace. Youths did not have to complete all the surveys at the same time. Youths who completed paper and pencil copies had select surveys to complete rather than being given every survey. Youths did not have to complete any question or survey they did not want to, resulting in varying sample sizes for each survey. All surveys used were self-report. We present youths' demographics in Table 1. Demographics reflect youths enrolled in the community club program statewide. The University of California, Davis approved the study.

Table 1. Demographics for Participants Aged 9-18 Years

Demographic Variable	Participants (N = 971)		
	n	%	
<i>Gender</i>			
	Female	643	66.2
	Male	328	33.8
<i>Ethnicity</i>			
	Non-Hispanic or Latino	809	83.3
	Hispanic or Latino	162	16.7
<i>Race</i>			
	White	738	76.0
	Black or African-American	7	0.7
	Asian	29	3.0
	American Indian or Alaska Native	9	0.9
	Native Hawaiian or other Pacific Islander	4	0.4
	Multiple Races	69	7.1
	Undetermined	115	11.8
<i>Residence Type</i>			
	Farm	242	24.9
	Town (non-farm, rural, population <10,000)	200	20.6
	Town or city (population 10,000 - 50,000)	219	22.6
	Suburb of city (population > 50,000)	187	19.3
	Central city (population > 50,000)	123	12.7
	Mean (S.D.)		
<i>Age of child</i>			12.30 (2.35)
<i>Years in 4-H</i>			4.70 (2.36)

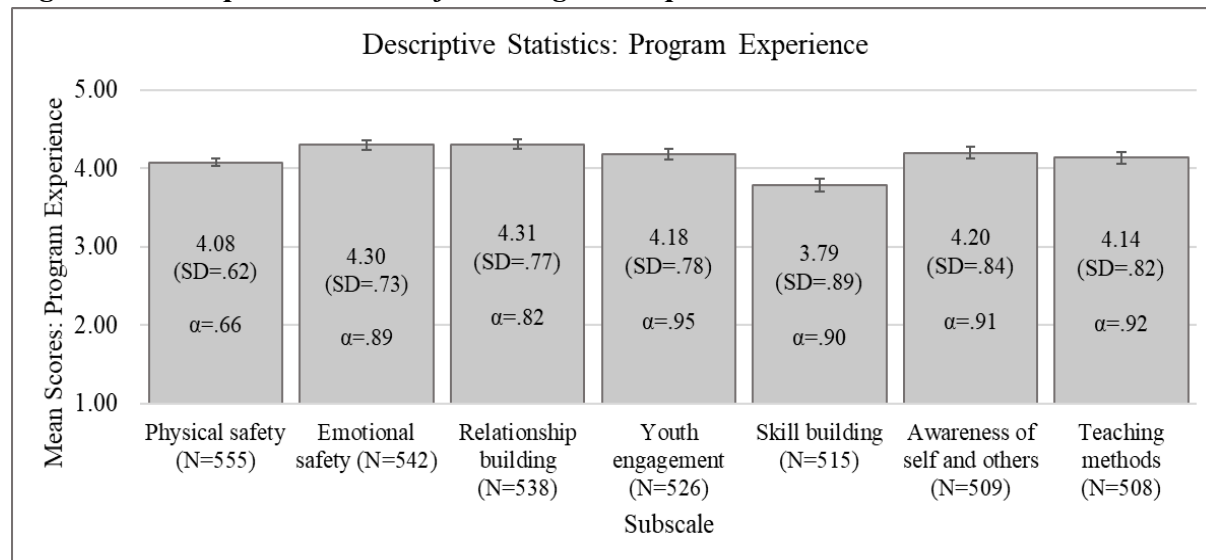
Measures

Program Experience

CA 4-H Academic Coordinators developed a measure of program experience. Items were adapted from existing scales (Thrive Foundation for Youth, personal communication, 2014; Zeldin et al., 2014) or developed for this survey. There were 53 questions within nine subscales: (1) physical safety (“The place where 4-H meets is safe and clean”), (2) emotional safety (“I think youth in 4-H respect each other”), (3) relationship building (“Adults in 4-H support me when I try something new”), (4) youth engagement (“I have a say in planning the activities in 4-H”), (5) skill building (“Adults in 4-H make new tasks simpler so that I can complete them”), (6) awareness of self and others (“I interact with youth who are different than me in 4-H”), (7) teaching methods (“4-H gives me time for hands on activities”), (8) community involvement (“4-H gives me opportunities to be a part of my community”), and (9) extended learning (“4-H gives me the opportunity to do things like public speaking, record keeping, field days, or being a Junior or Teen Leader”). We created a mean composite score for the first seven subscales. All items were on a five-point Likert-type scale with response options of 1 = *Strongly Disagree* to 5 = *Strongly Agree* or 1 = *Never* to 5 = *Most of the time*. The last two subscales comprised only one item asking youths about their exposure to opportunities in these areas. A full list of items is

in Appendix A, as well as more detailed information about the source of the items. Figure 1 presents descriptive information about each subscale of the program experience survey. Correlations among the subscales ranged from 0.37 to 0.80 (see Appendix B).

Figure 1. Descriptive Statistics of the Program Experience Subscales



Note. Error bars are two times the standard error. SD=standard deviation. α =Cronbach's alpha.

