ADOLESCENTS' POSSIBLE SELVES, ACHIEVEMENT GOAL ORIENTATIONS, AND ACADEMIC ACHIEVEMENT

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Abstract: The study examined adolescents' possible selves, namely the most commonly reported hoped-for and feared selves; second, the differences in possible selves in relation to gender, place of living (urban/rural), and parents' educational level and, third, the relations between possible selves, achievement goal orientations, persistence, and academic achievement. A total of 1162 mid-adolescents (aged 15-16) of both genders from urban and rural areas were asked (a) to report their three most important hoped-for and feared selves that they currently imagined for themselves and (b) to complete a self-report questionnaire measuring achievement goal orientations and persistence. The two most frequent categories of hoped-for possible self pertained to career and social relations followed by educational, material, and personal concerns. The two most commonly listed feared selves pertained to personal and career followed by social, material, and educational concerns. Significant effects of gender and place of living on both hoped-for and feared selves were found. Students with academic or career-related possible selves as their first choice were significantly more mastery-oriented and reported higher persistence as compared to students with other priorities as regards hoped-for selves. No significant effects of feared possible selves were found.

Key words: Academic achievement, Achievement goal orientations, Persistence, Possible selves.

INTRODUCTION

Time perspective, the individual's ability to move into the past through the use of memory or to imagine the future, is considered by some theorists as a unique human capability (Roberts, 2002). This ability is conceptualized and measured in a number of different ways by theories such as time perspective (Zimbardo & Boyd, 1999), temporally extended self (Moore &

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Lemmon, 2001), future possible selves (Markus & Nurius, 1986), time orientation (Gjesme & Nygard, 1996), and temporal orientation (Holman & Silver, 1998). The most common term used in developmental, social, and educational psychology is "future time perspective" (Simons, Dewitte, & Lens, 2000). Future time perspective (FTP) is conceptualized as the mental representation of the future, constructed by individuals at certain points in their lives and reflecting personal and social contextual influences (Husman & Lens, 1999). As such, FTP provides a basis for setting personal goals and life plans, exploring future options and decision-making, all of which may affect the individual's life course (Seginer, 1992). Presumably, FTP is very close to Markus's concept of "possible selves" (Markus & Nurius, 1986).

Possible selves

Possible selves are representations of the self in the future. In their original presentation of the construct, Markus and Nurius (1986) defined possible selves as «self-knowledge [that] pertains to how individuals think about their potential and about their future» (p. 954). They stated that possible selves represent those selves the person could become, would like to become, or is afraid of becoming. They encompass both hoped-for and feared selves. Hoped-for selves are what we strive to become. Feared selves are what we strive to avoid becoming. Hoped-for and feared selves may influence affect, motivation, and current achievement in different ways. Hoped-for selves have been positively associated with superior performance and high self-esteem (Oyserman & Markus, 1990a). Feared selves have been associated with negative outcomes such as depression (Carver, Lawrence, & Scheier, 1999), lower life satisfaction (Ogilvie & Clark, 1992), anxiety and guilt (Carver et al., 1999). Since individuals value and desire the positive or hoped-for possible selves, they would regulate their behaviour to increase their chances of realizing those selves. If individuals are repelled by the negative or feared possible selves, then they would implement behavioural patterns that decrease probability of realizing those feared selves. In other words, the choices that people make in the present are based on their desire to develop toward the kind of person they hope to become (i.e., approach) and away from the kind of person they fear of becoming (i.e., avoidance). Research has demonstrated that these possible selves can play an important motivational role in a number of domains, including academic striving (Oyserman, Gant, & Ager, 1995).

From the point of view of possible selves, the cognitive changes that occur during adolescence allow adolescents to conceive of themselves along multiple dimensions. Thus they begin to formulate various hypothetical, possible selves based on their attainments and the resources available in their sociocultural and historical context (Harter, 1990; Oyserman, 1993; Oyserman & Markus, 1990b). The selves thus constructed provide meaning and organization to experiences and motivate action by providing incentives, plans and scripts for behaviour (Markus & Wurf, 1987; Oyserman et al., 1995). Adolescents who have a well-developed representation of the self in a particular domain are better able to predict their future behaviour in that domain (Markus & Ruvolo, 1989); consequently, one's present representation of the self may also serve as the foundation for the development of representation of the self in the future.

