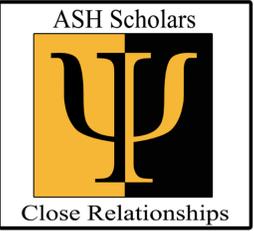




Adolescent Friendship Quality: Analyzing the Impact of Temperament, Emotional Reactivity and the Role of Gender

Catherine Everett, Gabrielle Scott, Hannah Holladay, Archer Cole, Allie Spiekerman, Sarah Borowski, Ashley Groh, & Amanda Rose

Department of Psychological Sciences, University of Missouri, Columbia, Missouri, USA



Introduction

- Emotional reactivity and temperament are similar emotional components of development that have been shown to impact friendship quality both positively and negatively (see Acar et al., Demir & Urberg, 2004; 2015 Stotsky & Bowker, 2018)
- Temperamental characteristics (e.g., emotional intensity and sociability) are considered to have significant implications for children's peer relationships (Rothbart & Bates, 1998)
- An increase emotional reactivity is related to greater conflict with close friends (Cook et al., 2013)
- Previous research on early childhood has found connections between temperament characteristics indicating better regulation and less reactivity predict positive peer relations and friendship (Gleason et al., 2005)
- Previous research has also found gender differences between temperament and emotional reactivity in regards to friendship quality in early childhood.
 - Association between perceived emotional reactivity and relationship conflict is stronger for girls than boys (McCoy, Brody, & Stoneman, 1995)
 - Boys have been shown to have higher ratings in temperamental difficulty and conflict (McCoy et al., 1995)
- There is limited research on emotional reactivity and temperament in adolescence.
- This study aims to analyze the association between temperament and emotional reactivity in relation to positive and negative friendship quality in adolescent participants.
- Two measures of emotional reactivity are considered:
 - trait emotional reactivity (i.e., temperament)
 - state emotional reactivity (i.e., change in negative emotions from before to after an interaction task).

Hypotheses

- Lower levels of reactivity will be related to more positive friendship quality
- Increased emotional reactivity will be negatively related to friendship quality for boys and girls.
- The effects of increased emotional reactivity will be more strongly correlated with negative friendship quality for girls than boys.

Methods

- Participants were 174 adolescents (60 boys, 114 girls) in the 8th, 9th, and 10th grade.

Procedure:

- Trait emotional reactivity (i.e., temperament):
 - Adolescents answered questions that assessed the extent to which they experience negative affect or negative reactivity using the Early Adolescent Temperament Questionnaire (Capaldi & Rothbart, 1992; Ellis & Rothbart, 2001).
- State emotional reactivity:
 - The friends completed a Negative Valence Task (talk about a problem) together.
 - Adolescents reported on positive (e.g., happiness) and negative (e.g., upset) emotions before and after each task using the Positive and Negative Affect Scale (Watson et al., 1999).
- Friendship Quality:
 - Adolescents answered questions on computers that assessed positive and negative qualities of the adolescents' friendship using The Friendship Quality Questionnaire (Rose, 2002).

Results

Table 1: Gender Differences in Temperament and Emotional Reactivity and Friendship Quality

Variable	Boys M (SD)	Girls M (SD)	Overall M	T-value
1. REACT. state	-0.13 (0.19)	-0.19 (0.33)	-0.17 (0.30)	1.25
2. REACT. trait	2.55 (0.51)	2.76 (0.46)	2.70 (0.49)	2.49*
3. POS. FQ	3.98 (0.46)	4.36 (0.43)	4.25 (0.47)	4.90**
4. VAL.	4.07 (0.75)	4.37 (0.60)	4.28 (0.66)	2.52*
5. CON. RES.	4.14 (0.73)	4.37 (0.66)	4.30 (0.69)	1.88
6. AFF.	4.01 (0.57)	4.46 (0.43)	4.32 (0.52)	5.08**
7. EMOT.	4.39 (0.58)	4.73 (0.40)	4.62 (0.49)	3.83**
8. HELP.	3.89 (0.76)	4.23 (0.65)	4.13 (0.70)	2.73**
9. COMP.	3.76 (0.75)	4.07 (0.80)	3.98 (0.80)	2.37**
10. INTL.	3.21 (0.76)	4.16 (0.67)	3.86 (0.83)	7.66**
11. NEG. FQ	1.61 (0.80)	1.53 (0.64)	1.55 (0.69)	0.69

