



Does Participation in Extracurricular Activities Protect COAs from the Development of Internalizing Problems?

Christine McCauley Ohannessian, *University of Delaware*

Abstract

The primary aim of this study was to examine whether participation in extracurricular activities (sports, religious activities, and work) moderates the relationship between parental alcoholism and psychological adjustment during adolescence. The sample included 1,037 14-19 year-old adolescents (52% girls; 58% Caucasian). Results indicated that COAs had higher levels of depression and anxiety than non-COAs. In addition, girls had higher levels of depression and anxiety than boys. Significant interactions also were found. These interactions suggested that working during adolescence may increase the risk of experiencing internalizing problems, particularly for COAs. In contrast, being involved in religious activities appeared to protect adolescents from developing internalizing problems.

Sample

- 1,037 adolescent boys and girls (52% girls)
- 58% Caucasian; 22% African American; 11% Hispanic; 2% Asian
- Age range = 14-19 years old; Mean age = 16.15 (SD=.75)
- All participants were 10th or 11th grade students attending public high schools in Delaware, Maryland, or Pennsylvania
- 88% lived with their biological mother; 61% lived with their biological father
- The mean educational level obtained by the adolescents' mothers and fathers was 3.98 (SD=1.15) and 3.84 (SD=1.11) (on a 6-point scale), respectively. This level is the equivalent of two years of college.

Measures

Parental Alcoholism. The 6-item Children of Alcoholics Screening Test-6 (CAST; Jones, 1981) was used to assess parental alcohol abuse. A representative item from the CAST is "Have you ever thought that one of your parents had a drinking problem?" (0 = no and 1 = yes). The CAST items were summed to create separate scale scores for the adolescent's biological mother and biological father. An adolescent who had a biological mother or biological father with a CAST score of 2 or greater was classified as having an alcoholic parent. Previous research (Clair & Genest, 1992; Dinning & Berk, 1989) has supported the validity and reliability of this measure.

Participation in Extracurricular Activities. All of the adolescents were asked how much time they were involved in extracurricular activities during the past year. The activities included sports, religious activities, and work. The response scale ranged from 1 = no involvement to 6 = every day.

Measures

Adolescent Anxiety. The Screen for Child Anxiety Related Disorders (SCARED; Birmaher et al., 1995) was used to assess adolescent anxiety. This measure consists of 41 items that are completed in reference to the previous three months. A sample item is "I get really frightened for no reason at all." The response scale ranges from 0 = not true or hardly ever true to 2 = very true or often true. Items may be summed to reflect overall level of anxiety symptomatology. Prior research has indicated that the SCARED has good reliability and validity characteristics (Birmaher et al., 2003). In the present sample, the Cronbach alpha coefficient for the SCARED total score was .93.

Adolescent Depression. The Center for Epidemiological Studies Depression Scale for Children (CES-DC; Weissman et al., 1980) was used to assess adolescent depressive symptomatology. A sample item from this 20-item measure is "I wasn't able to feel happy, even when my family or friends tried to help me feel better." Adolescents were asked to respond to the items in regard to how they felt or acted during the past week, using a four-point Likert-type scale ranging from 1 = not at all to 4 = a lot. The 20 items were summed to create a total score. The CES-DC has been reported to have good psychometric properties (Faulstich et al., 1986). In the present sample, the Cronbach alpha coefficient for the CES-DC total score was .90.

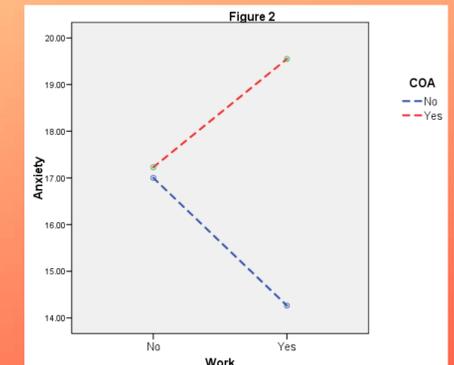
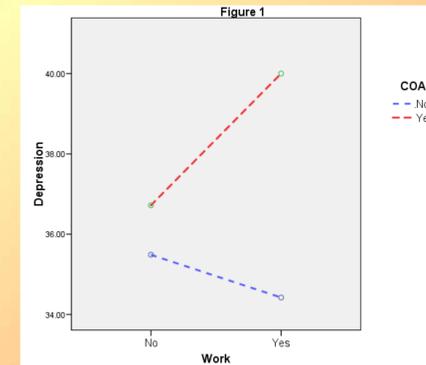
Results

The Moderating Effect of Technology Use on the Relationship between Parental Alcoholism and Adolescent Psychological Adjustment

Factorial ANOVA models were conducted to examine the interactions between parental alcoholism, gender, and extracurricular activities. Separate models were conducted for each type of extracurricular activity, yielding three models each for depression and anxiety.

