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UNIVERSITY OF JYVÄSKYLÄ

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Cover picture: A view from our summer cottage which I sometimes used as my office
in the summertime. Photo by Lotta Tynkkynen.

ABSTRACT

This research focused on adolescents' career-related goals in social context. The life span model of motivation (Nurmi, 2004; Salmela-Aro, 2009) and expectancy-value theory (Eccles et al., 1983; Jacobs & Eccles, 2000; Wigfield et al., 2009) formed the theoretical framework for the study. Two distinct data sets were used. The first, Sample 1 (N = 858), was drawn from the Finnish Educational Transitions Studies (FinEdu, Salmela-Aro, 2003) and the second, Sample 2 (N = 1034), from the Towards Working Life Study (e.g. Vuori, et al., 2008), which comprised data on adolescents (N = 1034) and their mothers (N = 720) and fathers (N = 542). Both data sets were collected between 2003 and 2011. During this time the participants went through two important career-related transitions: first, the transition from comprehensive school to upper secondary education, and second, the transition from upper secondary education to working life or further studies. The results showed that naming the father as a supportive career goal-related tie was related to entering an academic track after comprehensive school. Moreover, high parental career-related support was related to high and increasing career goal-related success expectations over the two educational transitions. The results showed further that a negative parenting style such as guilt-inducing psychological control is related to lower parental educational aspirations for their child. In addition to parents, the results showed that other career-goal related social ties may be important with regard to career choice. Having a romantic partner or guidance counselor as a career goal-related tie was related to entering a vocational track after comprehensive education. The results also showed different developmental trajectories between the adolescents for both educational expectations and career goal-related success expectations. Most adolescents showed persistence in holding on to their career goals and had high and increasing career goal-related success expectations. However, unstable developmental trajectories were also identified. High academic achievement promoted higher educational expectations and higher success expectations regarding career goals. Girls were more likely to name a peer as their supporter than boys, whereas boys were more likely to name their father. Girls had higher academic achievement, but also lower career goal-related success expectations than boys.

Key words: adolescents, transitions, career goals, educational expectations, parents, social ties, expectancy-value theory, developmental regulation

Author's address   Lotta Tynkkynen
Department of Psychology
University of Jyväskylä, Finland

Supervisors   Professor Katariina Salmela-Aro
Department of Psychology
University of Jyväskylä, Finland

Professor Jari-Erik Nurmi
Department of Psychology
University of Jyväskylä, Finland

Professor Ingrid Schoon
Department of Quantitative Social Science
Institute of Education
University of London, United Kingdom

Reviewers   Professor Bettina S. Wiese
Institute of Psychology
RWTH Aachen University, Germany

Professor, Hannu Perho
Department of Psychology
University of Eastern Finland, Finland

Opponent   Professor Bettina S. Wiese
Institute of Psychology
RWTH Aachen University, Germany

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1 INTRODUCTION

Finding a suitable education and occupation is one of the most important developmental tasks of adolescence and young adulthood (Havighurst, 1948; Steinberg, 1999). This is also reflected in adolescents' personal goals, as empirical studies have shown that goals related to education and occupation are the most frequently reported personal goals among young people (Lanz, Rosnati, Marta, & Scabini, 2001; Salmela-Aro, Aunola, & Nurmi, 2007). Active pursuit and engagement in career goals during adolescence is beneficial, since being engaged predicts the likelihood of finding employment and is also related to higher levels of well-being (e.g. Haase, Heckhausen, & Köller, 2008; Haase, Heckhausen, & Silbereisen, 2012; Nurmi, Salmela-Aro, & Koivisto, 2002; Salmela-Aro & Nurmi, 1997). Setting appropriate career goals is especially important at transition points, such as the transition from comprehensive education to further studies, since dropping out of the educational system at this point leads to an increased risk of later unemployment and overall maladjustment (Eccles, 2008; Janosz, Archambault, Morizot, & Pagani, 2008).

Goal setting and goal engagement does not happen in a vacuum, but both overall cultural context and proximal social environment have an impact on the kinds of expectations and possibilities adolescents have for pursuing their career goals (Nurmi, 1993; 2001). Moreover, individual characteristics such as abilities and values have an impact on the kinds of goals adolescents are able to – and prefer to – achieve (Eccles et al., 1983; Wigfield, Tonks, & Klauda, 2009). The main aim of this research is to examine the social and individual antecedents of adolescents' career goals. The role of parents as major socializing agents is one of the main themes, but the impact of wider social context and individual characteristics are also examined. A further focus is on the developmental patterns that may be found in adolescents' career goal pursuit.

The topics covered in this research are theoretically rooted in two main lines of research. First, career goals are viewed as important personal goals (Little, 1983; Little, Salmela-Aro, & Phillips, 2007) as well as units of developmental tasks in the life-span model of motivation (Nurmi, 2004; Salmela-Aro, 2009). The life-span model of motivation is one of the theories of developmental regu-

lation (Baltes & Baltes, 1990; Heckhausen, Wrosch, & Schulz, 2010) that attempt to explain the processes of engagement and disengagement in goal pursuit (Dietrich, Parker, & Salmela-Aro, 2012). The second theoretical framework comes from the expectancy-value theory and family socialization model (Eccles et al., 1983; Jacobs & Eccles, 2000; Wigfield et al., 2009).The modern expectancy-value theory attempts to explain achievement-related choices and persistence and performance in them (Eccles et al., 1983; Wigfield & Eccles, 2000; Wigfield et al., 2009). The expectancy-value theory was originally developed to explain subject-specific choices and behavior, for example a preference for mathematics or literature. However, in recent studies the model has also been applied to the broader context of career goals – for example, to examine the dynamics of educational choices in terms of level of education (Neuenschwander & Garrett, 2008; Wood, Kurz-Costes, & Chopping, 2011). In the present research too, the model is applied to the broader context of career goals. Overall, this research aims to integrate the postulates of in the life-span model of motivation and expectancy-value theory.

