

Revision of the Early Adolescent Temperament Questionnaire

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Abstract

The Early Adolescent Temperament Questionnaire (EATQ; Capaldi & Rothbart, 1992) was revised and updated to better assess aspects of temperament related to self-regulation in adolescents. Scales measuring aggression and depressive mood were included to examine relationships between temperament and traits relevant to socialization. 177 adolescents, aged 10-16, and 62 parent participants completed questionnaires. Analyses were conducted to determine reliability of scales. Exploratory factor analysis revealed four factors: Effortful Control, Surgency, Affiliativeness, and Negative Affect. Low Effortful Control and high Negative Affect scores were predictive of both aggression and depressive mood. However, aggression was associated with low scores on Affiliativeness, while depressive mood was associated with high levels of Affiliativeness, even when controlling for differences in gender.

Introduction

A number of studies over the past two decades have examined the role of temperamental characteristics in adolescent affect and psychopathology (e.g., Windle, Hooker, Lerner, East, Lerner, & Lerner, 1986; Caspi, Henry, McGee, Moffitt, & Silva, 1995) and substance use (e.g., Wills, DuHamel, & Vaccaro, 1995; Stice & Gonzales, 1998). However, traditional measures of temperament have not specifically tapped experiences common to adolescents, thus prompting the development of the Early Adolescent Temperament Questionnaire (EATQ; Capaldi & Rothbart, 1992). The purpose of the current study was to revise and update the EATQ to better assess aspects of temperament related to self-regulation in adolescents. In addition, scales measuring aggression and depressive mood were embedded within the instrument as a tool to examine possible relationships between temperament and social-emotional functioning.

Method and Results

The revised instrument contained 12 scales designed to measure subcomponents of self-regulation, reactivity, and emotionality, as well as the two social-emotional scales. The revised questionnaire was administered to 177 school students (82 males, 94 females, 1 unidentified), aged 10-15 years. In addition, a parent-report version was completed by 62 parents of adolescent participants. Analyses assessing scale reliability, dimensionality, and discriminant validity were conducted. Item total correlations were calculated. Items were eliminated that did not increase scale reliability. Coefficient alphas were calculated for the scales. Following these analyses, three scales either failed to achieve acceptable coefficient alpha levels, or contained too few items to be meaningful, and were excluded from further analyses. Coefficient alpha for the remaining scales ranged from .64 - .81 (see [Table 1](#)). Convergence with parent report was high for most scales, but poor for shyness and inhibitory control for males (see [Table 2](#)).

Table 1: Alpha Levels for Self Report Scales

| | | | |
|-------------------------|-----|------------------------|-----|
| Activation Control | .76 | Perceptual Sensitivity | .71 |
| Affiliation | .75 | Pleasure Sensitivity | .78 |
| Attention | .67 | Shyness | .82 |
| Fear | .65 | | |
| Frustration | .70 | | |
| High Intensity Pleasure | .71 | Aggression | .80 |
| Inhibitory Control | .69 | Depressive Mood | .69 |

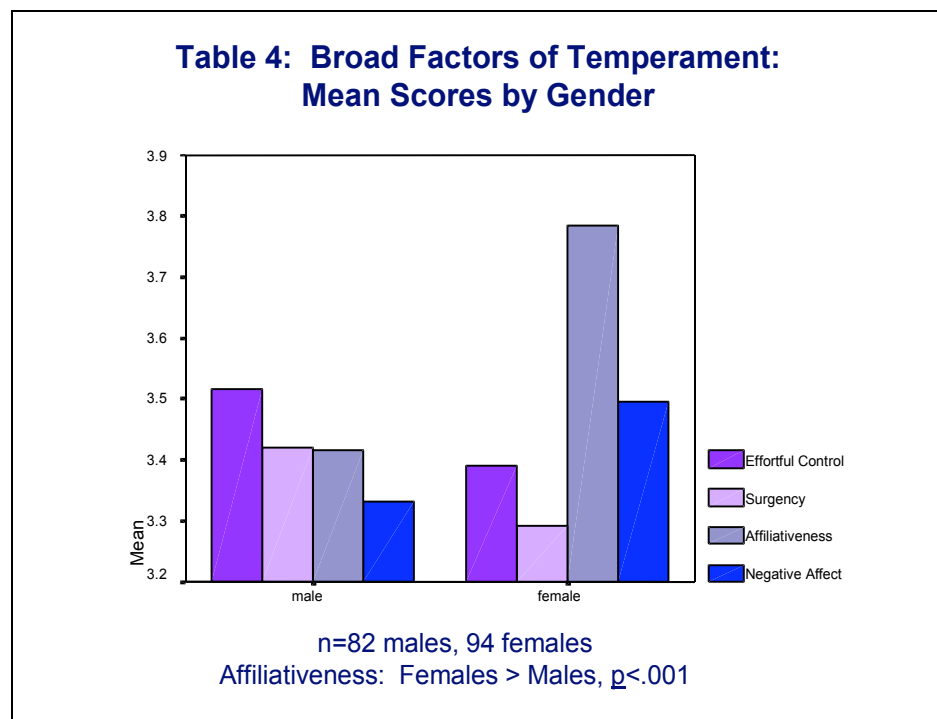
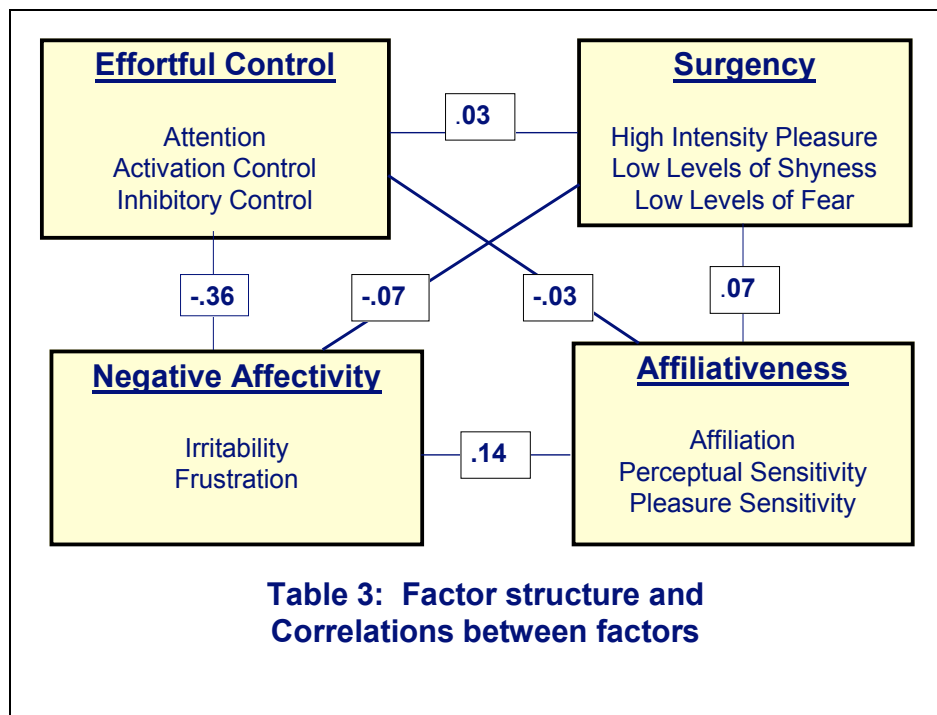
Table 2: Parent Report Form