Youth Developmental Outcomes

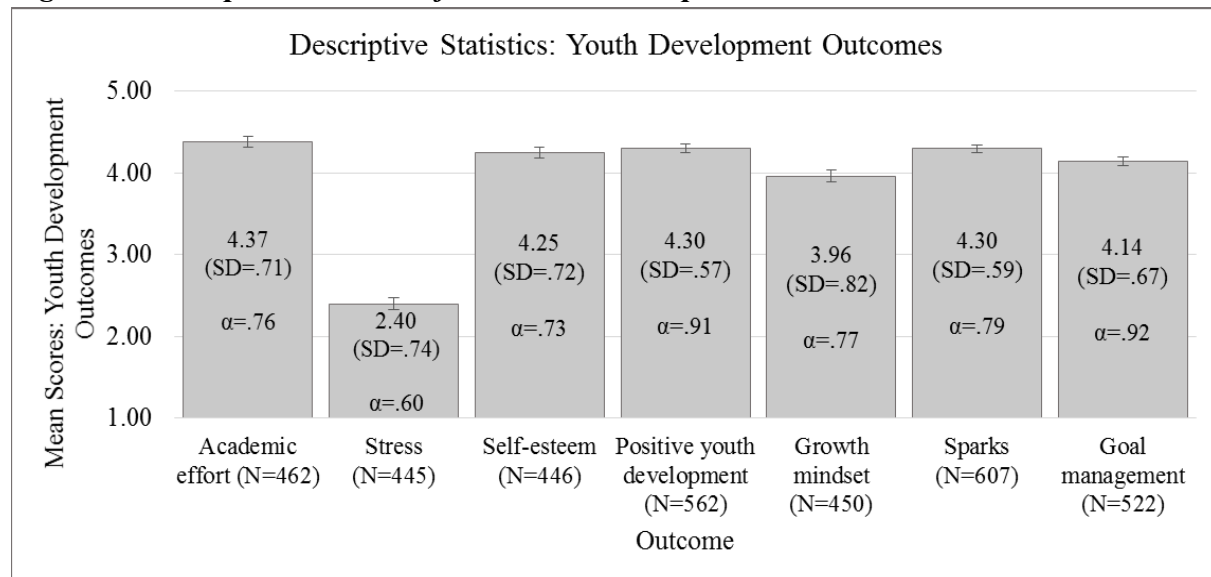
In the present paper, we included seven youth developmental outcomes specified by the CA 4-H Program Framework (Dogan et al., 2012); a full list of items is in Appendix A. We measured:

- *Academic effort* using four items related to academics and academic performance adapted from the Tufts Study of Positive Youth Development (Lerner et al., 2013). An example item is “I try hard in school.”
- *Stress* using four items adapted from the Perceived Stress Scale (Cohen et al., 1983). An example item is “In the last month, how often have you felt that you were unable to control the important things in your life?”
- *Self-esteem* using four items from the Rosenberg Self-Esteem Scale (Rosenberg, 1965). An example item is “I feel that I have a number of good qualities.”
- *Positive youth development* using 30 items assessing six C's of PYD: caring (“Other people's feelings matter to me”), character (“It is important for me to do the right thing”), competence (“I make good decisions”), confidence (“In general, I think I am a worthy person”), connection (“My friends care about me”), and contribution (“It is important for me to try and make a difference in the world” (Arnold et al., 2012). The original source contains 55 items, broken down into the six C's. CA 4-H uses 30 of these items, five items per C.

- *Mindset* using four items related to growth mindset (Blackwell et al., 2007). An example item is “You can always greatly change how intelligent you are.”
- *Sparks* using four items related to “sparks” or passion. We adapted these items from Vallerand et al. (2003). An example item is “The new things that I discover with my spark(s) allow me to appreciate it even more.”
- *Goal management* using ten items related to goal setting and management. Example items are “I work hard to reach my goals” and “When I’m working on a goal, I check my progress to make sure I will reach my goal.” Nine items were based on scales from Freund and Baltes (2002), Gestsdóttir and Lerner (2007), and Zimmerman et al. (2007). The Likert response option version was developed and validated by Geldhof et al. (2014). The last item was developed by the first and fourth authors. We adapted some items from the original wording for clarity for youths.

Figure 2 presents descriptive statistics for each outcome. Scales are an average of the items, except for the PYD items; the PYD scale is an average of each C within the measure. All items were on a five-point Likert-type scale of 1 = *Strongly Disagree* to 5 = *Strongly Agree*, except for stress, which was on a scale of 1 = *Never* to 5 = *Very Often*.

Figure 2. Descriptive Statistics of the Youth Development Outcomes



Note. Error bars are two times the standard error. SD=standard deviation. α=Cronbach’s alpha.

Analyses

Prior research has shown that youths in their first year of 4-H experience many challenges (e.g., Hamilton et al., 2014; Lewis et al., 2015). To separate out the unique experience of first-year 4-Hers, we excluded youths who had just completed their first year in 4-H and only included youths who had been in 4-H for at least two years. We calculated effect sizes as Cohen’s *d* (Cohen, 1988).

To test our first research question, “*What do CA 4-H youths report for their program experience, and does it vary by youths’ demographics?*” we calculated correlations, independent samples *t*-tests, and ANOVAs to test for differences among the program experience subscales by youths’ demographics (age, years in 4-H, ethnicity, race, residence, and gender).

