Universiteit
Leiden
The Netherlands

# Self-generated goals and goal process appraisals: Relationships with sociodemographic factors and well-being.

Massey, E.K.; Gebhardt, W.A.; Garnefski, N.

**Citation**
Massey, E. K., Gebhardt, W. A., & Garnefski, N. (2009). Self-generated goals and goal process appraisals: Relationships with sociodemographic factors and well-being. *Journal Of Adolescence*, *32*, 501-518. Retrieved from https://hdl.handle.net/1887/15135

| | |
|---|---|
| Version: | Not Applicable (or Unknown) |
| License: | Leiden University Non-exclusive license |
| Downloaded from: | https://hdl.handle.net/1887/15135 |

**Note:** To cite this publication please use the final published version (if applicable).

Available online at www.sciencedirect.com
ScienceDirect
Journal of Adolescence 32 (2009) 501–518
Journal of Adolescence
www.elsevier.com/locate/jado

# Self-generated goals and goal process appraisals: Relationships with sociodemographic factors and well-being

Emma K. Massey*, Winifred A. Gebhardt, Nadia Garnefski

*Leiden University Institute for Psychological Research, Clinical, Health and Neuropychology Unit, Leiden University, The Netherlands*

**Abstract**

In this study the full array of personal goals pursued by adolescents was examined using an idiographic goal-elicitation procedure. The aims of the study were twofold. Firstly, we investigated individual differences in self-generated goals and goal process appraisals based on sociodemographic characteristics. Secondly, we investigated the relationship between goal content, goal process appraisals and well-being. Questionnaires were completed by 438 high-school students aged 12 to 19. Girls reported more school, relationship, self and body goals and older students reported more future trajectory goals. In addition, girls and ethnic minority adolescents were more likely to report goal frustration. Well-being was positively associated with goal related self-efficacy and negatively associated with endorsement of self goals, perceived difficulty in goal attainment and goal frustration. These results extend previous findings and suggest that goal-related efficacy, attainment beliefs and impediment to goal pursuit are important factors in adolescent well-being.
© 2008 The Association for Professionals in Services for Adolescents. Published by Elsevier Ltd. All rights reserved.

*Keywords:* Personal goals; Goal disturbance; Goal hindrance; Gender; Age; Ethnicity; Educational track; Life satisfaction

* Corresponding author. Clinical, Health and Neuropsychology Unit, Leiden University, Postbus 9555, 2300 RB Leiden, The Netherlands. Tel.: +31 71 527 3737; fax: +31 71 527 4678.
*E-mail address:* emassey@fsw.leidenuniv.nl (E.K. Massey).

0140-1971/$30.00 © 2008 The Association for Professionals in Services for Adolescents. Published by Elsevier Ltd. All rights reserved.
doi:10.1016/j.adolescence.2008.07.003

Adolescent goals reflect the normative developmental tasks which are pertinent to this period (e.g. Nurmi, 1991, 1993). Such tasks typically include establishing and maintaining relationships with peers and romantic partners, becoming emotionally independent from parents, and preparing for a career and a family (Havighurst, 1953). Individuals personalize these normative tasks (Cantor & Sanderson, 1998), interpreting them according to their own interests, resources and beliefs. As such, they generate an individualized set of personal goals and plans for achievement (Zirkel & Cantor, 1990). In line with Emmons we conceptualize personal goals as "desired states that people seek to obtain, maintain, or avoid" (Emmons, 1996: p. 314). Goal content refers to what it is that the individual is striving to achieve (or avoid), such as creativity, individuality, belongingness, or mastery. Goal processes are the actions and strategies used to strive and achieve these goals, including the thoughts and emotions experienced during goal pursuit (Ford, 1992). The most commonly self-articulated goals of adolescents relate to occupation and education (e.g. Carroll, 2002; Emmons, 1996; Knox, Funk, Elliott, & Bush, 2000; Nurmi, 1987, 1989; Yowell, 2000). Other important goals include those concerning family, friendships, health, leisure activities, material concerns, and personal development (e.g. Carroll, 2002; Knox et al., 2000; Malmberg & Norrgård, 1999; Nurmi, Poole, & Kalakoski, 1994; Nurmi, Poole, & Seginer, 1995; Nurmi & Pulliainen, 1991).

## Goal content, process appraisals and sociodemographic characteristics

Certain goal content and goal process appraisals have been found to be related to various personal and contextual characteristics (Greene & DeBacker, 2004; Massey, Gebhardt, & Garnefski, in press; Nurmi, 1991; Oyserman & Fryberg, 2006). Studying such differences may offer important insights into for example differences between adolescents in academic performance or well-being (Oyserman & Fryberg, 2006). Firstly, as is true of personal goals over the entire life span (Ogilvie, Rose, & Heppen, 2001), adolescent goals reflect age-graded normative tasks (Nurmi, 1987, 1991). The goals that adolescents endorse, their plans and expectations for goal attainment and temporal extension of goals all change with age (Nurmi, 1987, 1989) whereby increasing age is characterized by an increase in autonomy, education, occupation and family goals, and plans and expectations for goal realization.

Secondly, the distinction between future aspirations of girls and boys typically reflects sex role stereotypes (Nurmi, 1991). Females tend to focus on family, social responsibility, self-acceptance, community and affiliation goals (Kasser & Ryan, 1993; Kasser, Ryan, Zax, & Sameroff, 1995; Kerpelman, Shoffner, & Ross-Griffin, 2002; Nurmi & Pulliainen, 1991). There is also evidence that girls give educational goals a greater priority (Nurmi et al., 1995; Yowell, 2000). Boys on the other hand tend to focus less on leisure and family (Nurmi & Pulliainen, 1991) and more on occupational (Yowell, 2000) and financial aspirations (Kasser & Ryan, 1993). Findings regarding gender-related goal differences however are not always consistent (McCabe & Barnett, 2000; Newberry & Duncan, 2001).

Thirdly, adolescents' goals and aspirations also appear to be associated with membership to a particular ethnic group (Oyserman & Fryberg, 2006). The values and norms (such as level of religiosity, collectivist orientation, and modernity) which characterise an ethnic community have been suggested to guide adolescent goal setting (Seginer & Halabi-Kheir, 1998). However, not all findings support ethnic differences in adolescent goals, for example, a study of ethnic groups in the

United States found no difference in goal content across groups (Phinney, Baumann, & Blanton, 2001). In addition to goal content differences, adolescents from differing ethnic backgrounds may also experience the goal pursuit process differently. Adolescents from ethnic minorities may face greater difficulty or setbacks to goal pursuit when attempting to conform to the dominant cultural norms, definitions and expectations (Freeman, Gutman, & Midgley, 2002) while staying true to ones own ethnic identity, values and norms (see Seginer & Vermulst, 2002).

