ADOLESCENT COPING PROFILES AND DEPRESSION AND ANXIETY SYMPTOMS

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Overview of Coping

- Coping refers to the ways in which individuals respond to and manage stress
- Coping evolves over the course of development
- Certain coping strategies associated with better outcomes
- Some coping strategies → internalizing symptoms

Approach vs. Avoidant Coping

- Approach strategies = attempts to alter the stressfulness of a situation (e.g., problem solving, cognitive restructuring, seeking emotional support)
- Avoidance strategies = attempts to ignore or deny the existence of a stressor (e.g., denial, withdrawal)
  - Result: short term relief, but increased distress in the long term

Generally, research shows that approach coping is associated with positive outcomes, whereas avoidance coping is associated with negative outcomes

Coping in Adolescence

- Numerous changes occur during adolescence, including:
  - Pubertal development
  - Autonomy development
  - Identity formation
  - Increases in cognitive, behavioral, and emotional self-regulation
  - Transition to high school
  - Changes in family and peer relationships
- Managing the vast number of changes during adolescence may be difficult for some youth
- Prevalence of psychological problems rises dramatically during this time period

Gender Differences in Coping

- Girls:
  - Use a wider range of coping strategies
  - Generally report engaging in more coping strategies
  - Are more likely to report the use of approach strategies (e.g., seeking social support; problem solving)
- The increase in stressful life events for adolescent girls and their use of different coping strategies may explain why they are more vulnerable to depressive symptoms during this time period

The COPE Inventory (Carver et al., 1989)

- 60 items to assess 15 coping strategies:
  1. **Active coping**
  2. **Denial**
  3. **Substance Use**
  4. **Use of emotional social support**
  5. **Use of instrumental social support**
  6. **Behavioral Disengagement**
  7. **Venting of emotions**
  8. **Planning**
  9. **Humor**
  10. **Religious coping**
  11. Mental Disengagement
  12. Positive reinterpretation and growth
  13. Restraint
  14. Acceptance
  15. Suppression of competing activities

- Brief COPE (28 items) includes the bolded scales plus the following:
  1. Self-distraction
  2. Positive reframing
  3. Acceptance
  4. Self-blame

Using the COPE to Predict Risk

- Litman (2006)
  - Approach-oriented scales positively correlated with behavioral activation and positive traits (curiosity)
  - Avoidant-coping scales positively correlated with avoidance motives (behavioral inhibition) and negative traits (anxiety, depression, and anger)
- Litman and Lunsford (2009)
  - Emotional venting and behavioral disengagement predicted diminishment (e.g. reduced self-esteem, greater pessimism), which in turn, predicted illness

COPE with Adolescents

- Factor analysis of the COPE inventory with adolescents has identified similar factors to those found with adults (Phelps & Jarvis, 1994)
- Psychological outcomes associated with the use of individual coping strategies (e.g., Horwitz et al., 2011)
- Cluster analysis of the COPE identified adolescent coping typologies associated with risk for adult substance use and abuse (Ohannessian et al., 2010)

The Current Study

- Latent profile analysis (LPA) was used to identify a categorical latent structure of coping that differentiates groups of adolescents who employ similar patterns of coping responses
- Research Questions:
  1. Can a common self-report measure of adolescent coping (COPE Inventory; Carver et al., 1989) identify profiles of adolescents with preference for certain strategies?
  2. Does the composition of the different profiles vary in terms of adolescent demographic characteristics, including gender?
  3. Do the different coping typologies identified by the groups differentiate levels of depression and anxiety symptoms?

Participants

- 10th and 11th grade students attending 7 public high schools in the Mid-Atlantic region of the U.S.
- *N* = 982 (Age range = 15-17, *M* = 16.09 years, *SD* = .68)
- 54% female
- 65% Caucasian, 19% were African-American, 11% were Hispanic, 2% were Asian, 3% identified as “other”

Procedure

- Waiver of consent
  - 2 parents requested that their adolescents not participate
- Adolescent assent obtained prior to participation
  - 45 adolescents declined participation
- 71% of eligible students participated
  - The majority of that students who did not participate were students who were absent on the day of data collection
- Trained research staff administered self-report survey measures (~40-min total)
- Participants were compensated with a movie pass

Measure of Coping

The COPE Inventory (Carver et al., 1989)

- Items rated on a 1 (*don't do this at all*) to 4 (*do this a lot*)
- 9 scales included:
  1. Active coping ("I concentrate my efforts on doing something about it"; α = .75)
  2. Denial ("I say to myself 'this isn't real'"; α = .83)
  3. Emotional social support ("I discuss my feelings with someone"; α = .86)
  4. Humor ("I laugh about the situation"; α = .89)
  5. Instrumental social support ("I try to get advice from someone about what to do"; α = .82)
  6. Mental disengagement ("I do other activities to take my mind off things"; α = .55)
  7. Planning ("I make a plan of action"; α = .82)
  8. Religious coping ("I put my trust in God"; α = .90)
  9. Venting emotions ("I get upset and let my emotions out"; α = .83)

