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Abstract

The ways in which adolescents cope with stressful life events have been linked with developmental outcomes ranging from depression (Auerbach et al., 2010) to academic achievement (Arsenio & Loria 2014). Research has demonstrated that parents play an important role in the development and use of coping strategies (Zimmer-Gembeck & Skinner 2011), and that adolescent girls and boys use different coping strategies (De Boo & Spiering, 2010). However, one aspect of family life that has not fully been explored in relation to adolescent coping is sibling relationships, despite research highlighting the powerful role siblings play in adolescents' lives (McHale, Updegraff, & Whiteman, 2012). Therefore, the purpose of this study was to examine how family functioning and sibling relationship characteristics are related to coping strategies for adolescent girls and boys with sisters and brothers.

Sample

- 389 adolescents (54% girls) from the Adolescent Adjustment Project (AAP)
- Adolescents' mean age = 16.08 (*SD* = .69)
- All participants attended a public high school in Mid-Atlantic States

Measures

Family Functioning. The Family Satisfaction Scale (Olson & Wilson, 1989) was used to measure adolescents' satisfaction with closeness within their family (cohesion; "How close do you feel to the rest of your family?") and the flexibility of family roles (adaptability; "How often parents make decisions in your family?"). Response options ranging from 1 (*Dissatisfied*) to 5 (*Extremely Satisfied*). These scales demonstrated acceptable internal consistency in our sample for both cohesion ($\alpha = .83$) and adaptability ($\alpha = .79$).

Sibling Relationship. Adolescent-sibling relationship characteristics within the last month were assessed using The Sibling Relationship Questionnaire (Slomkowski et al., 2001). Warmth (e.g., "Act loving and affectionate toward you?") and hostility (e.g., "Criticized you and your ideas?") were assessed. Response options ranged from 1 (*Always*) to 7 (*Never*) but were recoded for analyses such that greater scores indicated greater warmth and hostility. Cronbach alphas ranged from .87 to .92 for boys and girls.

Table 1.

Predicting Adolescent Coping from Family Functioning and Sibling Relationships for Girls with Sisters

Outcome Variable	Predictors	Girls with Sisters			
		Model 1		Model 2	
Seeking instrumental social support	Cohesion	0.12(.06)	0.23	0.22(.09)	0.43*
	Adaptability	0.05(.08)	0.07	-0.06(.11)	-0.09
	Sibling warmth			0.70(.24)	0.34**
	Sibling hostility			0.40(.25)	0.18
	R2	0.08		0.24***	
F for change in R2		8.24***		2.62	
Denial	Cohesion	-0.00(.05)	-0.01	0.01(.07)	0.01
	Adaptability	-0.02(.07)	-0.04	-0.07(.09)	-0.14
	Sibling warmth			0.42(.20)	.26*
	Sibling hostility			0.81(.21)	.46***
	R2	0.00		0.18**	
F for change in R2		0.26		8.46***	
Religion	Cohesion	0.05(.09)	0.07	0.08(.12)	0.12
	Adaptability	0.06(.11)	0.07	0.04(.16)	0.05
	Sibling warmth			0.37(.35)	0.14
	Sibling hostility			0.87(.36)	0.31*
	R2	0.02		0.09	
F for change in R2		1.59		1.94	
Humor	Cohesion	-0.01(.07)	-0.03	0.07(.10)	0.15
	Adaptability	0.00(.09)	0.01	-0.11(.12)	-0.16
	Sibling warmth			0.43(.27)	0.20
	Sibling hostility			1.00(.28)	.43**
	R2	0.00		0.15*	
F for change in R2		0.04		6.84***	

Note. * $p < .05$; ** $p < .01$; *** $p < .001$

Measures cont.

Coping. The COPE Inventory (Carver et al., 1989) was used to evaluate adolescents' use of coping strategies in response to stressful life events. The following scales from the COPE were included in this study: mental disengagement, venting of emotions, seeking instrumental social support, seeking emotional social support, active, denial, religion, planning, and humor. Cronbach alphas ranged from .55 to .90.

Procedure

Data for this study were drawn from a larger research project. Adolescents from seven public high schools in the Mid-Atlantic United States were invited to participate in the study in the Spring of 2007. The survey was administered by trained staff and took approximately 40 minutes to complete. Adolescents were compensated for their time with a movie pass. Only adolescents who reported having one sibling were included in the current study.