Finally, evidence supporting a relationship between goals and educational track was found in a study, where college-preparatory students were found to value education more greatly and report more 'career anticipatory' goals then vocational students, who in turn reported greater 'adult anticipatory' goals such as finding a partner and starting a family (Klaczynski & Reese, 1991). Vocational students also anticipate achieving these goals earlier than general-secondary school students (Malmberg & Trempała, 1997). Further, evidence is mixed with regards to expectations of goal success and educational track (Klaczynski & Reese, 1991; Malmberg & Trempała, 1997). Although the literature on this area is scarce (Massey et al., in press), the evidence available suggests that differential formation of goals may be associated with educational track.

## Goal content, process appraisals and well-being

Evidence suggests that endorsing particular types of goals is associated with well-being. For example, materialistic aspirations have been linked to a number of psychological disorders in adolescence (Cohen & Cohen, 2001), while there is evidence that a disproportionate number of self goals, such as those which focus on self improvement or personality, may be also maladaptive (Salmela-Aro & Nurmi, 1997; Salmela-Aro, Pennanen, & Nurmi, 2001). In contrast, the goal of "being a good person" appears to be negatively related to depression (Cohen & Cohen, 2001).

Not only the goals endorsed, but also experiences during goal pursuit and goal process appraisals may have an impact on well-being. Greater perceived goal attainability has been found to be associated with greater subjective well-being (Brunstein, 1993). Moreover, actual attainment of personal goals has been shown to be related to greater positive affect, life satisfaction and sense of well-being among university students (Brunstein, 1993; Little, 1989; Yetim, 1993) and adults (Harris, Daniels, & Briner, 2003; Omodei & Wearing, 1990; Yetim, 1993).

To what extent then is obstruction to goal attainment related to well-being in adolescence? According to Ford (1992), emotions are inherently linked to goal setting, progress and attainment, which implies that disruption to goal attainment may lead to negative affect and lower well-being. In support of this, daily goal difficulty (King, Richards, & Stemmerich, 1998; Little, 1989) and goal impediment (Emmons, 1986; Emmons & King, 1988; Ruehlman & Wolchik, 1988; Schroevers, Kraaij, & Garnefski, 2007; Yetim, 1993) have been shown to be related to lower life satisfaction and subjective well-being in (young) adults. However, these relationships have not previously been tested in adolescents.

## The present study

This study aimed to replicate and extend earlier finding regarding adolescent goal content, investigating a *broad taxonomy* of goals in various life domains rather than focusing on one

type of goal. Moreover, we investigated the *self-generated* goals of adolescents, with other words, those issues which youths indicate to be personally relevant rather than issues which are externally determined. A review of the association between sociodemographic factors and goal content indicated somewhat inconsistent findings suggesting the necessity of further research. Literature on goals and educational track is particularly sparse. Further, there is very little previous research on the association between sociodemographic variables and goal process appraisals. Relationships between sociodemographic factors and, for example, difficulties with goal attainment, impediments to goal pursuit and goal related self-efficacy have yet to be explored. Finally, although several studies have identified a relationship between goal impediment and low well-being in adults, this relationship has yet to be examined in adolescents. Greater knowledge of how adolescent goals are related to sociodemographic characteristics could assist in tailoring health enhancing interventions to distinct (sub)groups of adolescents. Further, studying the relationship between goal disruption and well-being could highlight possible targets for interventions with adolescents with psychological or emotional problems.

Several research questions were formulated for the present study. Firstly, to what extent are age, gender, ethnicity and educational track related to self-generated adolescent goals and related process appraisals in adolescents? In line with previous studies, we expected to find differences in goal endorsement and process appraisals according to these factors. Secondly, to what extent are goal content and goal process appraisals related to well-being? We expected that endorsing material and self goals, lower self-efficacy, and greater perceived difficulty in attainability, obstacles and frustration would be related to lower well-being.

## Method

### *Participants and procedure*

A total of 440 high-school students from four schools participated in this study. Schools which were known to include adolescents with ethnically diverse backgrounds were targeted to promote recruitment of a representative sample of the Dutch population. These schools were the first we approached and all agreed to participate. Two adolescents were excluded from the analyses due to incomplete questionnaires. The remaining sample consisted of 230 girls and 203 boys (gender data missing for five adolescents) aged 12–19 ($M = 15.3$, $SD = 1.4$). With regards to ethnicity, 254 of the adolescents were Dutch and 183 of the adolescents were from ethnic minorities (ethnicity data missing for one adolescent). Adolescents were recruited from schools all offering varying types of education, that is, a vocational secondary education ($n = 193$, 44%) and a higher secondary education ($n = 245$, 56%).

Prior to carrying out the study, parents received a letter via mail explaining the aims and procedures of the study and the possibility to refuse permission for participation. Only one parent objected to their child's participation in the study. Questionnaires were administered during school hours and completed in the presence of both a post-graduate psychology student and the teacher. The researcher gave a brief explanation of the purpose and procedures of the study and also outlined the voluntary nature of the study. Questionnaires were completed anonymously and returned to the researcher after completion.

## Measurements

### Sociodemographic variables

Adolescents reported their age, gender, ethnicity, and type of educational track they were following. In order to make a comparison of the developmentally distinct periods of early and late adolescence, age was divided into two groups. The early adolescent group was aged 12–15 years ($n = 237$: 108 boys; 129 girls), and the late adolescent group was aged 16–19 years ($n = 196$: 95 boys; 101 girls). Ethnic group membership was measured with the question 'to which population group do you consider yourself belonging to?' with response categories reflecting the main ethnic groups living in the Netherlands: Dutch ($n = 254$); Moroccan ($n = 64$); Surinamese ($n = 45$); Turkish ($n = 27$); Dutch Antillean ($n = 6$); Indonesian ($n = 2$); other within Europe ($n = 7$); and other outside Europe ($n = 32$). Due to the small number of adolescents per minority group, these adolescents were grouped together and compared to the Dutch adolescents. Eighteen adolescents reported a double ethnic membership; these adolescents with a mixed ethnic origin were grouped with the Dutch adolescents as they reside in the Netherlands and indicated a half Dutch nationality. Educational track items corresponded to the educational pathways offered in Dutch high-schools. For purposes of comparison, these were recoded into two broader groups: vocational secondary education (Vmbo) and higher secondary education (Havo, Vwo, and Gymnasium) reflecting the differences in educational and career opportunities open to adolescents following these tracks.

### Goal content

In order to explore the self-articulated goals of adolescents, we used an open goal-elicitation procedure, as promoted by Nurmi (1993). In order to stimulate reporting of goals in a variety of life areas, the following headings were used: school/future/work, free-time activities, yourself, relationships, and health. Goal content was reduced by means of thematic analysis. Goals which centred around a similar theme were consolidated under an umbrella term representing the goal domain. For example, 'school goals' incorporate getting good grades, not failing the year and obtaining a high-school diploma. All goals were coded by the first author. This coding procedure produced the following eight goal domains: school goals; future trajectory goals; material goals; free-time goals; self goals; relationship goals; health goals; and body goals. This categorization resembles the goal domains which have consistently been found in the literature (see Massey et al., in press). The goals of a sub-set of 10 participants were coded independently by two raters to test for interrater reliability. Acceptable agreement was found with a Cohen's Kappa of 0.79. Agreement per domain was as follows: school 90%; future trajectory 90%; material 100%; free-time 80%; self 94%; relationships 87%; health 90%; body 93%. For purpose of analysis, a dummy variable was created per domain whereby 0 = no goals in this domain, and 1 = one or more goals in this domain.