Work

The depression model was significant ($F(7,914) = 7.93, p < .001$). Significant main effects were found for parental alcoholism ($F(1,914) = 11.01, p < .01$) and gender ($F(1,914) = 18.89, p < .001$). These results indicated that COAs were significantly more depressed than non-COAs and girls were significantly more depressed than boys. Working was not directly related to depression. However, a significant two-way interaction between parental alcoholism and work was found ($F(1,914) = 4.49, p < .05$), indicating that COAs who worked were the most depressed, whereas non-COAs who worked were the least depressed (see Figure 1). A significant two-way interaction between gender and work also was observed ($F(1,914) = 6.31, p < .05$), suggesting that boys who did not work were the least depressed.



The anxiety model also was significant ($F(7,862) = 14.06, p < .001$). Significant main effects again were found for parental alcoholism ($F(1,862) = 5.77, p < .05$) and gender ($F(1,862) = 51.47, p < .001$). Similar to the results for depression, COAs were significantly more anxious than non-COAs and girls were significantly more anxious than boys. A significant interaction between parental alcoholism and work was found ($F(1,862) = 4.85, p < .05$). This interaction indicated that COAs who worked were the most anxious, whereas non-COAs who worked were the least anxious (see Figure 2).

Religious Activities

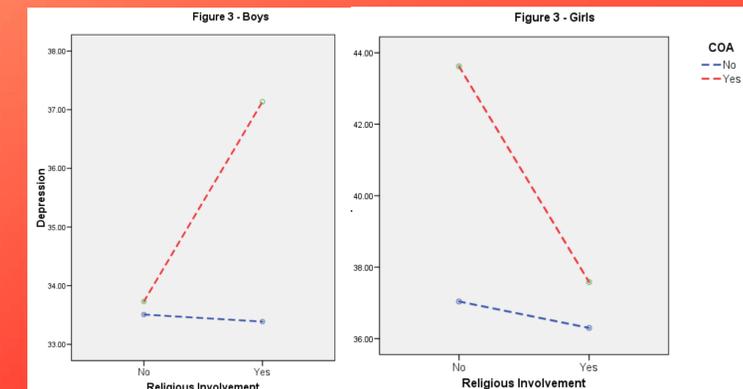
The main effects for parental alcoholism and gender in all of the models were similar to those just reported. Therefore, they will not be repeated. The depression model was significant ($F(7,914) = 7.93, p < .001$). A significant two-way interaction between gender and religious activities was found ($F(1,908) = 5.79, p < .05$), indicating that girls who did not attend religious activities were the most depressed. A significant three-way interaction between parental alcoholism, gender, and religious activities also emerged ($F(1,908) = 4.45, p < .05$). This interaction suggested that COA girls who reported no religious involvement were the most depressed, whereas non-COA boys who were involved in religious activities were the least depressed (see Figure 3).

The anxiety model was significant ($F(7,857) = 12.94, p < .001$). However, none of the interactions were significant.

Sports

The depression model was significant ($F(7,921) = 8.88, p < .001$). In addition to significant main effects for parental alcoholism and gender, a significant main effect for sports involvement was found ($F(1,921) = 7.71, p < .01$), indicating that those involved in sports were less depressed than those who were not involved in sports. None of the interactions were significant.

The anxiety model also was significant ($F(7,868) = 14.36, p < .001$). However, sports involvement was not significant in this model. In addition, none of the interactions were significant.



Conclusions

Consistent with the literature, girls were more depressed and anxious than boys. In addition, COAs were more depressed and anxious than non-COAs. Importantly, results from this study also indicate that involvement in sports during adolescence may be beneficial since adolescents who were involved in sports were less depressed than those who were not. Religious involvement also played a protective role for some of the adolescents in the present study. More specifically, results indicated that COA girls who had no religious involvement were the most depressed, whereas non-COA boys who were involved in religious activities were the least depressed. Moreover, religious involvement appeared to buffer the relationship between parental alcoholism and depression for girls. In contrast to the beneficial role that sports and religious involvement played in the present study, work appeared to exacerbate psychological problems for COAs (depression and anxiety). Taken together, these results suggest that prevention programs targeting adolescent COAs should encourage involvement in constructive extracurricular activities (e.g., sports) and discourage involvement in activities that may further increase the risk of developing problems (e.g., work).