Assessing Changes in Attitudes Concerning Developmental Assets Among Selected Middle School Students

Joseph Visker, Carol Cox, J. Christian Banez, Sabiya Azim, Anna Wang, Nicole Dunsieth, and Ben Lasser

Abstract

A self-report instrument was used to assess trends over time in student views of Developmental Assets in a rural Missouri county where youth report high rates of substance use. Based on 2012 survey results, a community/school-based prevention coalition provided intensive prevention education curricula integrated into the district's afterschool program as well targeted asset-building events following the Developmental Assets Framework. Results comparing asset scores between the three years failed to provide sufficient evidence supporting the effectiveness of asset-related education and events. However, the results provide health educators with valuable needs assessment data. Conducting a trends analysis based on a positive youth development process can assist community/school-based coalitions in planning future curricula, programs, activities, and events to address the specific asset needs of their community youth.

Introduction

As an approach to youth programming that promotes healthy outcomes, positive youth development is correlated with educational success and reduced risk of engaging in unhealthy practices like drug use and violence. By exposing youth to supportive environments and experiences, programming based on this philosophy seeks to strengthen critical developmental competencies in youth including: life skills, confidence, caring, purpose, involvement, and connectedness

*Joseph Visker, PhD, MCHES®, FESG
Associate Professor
Department of Health Science,
Minnesota State University-Mankato,
Mankato, MN 56001
Email: joseph.visker@mnsu.edu
Carol Cox, PhD, MCHES®
Professor
Department of Health and Exercise Sciences,
Truman State University,
Kirksville, MO 63501
Email: ccox@truman.edu
J. Christian Banez, Student
Department of Health and Exercise Sciences,
Truman State University,
Kirksville, MO 63501
Sabiya Azim, Student
Department of Health and Exercise Sciences,
Truman State University,
Kirksville, MO 63501
Anna Wang, Student
Department of Health and Exercise Sciences,
Truman State University,
Kirksville, MO 63501
Nicole Dunsieth, Student
Department of Health and Exercise Sciences,
Truman State University,
Kirksville, MO 63501
Ben Lasser, Student
Department of Health and Exercise Sciences,
Truman State University,
Kirksville, MO 63501
*Corresponding Author

(Campbell, Trzeniewski, Nathaniel, Enfield, & Erebstein, 2013). It seems older youth report more connections and societal contributions, but these protective assets decline over middle school years. Having positive relationships with adult mentors as well as participation in outside-of -school activities, though, affects healthy youth development (Larson & Tran, 2014). A recent study confirmed that partaking in "positive youth development practices" improves the welfare of endangered young people (Sanders, Munford, Thimasam-Anwar, Liebenberg, & Ungar, 2015, p. 40).

Positive Youth Development and Developmental Assets

The most effective community-based positive youth development programming includes multiple categories of developmental competencies, promotes adult mentor relationships, and is implemented over a longer time period (Roth, Brooks-Gunn, Murray, & Foster, 2010). Those programs that are structured, actively involve participants, and explicitly focus on life skills improve behavioral and academic outcomes more than those program that do not (Durlak, Weissberg, & Pachan, 2010). For example, participation in arts activities for at-risk youth is linked with positive academic, behavioral, and civic engagement practices (Catterall, 2012). Further, adolescents who partake in arts programs display less misbehavior than non-participants (Respress & Lufti, 2006 as cited in Stevenson, Johnson Limón, & Reclosado, n.d.). Community service or service-learning following a positive youth development approach demonstrates positive social and emotional benefits for middle school youth (Chung & McBride, 2015). Emphasis on supportive relationships and community connections are also key components of successful community interventions for positive youth development (Lapalme, Bisset, & Potvin, 2015). Supportive, mentoring relationships with adults are associated with youth gaining developmental benefits from their community (Schwartz, Chan, Rhodes, & Scales, 2013). In addition, having caring parents or mentors from the community is associated with positive developmental outcomes, especially for at-risk and disadvantaged youth (Hamilton, 2014).