To test our second research question, “*Is there a difference in youth developmental outcomes between high and low program experience?*”, we split participants into either low program experience or high program experience groups. We defined the low group as any youth with a mean score of 3.99 or lower on the program experience subscale and the high group as having a mean score of 4.00 or higher on that subscale. This high group meant that for every item within a particular subscale, youths responded with at least “agree” on every item, indicating only positive responses to every item in the subscale. For the low group, having a mean score of 3.99 or lower meant that on at least one item within a subscale, youths responded with “strongly disagree,” “disagree,” or “neither agree nor disagree.” We used the neutral response of “neither agree nor disagree” as a negative experience (or lack of a positive experience). We made the low and high group for each program experience subscale; each youth could be low in some subscales and high in others. As a sensitivity analysis, we also created the low and high groups by finding the median for each subscale. Youths with a score below the median were in the low group, and youths who scored at or greater than the median were in the high group.

We ran independent samples *t*-tests to compare mean scores between the low and high groups on the seven youth developmental outcomes. The physical safety subscale measures a concept different from the other subscales of the program experience scale because it focuses on a physical environment, whereas the other subscales focus more on the emotional environment or experience. For that reason, we excluded physical safety from these analyses.

To test our third research question, “*Which subscales of program experience are the best predictors of youth developmental outcomes?*”, we ran seven multiple regression models, one for each youth developmental outcome. In each model, all program experience subscales were included as independent variables. We again excluded physical safety. To assess for multicollinearity, we examined the Variance Inflation Factor (VIF) for each model. While there is no universal “cutoff” value for a VIF that is considered problematic, common guidelines suggest cutoff values of 5 or 10 for detecting multicollinearity (e.g., Kutner et al., 2005).

Results

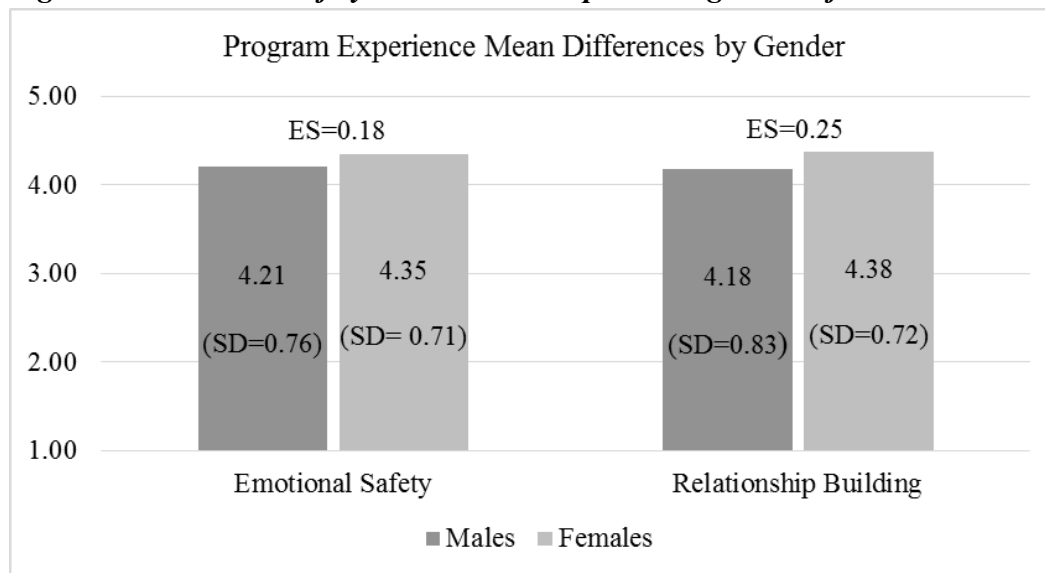
RQ1: What do CA 4-H youths report for their program experience, and does it vary by youths’ demographics?

As hypothesized, there were no significant correlations between age or years in 4-H with any program experience subscale. In addition, there were no significant differences in program

experience means found using *t*-tests and ANOVAs test for differences in ethnicity, race, and residence type (e.g., farm, suburb, city).

Results of *t*-tests revealed females reported significant higher emotional safety ($M=4.35$, $SD=0.71$) compared to males ($M = 4.21$, $SD = 0.76$; $t(540) = -2.06$, $p < .05$), as well as significantly higher relationship building (females $M = 4.38$, $SD = 0.72$; males $M = 4.18$, $SD = 0.83$; $t(329.51) = -2.65$, $p < .01$). Figure 3 presents means for males and females for both outcomes.

