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Adolescents’ achievement goal orientations, goal appraisals, and subjective well-being:
A person-centered approach

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The aim of this study was to examine the relationships between adolescents’ achievement goal orientations, educational goal appraisals, and subjective well-being (self-esteem and burnout). 561 ninth-graders (277 boys and 284 girls) participated in the study. By means of latent class clustering, the students were first classified according to their responses to the goal orientation scales. The best fitting solution included four groups, which, according to the score mean profiles, were labeled as non-committed, avoidance-oriented, performance-oriented, and learning-oriented. As expected, these groups differed in terms of how they appraised their educational goals. Avoidance-oriented students were the least committed and experienced least goal progress, but they also experienced least stress with their current goal status. In contrast, the learning-oriented students reported most progress with their goal pursuit, displayed higher self-esteem, and experienced less burnout than the other students. The theoretical implications of linking achievement goal orientations and personal goals will be discussed.

Introduction

It has been suggested that young people direct their own development and create their own future life, and that individuals’ motivation and goal construction have an important role in this process (Nurmi, 1993). Personal goals and projects (e.g., Little, 1983) represent the consciously articulated, personally meaningful objectives that individuals pursue in their daily lives. Another way of approaching young people’s motivational strivings is to focus on the goals they pursue within the given educational setting (Boekaerts & Niemivirta, 2000). Achievement goal orientations describe young people’s general orientations towards learning and studying, that is, the kinds of goals they tend to choose and the kinds of outcomes they prefer in relation to studying (Niemivirta, 2002). Although we are aware of how goal orientations relate to personal outcomes (e.g., self-efficacy, anxiety, and interest; see Niemivirta, 2002) and achievement-related outcomes (e.g., grades, task performance, and course choices; see Harackiewicz, Barron, Tauer, Carter & Elliot, 2000), less is known about how achievement goal orientations relate to young people’s personal goal appraisals and subjective well-being. This was the goal of our study.

Achievement goal orientations

Most achievement goal theorists have made a distinction between two types of achievement goals. Mastery goals focus on the development of competence or task mastery, whereas performance goals focus on the demonstration of competence relative to others. According to normative goal theory mastery goals have been considered more adaptive in terms of affect, self-regulation, and performance outcomes, while performance goals have been seen less adaptive or even maladaptive (cf. Dweck, 1986). However, more recent studies suggest that performance goals do not always have negative effects (e.g., Bouffard, Boisvert, Vezeau & Larouche, 1995; Skaalvik, 1997). In revised goal theory perspective performance orientation has been divided into independent approach and avoidance components (Elliot & Harackiewicz, 1996; Skaalvik, 1997). Performance-approach goal orientation is directed at demonstrating competence, whereas performance-avoidance goal orientation is directed at avoiding the demonstration of incompetence (Elliot, 1999). This trichotomous framework of achievement goals (see Elliot, 1999) would therefore comprise of mastery, performance-approach, and performance-avoidance goals. Research using this framework proposes a more adaptive role for performance goals and shows that maladaptive patterns of intrinsic motivation and actual performance occur only in the avoidance-performance groups (e.g., Elliot & Harackiewicz, 1996).

Studies also show that although the two types of goal orientations are independent dimensions, they are not mutually exclusive. In other words, it is possible for students to adopt both mastery and performance goals and different levels of both of these goals. For example, Bouffard et al. (1995) found out that students strongly inclined toward both performance and learning orientation had higher levels of self-regulation and higher grades than students who endorsed only one or neither goal. Harackiewicz, Barron and Elliot (1998) suggest that performance goals can have some positive consequences that complement the positive effects of mastery goals. They found out that each goal was associated with one positive outcome but not the other (performance goals were related to higher grades and mastery goals were related to higher levels of interest) and hence, students who endorsed both goals were most likely to attain both outcomes. Pintrich (2000) addressed the role of multiple goals and discovered that a high approach performance goal, when coupled with a high mastery goal, does not reduce or dampen the general positive effect of a high mastery goal.

The majority of goal orientation research has applied a variable-centered approach, and only few studies have tried to explore the patterns of goal orientations individuals have and thus utilized a person-centered approach (see, Meece & Holt, 1993). Recently Niemivirta (2002; 2004) examined the role of achievement goal orientations from both variable-centered and person-centered perspectives. In these studies, he distinguished five types of achievement goal...
orientations: mastery-intrinsic orientation, mastery-extrinsic orientation, performance-approach orientation, performance-avoidance orientation, and avoidance orientation.