Hoped-for and feared possible selves are often studied separately, either as summaries or counts of the number of hoped-for and feared possible selves, or in terms of content (e.g., academic, personal). Hoped-for and feared possible selves can also be studied in conjuction. Balance refers to the construal of both positive expectations and fears in the same domain (Oyserman & Markus, 1990b). It is assumed that balance may preserve motivation to attain the hoped-for possible self and avoid the feared, by leading adolescents to adopt only strategies that simultaneously increase the possibility of attaining the positive self and avoiding the negative self. The motivation conferred by balanced possible selves is additive and therefore greater than the motivation conferred by the hoped-for or feared self alone. Lack of balance in possible selves may mean that adolescents are more likely to act without taking into account possible negative consequences for a possible self, and this is likely to result in surprise when attempts to attain a positive possible-self result in negative consequences for the self (Oyserman & Markus, 1990b).

Both significant others (e.g., parents) and social contexts play an important role in the creation and maintenance of possible selves. Adolescents learn what is possible and what is valued through engagement with their social context. Social contexts also provide important feedback to adolescents about whether a possible self is positively or negatively valued. When social contexts lack images of possible selves in a particular domain, possible selves in this domain are either likely to be missing entirely or will be so global as to be useless as a self-regulatory mechanism. In studying girls and low socio-economic status adolescents, the issue of social con-

textual restriction is of particular interest. It has also been argued that youth in rural settings may experience a restriction of possibilities because specific role models for a range of academic and occupational outcomes are missing (Oyserman, 1993). Therefore, the construction and maintenance of future possible selves in educational and occupational domains may require more effort for adolescents living in rural areas (Shepard, 2003).

Possible selves, academic achievement, and achievement goal theory

Achievement motivation and achievement goal orientation theories pay particular attention to adolescents' FTP (Greene & DeBacker, 2004; Nurmi, 1991; Seginer, 1992). This line of research has provided evidence that future time perspective can be a powerful motivator of current behaviour (Greene & DeBacker, 2004). It is argued that a sense of purpose for the future is important in motivating individuals to engage in activities perceived to be instrumental in achieving valued future outcomes (Simmons et al., 2000).

The motivational importance of an individual's perception of the future is implicitly present in the concept of possible selves. The theory posits that possible selves mediate long-term motivation and supply direction for the achievement of the desired goal (Markus & Nurius, 1986; Markus & Ruvolo, 1989; Oyserman & Markus, 1990a; Wurf & Markus, 1991). Possible selves give meaning to current behaviour, positive or negative, and influence the direction of current activities by enabling the person to focus attention on specific, task-relevant thoughts and to organize action (Cross & Markus, 1991). The more a possible self is valued or the more important it is to an individual, the more likely it is that it will be related to the individual's behaviour. Possible selves, then, provide a theoretical framework for understanding the means by which future orientation influences behaviour. First, the hopes and fears that an adolescent holds for the future become the standards by which she/he processes relevant information. Second, possible selves can act as motivators by providing the energy to persevere in attempts to attain goals and to avoid fears. Third, the procedural knowledge of possible selves guides behaviour by facilitating meaning making, by providing incentives for behaviour, and by regulating behaviour. The way in which possible selves influence behaviour is thought to depend on the way in which they are evaluated. Negatively-evaluated possible selves engage avoidance motivational systems to prevent the realization of feared selves, whereas positively-

evaluated possible selves engage approach motivational systems to promote the realization of hoped for selves (Markus & Nurius, 1986).

Possible selves have been linked to academic attainments. Adolescents with both academically oriented possible selves and strategies to attain them are significantly more likely to attain improved grades than those without these possible selves (Anderman, Anderman, & Griesinger, 1999; Oyserman, Bybee, Terry, & Hart-Johnson, 2004). Even in samples at high risk of academic problems due to high poverty concentration, when adolescents had more academically focused possible selves and strategies to attain them, they had significantly improved grades compared with adolescents lacking these possible selves (Oyserman et al., 2004). In addition, in laboratory contexts, possible selves have predicted task competence (Cross & Markus, 1994).