Figure 3. Emotional Safety and Relationship Building Means for Males and Females

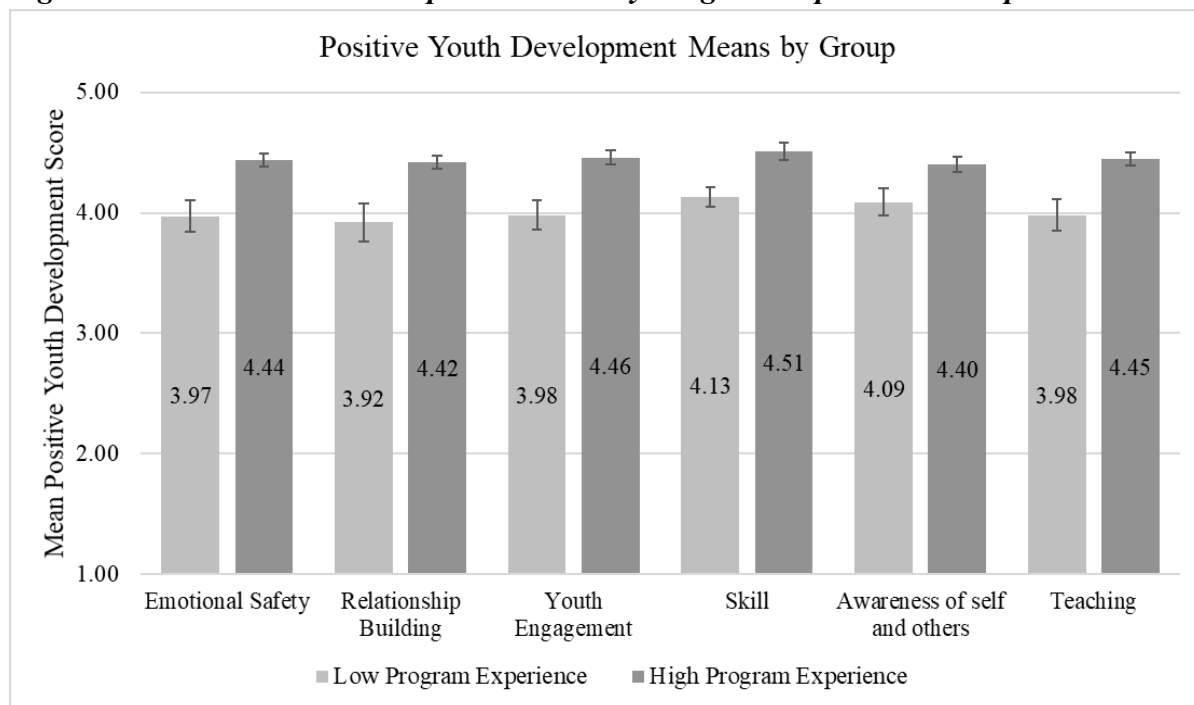


Note. SD=standard deviation. ES=effect size (Cohen's *d*).

RQ2: Is there a difference in youth developmental outcomes between high and low program experience?

As hypothesized, independent samples *t*-tests revealed that for all subscales of the program experience scale, youths in the high (more positive program experience) group had significantly higher scores on the youth developmental outcomes than youths in the low group. The exception was stress, in which case the high program experience group was significantly lower than those in the low experience group, indicating that those in the high program experience group had lower stress. Results were similar for the sensitivity analysis that divided youths into low and high groups based on the median split.

Figure 4 presents mean scores on the PYD outcome for the low and high groups. For nearly every subscale of the program experience scale, the PYD outcome had the largest effect sizes between the low and high groups (ranging from 0.55 to 0.81). The exception was for the awareness of self and others subscale, for which mindset and sparks had larger effect sizes. See Appendix C for full results.

Figure 4. Positive Youth Development Means by Program Experience Group

Note. Error bars are two times the standard error of the mean.

RQ3: Which subscales of program experience are the best predictors of youth developmental outcomes?

We ran multiple regression analyses to test which program experience subscales were the best predictors of the seven youth developmental outcomes (see Table 2). As hypothesized, emotional environment and relationship building were the most consistent predictors. Youth engagement was the only subscale that did not predict any outcomes when controlling for the other subscales and was the only variable with a VIF over 4 (range for all variables was 1.84 to 4.35).

We hypothesized program experience indicators related to safety, relationship building, and youth engagement would have more consistent effects on youth development outcomes, and that these effects would be on thriving indicators (e.g., PYD, growth mindset) more than distal youth outcomes (e.g., academic effort, self-esteem). There was partial support for this hypothesis; in most cases, more program experience indicators were significant predictors of thriving indicators than distal outcomes. Further, the R^2 values for the thriving outcomes were equal or greater to the R^2 values for the distal outcomes.

Table 2. Multiple Regression Results

	Emotional Safety	Relationship Building	Youth Engagement	Skills	Awareness of Self and Others	Teaching Methods	R ²	Model Information
Academic Effort (N=358)	0.09	0.25**	0.09	-0.12	0.06	0.12	0.20	$F(6, 352)=14.38^{***}$
Stress (N=373)	-0.14	-0.13	-0.06	0.09	0.00	-0.11	0.10	$F(6, 367)=6.61^{***}$
Self Esteem (N=373)	0.16*	0.31**	0.06	-0.17*	0.02	0.02	0.16	$F(6, 367)=11.95^{***}$
PYD (N=397)	0.22**	0.18*	-0.04	-0.04	0.03	0.25**	0.29	$F(6, 391)=26.41^{***}$
Mindset (N=379)	0.01	0.35***	-0.03	-0.14	0.25***	-0.07	0.16	$F(6, 373)=11.34^{***}$
Sparks (N=505)	0.09*	0.04	-0.06	0.34***	0.14***	0.33***	0.62	$F(6, 499)=132.94^{***}$
Goals (N=375)	0.29***	-0.00	-0.12	0.12	0.09	0.13	0.20	$F(6, 369)=15.36^{***}$

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

Discussion

Overall, our findings were consistent with prior research on program quality, indicating that program quality influences youth development outcomes (e.g., Blazeovski & Smith, 2007; Durlak et al., 2010; Grossman et al., 2007; Smith & Hohmann, 2005; Vandell et al., 2005). We showed that youths reporting positive program experience also reported more positive youth development outcomes. These findings demonstrate that high-quality program experiences correlate with positive developmental outcomes.

