

Theory of Mind, Empathy, and School Engagement in Adolescents

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<https://www.gocomics.com/calvinandhobbes/1986/12/09>

OBJECTIVE

Describe the individual differences and the connections among adolescents' **social-cognition** (ToM, empathy, self-conscious emotions) and **school engagement** (psychological, cognitive)

Social Cognition

School Engagement

Gender



DEFINITIONS



Advanced Theory of Mind (ToM):

- ▶ **Ability to label and explain mental and emotional states in self and other; usually emerges between 6 and 8 years of age** (Carpendale & Chandler, 1996; Saarni, 1999)

Empathy

- ▶ **generalized tendency to recognize emotion and respond to other people's emotions** (McCullough, Emmons, & Tsang, 2002).

Moral or Self-conscious Emotions (shame, guilt):

- ▶ **Require:**
 - 1) **self-monitoring ability and a personal standard for one's own behaviour**
 - 2) **awareness of social rules** (Lewis, 1993)

EMPIRICAL EVIDENCE

ToM, Emotion Knowledge, and School Engagement

- ▶ Studies show moral emotions and reasoning are connected by underlying social, cognitive, moral, and emotional mechanisms (Steinberg, 2014, 2015)
- ▶ Past research suggests that social cognitive and moral emotional abilities may partially underlie the links between ToM and school experiences (Hughes, 2011)
- ▶ Few studies on relations among adolescents' social cognitive abilities (ToM, empathy) and perceived school engagement (Lecce et al., 2014)
- ▶ Higher levels of ToM and emotion knowledge → higher rates of school engagement among youth (Bosacki et al., 2017; Longo et al., 2017; McCullough, et al., 2000; Tucker, 2017), $g > b$ (Bosacki et al., 2017)

EMPIRICAL EVIDENCE

Problem

- ▶ **Lack of research on the gendered, developmental linkages among ToM, empathy, self-conscious emotions, and perceptions of school engagement in adolescents** (Devine & Hughes, 2013)
- ▶ **More research is needed to explore how social cognitive processes influence young people's school life experiences (social and academic)**
- ▶ **Moral and emotional reasoning \neq prosociality and academic success.**

RESEARCH QUESTION

Do individual differences and relations exist among ToM, empathy, and perceptions of school engagement in adolescents?

METHOD

Participants

- **32 Euro-Canadian children from middle SES, semi-rural neighbourhoods (22 girls; 15.6 y)**

Procedure

- **Participants were group-administered within a school setting**
- **Measures included paper-and pencil standardized, self-report questionnaires on ToM, empathy, self-conscious emotions, school engagement**

Theory of Mind (ToM)

Affective:

Reading the Mind in the Eyes Test 3rd Ed. (Baron-Cohen et al., 2001)

Cognitive:

1. ToM Strange Stories (Happé, 2004)

2. 2nd order stories (Astington et al., 2002)

Emotion Knowledge:

1. Empathy (Interpersonal Reactivity Index) (IRI, Davis, 1980).

2. Test of Self-Conscious Affect (TOSCA, Tangney et al., 2000)

School Engagement Inventory (SEI, Appleton et al., 2006)

1. Psychological

2. Cognitive/Academic

Verbal Ability (VA) (WIAT, Wechsler, 2010)

RESULTS

MANCOVA (Age + Verbal age as covariates) showed significant ($p < .05$) gender effects:

- **ToM** (2nd order) $F(1,22) = 10.87, p < .01$
- **Empathy, Self-conscious emotions** (shame, guilt) $F(1,22) = 4.75, p < .05$

T-tests showed significant ($p < .05$) gender differences (See Figures 1-3):

- **G > B** in **Empathy, Self-conscious emotions** (shame, guilt)
- **G = B** in **ToM, school engagement**

Figure 1. Empathy scores (Mean)