**Achievement goal orientations and well-being**

A great deal of research has investigated the relationship between achievement goal orientations and a wide range of educationally relevant measures such as academic performance. However, there has been relatively little attention given to well-being variables. Dweck and her colleagues have integrated considerations of education (e.g., motivation and learning) and mental health issues (e.g., depression) among children and adolescents (e.g., Dweck & Wortman, 1982). In Dweck’s approach, three motivational types are identified: mastery-oriented students, ego-oriented students, and helplessness students. Helpless pattern is characterized by challenge avoidance, low persistence in the face of difficulty, and negative affect (such as anxiety) and negative self-cognitions when confronting obstacles (Dweck, 1986). Roese, Strobel and Quihuis (2002) employed person-centered analyses in order to examine among early adolescents whether the types of students defined by Dweck and her colleagues differed with respect to their classroom engagement and social-emotional functioning (e.g., self-esteem, sadness, and anger). Results showed that it was the helpless students, compared to both the mastery- and ego-oriented students, who were less engaged and more distracted in relation to school learning, who acted out and withdrew more, and who displayed lower self-esteem and higher degree of sadness.

Skaalvik (1997) assessed the correlation between global self-esteem and each of the three achievement goals and found that self-esteem was positively related to mastery and performance-approach goals and negatively related to performance-avoidance goals among sixth- and eighth-graders. Niemivirta (1998) examined individual differences in motivational and cognitive factors affecting self-regulated learning from a pattern-oriented perspective. Seventh grade students were classified on the basis of their goal orientations and the clusters were labeled based on the most dominating goal as learning-oriented, performance-oriented, and avoidance-oriented. The results showed that students with different goal orientations differed with respect to self-esteem; learning-oriented students had the highest and avoidance-oriented students had the lowest score on self-esteem.

Kaplan and Maehr (1999) studied the role that achievement goals may play in facilitating the psychological well-being of sixth grade students. The results showed that pursuing task goals was found to have a significant positive relationship with all indices of well-being (e.g., emotional tone, peer relationship, and impulse control). In contrast, pursuing ego goals was found to have a significant negative relationship with two of the general indices of well-being (e.g., emotional tone and impulse control). They conclude that goal orientation is related to emotions and cognitions that not only contribute to effective learning but which also relate to psychological well-being more generally.

**Personal goals**

Personal goals constitute individualized and cognitively elaborated representations of what a person wants to achieve in his or her current life situation. They are typically examined by asking individuals to list their self-articulated goals (Nurmi, 1993). When analyzing these goals, they are first classified according to the domains of life they concern. Second, they can also be investigated according to several appraisal dimensions. (Little, 1983). Personal goals have been found to be associated with individual well-being. For example, Little (1989) has shown that the possession of and progression toward important personal projects are tied to long-term well-being. It has also been suggested, that if individuals’ personal goals reflect the age-graded developmental tasks, it helps them to successfully deal with the key challenges of their developmental environment and consequently their well-being will improve (e.g., Salmela-Aro, 2001). The participants of the present study were ninth-graders, who had a significant transition from lower secondary school to further studying ahead of them. Consequently, we found adolescents’ personal goals during this transitional phase very important and wanted to include them in our examination of achievement goal orientations and well-being. Young people’s goals are usually related to education, future occupation, and social relationships. In the present study we explored adolescents’ education- or occupation-related personal goals and focused on the appraisals of these goals.

**Aims of the present study**

The aim of this study was to examine what kinds of goal orientation profiles can be identified among lower secondary school students. Another aim was to examine how students with different goal orientation profiles differ with respect to education-related personal goal appraisals and subjective well-being. Based on existing literature, we hypothesized that at least three goal orientation groups would be found: learning-oriented, performance-oriented, and avoidance-oriented. Furthermore, it was assumed that students in different goal orientation groups would differ in relation to their goal appraisals and subjective well-being (i.e., self-esteem and burnout). More specifically, since mastery goals have been linked with several adaptive outcomes, we expected that learning-oriented students would display higher subjective well-being and more positive goal appraisals (e.g., more commitment and effort) compared to the other students. In contrast, we assumed that avoidance-oriented students would display lowest subjective well-being and most negative goal appraisals.