Program experience varied little across youths' demographics, except for gender. This lack of differences in demographics showed program experience is similar amongst youths in the club program, regardless of age, years in 4-H, race/ethnicity, and residence type. We found only two differences in that females reported significantly higher emotional safety and relationship building. Emotional safety is similar to constructs such as "belonging" and "inclusiveness." The emotional safety and relationship building scales include questions that address youth-adult partnerships and relationships. Prior research is mixed in terms of gender differences for belonging in youth development programs (e.g., Akiva et al., 2013; Hensley et al., 2007) and youth-adult partnerships (e.g., Jones & Perkins, 2006; Ramey et al., 2017). However, multiple studies showed the positive impact of social interactions and relationship building during out-of-school time programs, whether among youths or between youths and adults, on positive youth outcomes (e.g., Grossman et al., 2007; Pierce et al., 2010; Ramey et al., 2018; Smith & Hohmann, 2005; Vandell et al., 2005). This was consistent with our findings on emotional safety and relationship building as consistent predictors for positive youth development outcomes. Further research should examine this construct in the various environmental contexts of youths' lives to better understand how boys and girls may experience emotional safety, belongingness, and relationships in different ways. This could result from the CA 4-H program having a higher population of females both as members and as adult volunteers; having more male adult volunteers might improve relationships for boys (Jones & Perkins, 2006). We should note that although we found gender differences, the effect sizes of these differences were small (Cohen, 1988).

Multiple regressions showed that foundational aspects of program experience (e.g., safety, relationships) were more consistent predictors of youth development outcomes than advanced aspects (e.g., skill building, awareness of self and others, teaching methods). This suggests the importance of establishing good relationships and feelings of belonging for youths when they enter the program before focusing on building their skills and ensuring they have multiple learning methods. This is consistent with Maslow's theory of motivation that posits a person must have basic needs met (such as safety, belonging) before they can reach their full potential (Maslow, 1970).

In addition, an emerging model of 4-H, the 4-H Thriving Model (Arnold & Gagnon, 2019), proposes that the context of a youth's experience in 4-H (i.e., program quality, caring youth-adult relationships, and a place to explore their sparks) predicts developmental outcomes (e.g., academics, competence, responsibility), which are mediated by thriving indicators (e.g., growth mindset, goal management). This model also suggests that youth engagement in the program is a moderator of the relationship between program quality and thriving indicators (Arnold, 2018) rather than a predictor of youth outcomes as modeled in our study. Our current measures do not measure all the aspects of Arnold's (2018) model; therefore, we could not test this theory in this paper. Future research should test Arnold's (2018) model to see if what we have identified as "outcomes" here may actually be thriving indicators that predict program outcomes such as academic effort and the C's of PYD and to test youth engagement as a moderator for program quality effects. Future research on Arnold's model could also examine the role of predictors versus moderators on youth developmental outcomes.

Limitations

Data were self-report, which can be biased (Podsakoff et al., 2003). Future research might supplement with observational tools to assess both program quality and youth development outcomes, in addition to youths' self-reports to triangulate the data. Using observational tools would require training observers to use the tool and limit our sample to volunteers interested and engaged in this type of project. In addition, some volunteers may feel that we may use the tool to "judge" their performance as a volunteer. Using surveys allowed us to reach youths across the state rather than in certain areas and include all youths, not just those with educators willing to be observed. In addition, we did not collect data from adults to compare their perspectives and responses to the youths in their club or project.

Further research should gather data from both youths and adults to identify the gaps and overlap between perspectives. This can help guide improvement in program quality. Diversity of the sample was limited, which may explain why we did not find demographic differences. The sample, however, represented youths enrolled in the community club program. We did not collect data on family demographics, such as socioeconomic status, which may have also influenced youths' experiences in 4-H. Finally, the Variance Inflation Factor for "youth engagement" was over 4 in all models, suggesting that it may lead to multicollinearity issues; the correlation of youth engagement with relationship building was $r = 0.80$. Future research should be sure to disentangle these two aspects of program quality.

Implications

For program staff and volunteer educators that are directly providing programming to youths, we recommend they assess their current practices in all program activities. The focus should be promoting emotional safety, relationship building, and belonging. This recommendation aligns with recommendations for youth-serving programs following the COVID-19 pandemic (Arnold

& Rennekamp, 2020). Further, we also recommend that at least two volunteers facilitate learning experiences. Co-educators can support one another in creating warm, welcoming spaces for youths. For example, one volunteer might focus on planning project meetings and learning activities, while a co-volunteer focuses on the environment and atmosphere.

We showed that high-quality program experiences correlate with positive developmental outcomes. The 4-H program relies heavily on volunteers to provide positive program experiences (Borden et al., 2014; Van Horn et al., 1999). Several recent studies have found that volunteers report a desire to learn more about educational practices, positive youth development, and program organization and communication (e.g., Homan et al., 2020; Kok et al., 2020; White et al., 2020). Offering professional development opportunities on program quality and developmental outcomes could further improve these outcomes for youth. We also recommend that the youth-serving organization staff provide volunteers with explicit information on how to promote these practices. This may involve trainings, fact sheets, hands-on practice, or suggestions following an observation. Having simple, concrete ways to implement these practices can help ensure volunteers and staff do so. For example, to promote emotional safety, make sure each youth is greeted by name upon arrival. Organizational staff and administration should also model these practices, for example, creating inclusive environments for volunteers, or building warm, nurturing relationships among volunteers.

