

## INTRODUCTION

Adolescents with internalizing problems struggle to cope with challenges while transitioning into adulthood (Seiffge-Krenke & Beyers, 2005).

- ❖ As many as 32% of adolescents 13 - 18 are diagnosed with an anxiety disorder, however, even sub-clinical anxiety symptoms can impair functioning (Bosquet, & Egeland, 2006; Merikangas et al., 2010).
- ❖ Similarly, major depressive disorder is thought to affect about 14% of adolescents aged 15-18, with an additional 20% to 50% of adolescents experiencing subclinical symptoms (Hankin, 2006).

Poor parent-child communication (reduced perceived support and increased conflict) negatively relate to adaptive coping strategies (Toussiant & Jorgensen, 2008; Wadsworth & Compas, 2002), however, longitudinal studies of coping across the transition to adulthood are rare.

- ❖ Active coping skills (e.g., humor) are protective during normative and atypical stressors (Fidan, Ceyhun & Kirpinar, 2011).

The current study examines predictive relationship between adolescent anxious/depressive symptomology and coping styles in early adulthood, and explores parent-adolescent communication as a mediator.

**H1: 10<sup>th</sup>/11<sup>th</sup> grade participants' internalizing symptoms will be positively associated with active coping styles in early adulthood.**

**H2: Adolescent-mother communication during the transition out of high school will mediate this relationship.**

## METHODS

### PARTICIPANTS

235 Adolescents (69% female;  $\mu_{age} = 16$  years at Time 1) in 10<sup>th</sup>/11<sup>th</sup> grade

- ❖ Recruited 71% of eligible students from seven mid-Atlantic public high schools in 2007
- ❖ 57% Caucasian, 21% African-American, 11% Hispanic, 4% Asian (the remainder responded "other").

### PROCEDURE

Time 1 (2007): Administered a 40-minute, self-report survey in school.

Time 2 (2009): Participants were invited to participate again as they graduated high school, using the same survey protocol.

Time 3 (2014): Follow-up surveys sent to all participants ( $\mu_{age} = 23$  years).

### MEASURES

Participants anonymously completed a demographic questionnaire, plus:

- ❖ The Center for Epidemiological Studies Depression Scale for Children (CES-DC; Weissman, Orvaschell, & Padian, 1980). 20-items; Cronbach's  $\alpha = 0.90$ .
- ❖ The Screen for Child Anxiety Related Disorders (SCARED; Birmaher, Brent, Chiappetta, Bridge, Monga, & Baugher, 1999); Cronbach's  $\alpha = 0.93$ .
- ❖ The Parent-Adolescent Communication Scale (Barnes & Olson, 2003), open and problem communication scales. Cronbach's  $\alpha = 0.81, 0.93$ , respectively.
- ❖ The COPE Inventory (Carver, Scheier, & Weintraub, 1989). 60-item inventory of coping preferences (venting, denial, religious coping, humor, emotional social support subscales);  $\alpha = .83, .85, .92, .89, .88$ , respectively.

## METHODS (continued)

### ANALYSIS

- ❖ Path analyses, using IBM SPSS Amos 23.0.0, tested relationships between adolescent internalizing symptoms (both anxiety and depression) at Time 1 and adolescents' ratings of coping style at Time 3.
  - ❖ Tested whether adolescent-parent communication at Time 2 (open communication and conflict) mediated this relationship.
  - ❖ Time 1 coping styles were included as covariates
- ❖ Maximum Likelihood estimation was used to handle missing data, as this technique utilizes all available data to produce unbiased parameter estimates (Wothke, 2000).

## RESULTS

- ❖ The specified model demonstrated acceptable model fit ( $X^2(52)=95, p < .001$ ; CMIN/DF=1.83; CFI=.96; RMSEA=.06).
- ❖ H1: Adolescent depression and anxiety symptoms at Time 1 significantly predicted humor coping in emerging adulthood ( $\beta = .29, p < .05$ ;  $\beta = -.16, p < .05$ , respectively).
- ❖ H2: Adolescent-mother open communication at Time 2 positively predicted humor coping at Time 3 ( $\beta = .17, p < .05$ ).
  - Sobel tests indicated that adolescent-mother open communication at Time 2 mediated the relationship between adolescent depression at Time 1 and humor coping at Time 3 (c.r.=2.65,  $p < .05$ ).
- ❖ These results indicate that the relationship between depression symptoms and subsequent humor coping can be understood as acting through open communication with mother.