The Search Institute (2017a) defines "Developmental Assets" as "a set of skills, experiences, relationships, and behaviors that enable young people to develop into successful and contributing adults" (para.1). The developmental assets are comprised of both "Internal" and "External" assets (Search Institute, 2017b, p. 1). "External assets" include the attainment of "Support, Empowerment, Boundaries and Expectations, and Constructive use of Time" while "Internal assets" include "Commitment to Learning, Positive Values, Social Competencies, and Positive Identity" (Search Institute, 2017b, p. 1). A multitude of evidence exists showing the positive impact of the Developmental Assets on the wellbeing of youth (Search Institute, 2017c). Children and adolescents who retain a significant quantity of assets will more likely experience academic success, higher levels of personal health, and greater ability to avoid harmful situations (Search Institute, 2017c). Youth reporting sufficiently high numbers of assets spread across many of these categories seem to be protected the most from health and behavioral problems (Lenzi, Dougherty, Furlong, Sharkey, & Dowdy, 2015). On the opposite end of the spectrum, children and adolescents who possess fewer assets tend to participate in unhealthy behaviors more frequently than those who possess high numbers of assets (Search Institute, 2017c). Estimates from the Search Institute (2017c) indicate that young people across the United States possess approximately half of the Developmental Assets, and only a small fraction (11%) are classified as possessing a "high level of assets" (Search Institute, 2017c, para 3).

High-quality programming, regardless of the youth development model or framework, seems to improve school performance, decrease health risk behaviors, and improve self-efficacy in youth (Campbell et al., 2013). Community

coalitions in partnership with schools, especially working together in the afterschool setting, are recommended as a positive youth development strategy (Finn-Stevenson, 2014). Community-based prevention strategies lead by community coalitions help reduce youth substance use and violent behaviors by increasing assets and health-promoting factors (Fagan & Hawkins, 2012). It is recommended that prevention programs, though, address the specific health and behavioral needs of at-risk youth and their communities (Campbell et al., 2013).

Risky Substance Abuse Behaviors and County Youth

Currently, approximately 4.5% of Missouri youth report using illicit drugs (beyond Marijuana) in the past month. Alcohol was consumed by 12.2% of state youth with about 6.7% participating in binge drinking during the past month. In addition, approximately 6.1% of state youth indicated they smoked cigarettes in the past month (Missouri Behavioral Health Epidemiology Workgroup, 2019). One rural Northeast Missouri county residents possessed (at the time) some of the highest rates in the state for substance use treatment admissions for prescription drug, methamphetamine, alcohol, and marijuana use (Missouri Division of Behavioral Health and Substance Abuse and Mental Health Services Administration, 2015). In addition, almost half of middle school students in the county qualified (at the time) for free and reduced lunch, and truancy offenses and juvenile drug offenses in the county have increased since 2012 (Missouri Institute of Mental Health, 2014). Specifically, when a Developmental Asset-based survey was recently conducted for middle school-aged youth in the target county, respondents noted having "assets of positive values, positive identity, and social competencies" more so than others (Hackett, McManus, Woolman, & Stewart, 2014, para. 13). On the other hand, "constructive use of time, empowerment, and commitment to learning" scored the bottom most among this priority population (Hackett et al., 2014, para. 14). Furthermore, "neighbors monitoring youth behavior, reading for pleasure, and [community service]" were recognized as low-ranking assets (Hackett et al., 2014, para. 14). The purpose of this study was to assess changes over time (2012-2019) in the attitudes toward achievement of Developmental Assets (Search Institute, 2017b) among select at-risks students in rural Northeast Missouri.

Methods

Sample

In 2012, a total of 151 7th grade students responded to the survey. In 2016, 121 students in the same middle school completed the survey followed by 167 students in 2019. The demographics of the respondents were fairly similar over the sampling periods. Small fluctuations between the number of male and female respondents were noted in 2016 and 2019 samples. The majority of respondents recorded their ethnicity as non-Hispanic (80% or above for all three years). The racial makeup was not diverse with the sample primarily being made up of White/Caucasian respondents (over 70% for all three years) (see Table 1).