Volunteers might use our study results to facilitate discussions with youth. It would be valuable to hear what youths have to say about their experiences with emotional safety, relationship building, and belonging. We know that the act of talking about safety increases safety factors for youth. It would be reasonable to believe that talking about relationships and belonging would also increase those factors for youth. Suggested strategies might include discussion groups of youth from homogenous demographics (e.g., gender identity, socio-economic status, ethnicity) as well as diverse groups of youth. Further work to develop a series of inquiry-based questions to explore youth perceptions and experiences of these practices is a worthwhile endeavor.

Conclusion

Our study provides evidence that having a positive out-of-school time program experience (i.e., improving program quality) relates to better positive youth development outcomes. Youth development programs should work toward providing the most high-quality programming they can for youths. In addition, programs should focus on making sure that youths feel a sense of safety and belonging as well as develop caring relationships in the program. These aspects of program quality are essential for ensuring positive youth development.

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Appendix A

Measures Information

Reverse coded items are marked with an asterisk (*). For all measures, scales are an average of the items, except for the “positive youth development” items; this scale is an average of subscales within the measure.

Program Experience

CA 4-H Academic Coordinators developed a measure of program experience. Items were adapted from existing scales (Thrive Foundation for Youth, personal communication, 2014; Zeldin et al., 2014) or developed for this survey. There are 53 questions within nine subscales: (1) physical safety, (2) emotional safety, (3) relationship building, (4) youth engagement, (5) skill building, (6) awareness of self and others, (7) teaching methods, (8) community involvement, and (9) extended learning. The last two subscales comprise only one item asking youth about their exposure to opportunities in these areas. We created a mean score for the remaining subscales.

Physical Safety					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The place where 4-H meets is safe and clean	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The place where 4-H meets has enough room for everybody	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The place where 4-H meets is comfortable	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know what to do in case of an emergency during 4-H meetings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Water is available at 4-H meetings and events	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Soda is available at 4-H meetings and events*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sugar-sweetened beverages are available at 4-H meetings and events (lemonade, fruit punch, etc.)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Emotional Safety					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
4-H meetings start on time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The adults in 4-H have everything ready for the meeting when we start	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please choose one answer	Never	Rarely	Sometimes	Often	Most of the time
I think youth in 4-H are kind to each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think youth in 4-H respect each other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other youth in 4-H support me when I try something new	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other youth in 4-H listen to me when I have something to say	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am not afraid that other youth would make fun of me if I spoke up in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel safe when I come to 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel comfortable sharing my experience with others in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I come to 4-H, I feel the adults are happy to see me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Relationship Building					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I feel like I belong in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel like I am included in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please select one answer	Never	Rarely	Sometimes	Often	Most of the time
If there is a disagreement among youth in 4-H, adults would solve it quickly	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adults in 4-H support me when I try something new	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Youth Engagement					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I think youth and adults trust each other in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think youth and adults learn a lot from working together in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think youth and adults respect each other in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think adults learn a lot from youth in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have a say in planning the activities in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think adults in 4-H take my ideas seriously	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am expected to voice my concerns when I have them in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I am encouraged to express my ideas and opinions in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please choose one answer	Never	Rarely	Sometimes	Often	Most of the time
I think adults in 4-H make sure everyone who wants to be included in activities and discussions is	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adults in 4-H think my opinion is important	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please choose one answer	Never	Rarely	Sometimes	Often	Most of the time
Adults in 4-H make sure I had a lot of time to plan activities with my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think youth in 4-H have opportunities to lead an activity	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Community Involvement					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
4-H gives me opportunities to be a part of my community, such as having guest speakers at meetings and volunteering	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Skill Building					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
Adults in 4-H notice when I am trying hard to complete a task	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adults in 4-H make new tasks simpler so that I can complete them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please choose one answer	Not at all	A little bit	Somewhat	Quite a bit	A lot
The 4-H program helped me find my spark(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
The 4-H program helped me get better at my spark(s)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please choose one answer	Never	Rarely	Sometimes	Often	Most of the time
In the 4-H program, how often do you work to get better at your spark(s)?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please choose one answer	Not at all	A little bit	Somewhat	Quite a bit	A lot
Adults in 4-H ask me about the different activities I've tried at the program	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is enough time at the end of each activity in 4-H to think about what we have done	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Adults in 4-H ask me for suggestions to make 4-H better	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Awareness of Self and Others					
Please choose one answer	Never	Rarely	Sometimes	Often	Most of the time
I talk to people who have different skills than I do in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I interact with youth who are different than me in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I interact with people who are of the opposite sex in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I interact with people who look different than I do in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Teaching Methods					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
There is enough time for me to learn things on my own in 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
4-H gives me the opportunity to plan and do service learning activities (like a neighborhood clean-up)	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Please select one answer	Never	Rarely	Sometimes	Often	Most of the time
4-H gives me time for hands-on activities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Please select one answer	Never	Rarely	Sometimes	Often	Most of the time
4-H gives me time to think about the activities we do	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There are lots of opportunities for me to learn from my friends at 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
There is enough time for me to learn from adults at 4-H	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Extended Learning					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
4-H gives me the opportunity to do things like public speaking, record keeping, field days, or being a Junior or Teen Leader	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Academic Performance

This measure contains four items related to academics and academic performance in youth. Items were adapted from the Tufts Study of Positive Youth Development (Lerner et al., 2013).

Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I often come to class unprepared (homework unfinished, forget to bring books or other materials)*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I complete homework on time	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I actively take part in group (class) discussions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try hard in school	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Stress

This measure contains four items related to stress in youth. These items are adapted from the Perceived Stress Scale (Cohen et al., 1983).

You may choose not to answer any question you are not comfortable with. Rate yourself on how you've been feeling during the last month by answering the questions below	Never	Almost never	Sometimes	Fairly often	Very often
In the last month, how often have you felt that you were unable to control the important things in your life?*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the last month, how often have you felt confident about your ability to handle your personal problems?*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the last month, how often have you felt that things were going your way?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In the last month, how often have you felt difficulties were piling up so high that you could not overcome them?	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Self-Esteem

This measure contains four items related to self-esteem in youth from the Rosenberg Self-Esteem Scale (Rosenberg, 1965).

Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I feel that I am a person of worth, at least equal to others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel that I have a number of good qualities	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel I do not have much to be proud of*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
All in all, I am inclined to feel that I am a failure*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Positive Youth Development

This measure contains the 6 C's of positive youth development: Caring, Character, Competence, Confidence, Connection, and Contribution (Arnold et al., 2012). The original source contains 55 items, broken down into the 6 C's as outlined below. CA 4-H currently utilizes only 30 of these items. The scale score was created as an average of the six subscales.

Competence					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I am a good student	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I make good decisions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel comfortable in social situations	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can handle problems that come up in my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can manage my emotions	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Character					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
It is important for me to do the right thing	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think it is important for me to be a role model for others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important for me to do my best	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important that others can count on me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
If I promise to do something I can be counted on to do it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Connection					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I have a wide circle of friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think it is important to be involved with other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My friends care about me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel connected to my teachers	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel connected to my parents	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Caring					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
It is easy for me to consider the feelings of others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I care about how my decisions affect other people	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I try to encourage others when they are not as good at something as me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Other people's feelings matter to me	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I care about the feelings of my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Confidence					
Please rate how strongly you agree or disagree with the following statements.	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I am satisfied with how I look	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I feel accepted by my friends	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
In general, I think I am a worthy person	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I know how to behave well in different settings	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I can do things that make a difference	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Contribution					
Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I am someone who gives to benefit others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I have things I can offer to others	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I believe I can make a difference in the world	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I care about contributing to make the world a better place for everyone	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
It is important for me to try and make a difference in the world	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Growth Mindset

This measure contains four items related to growth mindset (Blackwell et al., 2007).

Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
You can learn new things but you can't really change your basic intelligence*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You have a certain amount of intelligence and you really can't do much to change it*	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
You can always greatly change how intelligent you are	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No matter how much intelligence you have, you can always change it quite a bit	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Sparks

This measure contains four items related to “sparks” or passion. These items were adapted from Vallerand et al. (2003).

Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
The new things that I discover with my spark(s) allow me to appreciate it even more	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My spark(s) reflects the qualities I like about myself	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My spark(s) allows me to live a variety of experiences	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
My spark(s) is well integrated in my life	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Goal Management

This measure contains ten items related to goal setting and management. The first nine items were based on scales from Freund and Baltes (2002), Gestsdóttir and Lerner (2007), and Zimmerman et al. (2007). The Likert response option version was developed and validated by Geldhof et al. (2014). The last item was developed by CA 4-H Academic Coordinators. Items 4 and 8 were also adapted from the original wording for clarity.

Tell us how strongly you agree or disagree with the following statements	Strongly disagree	Disagree	Neither agree nor disagree	Agree	Strongly agree
I keep trying as many different options as are necessary to succeed at my goal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
For important things, I pay attention to whether I need to devote more time or effort	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I think about how I can reach my goal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I work hard to reach my goals	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I have started something that is important to me, but has little chance at success, I try even harder	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I decide upon a goal, I stick to it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When things don't work as usual, I look for other ways to achieve them	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When something doesn't work as well as usual, I look at how others do it	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
I always pursue goals one after the other	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
When I'm working on a goal, I check my progress to make sure I will reach my goal	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

Appendix B

Correlations of Study Measures

Correlations Among Program Experience Subscales

	Physical safety	Emotional safety	Relationship building	Youth engagement	Skill building	Awareness of self and others	Teaching methods
Physical safety	--	.48***	.51***	.55***	.44***	.37***	.52***
Emotional safety	.48***	--	.75***	.73***	.62***	.54***	.64***
Relationship building	.51***	.75***	--	.80***	.71***	.54***	.68***
Youth engagement	.55***	.73***	.80***	--	.78***	.58***	.78***
Skill building	.44***	.62***	.71***	.78***	--	.58***	.79***
Awareness of self and others	.37***	.54***	.54***	.58***	.58***	--	.66***
Teaching methods	.52***	.64***	.68***	.78***	.79***	.66***	--

*** $p < 0.001$

Correlations Among Youth Development Outcomes

	Academic effort	Stress	Self-esteem	Positive youth development	Growth mindset	Sparks	Goal management
Academic effort	--	-.31***	.44***	.51***	.31***	.34***	.36***
Stress	-.31***	--	-.52***	-.42***	-.34***	-.18***	-.28***
Self-esteem	.44***	-.52***	--	.49***	.46***	.29***	.33***
Positive youth development	.51***	-.43***	.49***	--	.39***	.45***	.68***
Growth mindset	.31***	-.34***	.46***	.39***	--	.27***	.30***
Sparks	.34***	-.18***	.29***	.45***	.27***	--	.45***
Goal management	.36***	-.28***	.33***	.68***	.30***	.45***	--