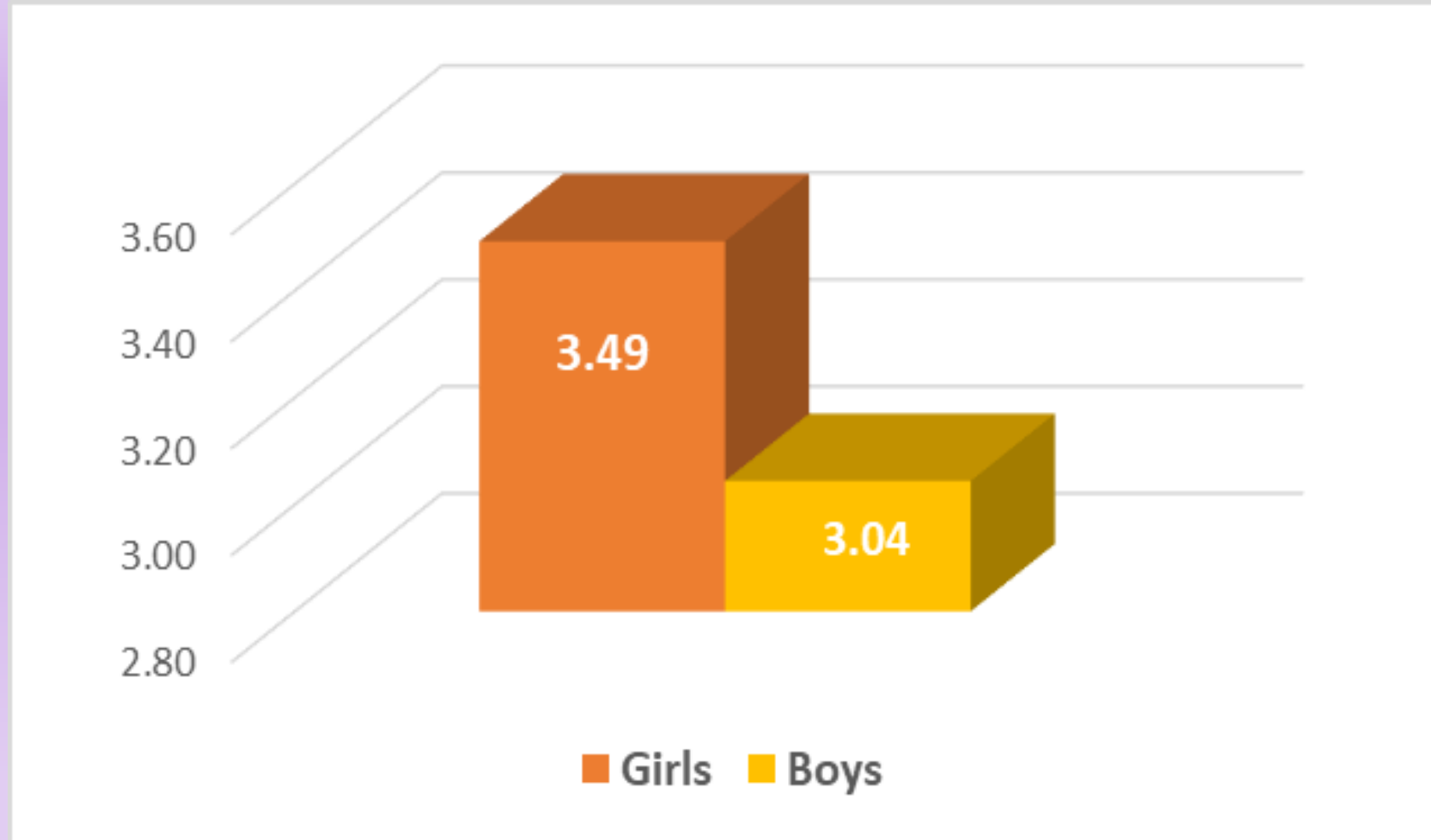


Figure 2. Self-conscious emotions scores (Mean)