Table 2.

Predicting Adolescent Coping from Family Functioning and Sibling Relationships for Girls with Brothers

Outcome Variable	Predictors	Girls with Brothers			
		Model 1		Model 2	
Denial	Cohesion	-0.00(.05)	-0.01	-0.01(.07)	-0.03
	Adaptability	-0.02(.07)	-0.04	0.04(.09)	0.06
	Sibling warmth			0.47(.22)	0.23*
	Sibling hostility			0.52(.21)	0.27*
	R2	0.00		0.07	
F for change in R2		0.26		3.76*	
Religion	Cohesion	0.05(.09)	0.07	0.03(.12)	0.04
	Adaptability	0.06(.11)	0.07	0.10(.15)	0.10
	Sibling warmth			0.69(.36)	0.21
	Sibling hostility			0.84(.33)	0.27*
	R2	0.02		0.08	
F for change in R2		1.59		3.164*	

Note. * $p < .05$

Results

Hierarchical regression models were used to examine whether family functioning and sibling relationship qualities predicted adolescent coping strategies. Family cohesion and adaptability were included in the first block and sibling warmth and hostility were included in the second block. Relationships were also examined by adolescent and sibling gender. Only significant relationships are displayed in tables.

Results suggested that, for girls, greater warmth with a sister was associated with greater use of instrumental social support seeking and denial (see Table 1). Additionally, greater hostility with a sister was associated with greater denial, religion, and humor coping strategies. Further, for girls with brothers, warmth was associated with denial and hostility was associated with denial and religion coping strategies (see Table 2).

For boys, greater warmth with a brother was related to greater use of active coping strategies (see Table 3). Hostility was related to greater use of mental disengagement, venting of emotions, and humor. Warm and hostility with sisters did not predict boys coping.

Table 3.

Predicting Adolescent Coping from Family Functioning and Sibling Relationships for Boys with Brothers

Outcome Variable	Predictors	Boys with Brothers			
		Model 1		Model 2	
Mental disengagement	Cohesion	-0.03(.06)	-0.08	0.01(.07)	0.02
	Adaptability	0.13(.08)	0.23	0.05(.10)	0.09
	Sibling warmth			-0.02(.21)	-0.01
	Sibling hostility			0.47(.20)	0.25*
	R2	0.03		0.08	
F for change in R2		2.07		1.01	
Venting of emotions	Cohesion	-0.07(.06)	-0.17	-0.02(.09)	-0.05
	Adaptability	0.06(.09)	0.09	-0.03(.13)	-0.05
	Sibling warmth			0.44(.25)	0.21
	Sibling hostility			0.51(.25)	0.23*
	R2	0.01		0.07	
F for change in R2		0.86		2.14	
Active	Cohesion	0.06(.06)	0.15	0.03(.08)	0.07
	Adaptability	0.06(.09)	0.09	0.07(.11)	0.12
	Sibling warmth			0.49(.24)	0.24*
	Sibling hostility			0.28(.23)	0.13
	R2	0.05*		0.13*	
F for change in R2		4.12*		1.96	
Humor	Cohesion	-0.05(.08)	-0.09	-0.15(.11)	-0.28
	Adaptability	0.21(.11)	0.27	0.28(.15)	0.36
	Sibling warmth			0.56(.30)	0.21
	Sibling hostility			0.61(.30)	0.22*
	R2	0.04		0.12	
F for change in R2		3.07*		2.59	

Note. * $p < .05$

Conclusions

Findings from this study highlight the importance of sibling relationships in understanding adolescent coping strategies. Generally, it appears that for both girls and boys, same-sex siblings play a more central role in influencing coping strategies, after controlling for family functioning. However, for girls, cross-sex sibling relationships were also found to be influential. These findings support previous literature which highlights the importance of the gender composition within sibling relationships when exploring adolescent outcomes (Feinberg et al., 2012). Findings also differentiate between the unique effects of sibling warmth and hostility on coping. It appears that, for girls, both warmth and hostility are related to diverse coping strategies, whereas, for boys, hostility with brothers appears to be more influential in adolescents coping. These findings have implications for prevention and interventions aimed at supporting adolescents' coping through engagement with siblings.