### Goal attainability

For each goal reported, participants were requested to rate how difficult they thought it was to achieve this goal, ranging from 1 (very easy to achieve) to 5 (very difficult to achieve). An average goal difficulty was calculated per domain, whereby a higher score indicated greater perceived difficulty in goal attainment. Additionally, a total mean goal attainability score was calculated over all reported goals.

*Goal obstacles*

In an open ended question, participants were requested to report any obstacles they may have experienced while trying to achieve any of the goals they had reported. The total number of goals obstructed was calculated, ranging from one to seven ($M = 2.3$, SD = 1.3).

*Goal frustration*

The emotional reaction to goal obstruction was measured on three ten-point scales of Annoyance ($M = 6.8$, SD = 2.3), Stress ($M = 5.6$, SD = 2.5) and Anger ($M = 5.8$, SD = 2.5). An example item is: 'In general, how angry does it make you when you experience obstacles while trying to achieve your goals?'. These scores were averaged to produce a mean goal frustration score, whereby a higher score indicates greater goal frustration ($M = 6.0$, SD = 2.0, Cronbach's $\alpha = 0.79$).

*Goal related self-efficacy*

The perception of self-efficacy in relation to being able to achieve ones goals despite possible obstacles was measured by an adaptation of Schwarzer's General Self-Efficacy Scale (Schwarzer & Jerusalem, 1995). An example item is 'I can always manage to achieve my goals if I try hard enough'. This scale has been widely used and has good psychometric properties (Scholz, Gutiérrez-Doña, Sud, & Schwarzer, 2002). A mean score of these 10 items was calculated (Cronbach's $\alpha = 0.73$).

*Well-being*

Life satisfaction ($M = 4.1$, SD = 0.9) and Happiness ($M = 4.1$, SD = 0.9) were rated on two five-point Visual Analogue Scales (VAS) ranging from a crying 'smiley' to a very happy 'smiley'. The respective items were 'In general, how satisfied are you with your life?', and 'In general, how happy are you?'. These scales were highly correlated, $r = 0.75$, $P < 0.01$, and therefore averaged to produce an indicator of well-being (Cronbach's $\alpha = 0.86$).

*Data analysis*

Chi-squared analyses and *t*-tests were conducted to test for group differences in goal endorsement per domain and goal process appraisals respectively. Bonferroni corrections were applied to all analyses where multiple tests were carried out, in order to reduce the likelihood of a Type I error. Multiple tests were therefore considered significant with a $P$ value of $<0.006$. To assess the relationship between goal content and process appraisals and well-being, stepwise hierarchical regression analyses were conducted. As gender was correlated with well-being ($r = 0.12$, $P = 0.02$) it was controlled for in the regression analyses. Furthermore, as the number of obstacles reported was dependent upon the total number of goals reported, this was also controlled for in this regression analysis.

## Results

A total of 3659 goals were reported by the 438 participants. Table 1 presents examples of self-articulated adolescent goals and the kinds of obstacles experienced per goal domain. The number of goals reported per adolescent ranged from 1 to 16 ($M = 8.4$, SD = 3.0). The number of

Table 1
Self-articulated adolescent goals and obstacles to goal pursuit.

| Goal domains | Example responses | Example obstacles |
|---|---|---|
| School | *"Pass my exams"* | *"All of a sudden I don't understand anything in mathematics, which could cause problems with my exams" (16 year old Dutch girl, vocational track)* |
| | *"Do my best at school".* | *"I spend to much time on my computer" (16 year old Dutch Antillean girl, higher secondary track)* |
| Future trajectory | *"Complete university"* | *"Laziness. No motivation" (17 year old Dutch/Surinamese boy, higher secondary track)* |
| | *"Do a fun course that suits me"* | *"I don't know what I want to be" (16 year old Dutch boy, higher secondary track)* |
| | *"Get a good job"* | *"… then I'll be just in that phase of my life where on the one hand I'll want to get married but then again you don't want to be without a job…both at the same time is going to be difficult for me" (18 year old non-European girl, higher secondary track)* |
| | *"Choose a profession for the future"* | *"At first I didn't know what kind of profession I wanted, it's difficult to make decisions about the future" (15 year old Dutch girl, vocational track)* |
| Material | *"Buy my own clothes"* | *"No time for a job, I want to buy my own clothes and earn money but school takes up all my time" (16 year old Moroccan boy, vocational track)* |
| | *"…get a well paid job"* | *"First move up a track, then pass my exams etc. only then can you get a good job" (15 year old Dutch boy, vocational track)* |
| Free-time | *"Do fun things in my free time"* | *"I don't always have time because I'm too busy" (15 year old Dutch girl, higher secondary track)* |
| | *"Become famous with my band"* | *"Costs a lot of time, money and energy" (17 year old Dutch boy, higher secondary track)* |
| | *"Win at hockey"* | *"We're in a really bad team" (12 year old Dutch boy, higher secondary track)* |
| Self | *"Be satisfied with yourself"* | *"There is always something that about myself that I don't like" (14 year Dutch old girl, higher secondary track)* |
| | *"More self-confidence"* | *"No idea if and how you improve that" (16 year old Dutch girl, higher secondary track)* |
| | *"Always be yourself"* | *"Sometime you have to adjust to other people" (16 year old Moroccan girl, higher secondary track)* |
| | *"Always be there for others"* | *"If I don't feel good myself, I can be moody towards others" (12 year old Dutch girl, higher secondary track)* |

(*continued on next page*)

Table 1 (*continued*)

| Goal domains | Example responses | Example obstacles |
|---|---|---|
| | *"Go to the mosque more often"* | *"I'm often too busy with other things" (16 year old Moroccan girl, higher secondary track)* |
| Relationship | *"Maintain my relationship"* | *"We have split up once in the past due to the situation at home" (15 year Dutch old girl, higher secondary track)* |
| | *"Have a good husband"* | *"I'm too scared to speak to boys" (16 year old Moroccan girl, higher secondary track)* |
| | *"To stay in touch with my friends"* | *"My closest friends go to other schools. I don't see them much any more" (17 year old Surinamese girl, higher secondary track)* |
| | *"Have more respect for my father"* | *"We often clash, and therefore argue a lot" (16 year old Dutch girl, higher secondary track)* |
| | *"Be able to get on well with people"* | *"I sometimes have trouble getting along with people because I don't like them, or they are nasty" (15 year old Dutch girl, vocational track)* |
| | *"Be nice. Be thought of as nice"* | *"Sometimes I'm tired and am not always as nice" (12 year Dutch old girl, higher secondary track)* |
| Health | *"Live a long life with diabetes (manage my diabetes well)"* | *"Not being able to keep up with the monitoring" (15 year old Dutch boy, higher secondary track)* |
| | *"Good health"* | *"It's difficult to always be healthy and to eat healthily" (19 year old Indonesian boy, higher secondary track)* |
| | *"Fitness training"* | *"No time because of school" (15 year old Dutch boy, vocational track)* |
| | *"Stay in good shape"* | *"I have a lot of trouble with my hip and due to that I can play less hockey/sport" (14 year old Dutch girl, higher secondary track)* |
| | *"Stop smoking/smoking marijuana, etc."* | *"It's difficult due to my friends who also do it" (15 year old Dutch boy, higher secondary track)* |
| Body | *"Eat more healthily"* | *"When I want to lose weight, I see something good and I eat it, I keep on eating, then it's starts all over again" (16 year old Dutch girl, vocational track)* |
| | *"Become prettier"* | *"I'm just ugly, you can't do anything about it" (16 year old Dutch girl, vocational track)* |
| | *"A flat stomach"* | *"Eating binges" (14 year old Dutch girl, vocational track)* |