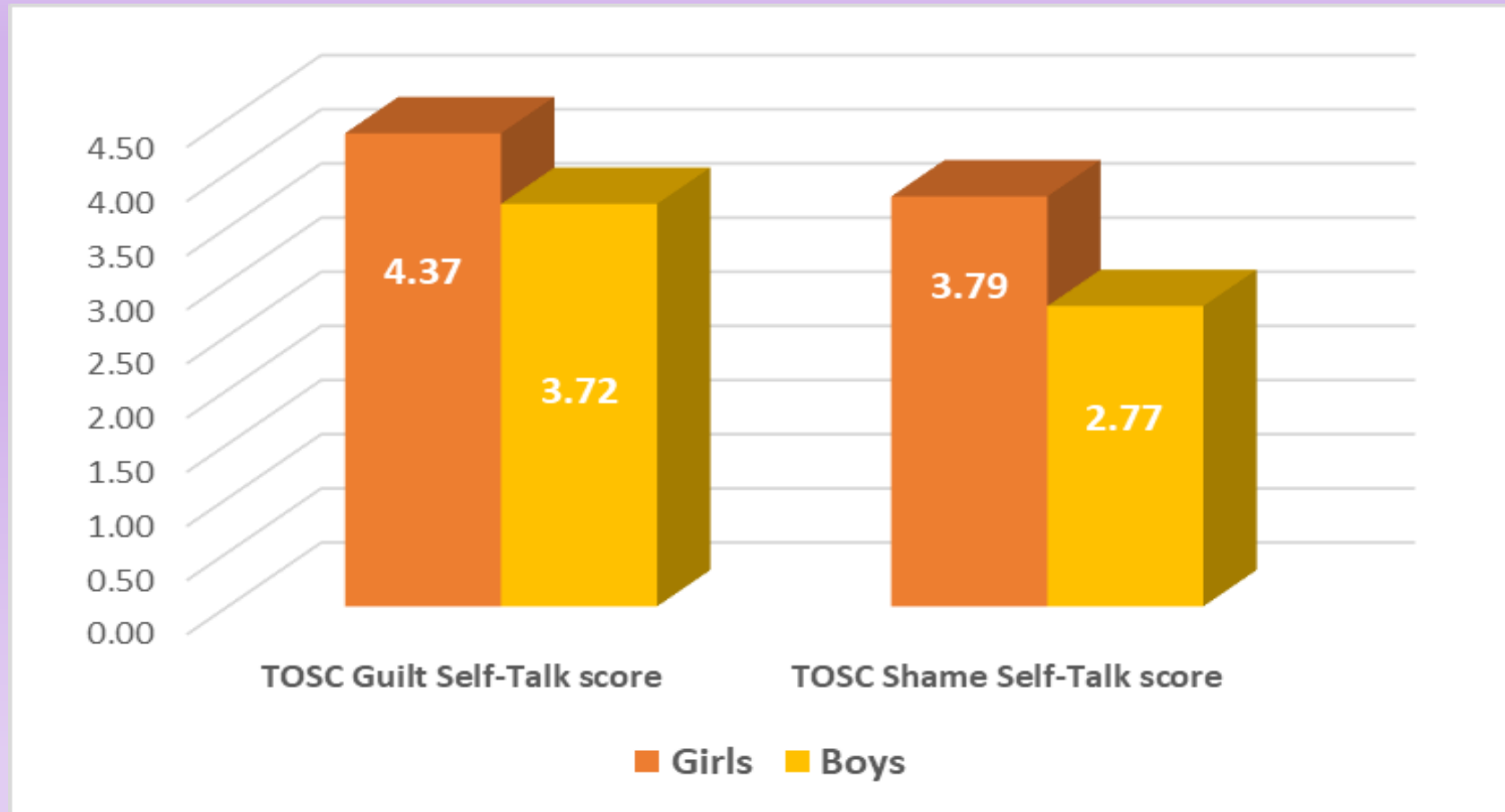
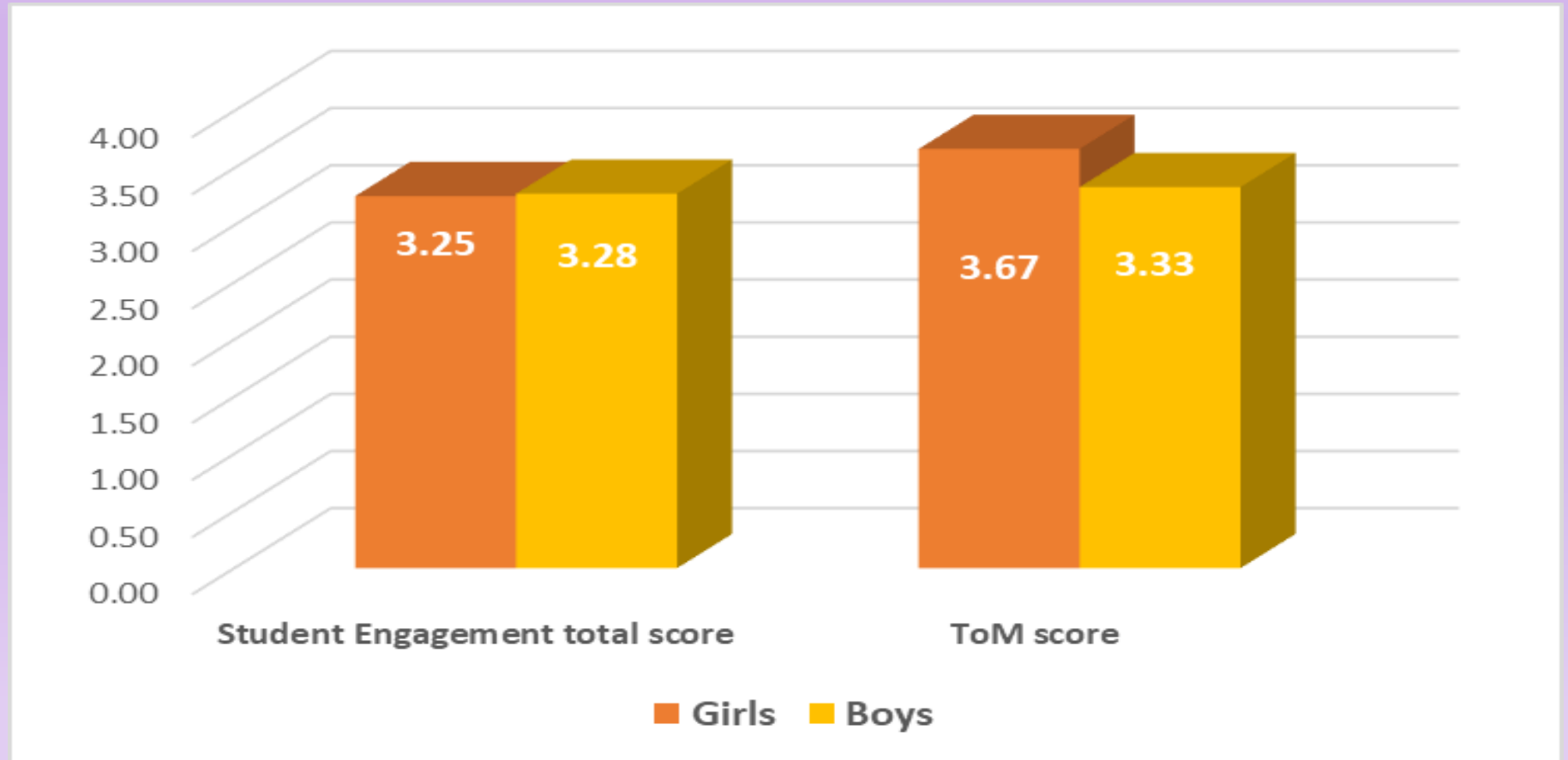