This research examines the career goals of Finnish adolescents over the time period from 2004 to 2011. The participants were 16 years old at the beginning of the study and 23 years old at its end. During this time the participants went through two important career-related transitions: first, the transition from comprehensive school to upper secondary education at age 15–16, and second, the transition from upper secondary education to working life or further studies at age 19–20. Both the Finnish education system and societal situation at this time period form the social context for the study. For example, in Finland all education is state-provided and tuition is free. Moreover, the general level of education has risen rapidly, especially among women, who are now overrepresented in most institutions of higher education in Finland (Ministry of Education and Culture, 2010). In addition, in Finland, unemployment among young people has been higher than elsewhere in the EU during the past ten years. Unemployment fell to 17% between 2004 and 2007,but thereafter increased considerably due to the global economic recession, rising to 21.5% in 2010 (Central Statistical Office of Finland, 2011). The impact of this social context on adolescents' career goals should be taken into account in interpreting the results of the study.

1.1   The role of motivation in career development

Motivation is a key factor influencing goal pursuit, and research over a wide field has been conducted on adolescents' achievement goals and achievement behavior. Modern theories of motivation focus specifically on the relation of beliefs, values and goals with action (Eccles & Wigfield, 2002). Several approaches emphasizing personal goals as important units of motivation have emerged. Personal goal theories focus both on the content and appraisals of the personal goals, but also on the goal systems of multiple life-domains and rela-

tional aspects of goal pursuit (Little et al., 2007). Personal goals may be conceived of as future-oriented representations of what individuals strive for in various life domains (Austin & Vancouver, 1996). They have been defined in many ways in the literature, such as personal strivings (Emmons, 1986), life tasks (Cantor et al., 1987), developmental goals (Heckhausen et al., 2010), future-oriented goals (Nurmi, 1991) and personal projects (Little, 1983). Personal goal theories view goals as important units of motivation, which are influenced by both personal (e.g. traits) and contextual (e.g. SES) features, and which have an impact on overall well-being and adaptation (Little et al., 2007). In the present research, the focus is on education and work-related goals, which are referred to as "career goals". Their relation to social context and related career goal appraisals in terms of expectancies and values is also examined.

Several motivation theories have focused on individuals' beliefs about their competence and efficacy as well as on the values people attach to their goals (Eccles & Wigfield, 2002). These aspects of career goal appraisals are also examined here (Study III and Study IV). Bandura (1997) proposed a social cognitive model of motivation with special focus on perceptions of self-efficacy. He defined self-efficacy as individuals' confidence in their ability to organize and execute a given course of action to solve a problem or accomplish a task. Bandura distinguished between beliefs that certain behaviors will lead to certain outcomes (outcome expectations) and beliefs about whether one can effectively perform the behaviors necessary to produce the outcome (efficacy expectations). He proposed that an individual's efficacy expectations are the major determinant of goal setting and willingness to expend effort and persistence in a chosen goal. Even if people are certain they can do a task, they may choose not to do it. The reasons for engagement may lie in the values people attach to the task. Many theories distinguish between extrinsic and intrinsic motivation (Deci, Koestner, & Ryan, 1999). When individuals are intrinsically motivated, they engage in an activity because they are interested in and enjoy the activity. When extrinsically motivated, individuals engage in activities for instrumental or other reasons, such as receiving a reward. Deci et al. (1999) proposed that people seek out optimal stimulation and challenging activities, and find these activities intrinsically motivating because they have a basic need for competence. In addition, they argued that intrinsic motivation is maintained only when actors feel competent and self-determined.

The modern expectancy-value theory, which is one of the main theoretical frameworks in this research, aims to integrate the expectancies and values related to goal choice and goal achievement (Eccles et al., 1983; Jacobs & Eccles, 2000; Wigfield et al., 2009). According to the theory, task-specific motivation depends heavily on an individual's expectation for success regarding the goal, a notion closely related to Bandura's efficacy expectations (Wigfield & Eccles, 2000), and the level of value that he or she attaches to the goal. However, adolescents' gender, aptitudes, ability beliefs and family background – for example, SES and parents' beliefs and expectations – all have an impact on adolescents' achievement related choices. This part of the model is also called the family socializa-

tion model (Eccles et al., 1983; Jacobs & Eccles, 2000), and emphasizes the role of parents as major socialization agents in the development of adolescents' career motivation. The overall model integrates the impact of parental and social background and the role of the adolescents' expectancies and values related to the achievement tasks at hand.

1.2 Developmental regulation during adolescence and young adulthood

The period of adolescence is characterized by multiple changes (Crosnoe & Johnson, 2011; Nurmi, 2004; Steinberg, 1999). Social relationships change as peers become more important and adolescents seek to become independent of their parents. Moreover, social environments change as adolescents move, for example, from comprehensive education to further studies. At the same time, adolescents go through many physiological and cognitive changes as hormone levels change and thinking becomes more abstract and self-awareness increases (Susman, Dorn, & Schiefelbein, 2003). The many changes that take place during adolescence may be puzzling and adolescence has been described as a time of heightened "storm and stress" which includes frequent conflict with parents and risk behavior (Steinberg, 1999). However, empirical studies have shown that most adolescents do not experience any significant amount of storm and stress; instead, adolescence may offer individuals a "second chance" to change the course of their development, especially for those with unfavorable childhood experiences (Larson, 2006).

The transition from adolescence to adulthood includes tackling many developmental tasks. The concept of a developmental task was first introduced by Havighurst (1948), who stated that developmental tasks arise at critical points in individuals' lives and that the successful accomplishment of such tasks leads to benefits in well-being and facilitates the attainment of other developmental tasks in the future (Schulenberg, Bryant, & O'Malley, 2004; Seiffge-Krenke, & Gelhaar, 2008; Zarrett & Eccles, 2006). The developmental tasks of adolescence and young adulthood include, for example, becoming independent of one's parents, forming peer and romantic relationships, and finding a suitable education and occupation (Havighurst, 1948). Recently, the transition to adulthood has increasingly been associated with uncertainty and heterogeneity in the timing of various developmental tasks (Arnett, 2000; Seiffge-Krenke & Gelhaar, 2008). However, the developmental task of finding a suitable education and occupation is still relatively clear in its timing, as adolescents need to make decisions on their future education at the transition point from comprehensive education to further studies (Zarrett & Eccles, 2006).