Instrument

The survey used for this study was derived from a 40-item checklist, originally developed by the Search Institute (2002). The primary shortcomings of using the original checklist were the existence of double-barreled items and the allowable response (check in the box) was considered superficial and did not adequately capture the respondents' attitudes toward each item. The final survey contained 50, five-point Likert-type items and were summated to acquire a total asset score. The remaining questions were designed to collect selected demographic variables. Internal consistency reliability was conducted on the instrument among the samples collected for all three years using Cronbach's alpha, which yielded satisfactory scores (α = 0.949 for 2012, α=0.938 for 2016, and α =.950 respectively).

Table 1
Demographics of respondents

Gender	Sample Year	n (%)	Race	Sample Year	n (%)
Male	2012	74 (49.0)	White/Caucasian	2012	120 (79.5)
	2016	72 (56.7)		2016	95 (74.8)
	2019	76 (45.5)		2019	120 (71.9)
Female	2012	75 (49.7)	Black/African American	2012	5 (3.3)
	2016	54 (42.5)		2016	8 (6.3)
	2019	82 (49.1)		2019	9 (5.4)
Ethnicity	**Sample Year**	**n (%)**	Arab/Middle Eastern Descent	2012	1 (0.7)
Hispanic	2012	12 (7.9)		2016	0 (0.0)
	2016	7 (5.5)		2019	1 (0.6)
	2019	22 (13.2)	Native American/ Alaskan Native	2012	2 (1.3)
Non-Hispanic	2012	130 (86.1)		2016	6 (4.7)
	2016	106 (83.5)		2019	1 (0.6)
	2019	135 (80.8)	Asian	2012	3 (2.0)
				2016	1 (0.8)
				2019	4 (2.4)
			Other	2012	6 (4.0)
				2016	4 (3.1)
				2019	7 (4.2)
			Two or More Races	2012	10 (6.6)
				2016	5 (3.9)
				2019	15 (9.0)

Note: Percentages not totaling 100% indicate missing data

Procedure

Results from the asset 2012 survey were used to guide a community/school-based coalition's intensive substance use and violence prevention interventions for the next four school years. The community/school-based prevention coalition followed the Developmental Assets Framework (Search Institute, 2017b) and implemented two evidenced-based prevention curricula each school year over four years for both elementary (puppet-based, prevention, and social-emotional learning-focused) and middle school students (computer-based, prevention, and social-emotional learning-focused) in the district's afterschool program. The interventions focused on maintaining supportive families as well as a concentrated emphasis on sustaining their strong anti-drug use perceptions, protective assets that were noted by 2012 respondents as being possessed in high numbers. In addition, curricula continued life skills training as positive identity and social competencies were noted in high numbers in a more recent asset survey of 7th grade respondents at this middle school (Hackett et al., 2014).

The community/school-based coalition's interventions also aimed to affect the assets reported in lower numbers by 2012 respondents. Lack of support from the community and neighbors monitoring youth behavior were noted; therefore, community members and young adults in the community were actively

involved in teaching and mentoring in the coalition's evidence-based afterschool curricular interventions. Community members as teachers and mentors brought active-learning strategies into the afterschool curricula using role-plays, drawing, and physical activity. Over the four years, eight large-scale, community-wide, asset-building events were also held that focused on community and community organizations' support for youth as well as community members and families planning and participating in the programs with the youth. In addition, curricula also focused on empowerment for healthy decision-making and included an emphasis on making learning fun as respondents to a more recent asset survey at this middle school noted empowerment and commitment to learning as being possessed in low numbers (Hackett et al., 2014). The survey was again distributed in both 2016 and 2019 to students in the target middle school during a selected class period. Results from the 2012 survey were then compared to results from the two additional sampling periods to observe any trends or changes over time.

