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Intervention Methodologies Targeting Vulnerable Youth in Frankfort, Kentucky: Measuring Developmental Assets

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Abstract

Results from the Kentucky State University Youth Empowerment Project (KSU-YEP) are presented. The results of this study indicate that increases in the factors that support positive health outcomes can be achieved if interventions are developed and implemented with community involvement and inclusion of the target population's values and norms.

Keywords: youth, intervention, developmental assets, participatory research

1. Introduction

Many health interventions for teens that focus on proximal determinants have shown limited impact on behavior change (Bell et al., 2007; Gaydos et al., 2008; Kourtis et al., 2006; Thomas, 1999; Tortolero et al., 2005). Among African-American and Hispanic American youth, the chosen health intervention may not comprehensively address their salient norms and beliefs as a result of the lack of community involvement in program development. As a result, a gap may occur in understanding effective ways to increase African-American youth's developmental assets (Peters, 2009).

Prior research includes alarming data about the academic, social, and health disparities facing minority youth with much of the current research describing them as a disparate population (Williams, D. & Mohammed S., 2009; Peters, 2010; DiClemente RJ, 2001). According to United States Public Law 106-525 (Civic Impulse, 2000), a disparate population is one with a significant difference in overall disease prevalence, incidence, mortality, or survival rates in comparison to the health status of the general population. This disparate population is disproportionately predisposed to multiple health problems not observed among other groups for economic (McLoyd VC et al., 1994; Kalousova L et al., 2013; Williams D, 2012; Dawkins CJ et al., 2005), environmental (Williams D, 2012; Dawkins CJ et al., 2005; Costello EJ et al., 2001; Raiford JL et al., 2013), and societal reasons (Kleven T, 2009; Allen TD et al., 2007; Ornelas IJ et al., 2009). In addition, although health problems may not manifest until later in life, the choices made during childhood and adolescence may have major impact on future health outcomes.

Although health disparities exist among African-Americans overall and among African-American youth in specific, differences do exist when African-Americans are stratified based on their demographic backgrounds. Specifically, African-American youths living at or near the poverty level are more likely to experience health disparities as a result of limited financial resources for health care, limited access to health care, and lack of knowledge or academic opportunity to practice intellectually-promoting behaviors (Rew, 2005).

An established link exists between poverty and poor health outcomes (Peters, 2010). According to the United States Census Bureau (2016), in 2014 the poverty rate for children was 21% or approximately one in five children below age 18. When children live in poverty, they are often faced with negative health outcomes that extend from early childhood into youth development and adulthood (Peters et al., 2010). They are also affected in other ways, including having

increased risk for use of illicit substances, stress, depression, and substance use.

Data show that Franklin County, the county in which Frankfort, Kentucky is located, with a population of approximately 50,000 residents, had a child poverty rate in 2016 of 24% compared to 26% statewide and 43% of children live in single-parent households compared to 34% statewide (University of Wisconsin Population Health Institute, 2016). According to the Kentucky Commission on Civil Rights (2009), within Franklin County the per capita income for African Americans was slightly less than $16,000 compared to approximately $27,000 for White Americans.

Although myriad problems exist, they can be prevented. If youth are provided developmental assets or the building blocks needed for them to grow and become caring, competent adults, they are more likely to engage in safe and healthy behaviors. In addition, if they are provided social norms and self-coping mechanisms that have been demonstrated to positively impact them and that are developed based on community participatory or bi-directional research, reductions in health disparities may occur (Williams DR, 2003). In the current study, we present results from the Kentucky State University Youth Empowerment Project (KSU-YEP), a theoretically and empirically based interactive intervention for at-risk African-American and Hispanic youth between the ages of 10 and 17 designed to positively impact their capacities to make healthier lifestyle choices. It was hypothesized that youth receiving the KSU-YEP curriculum would observe reductions in or elimination of high risk behaviors, strengthening of protective/resiliency factors, development of sustainable basic life skills needed to cope with the demands of daily life, and development of skills and behaviors that lead to healthier lifestyle choices and to overall success in life at 24-month follow up when compared to their counterparts not receiving the intervention.