The process of tackling developmental tasks has been described in many developmental regulation theories, such as the life-span model of motivation (Nurmi, 2004; Nurmi, & Salmela-Aro, 2006; Salmela-Aro, 2009), the model of

selection, optimization, and compensation (SOC, Baltes & Baltes, 1990), and the motivational theory of life-span development (Heckhausen et al., 2010). All these theories stress the importance of two processes in goal pursuit: goal engagement and goal adjustment or, where the goal becomes impossible or difficult to attain, disengagement (see Dietrich et al., 2012 for a review). The right timing of engagement is also important for adaptive development, as, for example, in goals related to educational transitions (Heckhausen et al., 2010; Nurmi & Salmela-Aro, 2006; Salmela-Aro, 2009).

Baltes and Baltes (1990) proposed the model of selection, optimization, and compensation (SOC). In the SOC model, selection refers to the setting of goals, elective selection refers to the behaviors of goal setting, and the behaviors relating to reconstructing goals are called loss-based selection. Optimization behaviors pertain to the acquisition and the investment of goal-relevant means, and compensation encompasses the use of alternative behaviors for counteracting loss when goal-relevant means are blocked. All these behaviors contribute to effective goal attainment.

Heckhausen and colleagues' (2010) motivational theory of life-span development describes the action cycles of setting, striving for, and disengaging from developmental goals as recurring cycles throughout an individual's life. The authors assume that individuals who strive for developmental goals that are consistent with current developmental tasks maximize their chances of goal attainment. The developmental deadline characterizes a point of rapidly decreasing chances for goal attainment. The closer an individual gets to a deadline, such as school graduation, the more she perceives the imminent loss of opportunities, and the more intense her striving becomes to achieve the developmental goal. Heckhausen and colleagues (2010) further identify the typical behaviors individuals use during this process. Typically, goal engagement strategies are assumed to be adaptive, but when a developmental deadline is passed (Heckhausen et al., 2010) or in the face of obstacles that are too great to overcome, goal disengagement becomes important.

Of the various developmental regulation theories, the theory of the life-span model of motivation and its four C's is used here to describe the pursuit of adolescents' career goals (Salmela-Aro, 2009). The model is closely related to the SOC model of Baltes and Baltes (1990) and the motivational theory of life-span development of Heckhausen and colleagues (2010). However, the life-span model of motivation proposes that goal pursuit involves four key processes: channeling, co-agency or co-regulation, choice and compensation (Salmela-Aro, 2009). Moreover, this model pays heightened attention to the social context of goal pursuit and the role the four key processes play during critical transitions such as that from comprehensive education to further studies or working life.

Channeling refers to the expectations and opportunities that are embedded in the age-related sociocultural beliefs and institutional structures which direct people to strive for age-appropriate developmental goals and trigger the individual's intentional efforts towards task accomplishment (Dietrich et al., 2012; Nurmi, 1993; Salmela-Aro, 2009). For example, there is an expectation in

Finnish society to continue one's studies after comprehensive schooling, and hence support and guidance for making the right career choice is offered at this point by guidance counselors, although most adolescents also talk about these issues with their parents and friends (Salmela-Aro & Little, 2007). Thus, career choices and goal pursuit are often conducted with help from other people. In the life-span model of motivation, this is called the process of co-agency or co-regulation (Salmela-Aro, 2009). The process of choice refers to the individual's agency in selecting a certain goal among all the goals possible. The resultant choices will be based on current developmental tasks as well as on one' values, ambitions and abilities (Baltes, & Baltes, 1990). Moreover, adolescents employ strategies of planning, decision making, and problem-solving in order to attain their goal (Nurmi, 1993; 2004). Compensatory regulation is needed as people evaluate their successes and failures in goal progress and adapt their goals to cope successfully with the challenges they meet (Heckhausen et al., 2010). The adaptive use of all these processes contributes to the attainment of developmental goals and well-being (Salmela-Aro, 2009).The process of co-agency and co-regulation is emphasized in the present research; however, the processes of cultural channeling, compensation and individual agency are also examined.

The processes of developmental regulation have also been linked to identity (Lerner, Freund, De Stefanis, & Habermas, 2001) and career (Lent, Brown, & Hackett, 1994; Savickas, 2011) development during adolescence. Just as in the regulation of developmental goals, identity development involves the regulation of relations between the person and the social context. Selecting career goals is an important part of identity exploration (Lerner et al., 2001). The theories of career development emphasize the impact of self-efficacy in career goal pursuit (Lent et al., 1994; Savickas, 2011). In Lent et al.'s (1994) social cognitive career theory it is proposed that the perception of beneficial environmental factors, such as support systems and structures (e.g. career counseling at school and possibilities to apply for further education) are likely to facilitate the process of translating one's career interests into goals and actions and increase one's self-efficacy in attaining these goals. Similarly, Savickas (2011) has proposed that establishing self-efficacy regarding career goals is an important part of one's career development, leading to career adaptability, which in turn refers to the ability to self-regulate one's career-related behaviors. Hence adolescents' expectations of success are expected to increase as they become more engaged with their career goals, explore their possibilities and set suitable goals.

1.3 Stability and change in adolescents' pursuit of their career goals

People actively evaluate their successes and failures in pursuing their goals. This is one of the key processes in goal pursuit in the life-span model of motivation (Salmela-Aro, 2009). If a goal is achieved, a new goal is set, based on past

experiences and current opportunities. Failures, instead, require compensation, where people have to readjust their goals and plans in order to tackle the developmental tasks at hand (Heckhausen et al., 2010). Sometimes disengagement from a goal is the best way to regain balance and life-satisfaction. For the majority of young people, their career-related transitions seem to go quite well and stability in career goals is the norm. Most young people tend to set a certain career goal, for example regarding their educational expectations, and hold on to it (Alexander, Bozick, & Entwisle, 2008; Eccles, 2008; Janosz et al., 2008; Neuenschwander & Garrett, 2008; Trusty, 2000).Unfortunately, stability also holds for the more risky developmental pathways, and major changes in educational goals are often switches from more demanding to less demanding qualifications, or even to drop out from the educational system (Eccles, 2008; Messersmith & Schulenberg, 2008; Trusty, 2000). This may be due to faulty career choices to begin with, such as choosing a goal which is not congruent with one's interests or abilities, with the result that the fit between the demands of the new environment and the individual's competencies is not functional (Eccles, 2004; Trusty, 2000). Low fit leads to ineffective learning, whereas high fit leads to increased commitment to the goal (Pinquart, Juan, & Silbereisen, 2003). The social support available may also be inadequate. If there is no one to guide and help with the demands of the goal, one may not be capable of holding on to it (Englund, Egeland, & Collins, 2008).