Analysis

Descriptive statistics, including means and standard deviations, were calculated for all individual survey items as well as the summated scores. A one-way Analysis of Variance (ANOVA) used to compare mean scores between all three data collection years.

Results

Areas of Need and Areas of Success Between 2012 and 2016

After examining Developmental Asset scores over the first two sampling timeframes, multiple areas revealed continuous low scores (see Table 2). Results showed that respondents did not feel that they received support from neighbors between the 2012 (M=2.93, SD=1.26) and 2016 (M=3.33, SD=1.27). Further, mean scores showed that respondents did not feel that their neighbors took some responsibility for monitoring their behavior (M=2.44, SD=1.23 in 2012 and M=2.71, SD=1.23 in 2016). The data also indicated that respondents did not actively serve their community between 2012 (M=2.55, SD=1.18) and 2016 (M=2.86, SD 1.24). In regards to practices that would enhance both cognitive and artistic abilities, low scores were noted when respondents were asked to indicate the extent to which they read for pleasure at least three hours per week (M=2.86, SD=1.51 in 2012 and M=3.25, SD=1.43 in 2016). In addition, scores indicating that respondents participated in a minimum of three hours in music, theater, or arts were low between 2012 (M=3.06, SD=3.52) and 2016 (M=3.52, SD =1.43).

While the previously noted asset scores are concerning, the 2016 scores revealed multiple areas of accomplishment. Respondents indicated, between 2012 (M=4.39, SD =0.83) and 2016 (M=4.61, SD=0.69), their parents/guardians encouraged them to do well and that they wanted to do well in school (M=4.37, SD=0.88 in 2012 and M=4.64, SD=0.66). Moreover, high mean scores were noted in 2016 regarding respondents feeling it was imperative to abstain from alcohol (M=4.61, SD=0.79) and from drugs (M=4.68, SD=0.67).

Areas of Need and Areas of Success Between 2012 and 2019

Mean scores for two asset areas in the 2019 sample were higher than the two previous years. An improvement was found among students' feeling at ease in the presence of those from different backgrounds (M=4.41, SD=0.84). In addition, more students indicated spending limited time casually socializing with friends during the evening (M=3.50, SD=1.24). While this can be interpreted differently, it may indicate that more time is being spent with structured activities.

Mean scores among 15 asset areas in the 2019 sample were the lowest among the three years. Some of these asset areas involved intrapersonal characteristics such as telling the truth (M=3.71, SD=1.05), feelings of self-positivity (M=3.83, SD=1.18), and perceptions of positive support

Table 2

Mean scores for individual responses

Survey Items*	2012 Sample n	2012 Sample M (SD)	2016 Sample n	2016 Sample M (SD)	2019 Sample n	2019 Sample M (SD)
"I receive high levels of love and support from family members."	151	4.23(1.067)	127	4.61 (0.592)	166	4.43(0.811)
"I can go to my parent(s) or Guardian(s) for advice and support."	151	4.10 (1.038)	127	4.45 (0.784)	165	4.23(0.967)
"My neighbors encourage and support me."	151	2.93(1.263)	123	3.33(1.272)	165	2.84 (1.236)
'My school provides a caring, encouraging environment."	151	3.23(1.134)	125	3.78 (1.135)	162	3.41 (1.123)
"My Parent(s) or Guardian(s) help me succeed in school."	150	4.16 (0.984)	126	4.38 (0.875)	163	4.21 (0.844)
"I know some nonparent adults I can go to for advice and support."	149	3.99 (0.986)	125	4.01 (0.955)	164	3.77 (1.111)
"I feel valued by adults in my community."	150	3.65 (1.031)	126	3.70 (1.022)	163	3.51 (1.062)
"I am given useful roles in my community."	150	3.33(1.059)	125	3.52 (1.060)	163	3.31 (1.032)
"I serve in the community one hour or more each week."	150	2.55 (1.179)	122	2.86 (1.235)	165	2.82 (1.215)
"I feel safe at home."	151	4.23(1.016)	127	4.54 (0.743)	165	4.41 (0.818)
"I feel safe at school."	150	3.66 (1.197)	126	3.88 (1.121)	166	3.71 (1.045)
"I feel safe in my neighborhood."	151	3.90 (1.147)	125	4.06 (1.030)	166	3.86 (1.106)
"My family sets standards for appropriate conduct."	150	4.17 (0.961)	124	4.44 (0.819)	164	4.24 (0.820)
"My family monitors my whereabouts."	150	3.97 (1.083)	127	4.21 (0.981)	167	4.19 (0.931)
"My school has clear rules and consequences for behavior."	150	3.97 (1.083)	127	4.28 (0.816)	164	4.09 (0.857)
"Neighbors take responsibility for monitoring my behavior."	151	2.44 (1.225)	120	2.71 (1.233)	165	2.52 (1.262)
"Parent(s) and other adults model positive, responsible behavior."	150	3.83(1.026)	126	4.20 (0.895)	166	3.99 (0.947)
"My best friends model responsible behavior."	149	3.36 (1.237)	125	3.82 (0.968)	166	3.77 (1.111)