obstructed goals reported ranged from 0 to 7 ($M = 2.3$, SD = 1.3). There were 104 adolescents who did not report any obstacles to goal pursuit. The most commonly reported obstacles per domain were as follows. School goals: difficulty with the material ($n = 28$), lack of effort or motivation ($n = 22$) and poor grades ($n = 20$); Future trajectory goals: fulfilling the entrance requirements for further education ($n = 18$), characteristics of further education such as length or difficulty ($n = 15$), and difficulty or uncertainty making decisions ($n = 15$); Material goals: lack of money ($n = 3$), lack of time ($n = 2$) and insufficient grades ($n = 2$); Free-time goals: injuries or illness ($n = 19$), school(work) ($n = 11$), and other people ($n = 9$); Relationship goals: arguments/communication problems ($n = 43$), other people ($n = 35$), and uncontrollable situational factors ($n = 26$); Self goals (obstacles were very varied): other people ($n = 6$), difficult to change ($n = 5$), and being shy ($n = 4$); Health goals: lack of motivation ($n = 27$), lack of time ($n = 24$), injuries ($n = 24$), and school ($n = 16$); Body goals: temptation ($n = 35$), lack of self control or persistence ($n = 13$), and own body ($n = 12$). In sum, recurring themes were lack of time, resources and motivation, school, other people, distractions, illness or injury and the perceived difficulty of the goal.

*Goals content, process appraisals and sociodemographic characteristics*

Table 2 presents the percentage of adolescents reporting goals in each domain according to age, gender, ethnicity and educational track (described below). Table 3 presents the goal process appraisals per domain according to age, gender, ethnicity and educational track. As can be seen in Table 3, there was a tendency for younger adolescents to report lower goal related self-efficacy than older adolescents, $t(432) = -2.1$, $P = 0.04$. Girls reported more goals than boys, $t(431) = -2.7$, $P = 0.007$ (trend), and more goals obstructed than boys, $t(329) = -2.5$, $P = 0.01$ (trend). Girls, $t(423) = -2.3$, $P = 0.02$, and Dutch adolescents, $t(426) = 2.1$, $P = 0.04$, reported that their goals were more difficult to achieve compared to boys and ethnic minority adolescents (trend). Similarly, girls $t(428) = 2.3$, $P = 0.02$ (trend), and Dutch adolescents, $t(432) = -3.9$, $P < 0.001$, reported lower self-efficacy to achieve their goals. In contrast, when obstacles to goal attainment were encountered, ethnic minority adolescents, $t(415) = -3.0$, $P = 0.002$, and girls, $t(412) = -3.7$, $P < 0.001$, reported greater goal frustration than Dutch adolescents and boys. Higher secondary students report their goals to more difficult to achieve than vocational students,

Table 2
Percentage of adolescents reporting at least one goal per domain according to sociodemographic variables.

| Goal domain | *n* | % Total sample | Age | | Gender | | Ethnicity | | Educational track | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | 12–15 | 16–19 | Boys | Girls | Dutch | Ethnic minority | Vocational | Higher secondary |
| School | 332 | 76 | 80.8 | 70.2* | 68.0 | 83.0*** | 76.4 | 74.9 | 76.2 | 75.5 |
| Future trajectory | 353 | 81 | 74.1 | 88.4*** | 75.9 | 84.8* | 76.8 | 85.8* | 83.4 | 78.4 |
| Material | 64 | 15 | 15.1 | 14.1 | 18.2 | 11.7 | 17.3 | 10.9 | 10.4 | 18.0* |
| Free time | 289 | 66 | 66.1 | 65.7 | 69.0 | 63.9 | 66.5 | 65.0 | 65.3 | 66.5 |
| Relationship | 410 | 94 | 91.2 | 96.5* | 88.2 | 98.7*** | 94.1 | 92.9 | 93.3 | 93.9 |
| Self | 235 | 54 | 49.8 | 58.1 | 46.3 | 60.0** | 50.4 | 58.5 | 52.8 | 54.3 |
| Health | 405 | 92 | 93.1 | 91.7 | 93.1 | 91.7 | 92.1 | 92.9 | 92.7 | 92.2 |
| Body | 307 | 70 | 62.6 | 76.5** | 62.6 | 76.5** | 71.7 | 68.3 | 65.8 | 73.5 |

*$P < 0.05$, **$P < 0.006$, ***$P < 0.001$.

Table 3
Mean goal process appraisals according to sociodemographic variables and correlations with well-being.