Achievement goal theory proposes that students adopt a certain orientation to learning and achievement that is instrumental in motivating learning behaviours. The orientation adopted will, in turn, influence the ways in which a student approaches and responds to academic demands (Ames, 1992; Urdan, 1997). Research on students' achievement goals conducted over the last decades has largely focused on three types of goals: mastery, performance-approach, and performance-avoidance goals. Mastery goals are defined as a desire to improve one's competence, to master a skill, and to understand the learning material (Ames, 1992; Kaplan, Middleton, Urdan, & Midgley, 2002). Performance-approach goals represent students' desire to demonstrate ability, while performance-avoidance goals represent students' aim to hide the demonstration of lack of ability (Elliot & Church, 1997; Middleton & Midgley, 1997). Typically, high levels of mastery orientation in students is thought to be associated with intrinsic motivation, which in turn, is related to positive motivational outcomes, such as more effort and persistence, to more effective learning strategies, and to better achievement. Performance-avoidance goal orientation has been consistently associated with maladaptive patterns of learning behaviour and negative affect, whereas performance-approach goal orientation has been found to be more positive than performance-avoidance goals, often related to positive outcomes and unrelated to negative ones. More specifically, recent research shows that performance-approach goals can have a positive effect on intrinsic motivation for students who are achievement oriented (Efklides & Dina, 2007; Harackiewicz, Barron, Pintrich, Elliot, & Thrash, 2002; Linnenbrink, 2005; Urdan, 1997).

Achievement goal orientation theory does not discuss the motivational effects of FTP and its relation to current short-term goals. However, several recent studies examined the potential impact of perceived goal-instrumentality on students' current motivation (Lens, 2001; Lens, Simons, & Dewitte, 2002). The empirical findings of this line of research suggest that students with a positive perception of the instrumentality of school work to reach future goals (a) are more motivated for school tasks, (b) make more use of effective learning strategies, and (c) work harder and perform better at school (Phalet, Andriessen, & Lens, 2004). Therefore, it is possible that mastery orientation and performance-approach goal orientation are related to FTP and to hoped-for possible selves, whereas performance-avoidance goal orientation are related to lack of FTP and to feared selves.

THE PRESENT STUDY

The aim of the present study was twofold. First, we sought to examine adolescents' possible selves. We focused on adolescence because a focus on the future is intrinsic to the social role of adolescence. More specifically, mid-adolescence, in terms of developmental phase, is an ideal time to study possible selves, because adolescents at this stage are cognitively able to conceptualize possible selves and they are also likely to start speculating what the future holds for them (Nurmi, 1991; Santili & Furth, 1987).

We adopted one of the most frequent research approaches to investigate future-oriented goals and concerns that analyses their content or thematic structure (Nurmi, Poole, & Kalakoski, 1994). Typically this is done by analyzing the goals, hopes, and concerns mentioned by people according to the domain of life that is important to them, such as education, occupation, family etc.

Previous research has shown that the contents of people's projections of the future are strongly influenced by socio-cultural factors, such as gender role prescriptions and other norms and expectations that mark the particular context in which one lives (Husman & Lens, 1999). Therefore, we aimed to examine gender differences in possible selves, as well as the possible effects of parental educational level and place of living (urban or rural). Based on previous studies (Knox, Funk, Elliot, & Bush, 2000; Nurmi, 1991) we hypothesized that boys and girls would differ in their possible selves, with each group endorsing more gender stereotypic ones. Given that women are

socialized from an early age to focus on interpersonal relationships (Beal, 1994), we hypothesized that girls would report more frequently possible selves related to interpersonal relationships, whereas boys would report more possible selves related to career concerns (Hypothesis 1).

Also based on the theory and research which suggests that future projections of self are strongly influenced by the particular cultural context in which one lives (Markus & Wurf, 1987), we hypothesized that adolescents living in rural and urban areas would differ in relation to the reported possible selves (Hypothesis 2). In addition, existing evidence shows that there is a connection between socioeconomic status (SES) and the specific types of self domains reported by youth (Gutman & McLoyd, 2000; Johnson, 1994). Therefore, we also expected that the types of possible selves reported by adolescents would differ according to their SES, as measured by their parents' educational level (Hypothesis 3).

The second aim of the study was to examine whether adolescents' possible selves are related to their goal orientations, persistence in school work, and school achievement. Although the relevant literature is still very limited, based on the studies which show that youth with academic possible selves attain better school outcomes (Oyserman et al., 1995; Oyserman & Harrison, 1998) and feel more connected to school (Oyserman, 1993; Oyserman & Harrison, 1998), we assumed that adolescents with academic possible selves as their primary choice would be more mastery-oriented, would perceive themselves as more persistent and would have higher academic achievement (Hypothesis 4).