Table 2 continued on pages 54 - 55

Table 2 Continued

Survey Items*	2012 Sample n	2012 Sample M (SD)	2016 Sample n	2016 Sample M (SD)	2019 Sample n	2019 Sample M (SD)
"My Parent(s)/Guardian(s) encourage me to do well."	150	4.39 (0.826)	126	4.61 (0.692)	165	4.44 (0.768)
"My teachers encourage me to do well."	150	3.91 (1.061)	125	4.33(0.957)	166	4.14 (0.848)
"I want to do well in school."	151	4.37 (0.884)	127	4.64 (0.663)	166	4.50 (0.777)
"I am actively engaged in learning."	151	3.79 (1.091)	127	4.09 (0.968)	165	3.79 (1.073)
"I do an hour or more of homework each school day."	151	3.32 (1.278)	127	3.78 (1.208)	165	3.36 (1.312)
"I care about my school."	149	3.50 (1.195)	125	3.90 (1.139)	163	3.59 (1.275)
"I read for pleasure three or more hours each week."	149	2.86 (1.511)	126	3.25 (1.425)	163	2.85 (1.514)
"I believe it is really important to help other people."	150	4.03(1.019)	127	4.46 (0.710)	164	4.33(0.880)
"I want to help promote equality."	151	3.95 (1.136)	126	4.19 (0.865)	164	4.09 (0.905)
"I want to help reduce world poverty and hunger."	150	3.98 (1.020)	126	4.24 (0.880)	166	4.14 (0.929)
"I can stand up for what I believe."	150	4.33(0.831)	126	4.49 (0.767)	165	4.17 (0.954)
"I tell the truth even when it's not easy."	151	3.74 (1.050)	126	4.04 (0.871)	164	3.71 (0.997)
"I can accept and take personal responsibility."	149	4.13(0.883)	127	4.28 (0.796)	164	4.01 (0.821)
"I believe it is important not to be sexually active."	148	3.65 (1.200)	124	4.27 (1.068)	165	3.95 (1.175)
"I believe it is important to not use alcohol."	151	3.81 (1.324)	126	4.61 (0.790)	163	4.28 (1.003)
"I believe it is important not to use drugs."	150	4.09 (1.226)	126	4.68 (0.665)	164	4.50 (0.862)
"I am good at planning ahead and making decisions."	150	3.95 (0.933)	126	4.03(0.954)	164	3.67 (1.092)
"I am good at making and keeping friends."	151	4.11 (0.906)	124	4.10 (0.966)	165	3.97 (0.990)
"I know people of different cultural/racial/ethnic backgrounds."	150	4.23(0.998)	124	4.43(0.848)	166	4.30 (0.833)
"I can resist negative peer pressure."	151	3.85 (1.061)	126	4.09 (0.947)	163	3.90 (1.007)

