Examining the Interplay between Family Climate, School Attachment, and Academic Self-Regulation: Implications for School Success

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**Introduction**

- School success has life-course developmental implications
  - Includes academic achievement and school adjustment
  - Has long-term impact on post-secondary educational attainment, later adult income, mortality, and life quality (e.g. Ganzach, 2000; Hawesman & Wulf, 1994; Muller, 2002)

- Early adolescent years are critical period for tremendous developmental changes that impact academic engagement and success (Eccles & Wigfield, 1997; Ganzach & Shulman, 1997)
- Cognitive change and emerging psychological needs lead to self-regulation development and dynamics in family and school settings (Zimmerman, 1989; Fosco et al., 2014; Pajares & Schunk, 2001)

- Three important domains from existing studies
  - Family climate (e.g. Kendrick et al., 1995; DuBois et al., 1994)
  - Academic self-regulation (ASR) (e.g. Nocito et al., 2004; Zimmerman & Schunk, 2013)
  - School attachment (e.g., Goodey & Grady, 1993; Reddy et al., 2003)

- Reciprocal influence among three domains
  - Family systems theory and ecological theory underscore the reciprocal influences of individual, family, and school context
  - Capturing the reciprocal influence among these domains is important in the early adolescent years when all of these domains undergo such tremendous changes
  - Existing studies supported the reciprocal influence between each two domains in relevant isolation (e.g. Lee et al., 2007; Anderman et al., 2003; Booth & Durr, 2013)
  - However, adolescents experience these changes across contexts simultaneously, and changes in each domain undoubtedly impact their school success

**Aim 1: Reciprocal Influence**

- To examine the reciprocal influences among family climate, ASR, and school attachment during early adolescent years
- **Hypothesis:** there are reciprocal associations between family climate, ASR, and school attachment over four waves.

**Aim 2: Predict School Success**

- To test the unique, relative impact of each of these domains for adolescents’ academic achievement and school adjustment
- **Hypothesis:** family climate, school attachment, and ASR in 6th grade would have unique implications for both academic achievement and school adjustment at the end of 9th grade.

**Method**

- **Participants and Procedure**
  - Families were drawn from the PROSPER project: Approximately 43% of these invited participated in home written questionnaires were completed independently by each family members during in-home interviews
  - 58.6% (N=574) were in intervention group at W1; Good retention for the whole sample (75.5% at W5)

- **Demographic Information**
  - N = 979
  - Gender: 47.5% male, 52.5% female
  - Location: 61% IA, 39% PA
  - Household income: $50,963 (in 2004)
  - Parents’ education: 62% post-secondary education
  - Ethnicity: 87.2% White, 6.1% Hispanic, 2.4% African American, 0.5% Asian, 2% Other

- **Variables**
  - Family climate
  - ASR
  - School attachment

- **Measures**
  - Family Environment Scale (Moos & Moos, 1994)
  - Multidimensional Scale of Perceived Academic Efficacy (Eccles & Wigfield, 1997)
  - School Liking Scale (Schweibert et al., 2002)
  - Loneliness Scale (Asher & Wheeler, 1995)
  - Parenting Scale Questionnaire (COPQRL, 1999)

- **Figure 1. Structural Model among Family Climate, ASR, School Attachment, and School Success**

**Results**

**Discussion**

- **The Interplay between Family Climate, School Attachment, and ASR**
  1. Family climate → ASR
     - Family climate plays role for self-regulation skills generally (e.g. Fosco & Grych, 2013; Stray, 1991)
     - Implicates family relationships effects on ASR specifically (e.g. Lee et al., 2007; Pro-Pax-Utakran et al., 2010)
  2. School attachment ↔ ASR
     - Adolescents in families with a more positive climate reported increases in their feeling of school over time
     - Through constructive coping style and better social competence (e.g. Shulman et al., 1987; Anderman et al., 2000)
     - Adolescents who felt a stronger connection with school also reported increases in school success and family relationship over time
     - Through promotion in psychological adjustment and emotional spillover across contexts (e.g. Crueter, 1984; Williams & Alliger, 1994)
  3. ASR → School attachment
     - Feeling connection to school can increase students’ motivation and self-efficacy in academic tasks (e.g. Goodey & Grady, 1993; Vos-Koek & Ellis, 2007)
     - Feeling bonding to peers and teachers at school can promote self-regulation ability and self-regulated learning strategies using (e.g. Lee et al., 2003; Novak & Clayton, 2001)

- **Additive Effects on School Success**
  1. School attachment → School adjustment
     - School attachment is well-documented associating with school adjustment and adolescent achievement (e.g. Calvani et al., 2004)
     - Our finding replicate and extend this literature by accounting family and individual factors in the same model
  2. Family climate → School adjustment
     - Consistent with literature that documents multiple family factors influencing students’ adjustment, especially on school adjustment (e.g. Clark et al., 1992; Kendrick et al., 1995)
     - Less stressful family experience lead to less negative family or self-attribution which undermine school success (Harold et al., 2008)
  3. ASR → School adjustment and Academic Achievement
     - ASR skills set the foundation for academic achievement (Zimmerman & Schunk, 2013)
     - ASR lead to better academic tasks completion and better teacher-student relationship which contribute to school adjustment (Trentacosta & Shaw, 2008)

- **Limitation and Future Directions**
  1. Primarily comprised by White sample
  2. Mono-informant assessments in cross-lagged model
  3. Additional expansion of ecological factors
     - e.g. teacher-student relationship, or peer influences

- **Implications for Intervention Research**
  1. Call for cross-context integration in intervention and prevention programs
     - Combine individual, family, and school domains
  2. ASR should be primarily focused on in intervention programs targeting on school success
     - ASR is the predominant proximal factors for both academic achievement and school adjustment
  3. Both family and school contexts can serve as protective factors accompanying ASR in intervention process
     - Both family and school factors have direct effect on the increases of ASR