| Goal related characteristics | *n* | Total sample M (SD) | *r* | Age | | Gender | | Ethnicity | | Educational track | |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | | | | 12–15 M (SD) | 16–19 M (SD) | Boys M (SD) | Girls M (SD) | Dutch M (SD) | Ethnic minority M (SD) | Vocational M (SD) | Higher secondary M (SD) |
| Total goals reported | 438 | 8.3 (3.0) | −0.06 | 8.3 (3.0) | 8.4 (3.0) | 8.0 (3.1) | 8.7 (2.9)* | 8.3 (2.9) | 8.4 (3.1) | 8.6 (3.2) | 8.2 (2.9) |
| Goal obstructed | 336 | 2.3 (1.3) | −0.13* | 2.3 (1.3) | 2.3 (1.3) | 2.1 (1.2) | 2.5 (1.5)* | 2.3 (1.3) | 2.2 (1.3) | 2.2 (1.3) | 2.4 (1.4) |
| Goal frustration | 418 | 6.0 (2.0) | −0.22*** | 5.9 (2.0) | 6.2 (2.0) | 5.7 (1.9) | 6.4 (2.0)*** | 5.8 (1.9) | 6.4 (2.1)** | 6.1 (2.2) | 6.0 (1.9) |
| Goal related self-efficacy | 435 | 2.9 (0.4) | 0.34*** | 2.8 (0.4) | 2.9 (0.3)* | 2.9 (0.3) | 2.8 (0.4)* | 2.8 (0.4) | 2.9 (0.3)*** | 2.9 (0.4) | 2.8 (0.4) |
| Mean difficulty in goal attainability | 429 | 2.6 (0.7) | −0.31*** | 2.6 (0.6) | 2.6 (0.7) | 2.5 (0.7) | 2.7 (0.6)* | 2.7 (0.7) | 2.5 (0.7)* | 2.4 (0.7) | 2.7 (0.6)*** |
| Difficulty in goal attainability per domain: | | | | | | | | | | | |
| School | 332 | 2.9 (0.9) | −0.04 | 2.9 (0.9) | 2.9 (1.0) | 2.9 (1.0) | 2.9 (0.9) | 2.9 (0.9) | 2.9 (1.0) | 2.7 (1.1) | 3.1 (0.8)*** |
| Future trajectory | 353 | 3.2 (0.9) | −0.11* | 3.2 (0.9) | 3.2 (0.9) | 3.2 (0.9) | 3.2 (0.9) | 3.2 (0.8) | 3.3 (1.0) | 3.1 (1.0) | 3.3 (0.8)** |
| Material | 64 | 3.3 (1.1) | 0.07 | 3.4 (1.2) | 3.2 (1.0) | 3.2 (1.2) | 3.5 (1.0) | 3.3 (1.1) | 3.3 (1.2) | 2.8 (1.3) | 3.5 (1.0) |
| Free time | 289 | 2.4 (1.2) | −0.13* | 2.4 (1.2) | 2.3 (1.2) | 2.5 (1.3) | 2.3 (1.1) | 2.6 (1.2) | 2.2 (1.2)* | 2.1 (1.2) | 2.7 (1.2)*** |
| Relationship | 410 | 2.1 (1.0) | −0.33*** | 2.1 (0.9) | 2.3 (1.0)* | 2.0 (0.8) | 2.3 (1.0)* | 2.3 (0.9) | 2.1 (1.0) | 2.0 (1.0) | 2.3 (0.9)*** |
| Self | 235 | 2.5 (1.2) | −0.34*** | 2.5 (1.1) | 2.6 (1.2) | 2.3 (1.0) | 2.8 (1.2)*** | 2.7 (1.2) | 2.4 (1.1)* | 2.4 (1.2) | 2.7 (1.1)* |
| Health | 405 | 2.4 (0.9) | −0.24*** | 2.3 (0.9) | 2.5 (0.9) | 2.3 (0.9) | 2.5 (0.9) | 2.4 (0.9) | 2.4 (0.9) | 2.3 (0.9) | 2.5 (0.9) |
| Body | 307 | 2.6 (1.1) | −0.22*** | 2.6 (1.1) | 2.5 (1.1) | 2.3 (1.0) | 2.8 (1.1)*** | 2.6 (1.1) | 2.5 (1.1) | 2.5 (1.1) | 2.6 (1.1) |

Pearson's correlations are significant at the following levels: *$P < 0.05$, **$P < 0.01$, ***$P < 0.001$. Due to the application of a Bonferroni correction, *t*-tests on sociodemographic differences are significant at the following levels: *$P < 0.05$, **$P < 0.006$, ***$P < 0.001$.

$t(427) = -4.9$, $P < 0.001$, particularly in the areas of school, future trajectory, free time and relationship goals.

*School goals*

Three quarters of adolescents in this sample reported one or more school goals. As can be seen in Table 2, school goals were reported to a greater extent by early adolescents, $\chi^2(1, n = 437) = 6.6$, $P = 0.01$ (trend), and girls, $\chi^2(1, n = 433) = 13.4$, $P < 0.001$. Adolescents who follow a higher secondary education perceived school goals as more difficult to achieve than those who follow a vocational education, $t(249) = -3.5$, $P < 0.001$.

*Future trajectory goals*

Eighty one percent of the sample reported future trajectory goals. Compared to early adolescents, late adolescents reported a greater number of these goals, $\chi^2(1, n = 437) = 14.1$, $P < 0.001$. Girls, $\chi^2(1, n = 433) = 5.4$, $P = 0.02$ (trend), and ethnic minority adolescents, $\chi^2(1, n = 437) = 5.5$, $P = 0.02$ (trend), tended to report a greater number of future trajectory goals than boys and Dutch adolescents. Adolescents following a higher secondary education perceived future trajectory goals as more difficult to achieve than those following a vocational education, $t(341) = -2.8$, $P = 0.006$.

*Material goals*

Only 15% of the sample reported material or financial goals. There was a trend for a greater number of higher secondary students to report these goals than vocational students, $\chi^2(1, n = 438) = 4.9$, $P = 0.02$. There were no sociodemographic differences in material goal attainability.

*Free-time goals*

Two-thirds of adolescents in this sample reported free-time goals. There were no significant sociodemographic differences in free-time goal reporting, however adolescents following a higher secondary education found free-time goals more difficult to achieve than those following a vocational education, $t(281) = -4.4$, $P < 0.001$. A trend effect was also found whereby Dutch adolescents reported perceiving these goals as more difficult to achieve than ethnic minority adolescents, $t(280) = 2.6$, $P = 0.01$.

*Relationships goals*

Of all the goal domains, relationship goals were the most commonly reported (94%). There was a trend for late adolescents to report more relationship goals than early adolescents, $\chi^2(1, n = 437) = 4.9$, $P = 0.02$. Significantly more girls than boys reported these goals, $\chi^2(1, n = 433) = 20.4$, $P < 0.001$. Higher secondary students perceived relationship goals as more difficult to achieve than vocational students, $t(392) = -3.5$, $P < 0.001$. There was a trend effect for girls, $t(390) = -2.7$, $P = 0.007$, and late adolescents, $t(391) = -2.6$, $P < 0.05$, to score higher on difficulty in goal attainment than boys and early adolescents, respectively.

*Self goals*

Just over half of the adolescents in this sample reported self goals. Girls reported significantly more self goals than boys, $\chi^2(1, n = 433) = 8.1$, $P = 0.004$, and perceived these goals as more

difficult to attain than boys, $t(217) = -3.2$, $P = 0.001$. Trend effects were found for ethnicity and educational track: Dutch adolescents, $t(219) = 2.3$, $P = 0.02$, and higher secondary students, $t(219) = -2.4$, $P = 0.01$, perceived self goals as more difficult to achieve than ethnic minority adolescents and vocational students, respectively.

*Health goals*

Health goals were also among the most commonly reported (92%). There were no significant sociodemographic differences in goal endorsement or goal process appraisals for the health domain.

*Body goals*

Seventy percent of the adolescents reported goals in the body domain. Girls reported significantly more body goals than boys, $\chi^2(1, n = 433) = 10.0$, $P = 0.002$. Moreover, girls perceived body goals as more difficult to attain than boys, $t(289) = -3.9$, $P < 0.001$. There were no further differences according to age, ethnicity or education.

