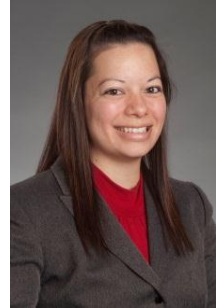


Positive Youth Development and Substance Use in Emerging Adults

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Abstract

Problem: According to the Centers for Disease Control and Prevention's (CDC) bi-annual National Youth Risk Behavior Survey (NYRBS), nearly 45% of all teens have smoked cigarettes at some point, nearly 71% have tried alcohol, and 40% have tried marijuana. Many potential factors have been identified as having a positive effect in treatment and cessation programs for at-risk adolescent populations, but research investigating the effects of these factors in prevention is still limited in scope. The present study examines relationships between risky health behaviors of freshman college students and the five Cs of positive youth development: competence, confidence, connection, character, and caring. *Procedure:* 204 emerging adult (18-19) college students who were involved in after school activities in high school completed the Positive Youth Development Inventory (PYDI) which measures the five Cs of positive youth development. We also included the substance use questions from the NYRBS. *Results:* Our data indicate that students who reported high levels of competence, confidence, and caring reported lower use of alcohol and marijuana. *Conclusions:* It appears that after school programs do foster the five Cs of positive youth development and may offer protective effects on underage drinking and marijuana use.

Positive Youth Development and Adolescent Substance Use

Past theories of development have viewed adolescence as a time of storm and stress in which adolescents are troublesome and need fixing (Tebes et al., 2007). Researchers now see the need to focus on enhancing youth development through examining positive aspects rather than focusing on youth deficits (Barton, Watkins, & Jarjoura, 1997). This movement is known as positive youth development and emphasizes a strengths-based approach to promote positive outcomes (Tebes et al., 2007). The positive youth development perspective views development as having relative plasticity, which can promote desired outcomes as well as prevent undesirable ones.

Lerner et al. (2005) report empirical evidence for five proposed characteristics (the five Cs: competence, confidence, connection, character, and caring) that comprise positive youth development in adolescents who participate in 4-H programming. Bowers et al. (2010) conducted a confirmatory factor analysis of the five Cs, in early, middle, and late adolescents. Table 1 provides the definitions of the five Cs as given in Bowers et al. (2010). The presence of the five Cs together, representing positive youth development, creates a sixth C, contribution. Lerner et al. established a relationship between participation in youth programs, positive youth development, and contribution.

Table 1. Definitions of the Five Cs of Positive Youth Development

Characteristic	Definition
Competence	Positive view of one's actions in domain specific areas including social, academic, cognitive, and vocational. Social competence pertains to interpersonal skills (e.g., conflict resolution). Cognitive competence pertains to cognitive abilities (e.g., decision making). School grades, attendance, and test scores are part of academic competence. Vocational competence involves work habits and career choice explorations, including entrepreneurship.
Confidence	An internal sense of overall positive self-worth and self-efficacy; one's global self-regard, as opposed to domain specific beliefs.
Connection	Positive bonds with people and institutions that are reflected in bidirectional exchanges between the individual and peers, family, school, and community in which both parties contribute to the relationship.

Character	Respect for societal and cultural rules, possession of standards for correct behaviors, a sense of right and wrong (morality), and integrity.
Caring	A sense of sympathy and empathy for others.

Note: Derived from Lerner et al. (2005) and Roth and Brooks-Gunn (2003)

Jelicic, Bobek, Phelps, Lerner, and Lerner (2007) found support for positive youth development as a method of fostering beneficial attitudes that can be described and measured. Jelicic et al. also reported that positive youth development predicts higher contribution and reduced levels of risk behaviors. Similarly, Schwartz et al. (2010) suggest that positive youth development acts as a protective factor for risk behaviors, specifically tobacco and marijuana initiation. But Schwartz et al. also found that the positive social relationships promoted by positive youth development may result in a higher risk of alcohol use among adolescent males by creating more social opportunities where alcohol is consumed. Thus, Schwartz et al. reported that although positive youth development has a preventive effect, it may also be a promotive process that can redirect negative trajectories.

Given the apparent success of programs emphasizing positive youth development, one would think that these programs abound. The need for community-based prevention programs is four-fold: substances are not restricted to any particular subgroup and can be found throughout the community; treatments that are widespread tend to be more effective than those that are less broad; substance use and abuse tends to be an embedded norm in the community; and underlying community causes related to substance use can be addressed through community efforts (Perry, 1986). Under these guidelines, after school organized activities seem to be appropriate prevention-aimed programs.