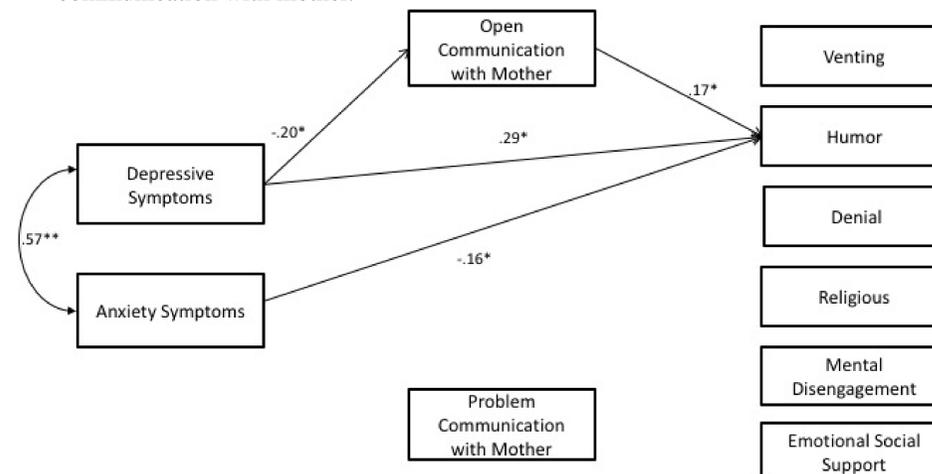


Figure 1. Model Predicting Coping Styles. Standardized regression coefficients are presented. For ease of interpretation, Time 1 Coping Styles covariates not shown. Only significant pathways included. \* $p < .05$ .

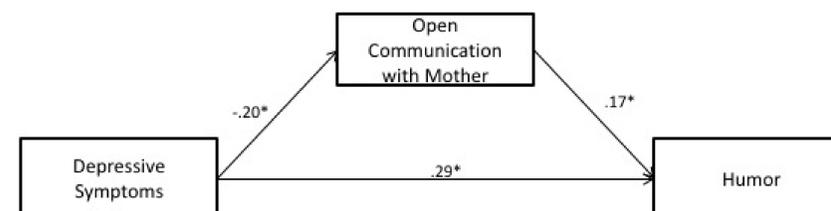


Figure 2. Mediation model. Standardized regression coefficients are presented. \* $p < .05$ .

## DISCUSSION

- ❖ This study presents novel findings on the development of coping styles from adolescence into adulthood and describes the important role open communication with mothers plays.
- ❖ The extant literature indicates youth with internalizing symptoms demonstrate increased challenges to adaptively cope (Seiffge-Krenke & Beyers, 2005), and that active coping skills - including humor - help to protect youth during stressful times (Fidan, Ceyhun & Kirpinar, 2011).
- ❖ Our study indicates a direct association between adolescent depression symptomology and use of humor to cope with life stressors in early adulthood, mediated by open communication with mothers.
  - ❖ Note the negative association between depressive symptoms and open communication with mothers, indicating depression has a dampening effect on open communication.
- ❖ While the literature indicates that poor parent-child communication - characterized by conflict - is negatively related to adaptive coping strategies, our results indicate that open communication with mothers is also significantly associated with the use of humor (Toussiant & Jorgensen, 2008; Wadsworth & Compas, 2002).

## LIMITATIONS

- ❖ Girls in this sample had significantly higher baseline levels of internalizing symptoms; future efforts could conduct similar efforts on a matched samples design of boys and girls with comparable mental health profiles.
- ❖ Further efforts to strengthen measurement might include assessment beyond the self-report measures used here.
- ❖ Consideration of other indicators of family dynamics would yield a more comprehensive picture of the mediation at play (i.e., nonverbal communication, attachment, and conflict between parents).

## IMPLICATIONS FOR FUTURE STUDY

- ❖ Those using humor as a coping mechanism may do so as a defense mechanism, or through cognitive reappraisal - reframing a negative experience into a positive one. Future studies might explore these pathways to further build the limited literature on humor as a coping strategy.
- ❖ Further consideration of the possible dampening effect seen between adolescent depressive symptomology and open communication (via a significant negative association) with mothers is warranted.
  - ❖ Interventions that target youth struggling with internalizing symptoms may benefit even more from efforts to foster open and supportive conversations at home
    - Note, as well, the negative association between anxiety symptoms and humor.