In cases where the career goal during adolescence and young adulthood is not replaced with a new goal, the possibility of being able to tackle the developmental task of career choice is at risk. However, even changing one's career goal may sometimes be problematic, especially if the new goal means moving to another culturally defined career pathway (Neuenschwander & Garret, 2008). Such changes are considered non-normative and may lead to low person-environment fit, since educational systems often require normative and chronological progress (Neuenschwander & Garret, 2008). Most of the previous longitudinal studies on educational expectations and success expectations have taken a variable-oriented approach, and hence less is known about the kinds of latent developmental trajectories that may be identified. Thus, in this research stability and change in adolescents' educational expectations (Study III) and career goal-related success expectations (Study IV) are examined from a person-oriented perspective, as this enables identification of different developmental patterns.

1.4   The role of co-agency in goal pursuit

As proposed by the life-span model of development (Nurmi, 2004; Salmela-Aro, 2009), people set and pursue their goals in co-agency with others (Edwards, 2006; Salmela-Aro & Little, 2007). Other people may offer support and share knowledge which may be helpful in goal setting and active goal pursuit (Coleman, 1988; Edwards, 2006; Jokisaari & Nurmi, 2005). In the theory of social capi-

tal (Coleman, 1988), the people who are related to one's career goals are seen as an important social resource which may influence the kinds of goals we choose and are able to achieve. One's social capital is composed of strong ties (parents, friends) and weak ties (teachers, co-workers, acquaintances) (Granovetter, 1973). Weak ties may be useful sources of goal-related information, as weaker ties may offer new ideas and new connections, which are often already shared with the strong ties. The support received from social ties may take many different forms, such as informational, material and emotional support (Taylor, 2011).

Sometimes goals may also be formed through contact with other people or be directly connected to other peoples' goals (Salmela-Aro & Little, 2007). It has been shown that other people are especially important in career-related goals and in career development (Eccles, 2004; Jokisaari & Nurmi, 2005; Nurmi, 2001). Parents are usually the key socialization agents in adolescents' lives (Eccles et al., 1983; Jacobs & Eccles, 2000), and thus parents influence adolescents' career choices in many different ways (Davis-Kean, 2005; Garg, Kauppi, Lewko, & Urajnik, 2002; Melby, Conger, Fang, Wickrama, & Conger, 2008; Schoon & Parsons, 2002; Trusty, Watts, & Erdman, 1997). Peers may also be important figures in career goals as adolescents often plan their future together with their friends (Malmberg, 1996) and peer group members tend to have similar educational plans (Kiuru, Nurmi, Aunola, & Salmela-Aro, 2007).

Also the wider social and cultural context should be taken into account in process of co-agency and co-regulation (Nurmi, 2004; Salmela-Aro, 2009). The surrounding cultural context sets its norms and offers structures and institutions for goal pursuit. Schools, hobbies and neighborhood one lives in all have an impact on the kinds of people one interacts with and the kind of possibilities and traditions there are for career goal pursuit. Thus, the social context one lives in may impact one's career choices in many different ways.

1.4.1 Parents' role in adolescents' career goals

In childhood and adolescence, parents are usually the most important social ties (Markward, McMillan, & Marward, 2003). Although the priorities in ties shift increasingly away from parents towards friends and romantic partners (Crosnoe & Johnson, 2011; Furman & Buhrmeister, 1992; Youniss & Smollar, 1985), in career-related issues parents have been shown to remain important sources of support up to young adulthood (Trusty, 1998; Youniss & Smollar, 1985). However, there is a lack of longitudinal studies on this topic, and one aim of this research is to examine changes in career goal-related social ties over two educational transitions (Study 1).

Career development in adolescence may be conceptualized as joint projects carried out with significant others – mainly parents (Young et al., 2008). A joint career project encompasses a series of goal directed and intentional actions undertaken together by both adolescents and their parents. Thus, the career choices made at the end of comprehensive education may represent a jointly constructed project which is pursued through mutual interactions between par-

ents and their adolescent offspring. For parents, the joint project pertains to their "parenting project"; for adolescents, it pertains to their "growing-up/identity project" (Young et al., 2008).

One way parents may take part in their joint project is by showing their support for the adolescent (Dietrich & Kracke, 2009). The role of parental support is important, as a supportive and stimulating family climate and school-based parental involvement has been shown to foster a positive academic self-schema and academic engagement, which in turn may lead to higher educational aspirations and higher academic attainment later in life (Garg et al., 2002; Melby et al., 2008; Trusty et al., 1997). Parental support may be especially important during transition times, since the transition often requires adaptation to a new environment with new demands and challenges (Falbo, Lein, & Amador, 2001). It has also been shown that the impact of parents may be especially strong at the transition point from comprehensive education to further studies, as parents often guide their children in their career choices on the basis of their own beliefs and expectations (Hansen, 1997). The effect is heightened in countries where career pathways are chosen very early in life (Schnabel, Alfed, Eccles, Köller, & Baumert, 2002). Here, one aim is to examine whether the social ties adolescents name as their career goal-related supporters (for example, parents) at the end of comprehensive education at age 15 to 16, are related to the educational choices (academic versus vocational) that they make (Study I). Furthermore, the impact of parents' career-related support on the development of adolescents' career goal-related success expectations is examined (Study IV).

One of the most studied factors influencing adolescents' career goals is their parents' socioeconomic status (SES), which refers both to level of education and to occupation in terms of prestige and income (Garg el al., 2002; Schoon & Parsons, 2002). SES may impact adolescents' career goals both directly and indirectly (Davis-Kean, 2005; Melby et al., 2008). Direct effects of SES may be reflected in material resources, such as the home study environment and financial help that parents have to offer. It is also possible that parents' education and occupation serve as a direct role model for the child (Jacobs & Eccles, 2000). For example, Melby et al. (2008) showed that parents' educational level, occupational prestige and family income each had a statistically significant direct relationship with young people's later educational attainment.