The five Cs have been studied extensively within the 4-H program, but have yet to be examined in other youth programs. In addition, very few studies have examined the potential protective effects of the five Cs in regard to adolescent health risk behaviors such as alcohol, tobacco, and illicit drug use. The present study seeks to determine whether emerging adults who participated in an organized after school activity in high school have a reduced likelihood of participating in common health risk behaviors, including the consumption of alcohol, tobacco, and illicit drugs. We hypothesize that emerging adults who possess the five Cs will report lower use of alcohol, tobacco, and marijuana.

Method

Participants

After acquiring informed consent, 204 emerging adult students who were enrolled in PSYC 101 at a state university in the Rocky Mountain region completed an online survey. All participants were first semester college students between the ages of 18–19 (53 males, 149 females, 1 transgender, 1 no response), had graduated from high school within the past year, and had participated in an organized after school activity while in high school. Participants were asked to report a specific activity that they participated in. A majority of participants were White (85%). The remaining participants were Hispanic/Latino/Spanish (3.9%), Multiethnic/Multiracial (3.4%), Black/African American (2.9%), Asian/Pacific Islander (2.4%), American Indian/Alaska Native (2%), and Other (.4%). The Institutional Review Board approved all study procedures before data collection commenced.

Measures

Positive youth development inventory (PYDI). Positive youth development was measured using Arnold, Nott, and Meinhold's (2012) Positive Youth Development Inventory (PYDI). The PYDI is a 58-item survey designed to measure the five Cs of positive youth development with six subscales: competence, confidence, connection, character, caring and contribution. Participants with $M \geq 3.00$ for each subscale indicate agreement with the items on the scale and are considered to possess that characteristic for this study.

Competence. The Competence subscale has 14 items and includes questions such as “I am a good student” and “I feel comfortable in social situations.” Participants responded to each item using a 4-point Likert scale with 1 = *Strongly Disagree* and 4 = *Strongly Agree*. Higher scores indicate a higher degree of competence ($\alpha = .82$ for the current study).

Confidence. The Confidence subscale has 9 items and includes questions such as “I feel accepted by my friends” and “I know how to behave well in different settings.” Participants responded to each item using a 4-point Likert scale with 1 = *Strongly Disagree* and 4 = *Strongly Agree*. Higher scores indicate a higher degree of competence ($\alpha = .85$ for the current study).

Connection. The Connection subscale has 8 items and includes questions such as “I think it is important to be involved with other people” and “I have adults in my life who are interested in me.” Participants responded to each item using a 4-point Likert scale with 1 = *Strongly Disagree* and 4 = *Strongly Agree*. Higher scores indicate a higher degree of competence ($\alpha = .87$ for the current study).

Character. The Character subscale has 9 items and includes questions such as “I am able to stand up to peer pressure when I feel something is not right to do” and “If I promise to do something, I can be counted on to do it.” Participants responded to each item using a 4-point Likert scale with 1 = *Strongly Disagree* and 4 = *Strongly Agree*. Higher scores indicate a higher degree of competence ($\alpha = .89$ for the current study).

Caring. The Caring subscale has 8 items and includes questions such as “When there is a need, I offer assistance whenever I can” and “Other people’s feelings matter to me.” Participants responded to each item using a 4-point Likert scale with 1 = *Strongly Disagree* and 4 = *Strongly Agree*. Higher scores indicate a higher degree of competence ($\alpha = .91$ for the current study).

Contribution. The Contribution subscale has 7 items and includes questions such as “It is important for me to try and make a difference in the world” and “I like to work with others to solve problems.” Participants responded to each item using a 4-point Likert scale with 1 = *Strongly Disagree* and 4 = *Strongly Agree*. Higher scores indicate a higher degree of competence ($\alpha = .89$ for the current study).

National youth risk behavior survey (NYRBS). The National Youth Risk Behavior Survey is conducted biennially by the CDC. The NYRBS is an 87-item scale designed to monitor six priority health risk-behaviors, behaviors contributing to unintentional injuries and violence, use of tobacco, use of alcohol and other drugs, sexual risk behaviors, unhealthy dietary behaviors, and physical inactivity, among adolescents and young adults. For the purpose of this study, 20 items were included that asked participants about their experiences with alcohol, tobacco, and both illicit and prescription drug use. Sample questions include “Have you ever smoked cigarettes daily, that is, at least one cigarette every day for 30 days;” “How old were you when you had your first drink of alcohol other than a few sips;” and “During your life, how many times have you used marijuana?” Answers were presented in a multiple choice format. Questions had between two and seven possible answer choices including “Yes/No,” age ranges, and number of times a participant had engaged in using a substance.

