Anxiety and Alcohol Use in Adolescence: The Moderating Role of Social Competence

Juliet R. Bradley
Kaplan University
and
Christine McCauley Ohannessian
Connecticut Children's Medical Center and
University of Connecticut School of Medicine

Abstract

Social competence has been found to buffer adolescents against externalizing behaviors, such as alcohol use, and internalizing behaviors, such as anxiety. No studies have examined the moderating impact of social competence on the relationship between anxiety and alcohol use in adolescents. Therefore, the objective of this study was to expand current research by exploring whether social competence moderates the association between anxiety and alcohol use over time during adolescence. The sample was comprised of 333 adolescents who were ages 15-17 at Time 1 and ages 16-18 at Time 2 (59 % girls, 72 % Caucasian, 18 % African American, and 10 % Hispanic). The adolescents completed self-report surveys, and were followed over a one year period of time as part of a longitudinal research project. Social competence was not found to moderate the relationship between anxiety and alcohol use over time.

The Adolescent Adjustment Project

- The Adolescent Adjustment Project is a five year longitudinal study which utilized a community sample to examine the relationship between family dysfunction and adolescent adjustment
- Data for The Adolescent Adjustment Project were collected in four Waves beginning in the spring of 2006 and ending In the spring of 2009-This study utilized data from Waves 2 and 3 which were collected in the spring of 2007 and 2008
- Adolescents were recruited by contacting public high schools in Delaware, Pennsylvania, and Maryland and inviting them to participate

Sample

- 333 adolescent boys and girls
- 72 % Caucasian, 18 % African American, 10 % Hispanic
- 59 % girls
- Age range = 15-17 years old Time 1; Mean age = 16.07 (SD = .67) and 16-18 years old Time 2; Mean age = 17.06 (SD =.68)
- All participants in the sample were in the 10th or 11th grade in a public high school in Delaware, Pennsylvania, or Maryland at Time 1

Measures

Anxiety: The Screen for Child Anxiety Related Disorders (SCARED) was utilized to assess anxiety. The SCARED is a 41-item measure that is used to measure overall anxiety, as well as specific types of anxiety including social phobia, separation anxiety disorder, school phobia, panic disorder, and generalized anxiety disorder (Birmaher, Khetarpal, Cully, Brent, & McKenzie, 1995). A sample item is, "I worry about things that have already happened." In various research studies, the SCARED has been shown to have good internal consistency and discriminant validity (Linyan, Kai, Fang, Yi, & Xueping, 2008; Muris, Merckelback, Ollendick, King, & Bogie, 2002).

**To obtain a copy of this poster, please visit www.adolescentadjustmentproject.org*

Alcohol Use Survey: A quantity x frequency index for alcohol consumption was used to indicate alcohol use. Both quantity and frequency of alcohol use were measured through the Alcohol Use Survey. As part of the survey, the adolescents in the sample were asked eleven questions related to the quantity and frequency of alcohol that they had used over the past six months. A sample item is, "When you had beer, on the average day, how much did you usually drink in the last 6 months?"

Social Competence: Social competence was measured using the Self-Perception Profile for Adolescents (SPPA). The SPPA includes 45 items that examine global self-worth and competence. A sample items is, "Some teenagers are popular with others their age" versus "Other teenagers are not very popular". The SPPA has been shown to have good reliability and internal consistency (Rudasill & Callhan, 2008).

Depression: Depression was entered as a covariate because it has been shown to be related to alcohol use and anxiety in adolescents (Essau, Conradt, & Petermann, 2000; Marmorstein, 2009). The Center for Epidemiologic Studies Depression Scale for Children (CES-DC) was utilized to assess depression. The CES-DC is a 20-item measure that includes items related to depression symptoms an individual may have experienced over the course of the past week (Weissman, Orvaschel, & Padian, 1980). A sample item is, "I felt like I couldn't pay attention to what I was doing." The CES-DC has been shown to have good reliability and concurrent validity in a variety of research studies (Faulstich, Carey, Ruggiero, Enyart, & Gresham, 1986; Ohannessian, 2009).

Parental Alcoholism: Maternal and paternal alcoholism were entered as covariates because they have been shown to be related to alcohol use and anxiety in adolescents (Essau, Conradt, & Petermann, 2000; Marmorstein, 2009). Maternal and paternal alcoholism were assessed through the Short Michigan Screening Test (SMAST). The SMAST is a 9-item version of the MAST (Michigan Alcoholism Screening Test). The SMAST includes items where adolescents report on the problem drinking behavior of their mothers and fathers (Crews & Sher, 1992). A sample item is, "Has your mother/father ever gone to anyone for help about his/her drinking?" Adolescents completed the SMAST for their mother (M-SMAST) and father (F-SMAST) separately. Both the M-SMAST and F-SMAST have been shown to have good reliability and validity (Crews & Sher, 1992; Ohannessian, 2010).

Results

Boys: For boys, depression and maternal alcoholism significantly predicted alcohol use at Time 2 F (3,133) = 4.44, p<.01. Anxiety, and social competence, and the interaction between anxiety x social competence were not significant. See Table 1.