Finally, another aim of the study was to investigate whether adolescents with 'balanced' possible selves –containing both a positive expectation and a fear or concern in the same domain– would differ from their peers in relation to goal orientations, grade point average and persistence (Hypothesis 5). We focused only on academic and career possible selves because the dependent variables under examination were directly related to these two types of possible selves.

METHOD

Participants

In total, 1162 mid-adolescents attending 9th (mean age: 15.31 years, *SD* = .41) and 10th grade (mean age: 16.27 years, *SD* = .34) participated in the

study. Of the participants 652 (56.12%) were girls and 510 (43.88%) were boys. Students were recruited from public high schools located in urban (n = 834) and rural (n = 328) areas in five different districts in Greece. Data were collected in ordinary school hours. Students' reports of their fathers' and mothers' educational level were also collected. Educational level was scored on a scale ranging from 1 (I didn't finish high school) to 3 (university graduate). Scores were then averaged to form the parental education level. According to these reports, 171 (14.7%) students had parents who had not finished high school, 673 (57.9%) had parents who had completed high school, and 318 (27.4%) had parents who were university graduates.

Measures

Possible selves. Instructions accompanying open-ended questions of hoped-for and feared possible selves were adapted from Oyserman and Markus (1990a). After an explanation of the notion of possible selves, respondents were asked to list their three most important, or salient, hoped-for and feared selves that they currently imagined for themselves. Participants' responses regarding the first most important hoped-for and feared self were used for the purposes of the present study.

Responses to the open-ended questions were coded in terms of pertinent life domains. Following previous categorization systems and in line with the domains relevant to adolescence (Oyserman & Markus, 1990a), each response was classified by two independent coders into one of five life domains, with hoped-for and feared selves coded separately: education (school graduation, university entry), career (get a good job), social relations (e.g., have friends, get along with parents, get married, etc.), personality characteristics or traits (e.g., be happy, try to do always my best, etc.), and attainment of material goods (e.g., have a nice house, have beautiful clothes, etc.). The interrater agreement was 92% for hoped-for and 90% for feared selves.

Achievement goal orientation. Adolescents responded to items assessing mastery, performance-approach, and performance-avoidance goal orientations. The Greek version of the Personal Achievement Goal Orientation Scale (Gonida, Leondari, & Kiosseoglou, in press), based on the Patterns of Adaptive Learning Scales (PALS, Midgley, Kaplan, Middleton, Urdan, Maehr, Hicks, Anderman, & Roeser, 1998), was used.

The scale consisted of 17 items and participants were asked to rate their degree of agreement with each of them on a 5-point Likert-type scale ranging from 1 (strongly disagree) to 5 (strongly agree). Principal component analysis with varimax rotation yielded a three-factor solution with each item loading on its designated factor. Specifically, mastery goals (six items, eigenvalue = 5.15, factor loadings from .59 to .79, α = .82), performance-approach goals (six items, eigenvalue = 2.61, factor loadings from .66 to .80, α = .85), and performance-avoidance goals (five items, eigenvalue = 1.13, factor loadings from .64 to .68 except one item with loading .35, α = .65) were abstracted and accounted for 52.27% of the total variance. A score based on the mean of all the items loading on each factor was computed and represented each goal orientation. The mastery goal scale included items such as "I like class work that I'll learn even if I make a lot of mistakes". The performance-approach scale included items such as "I would feel successful in class if I did better than most of the other students". The performance-avoidance scale included items such as "The reason I do my class work is that my teacher doesn't think I know less than others".

Persistence. Persistence was assessed using a 5-point Likert-type scale developed by Elliot, McGregor, and Gable (1999) with four items. A principal component analysis with varimax rotation yielded the hypothesized single-factor solution (eigenvalue = 2.25, factor loadings from .69 to .81, α = .74), which accounted for 56.22% of the total variance. The scale included items such as "When something that I am studying gets difficult, I spend extra time and effort trying to understand it".

Academic achievement. Academic achievement was measured with grade point average (GPA). The GPA was converted to a 5-point scale, where 1 was the lowest grade and 5 was the highest grade.

RESULTS

Categories of possible selves

Figure 1 shows the frequencies of the most salient hoped-for and feared possible selves in each of the five domains as reflected in the students' first response. The most frequent category of hoped-for possible self pertained to career (33.39%; e.g., to be a successful businessman, to be a good teacher, to find a good job, etc.). The second most common response for

the hoped-for self was the social (22.46%; e.g., to become a parent, to have or not have a family, to have friends, etc.) and the third was education (18.68%; e.g., to go to the University, to be a good student, to study law, etc.) followed by material (12.82%; e.g., to be rich, to have money, to be in a good financial status, etc.) and personal self (12.65%; e.g., to be healthy, smart, optimist, a hard-working person, a good person, etc.).

