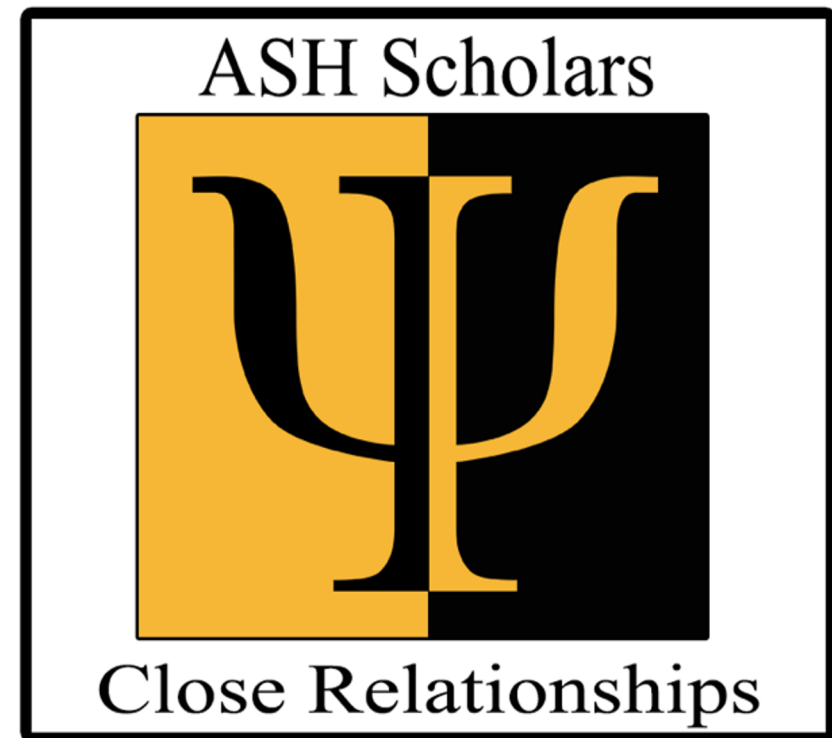




Adolescent Friendship Quality: Analyzing the Impact of Temperament, Emotional Reactivity and the Role of Gender

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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, INTI=intimate exchange, POS FQ = positive friendship quality, NEQ 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).

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