Girls, Caucasians, African Americans, and Hispanics: For girls, Caucasian, African American, and Hispanic adolescents, depression and paternal alcoholism did not significantly predict alcohol use at Time 2. Anxiety was not significant, and the interaction between anxiety x social competence was also not significant. Social competence was significant for girls and Caucasians, but was not significant for African-Americans, and Hispanics. See Tables 2, 3, 4, and 5.

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Table 1

Summary of Hierarchical Regression Analysis for Depression, Parental Alcoholism, Anxiety at Tim 1, Social Competence, Social Competence x Anxiety at Time 1 Predicting Alcohol Use at Time 2 for Boys (n = 137)

Variable	*B*	*SE B*	B
Step 1			
Depression	.05	.03	.18*
Maternal Alcoholism	1.04	.40	.22**
Paternal Alcoholism	.10	.18	.04
Step 2			
Anxiety at Time 1	-.03	.03	-.10
Social Competence	.10	.08	.11
Step 3			
Social Competence x Anxiety at Time 1	-.01	.01	-.52

Note. R^2 = .09 for Step 1; ΔR^2 = .02 for Step 2, ΔR^2 = .01 for Step 3. *p<.05. **p=.01.

Table 2

Summary of Hierarchical Regression Analysis for Depression, Parental Alcoholism, Anxiety at Tim 1, Social Competence, Social Competence x Anxiety at Time 1 Predicting Alcohol Use at Time 2 for Girls (n = 196)

Variable	*B*	*SE B*	B
Step 1			
Depression	.01	.02	.04
Maternal Alcoholism	.03	.24	.01
Paternal Alcoholism	.14	.13	.08
Step 2			
Anxiety at Time 1	.01	.02	.05
Social Competence	.15	.07	.17*
Step 3			
Social Competence x Anxiety at Time 1	.00	.00	-.03

Note. R^2 = .01 for Step 1; ΔR^2 = .03 for Step 2, ΔR^2 = .00 for Step 3. *p<.05.

Table 3

Summary of Hierarchical Regression Analysis for Depression, Parental Alcoholism, Anxiety at Tim 1, Social Competence, Social Competence x Anxiety at Time 1 Predicting Alcohol Use at Time 2 for Caucasians (n = 240)

Variable	*B*	*SE B*	B
Step 1			
Depression	.01	.02	.09
Maternal Alcoholism	.27	.24	.08
Paternal Alcoholism	-.01	.13	-.01
Step 2			
Anxiety at Time 1	-.03	.02	-.12
Social Competence	.15	.06	.16*
Step 3			
Social Competence x Anxiety at Time 1	.00	.01	.01

Note. R^2 = .02 for Step 1; ΔR^2 = .04 for Step 2, ΔR^2 = .00 for Step 3. *p<.05.

Table 4

Summary of Hierarchical Regression Analysis for Depression, Parental Alcoholism, Anxiety at Tim 1, Social Competence, Social Competence x Anxiety at Time 1 Predicting Alcohol Use at Time 2 for African Americans (n = 60)

Variable	*B*	*SE B*	B
Step 1			
Depression	-.01	.02	-.06
Maternal Alcoholism	-.19	.53	-.05
Paternal Alcoholism	.12	.18	.09
Step 2			
Anxiety at Time 1	.03	.03	.21
Social Competence	-.09	.08	-.15
Step 3			
Social Competence x Anxiety at Time 1	.01	.01	.83

Note. R^2 = .01 for Step 1; ΔR^2 = .04 for Step 2, ΔR^2 = .02 for Step 3.

Table 5

Summary of Hierarchical Regression Analysis for Depression, Parental Alcoholism, Anxiety at Tim 1, Social Competence, Social Competence x Anxiety at Time 1 Predicting Alcohol Use at Time 2 for Hispanics (n = 33)

Variable	*B*	*SE B*	B
Step 1			
Depression	.03	.04	.17
Maternal Alcoholism	-.80	.96	-.17
Paternal Alcoholism	-.04	.24	-.03
Step 2			
Anxiety at Time 1	.04	.04	.30
Social Competence	.22	.13	.34
Step 3			
Social Competence x Anxiety at Time 1	-.03	.02	.-.09

Note. R^2 = .03 for Step 1; ΔR^2 = .12 for Step 2, ΔR^2 = .08 for Step 3.

Conclusions

Social competence did not moderate the relationship between anxiety and alcohol use. However, significant main effects were observed. More specifically, boys with higher levels of depressive symptomatology and with mothers who had higher levels of alcohol use were more at risk for using alcohol themselves. These findings are important for clinicians as they should be aware of the potential for higher alcohol use if boys present with depression and/or mothers with higher levels of alcohol use. It is imperative that clinicians take preventive measures if they are working with boys who have this type of background in order to try to reduce the possible risk of future alcohol use. It is important to note that some research has found specific components of social competence, such as assertiveness, to protect adolescents from internalizing and externalizing behaviors. There is a possibility that this study did not find social competence to moderate the relationship between anxiety and alcohol use because overall social competence, as opposed to a specific component, was utilized. In addition, the present study only examined the relationship between anxiety and alcohol use, and not other substances. Consequently, future research may want to investigate the impact of a specific component of social competence on the relationship between anxiety and substances other than alcohol.