The most commonly reported feared self pertained to personal (44.23%; e.g., to get sick, ugly, unhappy, drug user, etc.) followed by career (28.23%; e.g., unemployed, too busy, etc.), social (13.34%; e.g., to be lonely, unmarried, without family, be rejected by others, etc.), and material concerns (10.72%; e.g., to be poor or not rich, to have no money, homeless, etc.). The percentage of the education-related feared self was very low (3.5%; e.g., to fail in the university entry exams, to fail at school, etc.). Overall, the adolescents reported possible selves that are representative of the developmental tasks of their age and of early adulthood: building a career, getting educated, forming social relationships.

To test whether some students projected their future self in the same domain in terms of their hopes as well as their fears (i.e., balanced self), the categories of hoped-for selves were crosstabulated with the categories of feared selves. As shown in Table 1, the frequencies of students with a balanced possible self in terms of their hopes and their fears were different for each of the five categories. The number of students with a balanced ca-
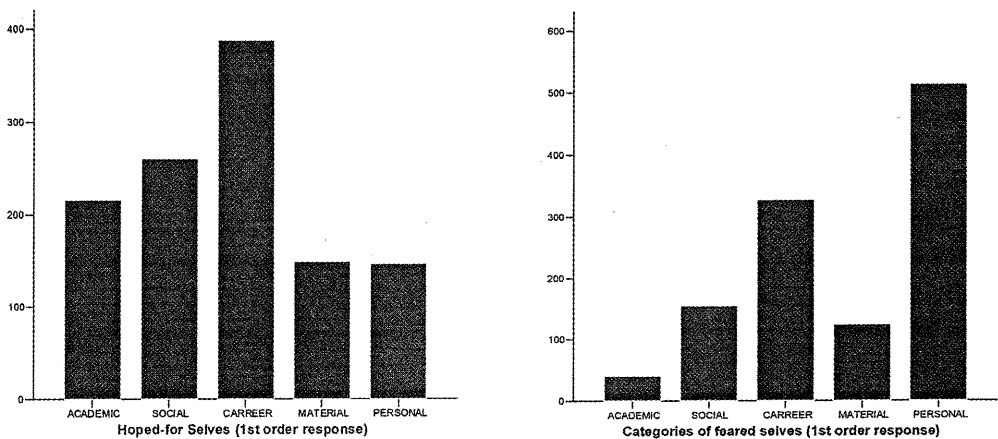

Figure 1. Frequencies of reported hoped-for and feared possible selves for each life domain (whole sample).

Table 1. Crosstabulation between the categories of hoped-for and feared selves

	Possible selves					
		Feared self				
Hoped-for self	Academic	Social	Career	Material	Personal	Total
Academic	22	23	75	14	83	217
Social	5	58	61	24	113	261
Career	13	47	148	31	149	388
Material	1	12	30	48	58	149
Personal	--	15	14	7	111	147
Total	41	155	328	124	514	1162

reer self was the highest compared to all other categories ($n = 148$), followed by the personal possible self ($n = 111$), social ($n = 58$) and material ($n = 48$). Only a very small number of adolescents had a balanced academic possible self ($n = 22$).

Demographic variables and possible selves

To examine differences in possible selves in relation to gender, place of living, and parents' education, a series of chi-square analyses were carried out using adjusted standardized residuals. As regards the hoped-for self, there were significant gender differences in relation to the categories of education and material goods, $\chi^2(4, N = 1162) = 23.09, p < .001$. Specifically, boys were more likely than girls to report hoped-for possible selves in the domain of material goods. Conversely, girls were more likely than boys to report possible selves in the domain of education. As regards feared selves, gender differences were found only in relation to the category of the social possible self, $\chi^2(4, N = 1162) = 11.59, p < .05$. The feared possible selves of girls reflected a greater concern about social relationships as compared to boys (Table 2), a finding which partially verifies Hypothesis 1 according to which girls were expected to report more frequently possible selves related to interpersonal relationships.