Table 2 continued on page 55

Table 2 Continued

Survey Items*	2012 Sample n	2012 Sample M (SD)	2016 Sample n	2016 Sample M (SD)	2019 Sample n	2019 Sample M (SD)
"I can resist dangerous situations."	150	3.87 (1.143)	127	4.13(0.937)	166	3.93(0.992)
"I try to resolve conflict nonviolently."	151	3.54 (1.226)	125	3.86 (1.045)	164	3.79 (1.042)
"I believe I have control over many things that happen to me."	149	3.77 (1.157)	125	4.12 (0.964)	165	3.96 (0.999)
"I feel good about myself."	149	4.05 (1.019)	126	4.08 (0.993)	163	3.83(1.179)
"I believe my life has a purpose."	149	4.22 (1.006)	126	4.28 (0.985)	165	3.92 (1.194)
"I am optimistic about my future."	149	4.16 (1.007)	126	4.23(0.948)	165	4.02 (1.112)
"I am comfortable with people of different cultural/racial/ ethnic backgrounds."	151	4.18 (1.033)	123	4.35 (0.887)	165	4.41 (0.841)
"I go out with friends with nothing special to do two or fewer nights each week."	149	3.41 (1.157)	123	3.38 (1.264)	163	3.50 (1.239)
"I spend one hour or more each week in religious services or participating in spiritual activities."	146	3.22 (1.502)	124	3.59 (1.482)	164	3.06 (1.477)
"I spend three hours or more each week in lessons or practice in music, theater, or other arts."	151	3.06 (1.443)	124	3.52 (1.434)	167	3.30 (1.351)
"I spend three hours or more each week in school, or community sports, clubs, or organizations."	151	3.65 (1.367)	124	4.10 (1.235)	165	3.98 (1.229)
"I can go to my parent(s) or Guardian(s) and have frequent, in-depth conversations with them."	150	3.72 (1.165)	126	4.11 (1.014)	164	3.87 (1.083)
Survey Total	**123**	**190.85 (28.976)**	**89**	**204.35 (24.184)**	**125**	**193.809 (28.021)**

** Survey items derived from Search Institute (2002)*

from neighbors (M=2.84, SD=1.23). In regards to behaviors, decreases in scores were noted for engaging in spiritual events (M=3.06, SD=1.48) and casual reading (M=2.85, SD=1.51).

Comparison Between Total Asset Survey Scores

A one-way ANOVA was used to examine mean differences in summated Attitudes Toward Assets scores between respondents in 2012 (n=123) (M=190.85, SD=28.98), 2016 (n=89) (M=204.35, SD=24.18), and 2019 (n=125) (M=193.81, SD=28.02) revealing a statistically significant difference in mean scores ($f(2, 334)=6.634$, $p<.05$). A Tukey post-hoc analysis indicated statistically significant changes between 2012 and 2016 ($p=0.001$) as well as between 2016 and 219 ($p=0.016$). No statistically significant change was noted between 2012 and 2019.

Discussion

A self-report survey was used to assess trends over time in the attitudes toward achievement of Developmental Assets among selected middle-school aged youth in a Missouri school district. Based on the 2012 survey results, a community/school-based prevention coalition provided intensive prevention education curricula integrated into the district's afterschool program as well targeted asset-building events (Hackett et al., 2014). Interventions and initiatives following the Developmental Assets Framework in supporting youth can improve their sense of self-efficacy and purpose (Campbell et al., 2013). Community-school partnerships and out-of-school programming are recommended positive youth development strategies (Finn-Stevenson, 2014); therefore, the community/school-based coalition in this study implemented prevention interventions in the afterschool setting and asset-building events in the community setting.