Results

Mean scores for all participants were calculated on each C subscale. Participants whose scores were greater than 3.00 for all Cs were determined to possess all five Cs. Our results indicate that 87% of emerging adults who participated in an after school activity possessed all five Cs. Twenty-six participants did not indicate possessing all five Cs, but 6 possessed four Cs, 5 possessed three Cs, 9 possessed two Cs, 3 possessed one C, and only 3 participants did not indicate possessing any of the five characteristics at all. Our results also suggest that the sixth C, contribution, is also present among emerging adults who possess all five Cs with $r = .68, p < .01$.

As displayed in Table 2, our data suggest that the presence of all five Cs as well as the individual characteristics: competence, character, caring, connection, and contribution are significantly correlated with the age at which marijuana was first tried and the total lifetime use of marijuana. The presence of all five Cs, as well as the individual characteristics: competence, character, caring, and contribution, are significantly negatively correlated with lifetime alcohol use, past 30 days of alcohol use, and binge drinking, as displayed in Table 3.

Table 2. Five Cs of Positive Youth Development and Marijuana Use

Characteristic	Age first tried marijuana	Number of days marijuana use, lifetime
Competence	-.15*	-.21**
Confidence	-	-
Character	-.15*	-.25**
Caring	-.16*	-.20**
Connection	-.16*	-.18*
Five Cs	-.16*	-.22**
Contribution	-.17*	-.18*

** Correlation is significant at the 0.01 level.

*Correlation is significant at the 0.05 level.

Table 3. Five Cs of Positive Youth Development and Alcohol Use

Characteristic	Number of days alcohol consumption, lifetime	Number of days alcohol consumption, past 30 days	Binge Drinking, past 30 days
Competence	-.24**	-.20**	-.17*
Confidence	-	-	-
Character	-.23**	-.25**	-.23**
Caring	-.21**	-.18*	-.18*
Connection	-	-	-
Five Cs	-.20**	-.17*	-.14*
Contribution	-.23**	-.20**	-.22*

** Correlation is significant at the 0.01 level.

*Correlation is significant at the 0.05 level.

Discussion

The present study sought to determine whether emerging adults who participated in an organized after school activity in high school had a reduced likelihood of participating in common health risk behaviors, including the consumption of alcohol, tobacco, and illicit drugs. Our hypothesis was partially supported. Similar to Schwartz et al. (2010) we found that the five Cs did significantly correlate with lower rates of alcohol and marijuana use. However, in contrast to Schwartz et al. (2010) our study did not find significant correlations between the five Cs and tobacco use. Further investigation should examine possible differences in smoking culture among participants who possess the five Cs. These differences may exist because of a difference in severity of penalty for smoking violations of minors. Cities that discourage public smoking may also have an effect on smoking rates among adolescents and emerging adults.

The results of this study also indicated that the five Cs were related to a sixth C, contribution, similar to studies by Lerner et al. (2005), Lewin-Bizan, Bowers, and Lerner (2010), and Phelps et al. (2009). The findings of this study add to the current literature on the five Cs model because they demonstrate the ability of adolescents to develop these characteristics in programs other than 4-H. The 4-H program is not accessible to all youth and thus having other programs available that can promote the five Cs can be of great benefit.

Though this study finds support for a relationship between the five Cs and substance use levels, it does have limitations. First, the sample of participants was mostly white (85%), but reflected the make-up of the population of university students where the study was conducted. Due to limited diversity of race and ethnicity, it is difficult to generalize these results across ethnicities. Future studies should investigate the five Cs and substance use among minority populations. Second, this study did not examine participants who were not involved in an organized after school activity. Future studies should compare participants in organized after school activities and those not in organized after school activities to assess levels of the five Cs and levels of substance use. Future studies should also

compare different organized after school activities to examine what types of activities have a greater impact on the development of the five Cs and substance use.

Conclusion

The National Youth Risk Behavior Survey in 2011 indicated that nearly 45% of teens have smoked cigarettes, 71% have tried alcohol, and 40% have tried marijuana at some point during their adolescence. Although there are many after school programs, research regarding these programs' ability to promote youth strengths is limited. One particular model of positive youth development, the five Cs model, has been extensively studied among 4-H programs, but not in other programs. The present study examined the presence of the five Cs in emerging adults who participated in organized after school activities other than 4-H, and levels of substance use among participants. We found that the presence of the five Cs was related to levels of contribution and alcohol and marijuana use.

The findings of this study illustrate the importance of organized after school activities for adolescents and emerging adults. Organized after school activities can lead to the development of positive attributes, including the five Cs: competence, confidence, character, caring, and connection. The possession of these positive attributes in adolescents and emerging adults impacts substance use levels, possibly acting as a buffer against their use. High school and college counselors are advised to encourage their students to participate in organized after school activities.

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