Table 2. Hoped-for and feared possible selves by gender

	Academic		Social		Career		Material		Personal	
Possible selves	B	G	B	G	B	G	B	G	B	G
Hoped-for possible selves	71	146	120	141	170	218	86	63	63	84
	(-3.7)	(3.7)	(0.8)	(-0.8)	(0.0)	(0.0)	(-3.6)	(-3.6)	(-0.3)	(0.3)
Feared possible selves	16	25	50	105	158	170	55	69	231	283
	(-0.6)	(0.6)	(-3.1)	(3.1)	(1.8)	(-1.8)	(0.1)	(-0.1)	(0.6)	(-0.6)

Note: B = boys; G = girls. The numbers in parentheses are the adjusted standardized residuals (d_{ij}). Values of $d_{ij} > 1.96$ denote significant association between i (categories of possible selves) and j (gender) of the contingency table.

Contrary to our hypothesis (Hypothesis 3), there were no significant differences in the reported possible selves in relation to parents' education, $\chi^2(16, N = 1161) = 15.39, p > .05$ and $\chi^2(16, N = 1161) = 11.97, p > .05$, for hoped-for and feared selves, respectively, whereas in line with Hypothesis 2, there were significant differences in relation to the place of living. Residents of rural areas reported significantly more frequently personal hoped-for possible selves as compared to urban area residents, $\chi^2(4, N = 1162) = 11.37, p < .05$. In relation to feared selves, urban area residents reported significantly more frequently social and career possible selves, whereas rural area residents reported more frequently personal possible self, $\chi^2(4, N = 1162) = 28.60, p < .001$ (Table 3).

Table 3. Hoped-for and feared possible selves by place of living

	Academic		Social		Career		Material		Personal	
Possible selves	B	G	B	G	B	G	B	G	B	G
Hoped-for	145	72	197	64	289	99	110	39	93	54
possible selves	(-1.8)	(1.8)	(1.5)	(-1.5)	(1.5)	(-1.5)	(0.6)	(-0.6)	(-2.5)	(2.5)
Feared possible	32	9	127	28	254	74	91	33	330	184
selves	(0.9)	(-0.9)	(3.0)	(-3.0)	(2.7)	(-2.7)	(0.4)	(-0.4)	(-5.1)	(5.1)

Note: U = urban, R = rural. The numbers in parentheses are the adjusted standardized residuals (d_{ij}). Values of $d_{ij} > 1.96$ denote significant association between i (categories of possible selves) and j (place of living) of the contingency table.

Possible selves, achievement goal orientations, persistence, and academic achievement

To examine whether the type of possible self has an effect on achievement goal orientations, persistence, and academic achievement, a series of one-way ANOVAs was performed on the data twice, one for hoped-for and one for feared possible selves. Following Bonferroni, the adjusted alpha level used was .05/5 = .01 (Winer, Brown, & Michels, 1991). Results indicated a significant main effect of hoped-for possible selves on mastery orientation, $F(4, 1157) = 5.769, p < .001$, partial $\eta^2 = .02$ and on persistence, $F(4, 1153) = 8.913, p < .001$, partial $\eta^2 = .03$. Tukey's post hoc tests showed that students with academic possible selves as their first choice, were significantly more mastery-oriented ($M = 3.54, SD = .83$) as compared to those who reported social ($M = 3.18, SD = .87$) or material ($M = 3.27, SD = .81$) possible selves. They also reported higher persistence ($M = 3.85, SD = .83$) as compared to students with all other types of hoped-for selves: $M = 3.41$ $(SD = .90), M = 3.64 (SD = .81), M = 3.54 (SD = .79)$, and $M = 3.48 (SD = $

.92) for social, career, material, and personal self, respectively. Moreover, students with career-related possible selves were more mastery-oriented (M = 3.37, SD = .80) and reported higher persistence (M = 3.64, SD = .81) as compared to students with social possible selves: M = 3.18 (SD = .87) and M = 3.41 (SD = .90) for mastery orientation and persistence, respectively. No significant main effects of feared possible selves were found. As regards academic achievement, no significant differences were found between the students with different possible selves, hoped-for or feared, as their first choice. The above results verify Hypothesis 4 only in relation to mastery orientation and persistence and not in relation to academic achievement.

