Academic and social achievement goals and early adolescents' adjustment: A latent class approach

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ABSTRACT

Middle school students pursue both academic and social goals. How to coordinate those strivings has important implications for students' academic and social adjustment at school. Confirmatory factor latent class analysis including both academic and social goals was conducted on the data from 440 middle school students. Analyses identified 3 latent classes based on academic goal orientation, and 2 social goal classes, resulting in a total of 6 (3 × 2) distinct latent groups. Subsequent analysis found that these 6 groups showed difference in academic adjustment (academic engagement, help seeking behaviors, learning strategies, academic self-efficacy, academic worry), and social adjustment (perceived peer support, social satisfaction, social self-efficacy, and social worry). The results indicate that middle school adjustment can be better understood when both academic and social achievement goals were taken into account. The implications of these results for researchers and practitioners are discussed.

1. Introduction

Early adolescence is characterized as the beginning of a downward trend in academic engagement, motivation, and achievement. Despite this general negative trend, there is individual variability (Shim, Ryan, & Anderson, 2008). Achievement goal theory framework has been very instrumental in explaining such individual variability. Achievement goal orientation theory posits that individuals show qualitatively different orientations toward competence (i.e., developing vs. demonstrating competence) and such orientations have implications for adjustment by setting in motion different cognitive, affective, and behavioral processes and outcomes (Dweck & Leggett, 1988; Nicholls, 1984). While ample empirical data support the importance of goals for learning outcomes (Elliot, 2005; Meece, Anderman, & Anderman, 2006 for reviews), prior research has been primarily focused on academic strivings. Limited research on social achievement goals has been conducted and research on achievement goals in academic and social domains has been conducted independently (for important exceptions see Anderman, 1999; Anderman & Anderman, 1999; Patrick, Hicks, & Ryan, 1997). However, we argue that such an approach is likely to be limited.

Achievement goals may have effects primarily on the outcomes in their respective domains (i.e., academic achievement goals on academic outcomes and social achievement goals on social outcomes). However, cross-domain associations between goals and outcomes have been often reported (e.g., Liem, Lau, & Nie, 2008; Shim, Cho, & Wang, 2013). In addition, research in the academic and social domains does appear to provide some converging evidence regarding the nature of different types of achievement goals. Thus, it is likely that we can obtain a fuller understanding of young students' academic and social adjustment by taking into account both academic and social achievement goals.

To date, little is known about how goals in different domains are combined within each individual. Several prior studies have examined the issue of within-person achievement goal combinations (e.g., Daniels et al., 2008; Luo, Paris, Hogan, & Luo, 2011; Pastor, Barron, Miller, & Davis, 2007; Tuominen-Soini, Salmela-Aro, & Niemivirta, 2012; Wang, Biddle, & Elliot, 2007) but to our best knowledge, none has investigated the goal patterns across academic and social domains simultaneously. Accordingly, two major aims of the current study are: a) to identify naturally emerging goal profiles among middle school students using latent class analysis, and b) to investigate how such academic and social achievement goal patterns are related to various indices of academic and social adjustment at school.

1.1. Achievement goals and middle school students' adjustment at school

In achievement goal literature, two distinct orientations toward competence have been contrasted: developing (i.e., mastery goals) versus demonstrating academic competence (i.e., performance goals) (Elliot, 2005). With the distinction based on the valence of the performance

goals (i.e., approach vs. avoidance), three achievement goals (mastery, performance-approach and performance-avoidance goals) have often been examined in relation to middle school students' adjustment at school.[2] These different achievement goals lead to significantly different cognitive, emotional, and behavioral processes and affect a wide variety of important student outcomes (see Elliot, 2005 for a review).

Consistent with achievement goals in the academic domain, three types of achievement goals in the social domain have also been proposed, each of which involves distinctive orientation toward social competence (Kuroda & Sakurai, 2011; Ryan & Shim, 2006). Social development, demonstration-approach, and demonstration-avoidance[3] goals mirror their academic counterparts, mastery, performance-approach, and performance-avoidance goals, respectively. A social development goal involves developing social competence with a primary focus on improving social relationships and social skills (e.g., gaining insights into friendship or learning how to get along with others); a social demonstration-approach goal involves demonstrating social competence with a focus on garnering positive feedback from others and gaining social prestige (e.g., being seen as "cool" or "popular"); and a social demonstration-avoidance goal involves hiding the lack of social competence and avoiding negative judgments from others (e.g., not being seen as a "loser").

Academic achievement goals were often examined in relation to academic engagement, learning strategies, perceived academic competence, and achievement (see Elliot, 2005 for a review), while social achievement goals have been related to social adjustment, social competence, social beliefs, and psychological well-being (Horst, Finney, & Barron, 2007; Kuroda & Sakurai, 2011; Ryan & Shim, 2006, 2008; Shim & Ryan, 2012). As we mentioned earlier in this article, these goal types have explanatory power for the outcome variables outside their relevant domain. Academic achievement goals are associated with social–emotional outcomes, such as the nature of peer interaction, social status, attitudes toward cooperation with peers, positive and negative affect, and self-consciousness (e.g., Kaplan & Midgley, 1999; Levy-Tossman, Kaplan, & Assor, 2007; Linnenbrink, 2005). Recent studies have shown that social achievement goals are related to academic help seeking behaviors (Ryan & Shin, 2011) and classroom engagement behaviors (Shim et al., 2013). A review of the existing studies suggests that mastery and social development goals are beneficial while performance-avoidance and social demonstration-avoidance goals are maladaptive. In addition, researchers agree that performance-approach and social demonstration-approach goals may have both benefits and consequences.