**Subjects**
The data were collected from two medium-sized cities in Finland. 561 ninth-graders (277 boys and 284 girls) from all the lower secondary schools in these cities (11 schools) participated in the study. These 15-year-old participants completed a self-report questionnaire tapping various types of constructs related to personal goals, student motivation, and subjective well-being.

**Measurements**

*Achievement goal orientations*

The questionnaire included scales for five types of goal orientations (cf. Niemivirta, 2002). Besides the now common scales for mastery orientation, performance-approach orientation, and performance-avoidance orientation, two additional scales were included. The first scale assessed avoidance orientation (i.e., minimizing effort) and the second mastery-extrinsic orientation (i.e., trying to get good grades and succeed in school). The important difference between mastery-extrinsic orientation and performance-approach orientation is the criteria used to define success. In performance-approach orientation the focus is on relative success (outperforming others), while in mastery-extrinsic orientation the focus is on absolute success (getting good grades regardless of what grades the others get). Hence, the five types of goal orientations were:

- **Mastery-intrinsic** (e.g., “To acquire new knowledge is an important goal for me at school.”)
- **Mastery-extrinsic** (e.g., “My goal is to succeed at school.”)
- **Performance-approach** (e.g., “An important goal for me at school is to do better than other students.”)
- **Performance-avoidance** (e.g., “I try to avoid situations in which I may fail or make mistakes.”)
- **Avoidance orientation** (e.g., “I try to get away with as little effort as possible in my school work.”)

Each scale contained 3 items. Students rated all items using a 7-point Likert scale ranging from 1 (Not true at all) to 7 (Very true). The Cronbach alpha reliabilities were .84, .86, .66, .78, and .69, respectively.

*Goal appraisals*

Participants were asked to produce one personal goal related to education (Salmela-Aro, 2002). This goal mentioned by the subject was later content-analyzed. Next the participants appraised this personal goal according to commitment ($\alpha= .71$), effort ($\alpha=.87$), stress ($\alpha=.84$), progress ($\alpha=.76$), and extrinsic ($\alpha=.68$) and intrinsic ($\alpha=.63$) motivation (Deci & Ryan, 2000). Altogether 13 items (e.g., “How committed are you to this goal?”) were rated using a 7-point Likert scale ranging from 1 (Very little) to 7 (Very much).

*Subjective well-being*

Subjective well-being was assessed by using two scales: self-esteem (Rosenberg, 1965) and burnout (Näätänen, Aro, Matthiesen & Salmela-Aro, 2003). Self-esteem was assessed using a 5-item scale with statements reflecting general self-acceptance, self-respect, and an overall attitude towards oneself (e.g., “On the whole, I am satisfied with myself.”). Items were assessed using a 7-point Likert scale ranging from 1 (I totally disagree) to 7 (I totally agree). The burnout scale was revised so that it concerned particularly schoolwork. The burnout scale included 9 items (e.g., “I feel that I am drowning in schoolwork.”), which were assessed using a 6-point Likert scale ranging from 1 (I totally disagree) to 6 (I totally agree). The Cronbach alpha reliabilities were .77 for self-esteem and .86 for burnout.

**Methods**

This study utilized a person-centered approach and therefore the analyses focused on identifying similarities and differences between groups of individuals in relation to certain variables. Profiles of variable values were thus of interest, not the variables as such. Following the person-centered emphasis of the study, the students were classified according to their goal orientation profiles using latent class clustering (Vermeunt & Magidson, 2002). Group and gender differences across different variables were assessed by means of analyses of variance (ANOVA).

**Results**

*Goal orientation profiles*

The first aim of this study was to examine what kinds of goal orientation profiles can be identified among lower secondary school students. According to statistical criteria (CAIC and BIC, see Table 1), the 4-class solution described the data best. The groups were labeled, according to the score mean profiles, as non-committed, avoidance-oriented, performance-oriented, and learning-oriented (see Figures 1 and 2).

Non-committed students (N=247) had average scores on all orientations, though; they scored relatively high on avoidance orientation. This was the biggest group with nearly half of the students. Avoidance-oriented students
(N=150) had high scores on avoidance orientation but relatively low scores on all other orientations, especially on mastery-extrinsic and mastery-intrinsic orientations. In contrast, performance-oriented students (N=81) scored low on avoidance orientation but high on mastery-extrinsic, mastery-intrinsic and both performance-focused orientations. Learning-oriented students (N=61) had also very high scores on mastery-intrinsic and mastery-extrinsic orientations but they had the lowest scores on all orientations. The first group was named non-committed, because the students in this group seemed not to be committed to any given orientation, but rather had average scores on all orientations. It is worth noticing, though, that this “norm group” scored relatively high on avoidance orientation.