In relation to Hypothesis 5, we examined possible differences between three groups of adolescents in relation to goal orientations, persistence and academic achievement: (a) adolescents with an academic hoped-for possible self (n = 195), (b) those with an academic-feared self (n = 19), and (c) those with a balanced-academic self (n = 22). One-way ANOVA, with Bonferroni alpha level adjusted to .01 was applied to the data. Due to the unequal number of subjects in the samples of the three categories, Levene's test of homogeneity of variances was performed. Levene's test was nonsignificant; therefore, homogeneity of variances was confirmed. The ANOVA results indicated nonsignificant differences between the three groups in regard to all five dependent variables: mastery orientation, $F(2, 233)$ = 1.403, p > .05; performance-approach, $F(2, 233)$ = .152, p > .05; performance-avoidance, $F(2, 233)$ = .209, p > .05; persistence, $F(2, 232)$ = .748, p > .05, and achievement, $F(2, 185)$ = 3.009, p > .05. The same analysis was repeated in relation to career-possible self and nonsignificant differences were found between adolescents having a career hoped-for self (N = 240), those having a career-feared self (n = 180), and those with a career-balanced self (n = 148): $F(2, 565)$ = .042, p > .05, $F(2, 565)$ = 4.517, p > .01, $F(2, 565)$ = 1.437, p > .05, $F(2, 562)$ = 1.806, p > .05, $F(2, 439)$ = .157, p > .05, for mastery orientation, performance-approach, performance-avoidance, persistence, and achievement, respectively.

DISCUSSION

Overall, the results showed that adolescents' possible selves are related to the major developmental tasks of their age group and early adulthood, such as future occupation, education, interpersonal relationships. These findings

are similar to those found earlier (Knox et al., 2000; Nurmi, 1991; Seginer, 1992), and suggest that age-related developmental tasks and role transitions provide a framework for setting one's own goals, because they provide knowledge of what is possible, acceptable, and desirable at different ages (Nurmi et al., 1994). The finding that the most important hoped-for possible self was related to career is in line with previous studies showing that adolescents are most interested in their future occupation and education (Nurmi, 1991). It is interesting that academic possible selves were not given a high priority among the adolescents of this group. Previous research (e.g., Oyserman et al., 2004) has indicated that the educational domain is of great significance to adolescents. There is some evidence that school and academic success may become less salient possible selves as adolescents move from elementary to middle and high school. Anderman et al. (1999) reported that in elementary school, boys' possible selves were more likely to focus on being a good student than in middle school, with the likelihood of 'good student' possible selves declining across the middle school years.

Almost half of the sample reported feared selves pertaining to personal states and characteristics, such as getting sick, having an accident, being drug-user, ugly, thief, murderer, bad person etc. The next two most frequent categories of feared selves were related to career and social relationships. This is again in line with previous studies (Nurmi, 1991), showing that although the content of adolescents' fears and worries varies according to a number of factors, such as age and culture, they still seem to be related to normative life-tasks.

Only a small percentage of adolescents reported balanced possible selves. The higher percentages of balanced possible selves pertained to career and personal possible selves. Although Oyserman and Markus (1990b) suggest that the ability to counter fears of future failure with images of oneself reaching a desired end state leads to heightened motivation, our results did not support such a conclusion, given that adolescents with balanced possible selves did not differ from their peers in relation to school attainment, persistence and goal orientations. It is possible that 'balance' alone is not enough to regulate current behaviour toward attaining the desired end-state. Recent research points out that it is important to investigate whether possible selves are detailed and connected with specific behavioural strategies that can sustain self-regulation over time and therefore be guides for self-improvement (Oyserman et al., 2004).

There were no differences in adolescents' possible selves in relation to

parental educational level. However, there were significant differences between the residents of urban and rural areas. For hoped-for as well as for feared selves adolescents living in rural areas focused more on personal traits and characteristics. Adolescents living in urban areas, on the other hand, were more concerned with social and occupational selves. Similar findings were obtained by Shepard (2003) in a qualitative interview study. He found that the adult hoped-for and feared possible selves generated by rural 17 to 19-year-old adolescent girls did not focus on education and fewer than 10% mentioned occupations, and even these few mentions were vague and general. Instead, possible selves focused on personal attributes, relationships and possessions. The present findings are generally consistent with the cross-cultural work which supports the assertion that people's future selves are shaped by the constraints that their socio-cultural context imposes on them (Greene & DeBacker, 2004).