Between 2012 and 2016, a statistically significant increase in respondent mean scores in attitudes toward achievement of assets was noted, followed by a statistically significant decrease in scores between 2016 and 2019. While the reasons for this shift in scores is unknown, the provided evidence shows inconclusive results on the impact of asset-building interventions. Examining data from a purely surveillance perspective, the data shows multiple areas of need for future programs and interventions. Continuously low scores throughout the sampling periods were noted regarding the role and perceptions of neighbors as well as feeling respected and appreciated by adults. Supportive community connections (Lapalme et al., 2015) and positive adult relationships (Schwartz et al., 2013) are keys to positive developmental outcomes, especially of those at-risk (Hamilton, 2014). It is recommended that the coalition target some asset-building events or programming into specific neighborhoods or local park districts and enlist the assistance of community neighbors in program implementation.

Lack of community service of respondents was also noted. Consistent with the literature; community involvement for youth decreases over the middle school period, and older youth seem to be more connected and contribute more to their community (Larson & Tran, 2014). There are great social benefits for those middle school-aged youth who participate in community service (Chung & McBride, 2015), and future coalition programming should include curriculum with a service-learning component that would lay a strong, positive foundation for participation in community service during the high school years.

Perceptions of achievement in arts-related assets were also low. Participation in the arts and afterschool arts programs has demonstrated positive academic and behavioral outcomes (Catterall, 2012; Stevenson et al., n.d.) and was associated with civic engagement (Catterall, 2012). Curricular lessons were taught using active learning strategies such as role play and drawing; however, it is recommended that more art, music, and drama-related techniques be consistently used. More focus on the arts, whether curricular or as an asset-building event, may also indirectly affect community service. On the other hand, consistently high mean scores over the time period

were reported by respondents for family support, support to do well in school, and anti-drug and alcohol attitudes. Curricular interventions that included family involvement or homework assignments as well as family-strengthening, asset-building events may have contributed to maintaining these perceptions. When community coalitions lead prevention programs, assets and health protective factors are increased (Fagan & Hawkins, 2012).

Limitations

This study was conducted in a single rural location, and therefore, the results are not fully generalizable. It is recommended that future researchers repeat the study with another population and in a different location. Further, while the survey was based on an existing instrument (Search Institute, 2002) and showed excellent internal consistency reliability scores, the survey should be further tested to assess essential psychometric properties. It would also be beneficial for future researchers to track school discipline and community juvenile justice referrals as well as perception of numbers of assets achieved for these middle school youth to assess any connection between them. As noted by the Search Institute (2017c), higher numbers of assets possessed by children and youth are correlated with less frequent engagement in unhealthy behaviors. Additionally, the present study did not follow a single cohort of students to determine changes in attitudes toward developmental assets. In order to assess individual change, future researchers should follow a single cohort rather than assessing three separate groups of students. Multiple factors may have contributed to changes in attitudes toward developmental assets, so it cannot be confirmed that the integration of interventions contributed to changes over the assessed time period.

Conclusion

There are many models or frameworks community/school-based prevention coalitions can use to promote positive youth development (Campbell et al., 2013). The coalition in this study chose the 40 Developmental Assets Framework (Search Institute, 2017b) upon which to base their health-promoting and substance abuse prevention interventions for middle school students in their community. Although the data did not support the effectiveness of asset-based programing, conducting a trends analysis based on a positive youth development process can assist community/school-based coalitions in planning future curricula, programs, activities, and events to address the asset needs of their community youth.

References

Campbell, D., Trzeniewski, K., Nathaniel, K., Enfield, R., & Erbstein, N. (2013). Positive youth development merits state investment. *California Agriculture*, 67 (1), 38-46.

Catterall, J. (2012). The arts and achievement in at-risk youth : findings from four longitudinal studies / James S. Catterall, University of California Los Angeles with Susan A. Dumais, Louisiana State University and Gillian Hampden-Thompson, University of York, U.K. pages cm -- (Research report ; #55) Report #55, March 2012

Chung, S, & McBride, A. (2015). Social and emotional learning in middle school curricula: A service learning model based on positive youth development. *Children and Youth Services Review*, 53, 192-200.

Durlak, J., Weissberg, R., & Pachan, M. (2010). A meta-analysis of afterschool programs that seek to promote personal and social skills in children and adolescents. American *Journal of Community Psychology*, 45, 294-309.