*Goal content, process appraisals and well-being*

In order to explore the relationship between goal content, goal process appraisals and well-being, two stepwise hierarchical regression analyses were conducted. Firstly, well-being was regressed on all domains of goal content, controlling for gender in the first step which explained 1% of the variance (see Table 4). Endorsement of self goals was entered into the second step and added an additional 1% of variance. The final model significantly explained 2.5% of the variance in well-being, $F(2,420) = 5.4$, $P = 0.005$. No other goal domains were entered into the regression.

Secondly, well-being was regressed on self goals and the goal process appraisals. The final model is presented in Table 5. In the first step, gender and total number of goals explained 2% of the variance and was non-significant. Thereafter, the first variable entered into the model using the stepwise method was goal related self-efficacy, explaining an additional 11% of the variance. The second variable entered into the model was mean goal attainability explaining an additional 6% of the variance. Goal frustration was the third and final variable entered into the model, explaining an additional 3% of the variance. Number of obstructed goals and self goals were not entered into the regression. The final model significantly explained 21% of the variance in well-being, $F(5, 324) = 17.0$, $P < 0.001$.

## Discussion

This study aimed to provide greater insight into self-articulated goals of adolescents, as well as into how adolescents experience the process of goal pursuit. The self-generated goals of

Table 4
Well-being regressed on adolescent goal content.

| Step | Variable | $\beta$ | $t$ | Model $F$ | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|
| 1 | Gender | −0.10* | −2.1* | 5.9* | 0.014 | |
| 2 | Self goals | −0.11* | −2.2* | 5.4** | 0.025 | 0.011 |

*$P < 0.05$, **$P < 0.01$, ***$P < 0.001$.

Table 5
Well-being regressed on goal process appraisals.

| Step | Variable | $\beta$ | $t$ | Model $F$ | $R^2$ | $\Delta R^2$ |
|---|---|---|---|---|---|---|
| 1 | Gender | −0.02 | −0.39 | 2.7 | 0.016 | |
| | Total goals reported | −0.01 | −1.7 | | | |
| 2 | Goal self-efficacy | 0.27*** | 5.2*** | 15.5*** | 0.125 | 0.109 |
| 3 | Difficulty in goal attainability | −0.24*** | −4.5*** | 17.9*** | 0.181 | 0.056 |
| 4 | Goal frustration | −0.17*** | −3.3*** | 17.0*** | 0.207 | 0.027 |

*$P < 0.05$, **$P < 0.01$, ***$P < 0.001$.

adolescents reported here are largely consistent with previous findings (e.g. Knox et al., 2000) and clearly reflect the current developmental normative tasks of adolescence (Havighurst, 1953; Nurmi, 1991). Our findings support the notion that adolescent goals are shaped by personal and contextual factors such as gender, ethnicity and educational pathway, examining not only one or a limited number of goals, but the investigating a broader adolescent goal taxonomy. Moreover, we replicate earlier findings employing a self-generated goal-elicitation procedure, ensuring that these goals are personally relevant as opposed to externally determined by the researcher. This study adds that endorsement of self goals, low goal-related self-efficacy, perceived difficulty in goal attainment, and goal frustration are related to low well-being in adolescence.

### *Goal content, process appraisals and sociodemographic characteristics*

#### *Age*

Our results concerning age are in agreement with previous findings that further education and occupational goals increase in the latter phase of adolescence as individuals approach these developmental deadlines (Nurmi, 1987, 1991; Nurmi et al., 1994). Younger adolescents focus to a greater extent on *school* goals while older adolescents focus to a greater extent on *further education* goals. We add to this area that there is little support for age differences in perceived difficulty in goal attainability, the experience of obstacles to goal pursuit, and goal frustration however goal related self-efficacy appears to increase with age.

#### *Gender*

This study found substantial support for the relationship between gender, goal content and goal processes. As in previous studies (Malmberg & Norrgård, 1999) girls endorsed a greater total number of goals and focused to a greater extent than boys on educational goals and interpersonal goals (Malmberg & Norrgård, 1999; Nurmi & Pulliainen, 1991; Nurmi et al., 1994, 1995; Yowell, 2000). Furthermore, girls perceive particularly body, self and relationship goals to be more difficult to achieve than boys. This suggests that girls are more social-goal oriented, however pursuing a large range of interpersonal goals may in itself lead to greater goal conflict. Contrary to our expectations and previous evidence (Kasser & Ryan, 1993), there were no gender differences in material goal endorsement. However, as in other studies (Cohen & Cohen, 2001) spontaneous reporting of material goals was low. This study demonstrated that girls tend to report a greater number of obstructed goals, greater goal frustration and lower goal related self-efficacy. Thus although these factors have not previously been studied and replication is necessary to be able to draw more definitive conclusions,

our findings suggest that not only do goals endorsed vary between boys and girls, but that gender is also related to cognitions and emotions experienced when goal pursuit is obstructed.

*Ethnicity*

There appears to be few differences between youths from differing ethnic backgrounds in the Netherlands in the types of goals they strive to achieve. The only trend difference suggests that those from ethnic minorities may hold more future trajectory goals. This supports previous findings on ethnic minorities in the USA (Phinney et al., 2001). The experience of the goal pursuit process however does appear to differ according to ethnicity. Dutch adolescents were found to report significantly lower goal related self-efficacy and greater perceived difficulty in goal attainment. In contrast, ethnic minority adolescents reported a great emotional reaction (goal frustration) to the experience of obstacles to goal pursuit. We note these findings should be interpreted with caution since our categorization of ethnicity was necessarily simplistic. We assumed that adolescents from differing minority groups may share similarities in the difficulties they face as minority groups and that these may translate into similar difficulties during goal pursuit. We acknowledge however that such a broad grouping may disguise differences between the various ethnic minority groups.

*Educational track*

This study adds to the scarce literature on the link between adolescent goals and educational track. Contrary to our expectations, educational track was not associated with adolescent goal content. Perception of goal attainability however was found to differ considerably between the tracks; higher secondary students perceived their goals in a variety of domains to be more difficult to achieve than vocational students. A previous study has suggested that goals which are seen as important are also rated as more difficult to achieve (King et al., 1998), therefore it could be that these students are more invested in these goals and thus perceive them as more difficult. However this requires further exploration. Another possible explanation is the inherent difficulty in attaining the achievements exacted by an academic educational track, plus the intensity of the educational programme which may preclude time for leisure and social goals. These results are similar to earlier findings showing lower goal success expectations in college-preparatory students than those following vocational education (Klaczynski & Reese, 1991).

*Goal content, process appraisals and well-being*

In line with our expectations, endorsement of self goals was related to lower well-being, which supports previous findings in young women (Salmela-Aro et al., 2001). It should be noted that the variance in well-being explained by self-goal endorsement was very low indicating that there is much remaining variance to be explained by other factors. Nevertheless, a negative self-focus, which is suggested by a predominance of self goals, is thought to be indicative of a depressive pattern of thinking (Pyszczynski & Greenberg, 1987) and may account for this association. Contrary to our expectations and findings from previous studies (Cohen & Cohen, 2001; Kasser & Ryan, 1993, 1996; Schmuck, Kasser, & Ryan, 2000), there was no evidence of a relationship between materialistic goals and well-being.