2. Methods

2.1 The Intervention

KSU-YEP is a holistic program implemented in 2012 among African-American and Hispanic youth between the ages of 10 and 17 attending schools in the Franklin County and Frankfort Independent School Districts in Frankfort, Kentucky. The KSU-YEP intervention is designed to assist youth with their academic, personal, social, and leadership development. Social Cognitive Theory (SCT) (Bandura, 1986) provides the primary framework for the operationalization of the YEP program. SCT uses a three-direction, constantly changing, reciprocal model in which personal factors, environmental influences, and behavior constantly act upon one another. Personal factors include knowledge, personal values, attitudes, beliefs, and self-efficacy. Environmental factors include both social and physical aspects of the individual's surroundings such as influential role models, social and normative support, and availability of facilities and resources that support or discourage a particular behavior. Behavioral factors influence behavior directly and include current behavioral patterns and behavioral capabilities. In addition, SCT posits that people (i.e., youth enrolled in YEP) learn not only through their own experiences but also by observing others' actions. Specifically, youth were exposed to 60, 15-minute sessions that included academic enrichment, leadership development, personal development, and life skills (see Figure 1). The main emphasis was on creating perceptions of the benefits of avoiding high risk behaviors and focusing on behaviors that enhance future success.

2.2 Community Advisory Group

Before implementation of the KSU-YEP, the investigative team created a community advisory group to develop an infrastructure for bi-directional information transmission from parents, students, mentors, and stakeholders in the Frankfort community. Stakeholders were selected based on Office of Minority Health grant guidelines. Contacts throughout Frankfort were asked to make recommendations for youth advocacy leaders and/or minority serving organizations that should serve on this advisory group. The research team ensured that advisory board members were males and females with varying levels of educational attainment, represented a broad range of demographic characteristics and opinions, and most importantly, were members of the community where both school districts were located. Of those invited to serve, 20 members were selected. They met quarterly in full sessions and in smaller meetings to accomplish specific tasks. Their functions included assisting the investigative team in developing content, providing feedback on specific youth norms, reviewing the intervention methods, and assisting with survey administration and collection of participants' data. The resulting framework included academic, leadership, social, and personal development. Intervention sessions corresponded to each area for which development is fostered.

ACADEMIC ENRICHMENT	LEADERSHIP DEVELOPMENT
Goal Setting	Leadership Training
Middle School/High School/College preparation	Social Consciousness
Study Skills/Learning Strategies	Public Speaking
Tutoring	Career Exposure
Future Aspirations	Cultural Comprehension
	Teamwork
PERSONAL DEVELOPMENT	LIFE SKILLS
Conflict Resolution	Self-Awareness
Self-Discipline	Interpersonal Skills
Time Management	Problem Solving
Coping Strategies	Critical Thinking
Strengthening of Resiliency Factors	Effective Communication

Figure 1. KSU-YEP Intervention Model

2.3 Participants and Procedures

Prior to start the study, it was approved by the Institutional Review Board of Kentucky State University. Thereafter, the investigative team met with administrators representing two large school districts in the Frankfort, Kentucky area seeking permission to conduct the study among students on their campuses. After verbal agreement was obtained from the schools' administrators, a memorandum of understanding was signed in which they granted the study team access to their students, faculty, and staff to assist with data collection and survey administration. A contact person/coordinator at each school was assigned by the respective administrators and those persons served as the liaison between the school and the investigative team.

Students were given a consent form to take home to their parents/guardians. Those returning their signed consent forms were considered eligible for the study. The treatment group was composed of youth between the ages of 10 and 17 attending the KSU-YEP program at the time of baseline survey creation. The comparison group was created by convenience sampling based on school referrals reflecting demographic study requirements such as being an at-risk African-American or Hispanic youth between 10 and 17 years of age.

Inclusion criteria for KSU-YEP treatment group participants included being a student attending a school in either district, ability to speak, read, and write English, and parental permission to attend an after-school program at KSU. The inclusion criteria were similar for comparison group participants with the exception of their attendance at the KSU-YEP after-school program. Informed consent was required of all participants. Individuals not returning consent forms or whose parents indicated they did not wish them to participate were deemed ineligible for study participation.

With university and school district approval, the study began with the collection of baseline data. Trained research assistants collected baseline surveys by meeting with students in the schools' common areas that were not in use at the time data collection commenced. The importance of the study and the procedures in place to assure confidentiality were explained to students before each data collection period. Students who then did not wish to participate were escorted back to their classrooms by a member of the study team. To obtain the maximum number of student responses, reasonable efforts (at least two attempts within a two-week period of the original study date) were exerted to locate and survey students who were absent during scheduled administration days.