Girls were over-represented in the learning-oriented group but in the other groups girls and boys were equally distributed ($\chi^2 = 10.38, df = 3, p < .05$).

**Education-related personal goals**

The second aim of this study was to examine how students with different goal orientation profiles differ with respect to education-related personal goal appraisals. First, participants produced one education- or occupation-related personal goal that they found important. The importance was rated using a 7-point Likert scale. The score mean was 6.03 (SD = .950). These personal goals concerned current studying (32 %, e.g., “To get better grades.”), future occupation (19 %, e.g., “To get a good occupation that would be suitable for me.”), upper secondary school (17 %, e.g., “To get into upper secondary school.”), further studying in general (11 %, e.g., “To continue studying after lower secondary school.”), vocational training (8 %, e.g., “To get into a vocational institute and study cooking.”), and university studies (3 %, e.g., “To get into the Faculty of Medicine.”). The students in different goal orientation groups reported these goals quite similarly, except that the avoidance-oriented students reported slightly less goals concerning studying in upper secondary school and more goals concerning studying in vocational institutes compared to the other students.

**Differences on goal appraisals between goal orientation groups**

As expected, these groups differed in terms of how they appraised their educational goals (see Figure 3). For example, it was revealed by means of analyses of variance (ANOVA) that avoidance-oriented students were the least committed (F(3, 522) = 28.09, p < .001, $\eta^2 = .14$), demonstrated the least effort (F(3, 519) = 32.31, p < .001, $\eta^2 = .16$), and experienced least goal progress (F(3, 517) = 32.92, p < .001, $\eta^2 = .12$), but they also experienced least stress with their current goal status (F(3, 519) = 6.05, p < .001, $\eta^2 = .03$). In contrast, the learning-oriented students reported most progress with their goal pursuit. Interestingly, there were no significant differences in commitment, effort, stress, and progress between the performance-oriented and learning-oriented students; however, the performance-oriented students were more externally motivated (F(3, 517) = 11.26, p < .001, $\eta^2 = .06$) in comparison to the learning-oriented students.

**Differences on well-being between goal orientation groups**

The final aim of the present study was to examine how students with different goal orientation profiles differ with respect to subjective well-being. The results (see Figure 4) showed that the learning-oriented students displayed significantly higher self-esteem (F(3, 526) = 3.67, p < .05, $\eta^2 = .02$) and experienced less school-related burnout (F(3, 509) = 9.35, p < .001, $\eta^2 = .05$) compared to the non-committed and avoidance-oriented students. Unexpectedly, the non-committed students experienced more school-related burnout than the other students.

Compared to the girls, the boys reported higher self-esteem (F(1, 521) = 78.62, p < .001, $\eta^2 = .13$) and experienced less school-related burnout (F(1, 504) = 5.10, p < .05, $\eta^2 = .01$) in all goal orientation groups. Boys also appraised their educational goals as less stressful than the girls did (F(1, 514) = 5.03, p < .05, $\eta^2 = .01$).

**Discussion**

Four goal orientation groups were found. As expected, learning-oriented, performance-oriented, and avoidance-oriented groups were discovered. The 4-class solution contained also a big group that was labeled non-committed. The non-committed group included nearly half of the students. These students formed some kind of “a norm group”; the students scored averagely on all goal orientations. Even though this was unexpected, it seems anyway rather reasonable that there is a large group of students among ninth-graders who are just “going with the flow”.