*** $p < 0.001$

Correlations Between Program Experience Subscales and Youth Development Outcomes

	Academic effort	Stress	Self-esteem	Positive youth development	Growth mindset	Sparks	Goal management
Physical safety	.33***	-.28***	.29***	.44***	.26***	.37***	.39***
Emotional safety	.38***	-.28***	.34***	.47***	.28***	.41***	.34***
Relationship building	.42***	-.28***	.37***	.47***	.37***	.35***	.30***
Youth engagement	.39***	-.27***	.32***	.45***	.26***	.34***	.34***
Skill building	.30***	-.20***	.21***	.40***	.18***	.36***	.34***
Awareness of self and others	.33***	-.21***	.24***	.38***	.32***	.34***	.31***
Teaching methods	.37***	-.25***	.26***	.47***	.22***	.38***	.40***

*** $p < 0.001$

Appendix C

Low and High Program Experience Outcome Means by Program Experience Subscale

	Academic effort						
	<u>Low Program Experience</u>			<u>High Program Experience</u>			Effect Size
	N	Mean	SD	N	Mean	SD	
Emotional safety	100	4.08	0.79	263	4.51	0.60	0.62
Relationship building	77	3.97	0.85	287	4.50	0.59	0.73
Youth engagement	106	4.08	0.79	256	4.52	0.59	0.63
Skill building	177	4.24	0.75	184	4.54	0.57	0.46
Awareness of self and others	98	4.12	0.79	262	4.49	0.61	0.52
Teaching methods	104	4.11	0.78	256	4.51	0.60	0.57

	Stress						
	<u>Low Program Experience</u>			<u>High Program Experience</u>			Effect Size
	N	Mean	SD	N	Mean	SD	
Emotional safety	100	2.71	0.71	276	2.28	0.71	-0.60
Relationship building	79	2.76	0.69	298	2.30	0.72	-0.65
Youth engagement	107	2.69	0.76	269	2.27	0.69	-0.57
Skill building	191	2.50	0.73	185	2.28	0.73	-0.31
Awareness of self and others	96	2.54	0.76	279	2.34	0.72	-0.28
Teaching methods	106	2.55	0.76	269	2.32	0.72	-0.31

	Self-esteem						
	<u>Low Program Experience</u>			<u>High Program Experience</u>			Effect Size
	N	Mean	SD	N	Mean	SD	
Emotional safety	100	3.95	0.83	276	4.37	0.66	0.56
Relationship building	79	3.87	0.90	298	4.36	0.65	0.63
Youth engagement	107	3.99	0.81	269	4.36	0.68	0.50
Skill building	191	4.17	0.77	185	4.35	0.69	0.25
Awareness of self and others	96	4.09	0.76	279	4.31	0.72	0.30
Teaching methods	106	4.05	0.83	269	4.34	0.68	0.38

	Positive youth development						
	<u>Low Program Experience</u>			<u>High Program Experience</u>			Effect Size
	N	Mean	SD	N	Mean	SD	
Emotional safety	106	3.97	0.67	296	4.44	0.48	0.81
Relationship building	84	3.92	0.74	319	4.42	0.47	0.79
Youth engagement	118	3.98	0.65	282	4.46	0.47	0.85
Skill building	205	4.13	0.60	195	4.51	0.48	0.70
Awareness of self and others	105	4.09	0.59	294	4.40	0.55	0.55
Teaching methods	114	3.98	0.71	285	4.45	0.45	0.79

Growth mindset							
	<u>Low Program Experience</u>			<u>High Program Experience</u>			Effect Size
	N	Mean	SD	N	Mean	SD	
Emotional safety	101	3.64	0.85	284	4.06	0.78	0.52
Relationship building	80	3.54	0.87	305	4.06	0.78	0.63
Youth engagement	110	3.68	0.84	272	4.06	0.79	0.46
Skill building	193	3.84	0.83	188	4.06	0.81	0.26
Awareness of self and others	98	3.56	0.80	282	4.08	0.79	0.65
Teaching methods	106	3.76	0.80	274	4.01	0.83	0.31

Sparks							
	<u>Low Program Experience</u>			<u>High Program Experience</u>			Effect Size
	N	Mean	SD	N	Mean	SD	
Emotional safety	101	3.99	0.66	278	4.43	0.52	0.74
Relationship building	82	4.04	0.70	297	4.38	0.54	0.55
Youth engagement	110	4.03	0.66	268	4.43	0.52	0.68
Skill building	190	4.14	0.60	188	4.48	0.53	0.60
Awareness of self and others	99	4.04	0.67	277	4.40	0.53	0.60
Teaching methods	106	4.00	0.67	270	4.43	0.51	0.73

Goal management							
	<u>Low Program Experience</u>			<u>High Program Experience</u>			Effect Size
	N	Mean	SD	N	Mean	SD	
Emotional safety	102	3.83	0.80	284	4.27	0.62	0.62
Relationship building	81	3.83	0.81	305	4.24	0.64	0.57
Youth engagement	109	3.81	0.77	275	4.29	0.62	0.69
Skill building	192	3.95	0.71	191	4.36	0.64	0.61
Awareness of self and others	98	3.89	0.71	284	4.25	0.68	0.51
Teaching methods	106	3.81	0.75	276	4.29	0.63	0.70