Fagan, A., & Hawkins, J. (2012). Chapter - Preventing substance use, delinquency, violence, and other problem behaviors over the life-course using Communities That Care System. *Handbook of Life-Course*

Criminology, 277-296.
Finn-Stevenson, M. (2014). Family, school, and community partnerships: Practical strategies for afterschool programs. *New Directions for Youth Development*, 2014 (144), 89-103.
Hackett A, McManus, K, Woolman K, & Stewart, B. (2014). Attitudes toward positive developmental assets of students attending a rural Northeast MO middle school. *Undergraduate Research Journal of the Human Sciences*, 13. Retrieved from http://www.kon.org/urc/v13/hackett.html
Hamilton, S. (2014). On the 4-H study of positive youth development. *Journal of Youth and Adolescence*, 43:1008-1011. doi: 10.1007/s10964-014-0121-z
Lapalme, J., Bisset, S., & Potvin, L. (2015). Role of context in evaluating neighbourhood interventions promoting positive youth development: A narrative systematic review. *International Journal of Public Health*, 59 (1), 31-42
Larson, R., & Tran, S. (2014). Invited commentary: Positive youth development and human complexity. *Journal of Youth and Adolescence*, 43(6), 1012-1017.
Lenzi, M., Dougherty, D., Furlong, M., Sharkey, J., & Dowdy, E. (2015). The configuration protective model: Factors associated with adolescent behavioral and emotional problems. *Journal of Applied Developmental Psychology*. Retrieved from http://dx.doi.org/10.1016/j.appdev.2015.03.003
Missouri Behavioral Health Epidemiology Workgroup. (2019). *Missouri state epidemiological profile 2019*. Retrieved from https://dmh.mo.gov/media/pdf/missouri-state-epidemiological-profile-2019
Missouri Division of Behavioral Health and Substance Abuse and Mental Health Services Administration. (2015). *Behavioral health profile*. Retrieved from http://dmh.mo.gov/ada/countylinks/docs/profile-adair.pdf
Missouri Institute of Mental Health. (2014). 2014 Status Report on Missouri's Substance Abuse and Mental Health Problems. Retrieved from http://dmh.mo.gov/ada/rpts/docs/status2014/adair.pdf
Roth, J., Brooks-Gunn, J., Murray, L., & Foster, W. (2010). Promoting healthy adolescents: Synthesis of youth development program evaluations. *Journal of Research on Adolescence*, 8 (4), 423-459.
Sanders, J., Munford, R., Thimasam-Anwar, T., Liebenberg, L., & Ungar, M. (2015). The role of positive youth development practices in building resilience and enhancing well-being for at-risk youth. *Child Abuse and Neglect*, 42, 40-53.
Search Institute. (2002). *An asset checklist.* Retrieved from http://www.searchinstitutepress.org/free_downloads/Asset%20Checklist.pdf
Search Institute. (2017a). *Developmental assets® resources*. Retrieved from https://www.search-institute.org/tools-resources/free-downloads/
Search Institute. (2017b). *The developmental assets® framework.* Retrieved from https://www.search-institute.org/our-research/development-assets/developmental-assets-framework/
Search Institute. (2017c). *Current research on developmental assets*. Retrieved from https://www.search-institute.org/our-research/development-assets/current-research-developmental-assets/
Schwartz, S., Chan, C., Rhodes, J., & Scales, P. (2013). Community developmental assets and positive youth development: The role of natural mentors. *Research in Human Development*, 10 (2), 141-162.
Stevenson, L., Johnston Limón, C., & Reclosado, T. (n.d.) Community-Based Afterschool and Summer Arts Education Programs: Positive Impact on Youth and Community Development in Terry K. Peterson, PhD, Executive Editor Expanding

Minds and Opportunities. Retrieved from: http://www.expandinglearning.org/sites/default/files/expandingminds_section_3_0.pdf