The data collection team consisted of a field director and two data collectors, one assigned to the treatment group and the other to the comparison group to administer surveys and gather participant data. All received training from the project's director and were knowledgeable of the study's objectives and the rights of human subjects. The data collection team was not involved in intervention development or implementation.

2.4 Measures and Instrument

At baseline, study participants completed an abbreviated version of the Developmental Assets Profile (DAP) self-report questionnaire. The DAP is a survey that measures the presence of developmental assets that influence adolescent behavior and future orientation towards higher education and quality of life. Measures included items on knowledge, attitudes, beliefs, mental and behavioral health, substance use, and safety. The constructs of support, empowerment,

expectations, commitment to learning, and possessing positive values were also measured. Students responded to statements with Likert scale responses of not at all or rarely, somewhat or sometimes, often, always or almost always, and never.

Differences between the intervention and comparison groups in DAP questions were examined using continuous variables and the chi-square test for categorical variables. Twelve questions were taken from the DAP scale and independently analyzed to determine differences at 24-month follow-up using Chi-square testing in which the level of significance was set at .05. The construct of support was assessed by students' responses to the following statements: "I seek advice from my parents," "I feel valued and appreciated by others," and "I have parent(s) who are good at talking with me about things." Empowerment was evaluated with students' responses to: "I am helping to make my community a better place," "I am spending quality time at home with my parents," and "I am given useful roles and responsibilities." Expectations were evaluated with responses to: "I have a school that gives students clear rules" and "I have a school that cares about kids and encourages them." Commitment to learning was assessed with: "I enjoy reading" and "I care about school." Positive values were measured with: "I tell the truth even when it is not easy" and "I am trying to help solve social problems." Student responses to these comments were dichotomized and assessed in two categories of responses: (1) rarely or sometimes and (2) often or almost always.

3. Results

3.1 Baseline Data

At baseline, no signficant differences were found in students' demographic characteristics. A total of 53 students completed 24-month follow-up and thus were eligible for inclusion in the analyses reported in this paper. The majority of participants were African American for both treatment and comparison groups. The average age of students was 15 years and the majority was in the ninth grade. Gender was similar and non-significant between groups.

Table 1. Demographic characteristics

	Treatment		Comparison		
	N	**Percent**	**N**	**Percent**	**p**
Race					
African-American/Black	13	68.4%	33	97.1%	.00
African-American/Hispanic	6	31.6%	1	2.9%	
Gender					
Male	11	57.9%	17	50/0%	.58
Female	8	42.1%	17	50.0%	
Grade					
Ninth	12	63.2%	15	44.1%	.57
Tenth	3	15.8%	8	23.5%	
Eleventh	4	21.1%	7	20.6%	
Twelfth	0	0.0%	4	11.8%	
Missing					
	N	**Mean**	**N**	**Mean**	**p**
????					
	19	15.7	34	15.2	.33

3.2 Follow-up Data

Approximately twenty-four months following intervention implementation, follow-up data collection commenced. The results revealed that treatment group participants showed more favorable responses to the support construct compared to their comparison group counterparts (see Table 2). Specifically, when asked to respond to the following statement: "I seek advice from my parents," 90.9% of intervention group participants responded that they often or almost always sought parental advice compared to 60% of comparison group respondents (p=.07). When asked to respond to the statement, "I feel valued and appreciated by others," treatment group participants were more likely to respond often or almost always when compared to their counterparts in the comparison group ($p \leq 0.05$). Treatment group participants were also more likely to respond often or almost always to the construct of empowerment. Close to 82% of treatment group students stated they often or almost always felt they were "helping to make my community a better place" compared to 71.4% of comparison group students (p=0.05). Further, treatment group respondents were significantly more likely to report that they often or almost always felt they were spending quality time at home with their parents (90.9% vs. 54.3%, ($p \leq 0.05$). Treatment group participants were also signficantly more likely to report that they are given useful roles and responsibilities (100% vs. 68.6%), $p \leq 0.05$).