Figure 3. Student Engagement and ToM scores (Mean)

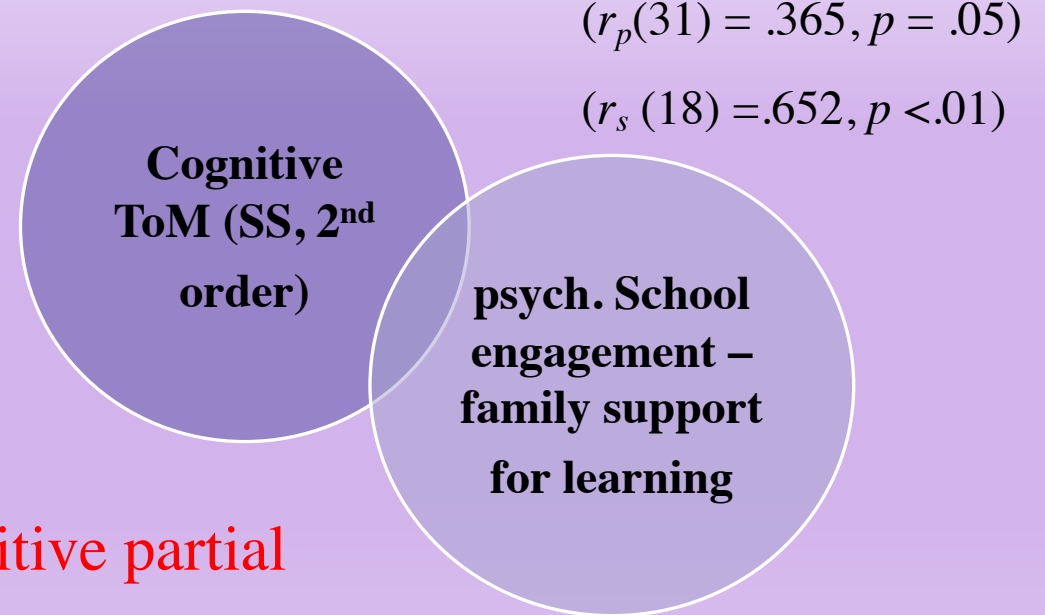
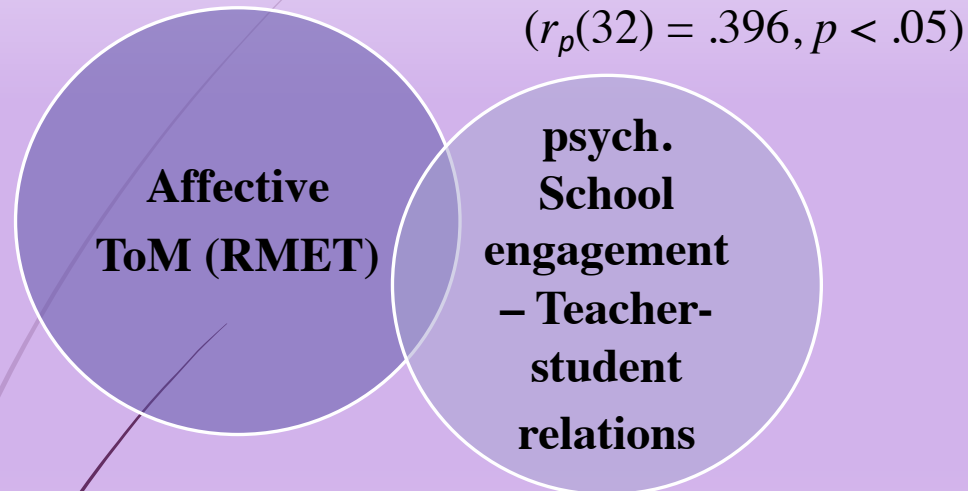