Nevertheless, the indirect effects of SES, e.g. in form of support, seem to be more important than the direct effects. In the family socialization model (Jacobs & Eccles, 2000), it is assumed that SES has an impact on parents' values and parenting behaviors, which again have an influence on the child's own self-concept and expectations. Similarly, in the family investment model (Conger & Donnellan, 2007), it is proposed that family SES is positively related to the investments parents make in their children which leads to increased academic engagement. Such investments may take many forms, but generally parents in high SES families are more likely to commit time and energy to raising their children and to emphasize academic success, show support and create a richer learning environment for their children (Conger & Donnellan, 2007). Many em-

pirical studies have confirmed these propositions (e.g. Davis-Kean, 2005; Garg et al., 2002; Melby et al., 2008; Trusty et al., 1997). For example, Davis-Kean (2005) showed in her study that parents with higher SES created a more stimulating home environment by spending a lot of time reading and playing with their children, and showed more school involvement, such as helping their children with school work and talking about school-related issues. However, also it has also been shown that parents with low SES may be very supportive to their children (e.g. Trusty, 1998), as they hope that their children will have a better future than they had. Thus, having supportive and involved parents is not necessarily related to socioeconomic background. The impact of parental SES is taken into account in all of the studies that comprise this research.

In addition to support and SES, parental expectations and aspirations regarding their children's academic attainments have an impact on adolescents' academic motivation, academic self-concept and own expectations (Garg et al., 2002; Neuenschwander, Garret, & Eccles, 2007; Schoon, Martin, & Ross, 2007). Parental educational expectations is a complex construct, and is influenced both by parents' socioeconomic background (Trusty & Pirtle, 1998) and their confidence in their child's ability to achieve desired academic outcomes (Wenzel, 1998). Moreover, a child's characteristics, such as the child's abilities and expectations are likely to mold parents' expectations regarding their child (Pomerantz, Grolnick, & Price, 2005; Spera & Wenzel, 2009). Thus, although it has long been assumed that parents have an impact on their children (Spera, 2005), in practice the influence is likely to be a reciprocal process. In the present research, adolescents' perceptions of their parents' educational aspirations for them are examined in relation to the trajectories of adolescents' educational expectations (Study III).

Parents' educational aspirations for their child may also be related to their parenting styles, that is, the emotional climate in which parents raise their children (Darling & Steinberg, 1993). The traditional parenting style paradigm described parenting styles by means of two main dimensions: behavioral control and affection (Maccoby & Martin, 1983). Studies have shown that warm parenting and adequate behavioral control (e.g. reasoned maturity demands, limit setting) is related to higher parental educational aspirations for their child, increased parental school involvement and encouragement of academic success (Campbell & Verna, 2007; Eccles & Wigfield, 2002; Steinberg, Lamborn, Donrbusch, & Darling, 1992). However, less is known about the extent to which psychological control, a parenting style which has recently gained increasing attention, is related to parents' educational aspirations for their child. Psychological control is a parenting style which, in line with Barber (1996), Silk, Morris, Kanaya and Steinberg (2003, p.115) defined as a "type of coercive, passive-aggressive, intrusive control that is characterized by hostility toward the adolescent." The distinction between behavioral and psychological forms of control lies in the focus on the attempt at control: whereas behavioral control is an attempt to regulate the child's behavior, psychological control focuses on exercising control over the child's psychological world (Barber, Olsen, & Shagle, 1994).

In parental behaviour, psychological control is reflected in possessiveness over the child, guilt induction, shaming and inhibiting the child from becoming independent of the parent. Furthermore, putting the child in a subordinate position and enmeshing with the child's psychological boundaries are typical characteristics of psychological control (Barber & Harmon, 2002). As parenting styles reflect a stable attitude towards the child (Darling & Steinberg, 1993), they may have an impact on child-specific beliefs, such as beliefs in the child's future educational attainment (Jacobs & Eccles, 2000; Spera, 2005). Therefore, the present research examines the extent to which parents' psychological control has an impact on their educational aspirations for their child (Study II). Moreover, the impacts of SES are taken into account, as for example McLoyd's (1998) extensive review of the literature shows that the link between socioeconomic disadvantage and child outcomes appear to be mediated by harsh and inconsistent parenting. Parents with low SES tend to be more stressed by economic problems, which increases their tendency to discipline children in a punitive way and causes them to be more ignorant of their child's needs (McLoyd, 1998).

In terms of family background, family structure may also be an important factor in career goals. Children of one-parent-families are more likely to have less social resources than families with two adults. Astone and McLanahan (1991) found less career- related parental involvement and support in single-parent and stepparent families than in nuclear families. This may be due to the fact that one-parent families often experience more negative life-events; this in turn may decrease parental involvement with their child's career choices. There may also be less material resources and facilities to support career development among one-parent families. However, McLanahan and Booth (1989) found in their study that sometimes single-parent families adjust and compensate for their relative lack of social support and financial freedom by becoming even more involved with their adolescents' career choices. This research (Study I), examines the extent to which family structure is related to whom the adolescent views as his or her career-related supporter.

1.4.2 Non-familial ties in adolescents' career goals

In addition to parents, other social ties may play a role in adolescents' career-goals. For example, friends and other peers are important people with whom adolescents plan their future. Malmberg (1996) showed that girls, in particular, tend to plan their future careers with their friends. Kiuru et al. (2007), using the same data as in the present research, showed that members of the same peer group tended to have similar educational plans. Adolescents may choose friends similar to themselves with regard to their educational plans, but such plans may also become increasingly similar over time, indicating that members of the same peer group may influence each other (Kiuru et al., 2007). Peers may act as advisors in each other's educational planning, and they may also affect adolescents' educational choices by either encouraging or discouraging differ-

ent alternatives (Malmberg, 1996). Further, in peer groups, adolescents may act as role models for each other (Nurmi, 1991). Studies on the role romantic partners have in career goals during adolescence are lacking, but they too are likely to play a role, especially as adolescents grow older (Smetana, Campione-Barr, & Metzger, 2006).