Only a few overall gender differences were found in this study, a finding which is in agreement with a previous study with a Greek sample (Leondari, Syngollitou, & Kiosseoglou, 1998). Representations of the future for boys and girls were converging as regards career and personal hoped-for selves. The absence of gender differences in adolescents' career-related expectations typically has been attributed to the economic necessity of women's employment. Such explanation, however, overlooks recent changes in the importance of employment to women's self-definition and well-being (Knox et al., 2000; Segal, DeMeis, Wood, & Smith, 2001).

Girls reported more hoped-for possible self in relation to education while boys expressed more hoped-for possible self in relation to the attainment of material goods. Women's attention to interpersonal relationships, as established by a range of research literature (Knox et al., 2000; Nurmi, 1991; Segal et al., 2001) was confirmed by the finding that female adolescents reported feared social possible selves more frequently than boys. Given that women are socialized from an early age to focus on interpersonal relations this was an expected finding.

By bringing together the possible-self literature and the literature on motivation and academic achievement this study sought to deepen understanding regarding the relations between possible self, persistence, and academic outcomes. Consistent with our predictions, the results showed that adolescents with academic and career hoped-for possible selves as their first choice, reported being significantly more persistent on academic tasks. These adolescents were also more mastery-oriented as compared to their

peers. The positive association between academic and career possible selves and mastery orientation is in line with previous research (Husman & Lens, 1999; Miller, DeBacker, & Greene, 1999) and may indicate that perceived utility and intrinsic motivation are not mutually exclusive.

In contrast to previous research (Miller, Greene, Montalvo, Ravindran, & Nicholls, 1996) no association was found between academic possible selves and GPA in this study. This may simply point out to the fact that this relationship is mediated by other factors not examined in this study. It may also be an artefact of the particular aspect of possible selves which was considered here. The present study was focused on the centrality of a possible-self domain. Oyserman et al. (2004) pointed out that it is important to consider not only the extent to which adolescents have academic possible selves or 'balanced' possible selves, but also whether these possible selves are likely to promote self-regulation which requires having action plans connected to self-relevant goals. Therefore, rather than simply focusing on whether adolescents mention success at the academic domain as a self-goal, or whether they mention a concern about failure, a more complex coding scheme that focuses on both the details of academic possible selves as well as on the strategies to attain them, may be more illuminating.

Limitations

As with any research, the results of the present study must be interpreted in light of the methodological constraints associated with data collection. First, we used a cross-sectional design. This prevented us from assessing the role of possible selves in influencing behaviour over time and also in reaching conclusions on the causal relations between the variables studied. Second, the current framework for possible selves, though promising, could be refined both conceptually and methodologically. For example, it has been proposed (Quinlan, Jaccard, & Blanton, 2006) that because positive selves can differ in their degree of positivity and negative selves in their degree of negativity, it is theoretically sound to incorporate degrees of each type of valence into possible selves. Similarly, possible selves could also differ in how 'possible' they are. Future research could consider incorporating both the extremity of valence and the degree of probability linked to a possible self.

Conclusion

Despite the limitations of this study, the findings are important in deepening understanding regarding the possible self and achievement link, as well as the possible self and goal orientation link. The findings point out toward a need to focus not only on whether adolescents have academic possible selves or whether these possible selves balance positive expectations with concerns, but on whether possible selves include specific behavioural strategies for pursuing the desired end-states. Markus and Ruvolo (1989) maintain that continued pursuit of a possible self requires keeping it active in the current concept of self. They suggest that this is most likely to occur when the path of present goals to the future goal is well elaborated and contains strategies for both goal-focused action and for dealing with the social context in which the goal is to be achieved. Vague, general possible selves by lacking behavioural strategies cannot function to guide behaviour because they neither provide a specific picture of one's goals nor a plan of how to reduce discrepancies between the present and one's future possible selves. When adolescents feel committed toward attaining possible selves and link current behaviours to attainment of these future goals, then possible selves can serve a self-regulatory role. The initial commitment to a valued distant goal sets the stage for the process of developing proximal goals (Nurmi, 1991) which in turn guide action.

Teachers and significant others who wish to improve outcomes for adolescents, should help them link wishes, expectations, and concerns for their academic future with concrete strategies to take action. They should also provide future goals in ways that satisfy adolescents' feelings of autonomous functioning by maximizing opportunities for choice and self-decisions. As research shows, students' opportunity to make decisions regarding future goals and self-direct themselves enhances intrinsic motivation, is associated with more interest and enjoyment of school work and enhances well-being indicators such as self-esteem and self-actualization (Ryan & Deci, 2000).

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