Measure of Depression Symptoms

Center for Epidemiological Studies Depression Scale for Children (CES-DC; Weissman, Orvaschell, & Padian, 1980)

- 20 items rated for how the adolescent felt or acted during the past week (e.g., “I felt sad.”) on a 1 *(not at all)* to 4 (*a lot*) scale
- Items were summed to reflect a total depressive symptomatology score (range = 20-80)
- α = .91.

Measure of Anxiety Symptoms

Screen for Child Anxiety Related Disorders (SCARED; Birmaher, Khetarpal, Cully, Brent, & McKenzie, 1995)

- 41 items completed in reference to the last three months (e.g., “I get really frightened for no reason at all.”)
- Response scale ranges from 0 (*not true or hardly ever true)* to 2 (*very true or often true)*.
- Items were summed to reflect a total anxiety symptomatology score (range = 0-82).
- α = .94.

Descriptives/Correlations for the COPE Scales

- Participants were most likely to seek instrumental and emotional support and least likely to engage in denial as a coping strategy

- COPE scales significantly correlated
  - Small correlations across the approach-oriented and avoidance-oriented coping scales (e.g., emotional support and denial, $r = .29$, $p < .01$)
  - Large correlations among the approach-oriented scales (e.g., planning and active coping, $r = .78$, $p < .01$)
  - Emotional support and instrumental support were highly correlated ($r = .82$, $p < .01$)

- Female participants reported significantly higher mean scores than males on the following scales:
  - Emotional social support
  - Instrumental social support
  - Active coping
  - Disengagement
  - Religious coping
  - Venting