Studies have shown that weaker ties (Granovetter, 1973), such as teachers and guidance counselors, may also be notable sources of support during adolescence (Kenny, Gallagher, Alvarez-Salvat, & Silsby, 2002; Morrison, Laughlin, San Miguel, Smith, & Widaman, 1997). For example, Kenny et al. (2002) concluded that, in the absence of adequate familial support, teachers and other non-familial adults may be important for disadvantaged adolescents. In contrast, Malmberg (1996) found that teachers were not very important figures in career-related planning among Finnish adolescents. Here (Study I), adolescents were asked who had supported them in their career goal. It was expected that many of them would mention peers, but in line with Malmberg (1996), few were expected to mention teachers.

1.5   The role of individual characteristics

According to the life-span model of motivation (Salmela-Aro, 2009), people are not simply passive targets of environmental expectations but actively make choices and select their goals and environments. Thus setting and striving for goals can be seen as an active way to guide one's development (Baltes & Baltes, 1990, Heckhausen et al., 2010, Lerner et al., 2001).This is also supported by empirical research showing that the more young people plan, place importance on and engage actively in career-related goals, the more likely they are to make a successful transition in terms of finding a suitable job or apprenticeship (Nagy, Köller, & Heckhausen, 2005; Nurmi et al., 2002). The expectancy-value theory (Eccles et al., 1983; Wigfield & Eccles, 2002) proposes that there are many individual factors, such as gender, GPA, values, success expectations and ability beliefs, which impact the level of motivation and the choice of career goals, albeit that individual characteristics and motivation develop in interaction with one's social environment.

1.5.1 Gender

Among personal characteristics, gender seems to play an important role in adolescents' and young adults' career development (Mello, 2008). First, there are clear gender differences in the fields of interest of young people (Meece, Glienke, & Burg, 2006). For example, girls tend to be more interested in literature and the caring professions whereas boys are more interested in the natural sciences and mathematics. These differences seem to stem from cultural role models and parental attitudes and expectations (Eccles et al., 1983; Meece et al., 2006). Second, it has been shown that differences between boys and girls in school moti-

vation and achievement can already be seen during comprehensive education. Girls tend to be more motivated and enthusiastic about school (Lupart, Cannon, & Telfer, 2004; Schoon et al., 2007) and also do better academically (Schoon et al., 2007; Steinmayr & Spinath, 2008). Girls also tend to be more active in planning their future career together with their friends (Malmberg, 1996) and seeking support from others (Colarossi & Eccles, 2003). One explanation for girls' higher academic achievement has been that girls may have been raised to behave in ways which are better suited to the school environment (Steinmayr & Spinath, 2008). Boys and girls may also face different expectations from parents and teachers (Eccles & Wigfield, 2002; Schoon et al., 2007). As more and more females enter higher education, this fact may act as a cultural model for adolescent girls and their parents (Eccles & Wigfield, 2002; Schoon et al., 2007).

The role of gender in later career development is more mixed. Some studies have shown that girls have higher educational and occupational expectations than boys (Mau & Bikos, 2000; Mello, 2008), some have found the opposite (Mendez & Crawford, 2002), and some have found no gender differences (Simpskins, Davis-Kean, & Eccles, 2006). However, nowadays in many Western countries, such as Finland, girls outnumber boys in higher education (OECD: Education at a Glance, 2009), although boys still seem to outnumber girls in occupational achievement. For example, in her study, Mello (2008) found that girls had higher occupational and educational expectations than boys, but also that boys who had high expectations were more likely to realize their expectations than like-minded girls. Women perceived more barriers in their career pathways. Similarly, Schoon et al. (2007) showed that while teenage girls tended to have higher occupational aspirations than boys of the same age, women were less likely than men to attain the same occupational level. One barrier for women was the step into parenthood, which happened earlier to women than men (Schoon et al., 2007). As gender is an important factor in academic motivation, it was included in all the analyses conducted in the course of this research.

1.5.2 Academic achievement, ability beliefs, success expectations and goal importance

School achievement, such as grade point average (GPA), is an important precursor of career goals, as academic achievement often channels one's subsequent possibilities. Moreover, one's previous academic achievement often molds one's self-concept and ability beliefs, and what kinds of expectations one can set (Eccles et al., 1983; Jacobs & Eccles, 2000; Wigfield et al., 2009). Academic achievement may also impact the beliefs and expectations of those around one, such as parents and teachers (Jacobs & Eccles, 2000, Neuenschwander et al., 2007; Wood et al., 2011). At the same time, an individual's perceptions of how important others perceive him or her may have an effect on GPA and one's ability beliefs and success expectations (Jacobs & Eccles, 2000; Wigfield et al., 2009). Here, the effect of GPA was taken into account in each of the individual studies.

In the expectancy-value theory, a success expectation is defined as the expectation that one will succeed in achieving an upcoming task, whereas ability

belief refers to evaluations of one's competence in the domain related to the task at hand (Wigfield & Eccles, 2000). Empirically, ability beliefs and success expectations are often difficult to distinguish as they influence one another. However, theoretically, ability belief is considered to be a broader concept, as it focuses on present abilities. Success expectations are viewed as more task-specific, but their focus is more in the future and they take into account external constraints (Eccles et al., 1983; Wigfield & Eccles, 2000). According to the theory, higher ability beliefs and success expectations are related to achievement-related choices, persistence and attainment of the task. People are more likely to choose a goal they think they have high chances of succeeding in. If the goal is perceived as impossible to achieve due to external conditions or due to one's abilities, then expectations are lowered (Wigfield & Eccles, 2000).

The values attached to a task may also influence the motivation adolescents show in attaining that task. Even if one feels competent enough to achieve a task, it may not be pursued if one does not attach any value to it (Wigfield & Eccles, 2000). In the expectancy–value theory, task values have been defined as importance or attainment value, intrinsic value or enjoyment, utility value and cost (Eccles et al., 1983; Wigfield & Eccles, 2000). Task values have an impact on both the choice of the task and persistence in it. If one values something, one is more likely to stick with it even when faced with difficulties (Wigfield & Eccles, 2000). Success expectations and the values attached to a task are highly related (Wigfield et al., 2009). Studies have shown that expectancies for success in a given domain would be a stronger predictor of valuing the domain than vice versa (Wigfield & Eccles, 2000), as people tend to like things they think they are good at. However, in practice, valuing and having high expectations in a given domain tend to develop in a cumulative cycle, and in latest version of the expectancy-value theory a reciprocal relationship between these constructs is presented (Wigfield et al., 2009).