No significant gender differences

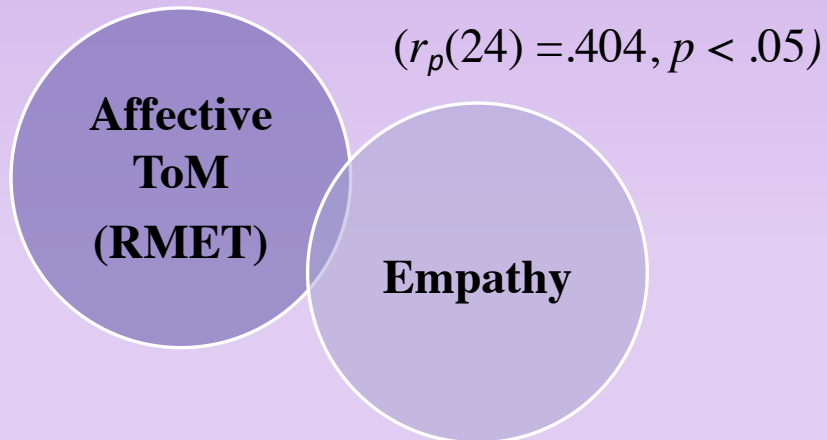
RESULTS



Correlational analyses showed a significant positive correlation between:



Controlling for VA, significant positive partial correlations were found between:



In contrast, no correlations between empathy and school engagement.

Correlational analyses also showed:

- ▶ Significant positive (+) correlation between ToM:
 - ▶ gratitude (simple appreciation) ($r_p(41) = .343, p = .032$)
 - ▶ total empathy ($r_p(41) = .485, p = .003$)

Significant positive (+) correlations between empathy (IRI):

- ▶ **Guilt** ($r_p(31) = .427, p < .05$)
- ▶ **Shame** ($r_p(31) = .384, p < .05$)

For girls only, significant positive (+) correlations between **ToM (RMET)** and **total school engagement (SEI)** ($r_p(22) = .493, p < .05$).

Regression analysis showed that ToM failed to account for significant amount of variance in school engagement above and beyond (VA) (21%).

DISCUSSION



- Results suggest that youth with **high levels of ToM** also had **high levels of school engagement**
- Girls only reported **high affective ToM** and **high levels school engagement**
- Teenaged **girls scored higher than boys** on **emotion knowledge**
- **No gender differences in ToM** and **school engagement**

CONCLUSIONS



- Results support past research that suggests **social cognition (ToM, empathy) and school engagement are multifaceted and complex** (Hughes, et al., 2016)
- Youth who scored high on ToM perceived school and learning to be more socially engaging
- Results provide empirical groundwork for **curriculum development** in the following ways:
 - › **Personal and social skills** areas aimed to promote **social cognition and socioemotional literacy**.
 - › A **psychological-focused curriculum** aimed to foster **emotional well-being, and prosocial, socially responsible goals**.

NEW DIRECTIONS



- ▶ Examine links between perceived **self-worth and ToM** particularly regarding the **moral or self-conscious emotions** (e.g., gratitude, pride, embarrassment, shame, envy)
- ▶ Focus on **sociocultural factors** that may influence social cognition and emotional competence, particularly the **role of language** (expressive and receptive), **gender**, and **family background (financial/cultural)**
- ▶ Educational implications include the development of curriculum aimed to foster **well-being and prosocial actions** through **moral and psychological** language (self and social)
- ▶ Adapt a **psychocultural** approach to research on the development of children's **social cognition and prosocial behaviours** (Bruner, 1996)

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