Table 2: Full Sample Correlations

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. REACT. state	---										
2. REACT. trait	-0.05	---									
3. POS. FQ	-0.07	-0.08	---								
4. VAL.	-0.03	-0.04	0.76**	---							
5. CON. RES.	-0.05	-0.20*	0.66**	0.42**	---						
6. AFF.	-0.03	0.00	0.72**	0.49**	0.33**	---					
7. EMOT.	-0.05	-0.13	0.74**	0.41**	0.41**	0.61**	---				
8. HELP.	-0.04	-0.12	0.79**	0.61**	0.44**	0.51**	0.58**	---			
9. COMP.	-0.10	-0.09	0.75**	0.46**	0.39**	0.47**	0.56**	0.56**	---		
10. INTL.	-0.05	0.13	0.72**	0.48**	0.45**	0.54**	0.53	0.47**	0.36**	---	
11. NEG. FQ	0.04	0.18*	-0.25**	-0.27**	-0.43**	-0.11	-0.14	-0.25**	0.04	-0.16*	---

Table 3: Correlations between Temperament and Emotional Reactivity and Friendship Quality For Girls

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. REACT. state	---										
2. REACT. trait	-0.03	---									
3. POS. FQ	-0.05	-0.16	---								
4. VAL.	0.01	-0.08	0.75**	---							
5. CON. RES.	-0.06	-0.20*	0.63**	0.35**	---						
6. AFF.	-0.03	-0.17	0.69**	0.51**	0.28**	---					
7. EMOT.	-0.01	-0.22*	0.79**	0.49**	0.37**	0.53**	---				
8. HELP.	-0.02	-0.17	0.80**	0.62**	0.33**	0.49**	0.65**	---			
9. COMP.	-0.10	-0.12	0.78**	0.42**	0.38**	0.53**	0.69**	0.60**	---		
10. INTL.	-0.01	0.09	0.65**	0.47**	0.37**	0.39**	0.41**	0.39**	0.30**	---	
11. NEG. FQ	0.14	0.18	-0.13	-0.16	-0.36**	-0.01	-0.05	-0.09	0.11	-0.08	---

Table 4: Correlations between Temperament and Emotional Reactivity and Friendship Quality For Boys

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. REACT. state	---										
2. REACT. trait	-0.09	---									
3. POS. FQ	0.02	-0.21	---								
4. VAL.	-0.08	-0.10	0.75	---							
5. CON. RES.	0.06	-0.31*	0.73**	0.51**	---						
6. AFF.	0.13	0.04	0.64**	0.38**	0.32*	---					
7. EMOT.	-0.04	-0.19	0.59**	0.19	0.42**	0.58**	---				
8. HELP.	-0.03	-0.16	0.74**	0.55**	0.57**	0.43**	0.43**	---			
9. COMP.	0.03	-0.16	0.68**	0.48**	0.35**	0.29*	0.32*	0.41**	---		
10. INTL.	0.06	-0.11	0.69**	0.39**	0.54**	0.46**	0.49**	0.49	0.33*	---	
11. NEG. FQ	-0.36*	0.25	-0.43**	-0.39**	-0.52**	-0.19	-0.21	-0.46**	-0.04	-0.27	---

Notes. REACT = reactivity, VAL = validation and caring, CON RES = conflict resolution, AFF = affective closeness, EMOT = emotional closeness, HELP = help and guidance, COMP = companionship and recreation, INTL = intimate exchange, POS FQ = positive friendship quality, NEG FQ = negative friendship quality
* $p < .05$, ** $p < .01$