The expectancy-value theory was originally developed to explain subject-specific choices and performance in a given subject (Wigfield et al., 2009). Recently the expectancy-value theory has also been applied to explain more general career-related tasks, such as educational expectations regarding the level of education. For example, Wood et al. (2011) found in their study that both utility value and expectations for success with regard to educational expectations predicted later college attendance. Similarly, Neuenschwander and Garret (2008) showed that self-efficacy expectations and personal values had an effect on choices of educational tracks. The results indicated that students with strong expectancies and personal values could oppose institutional norms and make unexpected educational choices at transition points. Moreover, Battle and Wigfield (2003) showed in their study among college women that their valuing of graduate education predicted their intentions to attend graduate school. The present research examines the extent of the impact of ability beliefs, success expectations and the importance of the career goal on the trajectories of educational expectations (Study III). In addition, change and heterogeneity in career

goal-related success expectations and are examined in the context of two educational transitions (Study IV).

1.6 The Finnish education system

The act of choosing a career goal at a specific transition point, for example, at the end of comprehensive education, launches the individual on a culturally structured career pathway (Pallas, 2003; Schoon & Parsons, 2002). In most Western countries, choosing an academic education after comprehensive school paves the way to studies in higher education, such as university, and later to higher status occupations, whereas choosing vocational schooling is related to early entry into full-time working-life. Depending on the country of origin, it may be difficult to change from one pathway to another later on.

Culturally defined career pathways exist also exist in the Finnish education system (Figure 1). In the year of their seventh birthday, Finnish children start comprehensive school, where they continue for the next nine years until the age of 16. At this point, most adolescents move into upper secondary education, which means 3 or 4 years either on an academic track (general upper secondary school) or on a vocational track (vocational school). In 2010, 50% of Finnish adolescents entered general upper secondary school, 40% went to a vocational school and 2% stayed on for a voluntary tenth grade to improve their grades and to clarify their future plans. The percentage of adolescents who continue to general upper secondary education has slightly decreased in recent years: in 2005, for example, 53% entered general upper secondary school. In turn, the percentage of vocational school entrants has fluctuated, but, overall it increased by one percent between 2005 and 2010 (Central Statistical Office of Finland, 2010). The remaining adolescents exit or postpone further formal education, mostly because they did not succeed in entering the school they applied for, as only 2% of all the adolescents who finished comprehensive school did not apply for any upper-secondary education (Central Statistical Office of Finland, 2010). It is also possible to obtain a dual qualification, meaning that a student attends courses in both general upper secondary school and vocational school.

The transition from comprehensive school to upper secondary education is strongly channeled via previous academic achievement. The general upper secondary schools select students according to their GPA in their comprehensive school diploma. Vocational schools also select students on the basis of their GPA, but suitability tests may additionally be used, for example in the caring occupations. General upper secondary school is academically more demanding than vocational school and it ends with a matriculation examination. General upper secondary school is a bridge to university, which in Finland is traditionally completed with a master's degree (second stage of tertiary education) but many students also apply to polytechnics, which offer higher education with a practical orientation, traditionally completed with a bachelor's degree (first

stage of tertiary education). Vocational school serves as a route to working life in academically less demanding occupations, or to tertiary-level education, mostly polytechnic, although it is also possible to apply for a university place. A full picture of the Finnish educational system is presented in Figure 1.

In Finland, most universities and polytechnics use entrance examinations to select their students. The main difference, compared to many other Western countries, (e.g. US, UK, Germany) is that prospective students apply directly to study a specific major and take an entrance exam which focuses on that major. Thus Finnish universities do not employ general entrance exams or aptitude tests. Excellent prior academic achievement may to some extent be taken into account, but the focus is on the applicant's performance in the subject-specific entrance examination, which may test both academic abilities and general suitability for the field of study. The competition to enter higher education is high, especially in fields where less than 10 percent of applicants are accepted. This often leads to gap years and delayed educational careers. In 2009, 33% of 25- to 34-year- olds in Finland had received a tertiary-level education, of whom 57% gained polytechnic degrees and 43% university degrees. Two percent of the polytechnic degrees and 83% of the university degrees were master's degrees, and the remainder bachelor's degrees (Central Statistical Office of Finland, 2009).

FORMAL EDUCATION IN FINLAND

ISCED-classification

6	Doctoral degrees / Licentiate-degrees / Universities
5 A	Master's degrees / Bachelor's degrees / Universities — Polytechnic master's degrees / Polytechnics — Work experience 3 years — Polytechnic bachelor's degrees / Polytechnics
4	Special vocational qualifications*
3	Matriculation examination / General upper secondary schools — Vocational qualifications* — Further vocational qualifications* — Vocational institutions / *Also available as apprenticeship training
2 & 1	Basic education, 7–16-year-olds / Comprehensive schools
0	Pre-primary education, 6-year-olds

Duration in years

ISCED-classification 1997
0 Pre-primary education
1–2 Primary education or lower secondary education
3 Upper secondary education
4 Post-secondary non-tertiary education
5 First stage of tertiary education
6 Second stage of tertiary education

FIGURE 1 The formal education system in Finland. Retrieved from http://www.minedu.fi/export/sites/default/OPM/Koulutus/koulutusjaerje stelmae/liitteet/finnish_education.pdf

1.7 Aims of the empirical studies

The main aim of this research was to examine adolescents' career goals, their antecedents and consequences, and their developmental pathways.

Study 1 examined whom adolescents named as their career goal-related social ties, how these ties changed during two educational transitions, and the antecedents and consequences of these ties. Altogether seven Hypotheses were set:

> Hypothesis 1.1: Parents and friends would most often be named as career goal-related ties (Fuhrman & Buhrmester, 1992; Malmberg, 1996; Markward et al., 2003).

> Hypothesis 1.2: Teachers and other authority figures would rarely be named as goal-related ties (Malmberg, 1996).