1.2. Investigation of the profiles of academic and social achievement goals

Most prior research has examined the effects of goals using a variable-centered approach (i.e., regression), which is theoretically informative to uncover the nature of different types of goals at the variable level. However, this approach may be limited. The effects of goals can vary by the level of other goals pursued by the same person (see Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002; Midgley, Kaplan, & Middleton, 2001 for discussion on this issue). To address the issue of individual's goal pattern, prior research utilized median split (e.g., Pintrich, 2000), cluster analysis (e.g., Daniels et al., 2008; Liu, Wang, Tan, Ee, & Koh, 2009; Wang et al., 2007) and latent cluster analysis (e.g., Luo et al., 2011; Pastor et al., 2007; Tuominen-Soini et al., 2012). Latent class modeling has a distinct advantage over median split and cluster analysis. The median split method has been criticized for the questionable homogeneity of the students classified in each determined category (MacCallum, Zhang, Preacher, & Rucker, 2002). Cluster analysis is also limited due to the lack of rigorous guidelines for selecting the optimal solution (Milligan & Cooper, 1985). Latent class analysis has the potential for both estimating a model of group membership, and assessing the extent to which that model fits a sample of data (Hagenaars & McCutcheon, 2002). Only a few studies have subjected academic achievement goals to latent class modeling (e.g., Luo et al., 2011; Pastor et al., 2007; Tuominen-Soini et al., 2012). To date, no prior research has derived latent classes based on six academic and social achievement goals simultaneously.

1.3. Different goal profiles and adjustment in middle school

Extant research on academic and social achievement goals has provided some converging evidence regarding the nature and consequences of different types of goals. As we discussed in the earlier part of our paper, we expect that the latent classes characterized by high mastery goals and social development goals are likely to show adaptive outcomes. In contrast, we expect the opposite for the classes reflecting high performance-avoidance goals and social demonstration-avoidance goals (Elliot, 2005; Harackiewicz et al., 2002; Horst et al., 2007; Kuroda & Sakurai, 2011; Ryan & Shim, 2006, 2008). However, it is difficult to predict the effects of performance-approach goals, as the findings are inconclusive (see Harackiewicz et al., 2002; Midgley et al., 2001 for reviews). Similar to their academic counterpart, social demonstration-approach goals have been associated not only with maladaptive consequences, such as lack of close and mutually satisfying relationships, and high aggressive and disruptive behaviors (Mouratidis & Sideridis, 2009; Ryan & Shim, 2008; Shim, Cho, & Wang, 2013; Shim, Kiefer, & Wang, 2013; Shim & Ryan, 2012) but also with desirable outcomes such as heightened social competence and popularity (Ryan & Shim, 2008; Shim & Ryan, 2012). Thus, due to mixed results, we do not pose any hypothesis regarding the classes characterized by high performance-approach goals and/or social demonstration-approach goals.

Students' adjustment may be affected not only by the levels of individual goals, but also by the patterns in which different goals are combined within each individual. Only a couple of studies have identified the groups that enable a test for these contrasting ideas. However, the evidence is inconclusive (Daniels et al., 2008; Liu et al., 2009; Pintrich, 2000). In the social domain, a couple of previous studies (e.g., Ryan & Shim, 2006, 2008; Shim & Ryan, 2012) have tested the interactive effect of goals using variable-centered approach but none has looked at the goal profile. While there have been theoretical discussions on how academic and social goals may interact (Urdan & Maehr, 1995) and jointly affect students' overall adjustment at school (Wentzel, 1999, 2000), we don't know much about how goals jointly affect students' outcomes, especially when both academic and social achievement goals are considered simultaneously. This leaves a large gap in our knowledge regarding the nature of students' goal pursuits in school by artificially drawing the line between academic and social domains. In sum, our purpose in this study was to identify naturally existing groups of students who share similar patterns of academic and social achievement goals and examine how such combined goal profiles are related to the various indices of academic and social adjustment in middle school.

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[2] Recently, approach and avoidance distinction was made for a mastery goal as well. The present study did not include a mastery-avoidance goal as its social counterpart has not been proposed and currently there is no available measure for it. Originally, achievement goals were defined as underlying reasons and purposes of achievement behaviors in achievement-related situations (Dweck & Leggett, 1988; Midgley et al., 2000). More recently, however, a revised definition of goals was introduced and gained much support in the field (see Elliot, 2005 for a detailed discussion on this issue). In the revised definition, goals are defined as desired end-states, objects, or aims (see Elliot & Murayama, 2008; Senko, Hulleman, & Harackiewicz, 2011). The current paper followed Ryan and Shim (2006, 2008)'s conceptualization of social achievement goals, which is consistent with the original definition of goals as reasons and purposes.

[3] Ryan and Shim (2006) coined the term "social demonstration-avoid goals". In the current article, we use "social demonstration-avoidance goals" to be consistent with the terms commonly used for academic achievement goals.