Table 2. Developmental assets profile follow-up group comparison

QUESTIONS	Often or Almost Always	Rarely or Sometimes	Often or Almost Always	Rarely or Sometimes	p-value
SUPPORT					
I seek advice from my parents	10 (90.9%)	1 (9.1%)	21 (60.0%)	14 (40.0%)	.07
I feel valued and appreciated by others	11 (100%)	0 (0%)	22 (62.9%)	13 (37.1%)	.02
I have parent(s) who are good at talking with me about things	11 (100%)	0 (0%)	25 (71.4%)	10 (28.6%)	.09
EMPOWERMENT					
I am helping to make my community a better place	9 (81.8%)	2 (18.2%)	16 (45.7%)	19 (54.3%)	.05
I am spending quality time at home with my parents	10 (90.0%)	1 (9.1%)	19 (54.3%)	16 (45.7%)	.04
EXPECTATIONS					
I am given useful roles and responsibilities	11 (100%)	0 (0%)	24 (68.6%)	11 (31.4%)	.04
I have a school that gives students clear rules	11 (100%)	0 (0%)	22 (62.9%)	13 (37.1%)	.02
I have a school that cares about kids and encourages them	11 (100%)	0 (0%)	19 (55.9%)	15 (44.1%)	.01
COMMITMENT TO LEARNING					
I enjoy reading	5 (45.5%)	6 (54.5%)	6 (17.1%)	29 (82.9%)	.10
I care about school	10 (90.9%)	1 (9.1%)	21 (60.0%)	14 (40.0%)	.07
POSITIVE VALUES					
I tell the truth even when it is not easy	10 (90.9%)	1 (9.1%)	21 (60.0%)	14 (40.0%)	.07
I am trying to help solve social problems	10 (90.9%)	1 (9.1%)	17 (48.6%)	18 (51.4%)	.02

Treatment group responses to the question related to the construct of expectations showed significant differences when students responded to the following statement: "I have a school that gives students clear rules"; and "I have a school that cares about kids and encourages them." Additional differences were found between treatment and comparison group students related to the construct of commitment to learning. At follow-up, treatment group students were borderline significantly more likely to respond often or almost always to the statement: "I care about school." Lastly, treatment group respondents were more likely to respond to having positive values with their responses to "I tell the truth even when it is not easy" and "I am trying to help solve social problems."

4. Discussion

The results of this study indicate that increases in the factors that support positive health outcomes can be achieved if interventions are developed and implemented with community involvement and inclusion of the target population's values and norms. Effective identification of these factors opens the door for successful intervention. The present study included the use of a community advisory board to develop interventions targeting at-risk African American and Hispanic youth between the ages of 10 and 17 attending schools in the Franklin County and Frankfort Independent School Districts of Frankfort, Kentucky. The results showed that these tailored interventions were effective in changing treatment group participants' beliefs regarding support, empowerment, values and expectations as well as their commitment to learning. Taken together, these constructs may have the power to change high-risk health behaviors.

According to Kreuter and colleagues (1999), "Tailoring is defined as any combination of information or change strategies intended to reach one specific person based on characteristics that are unique to that person, related to the outcome of interest, and have been derived from an individual assessment." However, targeting involves a single intervention approach for a defined population. While many health programs target single behaviors (Jackson CA et al., 2012), the KSU-YEP program is tailored toward the individualized needs of at-risk African American and Hispanic youth between 10 and 17 years of age. Because youth living in poverty in Frankfort, Kentucky, have challenges supporting maladjusted behaviors (e.g., fatherlessness, drug use, media illiteracy, education level, etc.), they may not respond to traditional community-based health programs. Research has shown that the intervention methodologies used by the KSU-YEP are effective in promoting cultural sensitivity on an individual level (Marcus et al., 1998; Peppers, Rogers & Adamson, 1998; Rakowski et al., 1998).

This is one of the first studies to report positive outcomes of a youth empowerment program in Frankfort, Kentucky. Although significant results were revealed, the findings from this study must be interpreted with caution. There are four limitations to the current study. Because of the small sample of students in the current study, conclusions regarding the impact of the program are limited. Larger studies on the evaluation of the impact of the KSU-YEP effects would more accurately reflect the program's impact. Secondly, students in the current study were taken from one county in Kentucky. The sample size and the limited area from which student respondents were drawn limit the generalizability of the project's results. Thirdly, this study does not reflect the entire youth population in Frankfort due to the lack of inclusion of White youth. Lastly, the present study is limited by the number and types of questions asked of the participating students. Nonetheless, the data uncovered in this research offer potential direction for larger impact research studies

among at-risk youth living in Frankfort, Kentucky. The information gleaned from this and future research will provide strategic guidance in understanding, developing, and implementing programs that promote positive health outcomes among minority youth.

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