| Scale | Alpha | Correlation with Self-Report |
|--------------------|-------|------------------------------|
| Activation Control | .66 | .27* |
| Affiliation | .82 | .35* |
| Attention | .65 | .28* |
| Fear | .69 | .40** |
| Frustration | .74 | .29* |
| Inhibitory Control | .86 | n.s. males, .33* females |
| Shyness | .72 | n.s. males, .31* females |
| Aggression | .71 | .46** |
| Depressive Mood | .76 | n.s. |

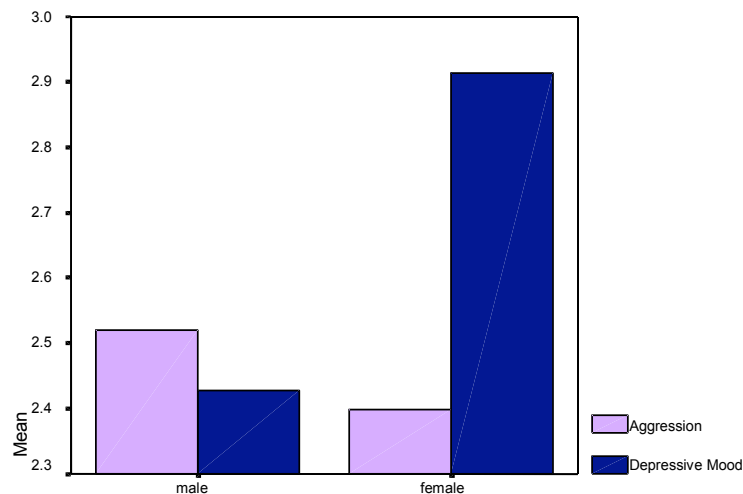
* $p < .05$, ** $p < .01$

Exploratory factor analyses of the temperament scores with oblique rotation revealed four clear factors: Effortful Control, Surgency, Affiliativeness, and Negative Affectivity (see [Table 3](#)). Significant gender differences were observed for both Affiliativeness and depressive mood, with girls scoring higher in both (see [Tables 4](#) and [5](#)). Multiple regression revealed that low Effortful Control, high Surgency, and low Affiliativeness best

predicted aggression scores (see [Table 6](#)), while low Effortful Control, high Affiliativeness, high Negative Affectivity, and gender (e.g., being female), best predicted depressive mood scores (see [Table 7](#)).



**Table 5: Aggression and Depressive Mood:
Mean Scores by Gender**



n=82 males, 94 females
Depressive Mood: Females > Males, $p < .001$

**Table 6: Temperament Variables, Gender, and
Depressive Mood Scores as
Predictors of Aggression Scores**

| | Beta | t | Significance |
|-------------------|-------|-------|--------------|
| Effortful Control | -.451 | -6.45 | .000 |
| Affiliation | -.252 | -3.67 | .000 |
| Gender (f) | -1.81 | -2.71 | .007 |
| Negative Affect | .171 | 2.55 | .012 |
| Surgency | .085 | 1.34 | .183 |
| Depressive Mood | .062 | .81 | .420 |

Table 7: Temperament Variables, Gender, and Aggression Scores as Predictors of Depressive Mood Scores

| | Beta | t | Significance |
|-------------------|-------------|----------|---------------------|
| Effortful Control | -.320 | -4.28 | .000 |
| Affiliation | .249 | 3.60 | .000 |
| Gender (f) | .211 | 3.157 | .002 |
| Negative Affect | .196 | 2.92 | .004 |
| Surgency | -.085 | 1.34 | .183 |
| Aggression | .063 | .81 | .420 |

Summary

The current study has shown the Early Adolescent Temperament Questionnaire-Revised (EATQ-R) to be a reliable tool for the measurement of temperament in adolescents. Further, it appears that temperamental characteristics may be related to socialization relevant behaviors, even when controlling for differences in gender. A study now in progress will further explore the psychometric properties of the EATQ-R, as well as the relationship between temperament and behavior in early adolescent participants.

References

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