Of the goal processes, goal related self-efficacy was most strongly related to well-being, followed by perceived difficulty in goal attainment and goal frustration when obstacles are encountered.

Having confidence in one's ability to achieve one's goals despite setbacks appears therefore to be important for adolescent well-being. Perceived difficulty in goal attainment was found to be negatively related to well-being, replicating previous findings among young adults (Brunstein, 1993; King et al., 1998). This association suggests that a positive perception of goal attainability may be inherent in a high sense of well-being of adolescents (Carver & Scheier, 1990), and may possibly contribute to needs satisfaction (Ryan, Sheldon, Kasser, & Deci, 1996). Furthermore, although the actual number of goals obstructed was unrelated to well-being, greater frustration when setbacks to goal pursuit are encountered was related to lower well-being. We note that these goal process factors explain only one fifth of the variance in our well-being measure. It seems therefore that other factors not measured in this study may also play a role in adolescent well-being. It remains however that this study replicates and extends to adolescents previous findings in adults which show that impediment to goal pursuit is related to lower well-being (Emmons, 1986; Emmons & King, 1988; Schroevers et al., 2007).

### *Limitations*

Some methodological limitations of this study should be noted. Firstly, it is possible that the open goal-elicitation procedure employed was subject to social desirability and methodological problems which may have led to under or over reporting of some goals. Despite this, the advantage of this method is that self-generated idiographic goals have greater personal meaning to the respondent compared to researcher generated goal measures. Secondly, as all data was collected using self-report measures this may have led to some bias. It is possible negative affect or low well-being may have coloured the way in which questions were answered. Alternatively, other factors not measured in this study such as personality traits or environmental factors may have influenced the findings. Thirdly, almost a quarter of the sample did not report any obstacles to goal pursuit. It is not possible to ascertain from this null response whether or not these participants skipped this question, did not understand the question or whether they had not actually experienced any obstacles. Furthermore, we focus here exclusively on between-persons differences without consideration of the within-person structure of goals and goal cognitions. This may be an interesting question for future research. Fourthly, when categorization of qualitative goal data takes place, inevitably some level interpretation is involved. In order to address these methodological shortcomings, future studies should attempt to use a combination of alternative methods, such as interviews and questionnaires, to explore in depth the adolescent goal taxonomy. Finally, caution should be noted due to the cross-sectional nature of the study and conclusions regarding causality between the variables cannot be made. It likely that the relationships studied are bi-directional, for example, that adolescents with low well-being set vague or unrealistic goals and perceive goal pursuit more negatively. Prospective research in this area may be able to shed further light on whether or not the experiences during goal pursuit and goal process appraisals are possible mechanisms which contribute to the development or maintenance of lower well-being.

### *Conclusions*

Notwithstanding these limitations, this is one of the few studies that have investigated not only a broad taxonomy of self-generated goals among adolescents, but the relationship between impediment to goal pursuit and well-being in adolescence. The findings demonstrate that

adolescent goal content is gender and age bound, reflecting both typical normative developmental tasks and gendered norms. Also the way in which the goal process is appraised appears to be related to gender, ethnicity and educational pathway. Self goals are suggested to be particularly important for adolescent well-being, as is the appraisal of the goal pursuit process. Low goal self-efficacy, experiencing greater goal frustration to goal pursuit and perceiving one's goals as difficult to attain are related to lower levels of well-being. These concepts offer possible targets for interventions with adolescents with low well-being. In future studies it will be interesting to look at possible moderators of the relationship between difficulties experienced during goal pursuit and well-being, such as the ability to regulate emotions and flexible goal pursuit strategies.

## Acknowledgements

The authors would like to thank the schools and adolescents who participated in this study, and the students who assisted with data collection.

## References

Brunstein, J. C. (1993). Personal goals and subjective well-being: a longitudinal study. *Journal of Personality and Social Psychology, 65*, 1061–1070.

Cantor, N., & Sanderson, C. A. (1998). The functional regulation of adolescent dating relationships and sexual behavior: an interaction of goals, strategies, and situations. In J. Heckhausen, & C. S. Dweck (Eds.), *Motivation and self-regulation across the life span*. New York: Cambridge University Press.

Carroll, A. (2002). At-risk and not at-risk adolescent girls in single-sex and mixed-sex school settings: an examination of their goals and reputations. *Westminster Studies in Education, 25*, 147–162.

Carver, C. S., & Scheier, M. F. (1990). Origins and functions of positive and negative affect: a control-process view. *Psychological Review, 97*, 19–35.

Cohen, P., & Cohen, J. (2001). Life values and mental health in adolescence. In P. Schmuck, & K. M. Sheldon (Eds.), *Life goals and well-being*. Gottingen: Hogrefe and Huber Publishers.

Emmons, R. (1986). Personal strivings: an approach to personality and subjective well-being. *Journal of Personality and Social Psychology, 51*, 1058–1068.

Emmons, R. (1996). Striving and feeling: personal goals and subjective well-being. In P. M. Gollwitzer, & J. A. Bargh (Eds.), *The psychology of action: Linking cognition and motivation to behavior*. New York: The Guilford Press.

Emmons, R. A., & King, L. A. (1988). Conflict among personal strivings: immediate and long-term implications for psychological and physical well-being. *Journal of Personality and Social Psychology, 54*, 1040–1048.

Ford, M. E. (1992). *Motivating humans: Goals, emotions, and personal agency beliefs*. Newbury Park, CA: Sage Publications, Inc.

Freeman, E. D., Gutman, L. M., & Midgley, C. (2002). Can achievement goal theory enhance our understanding of the motivation and performance of African American young adolescents? In C. Midgley (Ed.), *Goals, goal structures, and patterns of adaptive learning*. Mahwah, NJ: Lawrence Erlbaum Associates, Publishers.

Greene, B. A., & DeBacker, T. K. (2004). Gender and orientations toward the future: links to motivation. *Educational Psychology Review, 16*, 91–120.

Harris, C., Daniels, K., & Briner, R. B. (2003). A daily diary study of goals and affective well-being at work. *Journal of Occupational and Organizational Psychology, 76*, 401–410.

Havighurst, R. J. (1953). *Human development and education*. New York: David McKay Company, Inc.

Kasser, T., & Ryan, R. M. (1993). A dark side of the American dream: correlates of financial success as a central life aspiration. *Journal of Personality and Social Psychology, 65*, 410–422.

Kasser, T., & Ryan, R. M. (1996). Further examining the American dream: differential correlates of intrinsic and extrinsic goals. *Personality and Social Psychology Bulletin, 22*, 280–287.

Kasser, T., Ryan, R. M., Zax, M., & Sameroff, A. J. (1995). The relations of maternal and social environments to late adolescents' materialistic and prosocial values. *Developmental Psychology, 31*, 907–914.

Kerpelman, J. L., Shoffner, M. F., & Ross-Griffin, S. (2002). African American mothers' and daughters' beliefs about possible selves and their strategies for reaching the adolescents' future academic and career goals. *Journal of Youth and Adolescence, 31*, 289–302.