Goal orientation groups differed in terms of their education-related goal appraisals and subjective well-being. The appraisals concerning education-related personal goals were most negative among the avoidance-oriented students; these students were the least committed, demonstrated the least effort, and experienced least goal progress. But at the same time they also experienced least stress with their current goal status. It seems that there is no prior research that would link achievement goal orientations and personal goal appraisals in the same manner as in this study. However, the results can be seen as supporting some assumptions of prior studies. For example, Niemivirta (1998) found out that avoidance-oriented students differed clearly from learning-oriented and performance-oriented students on both motivational factors and self-reported strategy use. Their self-esteem, control beliefs, and self-perceptions of ability and effort were all relatively low. Hence, it could be said that avoidance-oriented students seem to have the most maladaptive pattern of motivation and affect.
There were no significant differences in commitment, effort, stress, and progress between the performance-oriented and learning-oriented students. The fact that performance-oriented and learning-oriented students differed only slightly in relation to their goal appraisals (and also in relation to their subjective well-being) is interesting but not surprising. Achievement goal orientations are not independent of each other. Consequently, students may assign a different weight (or value) to different goals. It has been suggested, that performance goals may be adaptive in some cases as long as learning goals are high as well. Pintrich (2000) remarks that students who were concerned about their performance and wanted to do better than others, and at the same time, wanted to learn and understand the material had an equally adaptive pattern of motivation, affect, cognition, and achievement as those just focused on mastery goals. In the present study, performance-oriented students scored very high (in fact as high as learning-oriented students) in mastery-intrinsic orientation. It is also good to remember that the educational context is undoubtedly quite competitive. Thus, if students are focused on approaching the competition and social comparison in a classroom situation, there do not have to be detrimental effects if they also are oriented to mastery of their schoolwork (Pintrich, 2000). If success depends on outperforming others, performance-oriented students’ focus on relative ability might actually prove adaptive in some school contexts.

In this study we have introduced a concept of school-related burnout. The concept of burnout has not been commonly used in a school context or when studying adolescents. The results concerning well-being showed that learning-oriented students displayed highest self-esteem and experienced least school-related burnout compared to the other students. Unexpectedly, the non-committed students experienced more school-related burnout than the other students did. The fact that avoidance-oriented and non-committed students reported similar levels of burnout suggests that alienation and competition in addition to lack of commitment could be taken as factors contributing to school-related burnout.

The differences in self-esteem between goal orientation groups were less significant than in other variables. Self-esteem assessed general self-acceptance, self-respect, and an overall attitude towards oneself and hence, it was the only variable not directly connected to school or academic context. Surely, the general self-esteem is greatly influenced by the non-academic context as well, especially during adolescence when young people have to get along with the different challenges of puberty (e.g., new body image and social role changes).

Concluding remark

In the present study we made an effort to link achievement goal orientations, educational goal appraisals, and well-being, which have rarely been studied together. It seems, that the way students appraise their personal goals is predictably and systematically related to their general achievement goal orientations. Furthermore, these goal orientations are related to subjective well-being. The findings of the present study were based upon a cross-sectional design, but the study will be extended into a longitudinal study in the future. By means of longitudinal design we will be able to follow how students with different goal orientation profiles deal with the transition and what kinds of different trajectories and pathways they have. The person-centered approach utilized in the present study provides an example of a useful way of approaching phenomena related to achievement goal orientations.

About the authors

Heta Tuominen is a postgraduate student at the Department of Education in the University of Helsinki. Her research interests include young people’s personal goals, motivation, subjective well-being, and educational interests and choices.

PhD Katariina Salmela-Aro is currently a fellow at the Helsinki University Collegium for Advanced Studies. Her main interests are personal goals, motivation, life-span development, life transitions, and well-being. She has successfully conducted several longitudinal studies concerning university studies and the transition to parenthood.

PhD Markku Niemivirta is currently a fellow at the Helsinki University Collegium for Advanced Studies. His research focuses on individual, contextual, and cultural differences in achievement goal orientations, interest, anxiety, and task performance. His interests also include quantitative methodology, especially related to developmental and longitudinal research.

Dr. Jukka Vuori is a senior researcher at the Finnish Institute of Occupational Health. Vuori’s main interests in research are stress, coping and health promotion in occupational settings. He is the Chief of the Section of Occupational Health Psychology and the head of a research group involved in prevention research aiming at supporting career management with group interventions.

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References


Table 1. Information criteria values for different cluster solutions

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Note. BIC=Bayesian information criterion, CAIC=Consistent Akaike’s information criterion. Values in italics indicate the best fitting model.

Figure 1. Motivational profiles of different goal orientation groups

- Non-committed
- Avoidance-oriented
- Performance-oriented
- Learning-oriented
Figure 2. The number of students in different goal orientation groups

Figure 3. Mean differences on goal appraisal measures between goal orientation groups. Note. Means with different letters are significantly different at p<.05 level (with Bonferroni correction).
Figure 4. Mean differences on well-being measures between goal orientation groups. Note. Means with different letters are significantly different at $p<.05$ level (with Bonferroni correction).