Discussion

- Girls reported higher levels of positive friendship qualities than boys did and boys reported higher levels of negative friendship quality than girls did.
- Contrary to hypotheses, negative emotional reactivity was not related to most indicators of positive friendship quality.
- Trait negative emotional reactivity was, however, related to greater negative friendship quality (i.e., conflict) and lower conflict resolution.
 - Previous research has also found that the way friends manage their anger in conflict is a predictor of having close friends (von Salisch et al. 2014).
 - Adolescents with greater levels of negative emotional reactivity may have difficulties managing their emotions during friendship conflicts, which could interfere with their abilities to effectively resolve conflicts within their friendships.
- Results showed few gender differences in the associations among emotional reactivity and friendship qualities. However, trait emotional reactivity was related to lower emotional closeness for girls but not for boys.
 - Girls compared to boys have been found to be more reactive to stressful life experiences and are more at-risk for negative emotional outcomes (e.g., Rudolph & Hammen, 1999).
 - Results of the current study indicate that girls' negative emotionality reactivity could also have negative implications for their close friendships.
 - Given that emotional closeness may be more important for girls' friendships than boys' friendships (Rose & Rudolph, 2006), it could be important for future work to further explore how girls' emotional reactivity affects their functioning within close friendships.
- There were no significant findings for state emotional reactivity in relation to friendship quality.
 - It is possible that the task in the current study (i.e., discussing problems) did not evoke strong negative emotions.
 - Future work might consider using a more emotionally evocative task to examine state emotional reactivity (e.g., a conflict discussion).
- An important step for future research will be to further examine how negative emotionality may affect adolescents' conflict in their friendships and their conflict management.
 - Observational methodologies could provide insights into specific behaviors that adolescents are engaging in during friendship conflicts (e.g., expressed anger; conflict management strategies).

References

Acar, I. H., Rudasill, K. M., Molfese, V., Torquati, J., & Prokasky, A. (2015). Temperament and preschool children's peer interactions. *Early Education and Development, 26*(4), 479-495. <https://doi.org/proxy.missouri.edu/10.1080/10409289.2015.1000718>

Cook, E. C., Buehler, C., & Blair, B. L. (2013). Adolescents' emotional reactivity across relationship contexts. *Developmental Psychology, 49*(2), 341-352. <https://doi.org/10.1037/a0028342>

Demir, M., & Urberg, K. A. (2004). Friendship and adjustment among adolescents. *Journal of Experimental Child Psychology, 88*(1), 68-82. <https://doi.org/10.1016/j.jecp.2004.02.006>

Gleason, T. R., Gower, A. L., Hohmann, L. M., & Gleason, T. C. (2005). Temperament and friendship in preschool-aged children. *International Journal of Behavioral Development, 29*(4), 336-344. DOI: 10.1080/01650250544000116

McCoy, J. K., Brody, G. H., & Stoneman, Z. (1995). Forecasting Sibling Relationships in Early Adolescence from Child Temperaments and Family Processes in Middle Childhood. *Child Development Vol. 65, No. 3* (Jun., 1994), pp. 771-784 (14 pages). DOI: <https://doi.org/10.2307/1131417>

Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship processes: Potential trade-offs for the emotional and behavioral development of girls and boys. *Psychological Bulletin, 132*(1), 98-131. <https://doi.org/10.1037/0033-2909.132.1.98>

Rothbart, M. K., & Bates, J. E., (1998). Temperament. *Handbook of Child Psychology: Vol. 3. Social, emotional, and personality development*. DOI: <https://doi.org/10.1002/9780470147658.chpsy0303>

Rudolph, K. D., & Hammen, C. (1999). Age and gender as determinants of stress exposure, generation, and reactions in youngsters: A transactional perspective. *Child Development, 70*(3), 660-677. <https://doi.org/10.1111/1467-8624.00048>

Stotsky, M. T., & Bowker, J. C. (2018). An examination of reciprocal associations between social preference, popularity, and friendship during early adolescence. *Journal of Youth and Adolescence, 47*(9), 1830-1841. DOI: 10.1007/s10964-018-0846-1

Von Salisch, M., Zeman, J., Luepschen, N., & Kanevski, R. (2014). Prospective relations between adolescents' social-emotional competencies and their friendships. *Social Development, 23*(4), 648-701. doi:10.1111/sode.12064

Acknowledgements

We would like to thank the adolescents who participated in the Friendship Project. We would also like to thank the staff of the Peer Relations Lab, which is administered by the University of Missouri's Department of Psychological Sciences. Funding for this study was provided by the MU Arts, Social Sciences, and Humanities (ASH) Scholars Program.