King, L., Richards, J. H., & Stemmerich, E. (1998). Daily goals, life goals and worst fears: means, ends and subjective well-being. *Journal of Personality, 66*, 713–744.

Klaczynski, P. A., & Reese, H. W. (1991). Educational trajectory and "action orientations": grade and track differences. *Journal of Youth and Adolescence, 20*, 441–462.

Knox, M., Funk, J., Elliott, R., & Bush, E. (2000). Gender differences in youths' possible selves. *Youth and Society, 31*, 287–309.

Little, B. R. (1989). Personal projects analysis: trivial pursuits, magnificent obsessions and the search for coherence. In D. M. Buss, & N. Cantor (Eds.), *Personality psychology: Recent trends and emerging directions*. New York: Springer-Verlag.

Malmberg, L. E., & Norrgård, S. (1999). Adolescents' ideas of normative life span development and personal future goals. *Journal of Adolescence, 22*, 33–47.

Malmberg, L. E., & Trempała, J. (1997). Anticipated transition to adulthood: the effect of educational track, gender, and self-evaluation on Finnish and Polish adolescents' future orientation. *Journal of Youth and Adolescence, 26*, 517–537.

Massey, E. K., Gebhardt, W. A., & Garnefski, N. Adolescent goal content and pursuit: a review of the literature from the past 16 years. Developmental Review, in press.

McCabe, K., & Barnett, D. (2000). First comes work, then comes marriage: future orientation among African American young adults. *Family Relations, 49*, 63–70.

Newberry, A. L., & Duncan, R. D. (2001). Roles of boredom and life goals in juvenile delinquency. *Journal of Applied Social Psychology, 31*, 527–541.

Nurmi, J.-E. (1987). Age, sex, social class, and quality of family interactions as determinants of adolescents' future orientation: a developmental task interpretation. *Adolescence, 22*, 977–991.

Nurmi, J.-E. (1989). Development of orientation to the future during early adolescence: a four-year longitudinal study and two cross-sectional comparisons. *International Journal of Psychology, 24*, 195–214.

Nurmi, J.-E. (1991). How do adolescents see their future? A review of the development of future orientation and planning. *Developmental Review, 11*, 1–59.

Nurmi, J.-E. (1993). Adolescent development in an age-graded context: the role of personal beliefs, goals, and strategies in the tackling of developmental tasks and standards. *International Journal of Behavioral Development, 16*, 169–189.

Nurmi, J.-E., Poole, M. E., & Kalakoski, V. (1994). Age differences in adolescent future-oriented goals, concerns, and related temporal extension in different sociocultural contexts. *Journal of Youth and Adolescence, 23*, 471–487.

Nurmi, J.-E., Poole, M. E., & Seginer, R. (1995). Tracks and transitions: a comparison of adolescent future-oriented goals, explorations, and commitments in Australia, Israel, and Finland. *International Journal of Psychology, 30*, 355–375.

Nurmi, J.-E., & Pulliainen, H. (1991). The changing parent-child relationship, self-esteem, and intelligence as determinants of orientation to the future during early adolescence. *Journal of Adolescence, 14*(1), 35–51.

Ogilvie, D. M., Rose, K. M., & Heppen, J. B. (2001). A comparison of personal project motives in three age groups. *Basic and Applied Social Psychology, 23*, 207–215.

Omodei, M. M., & Wearing, A. J. (1990). Need satisfaction and involvement in personal projects: towards an integrative model of subjective well-being. *Journal of Personality and Social Psychology, 59*, 762–769.

Oyserman, D., & Fryberg, S. (2006). The possible selves of diverse adolescents: content and function across gender, race, and national origin. In C. Dunkel, & J. Kerpelman (Eds.), *Possible selves: Theory, research and applications* (pp. 17–39). Hauppauge, NY: Nova Science Publishers.

Phinney, J. S., Baumann, K., & Blanton, S. (2001). Life goals and attributions for expected outcomes among adolescents from five ethnic groups. *Hispanic Journal of Behavioral Sciences, 23*, 363–377.

Pyszczynski, T., & Greenberg, J. (1987). Self-regulatory perseveration and the depressive self-focusing style: a self awareness theory of reactive depression. *Psychological Bulletin, 102*, 122–138.

Ruehlman, L. S., & Wolchik, S. A. (1988). Personal goals and interpersonal support and hindrance as factors in psychological distress and well-being. *Journal of Personality and Social Psychology, 55*, 293–301.

Ryan, R. M., Sheldon, K. M., Kasser, T., & Deci, E. L. (1996). All goals are not created equal: an organismic perspective on the nature of goals and their regulation. In P. M. Gollwitzer, & J. A. Bargh (Eds.), *The psychology of action*. New York, NY: Guilford Press.

Salmela-Aro, K., & Nurmi, J. (1997). Goal contents, well-being, and life context during transitions to university: a longitudinal study. *International Journal of Behavioral Development, 20*, 471–491.

Salmela-Aro, K., Pennanen, R., & Nurmi, J. E. (2001). Self-focused goals: what they are, how they function, and how they relate to well-being. In P. Schmuck, & K. M. Sheldon (Eds.), *Life goals and well-being*. Gottingen: Hogrefe and Huber Publishers.

Schmuck, P., Kasser, T., & Ryan, R. M. (2000). Intrinsic and extrinsic goals: their structure and relationship to well-being in German and U.S. College students. *Social Indicators Research, 50*, 225–241.

Scholz, U., Gutiérrez-Doña, B., Sud, S., & Schwarzer, R. (2002). Is general self-efficacy a universal construct? Psychometric findings from 25 countries. *European Journal of Psychological Assessment, 18*, 242–251.

Schroevers, M., Kraaij, V., & Garnefski, N. (2007). Goal disturbance, cognitive coping strategies, and psychological adjustment to different types of stressful life events. *Personality and Individual Differences, 43*, 413–423.

Schwarzer, R., & Jerusalem, M. (1995). Generalized self-efficacy scale. In J. Weinman, S. Wright, & M. Johnston (Eds.), *Measures in health psychology: A user's portfolio. Causal and control beliefs* (pp. 35–37). Windsor, UK: Nfer-Nelson.

Seginer, R., & Halabi-Kheir, H. (1998). Adolescent passage to adulthood: future orientation in the context of culture, age, and gender. *International Journal of Intercultural Relations, 22*, 309–328.

Seginer, R., & Vermulst, A. (2002). Family environment, educational aspirations, and academic achievement in two cultural settings. *Journal of Cross-Cultural Psychology, 33*, 540–558.

Yetim, U. (1993). Life satisfaction: a study based on the organization of personal projects. *Social Indicators Research, 29*, 277–289.

Yowell, C. M. (2000). Possible selves and future orientation: exploring hopes and fears of Latino boys and girls. *Journal of Early Adolescence, 20*, 245–280.

Zirkel, S., & Cantor, N. (1990). Personal construal of life tasks: those who struggle for independence. *Journal of Personality and Social Psychology, 58*, 172–185.