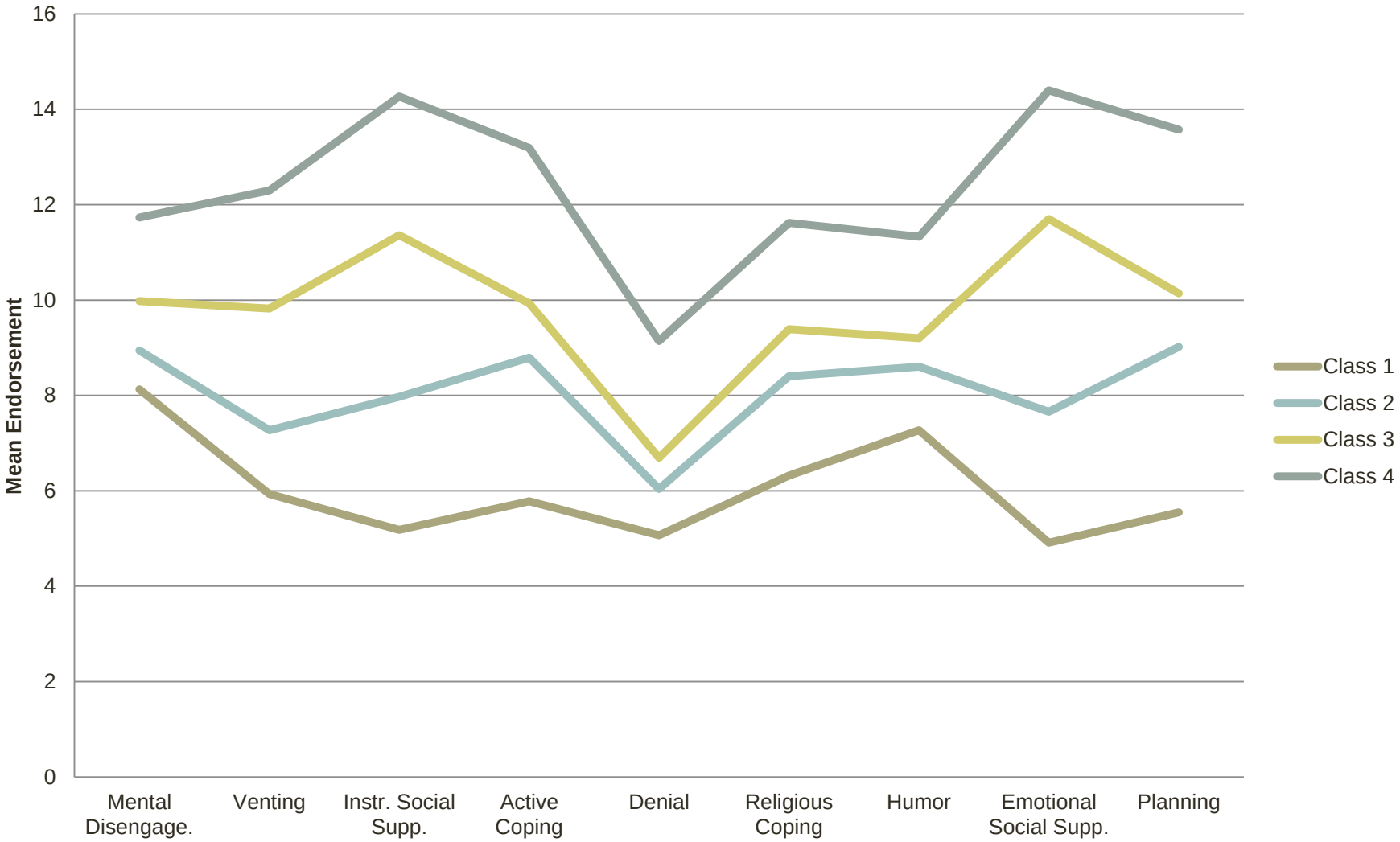
Latent Profile Analysis

- Conducted using Mplus Version 6.0 (Muthén & Muthén, 1998-2010)
- Compared fit statistics for models with increasing numbers of groups (1 to 5 groups):
  - Bayesian Information Criterion (BIC)
  - Sample-Size-Adjusted BIC
  - Vuong–Lo–Mendell–Rubin likelihood ratio test
  - Adjusted Lo–Mendell–Rubin likelihood ratio test
  - Entropy (values of Entropy range from 0 to 1, with values closer to 1 suggesting better classification of individuals to groups)

Fit statistics for LPA models representing one to five Coping Groups

# of Groups	BIC	SSA BIC	VLMR	*p*-value	Adj. LMR	*p*-value	Entropy
1	43152.82	43095.65	n/a	n/a	n/a	n/a	n/a
2	41279.35	41190.42	-21514.70	0.00	1914.12	0.00	0.85
3	40726.84	40606.15	-20543.68	0.00	612.15	0.00	0.84
4	40460.75	40308.30	-20233.15	0.01	329.84	0.01	0.84
5	40314.72	40130.52	-20065.82	0.25	211.50	0.25	0.85

COPE Scale Means for the 4 Groups



Composition of the Groups

- No group differences in **age**, $X^2 = 6.07$, p = n.s.
- No group differences in **race/ethnicity** (European American, African American, Latino American, or Asian American), $X^2 = 16.10$, p = n.s.
- Found differences in **gender** composition across the 4 groups, $X^2 = 89.30$, $p < .05$
  - More boys than girls in groups 1 (66% male) and 3 (60% male)
  - More girls than boys in groups 2 (66% female) and 4 (75% female)

Comparing the 4 groups on Symptoms

Group	Depression	Social Anxiety	Separation Anxiety	Generalized Anxiety	Total Anxiety
1 (n = 131)	36.98_a (12.39)	3.77_a (3.60)	1.30_a (2.11)	3.88_a (4.25)	12.69_a (12.45)
2 (n = 312)	36.36_a (10.90)	4.64_a (3.41)	2.62_b (2.45)	5.76_b (3.99)	18.72_b (12.13)
3 (n = 250)	33.69_b (9.76)	4.10_a (3.30)	1.63_a (1.94)	4.22_a (3.66)	13.29_a (9.68)
4 (n = 96)	37.42_a (12.64)	4.63_a (3.66)	3.24_b (3.23)	7.40_c (4.92)	22.44_c (15.53)
F (3, 785)	4.47*	2.64*	20.749*	20.82*	21.92*
Adjusted R^2	.013	.006	.070	.070	.074

Note. *SD*s are in parentheses. Different subscripts indicate significant differences between means at $p < .05$. Means that share the same subscript are not significantly different.
*$p < .05$

Conclusion

- Identified 4 groups of adolescents who varied in the degree to which they reported engaging in the coping strategies
- The coping groups also differed on levels of depressive and anxiety symptoms
  - Group 4 reported the most coping, as well as the highest anxiety
  - Group 3 reported the 2nd most coping and the least depression and anxiety
- Gender differences in the groups, but differences between the groups on depressive and anxiety symptoms were evident even after controlling for gender

Limitations and Future Directions

- Did not consider amount or type of stressors
- Self-report data
- Cross-sectional design
- Sample of public school students in Mid-Atlantic U.S.

- Future Directions:
  - Continue to take a multidimensional approach by examining profiles of coping, rather than individual strategies
  - Consider other types of coping that might differentiate youth at varying levels of risk for internalizing problems

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