> Hypothesis 1.3: Friends and romantic partners would increasingly be named as goal-related ties as adolescents grew older (Fuhrman & Buhrmester, 1992).

> Hypothesis 1.4: Parents in higher white-collar occupations would be named as goal-related ties more often than parents in other occupations (Hickman, Greenwood, & Miller, 1995).

> Hypothesis 1.5: Adolescents with a high GPA would name their parents as goal-related ties more often than adolescents with a low GPA (Spera, 2005; Wenzel, 1998).

> Hypothesis 1.6: Girls more often than boys would name friends as goal-related ties (Colarossi & Eccles, 2003; Malmberg, 1996)

> Hypothesis 1.7: No gender differences would be found regarding teachers and other authority figures as goal-related ties (Malmberg, 1996).

Study 2 examined the extent to which mothers' and fathers' psychological control together with SES played a role in parents' educational aspirations regarding their child. Four Hypotheses were set:

> Hypothesis 2.1: Parents' use of psychological control would be associated with low SES (Aunola, Nurmi, Onatsu-Arvilommi, & Pulkkinen, 1999).

> Hypothesis 2.2: High SES would be associated with high educational aspirations (Hypothesis 2.2a, Garg et al., 2002; Melby et al., 2008; Trusty & Pirtle, 1998) and the impact of SES on parents' educational aspirations

would be mediated by their use of psychological control (Hypothesis 2.2b, Eccles & Wigfield, 2002; Garg et al., 2002; Melby et al., 2008).

Hypothesis 2.3: Parents' use of psychological control would predict lower GPA (Hypothesis 2.3a, Aunola & Nurmi, 2004; Barber & Harmon, 2002) and high SES would predict higher GPA (Hypothesis 2.3b, Campbell & Verna, 2007; Melby et al., 2008; Wigfield & Eccles, 2000). Moreover, the impact of SES on GPA would be mediated by psychological control (Hypothesis 2.3c, Garg et al., 2002; Wigfield & Eccles, 2000) and the impact of parents' psychological control on their educational aspirations would be mediated by their child's GPA (Hypothesis 2.3d, Pomerantz et al., 2005; Spera & Wenzel, 2009).

Hypothesis 2.4: Parents' higher psychological control would predict lower educational aspirations among adolescents (Barber & Harmon, 2002; Joussemet, Landry, & Koestner, 2008).

Study 3 examined the developmental trajectories of adolescents' educational expectations and the role in those trajectories played by both personal and social factors. In addition, the study examined whether the trajectories were related to the participants' educational situation at the last measurement point. Four Hypotheses were set:

Hypothesis 3.1: It was assumed that for the majority their educational expectations would be stable (Hypothesis 3.1a, Alexander et al., 2008; Eccles, 2008; Neuenschwander & Garrett, 2008; Trusty, 2000) and that possible changes in expectations would be from more demanding to less demanding educational qualifications (Hypothesis 3.1b, Alexander et al., 2008; Hanson, 1994; Messersmith & Schulenberg, 2008; Trusty, 2000).

Hypothesis 3.2: It was assumed that in the trajectories of higher educational expectations girls would outnumber boys (Hypothesis 3.2a, OECD: Education at a Glance, 2009), and that GPA (Hypothesis 3.2b, Garg et al., 2002), SES (Hypothesis 3.2c, Schoon & Parsons, 2002; Trusty & Pirtle, 1998) and that perceptions of parents' educational aspirations would be higher (Hypothesis 3.2d, Schoon & Parsons, 2002; Trusty & Pirtle, 1998).

Hypothesis 3.3: It was assumed that higher ability beliefs, success expectations and task value would predict persistence with the educational expectation, and thus would be higher among those with stable trajectories (Neuenschwander & Garrett, 2008; Wigfield & Eccles, 2000).

Hypothesis 3.4: In line with the Finnish education system, we assumed that participants who were on an academic track during their upper sec-

ondary studies would be more likely to be located in the trajectories of higher educational expectations than the participants on a vocational track.

Study 4 examined to what extent adolescents' career goal-related success expectations increased and showed developmental heterogeneity during two educational transitions. In addition, the impact of social and personal factors and career situation at the last time point were analyzed. Four Hypotheses were set:

Hypothesis 4.1: It was expected that the overall level of success expectations would increase as adolescents move from comprehensive education to upper secondary school and onwards (Hypothesis 4.1a, Heckhausen et al., 2010; Savickas, 2011), but that significant variance in the change would also appear (Hypothesis 4.1b, Alexander et al., 2008; Eccles, 2004; Hanson, 1994; Messersmith & Schulenberg, 2008).

Hypothesis 4.2: It was assumed that for the majority their success expectations would be high and increasing (Hypothesis 4.2a, Eccles, 2008; Savickas, 2011) but that trajectories with unstable expectations would also appear (Hypothesis 4.2b, Alexander et al., 2008; Eccles, 2004; Hanson, 1994; Messersmith & Schulenberg, 2008; Trusty, 2000).

Hypothesis 4.3: In the trajectories of higher success expectations GPA (Hypothesis 4.3a, Garg et al., 2002), goal importance (Hypothesis 4.3b,Wigfield et al., 2009), SES (Hypothesis 4.3c, Garg et al., 2002; Schoon & Parsons, 2002) and perceptions of career related support would be higher (Hypothesis 4.3d, Garg et al., 2002; Wigfield et al., 2009).

Hypothesis 4.4: Those with higher success expectations would be better adjusted in terms of their career situation, i.e. show less dropout from studies, be engaged full-time either in work or in education, having completed an upper secondary degree, and having a job commensurate with one's education (Hypothesis 4.4, Bandura, Barbanelli, Caprara, & Pastorelli, 1996; Chemers, Hu, & Garcia, 2001; Wigfield et al., 2009).

2 METHOD

2.1 Samples and participants

The studies reported in this research form part of the Finnish Educational Transitions Studies (FinEdu) (Salmela-Aro, 2003) and the Towards Working Life Study (e.g. Vuori, Koivisto, Mutanen, Salmela-Aro, & Jokisaari, 2008). Both are ongoing studies with the aim of examining adolescents' educational and occupational goals and well-being from adolescence to early adulthood. Both studies started when the participants were facing the transition to post-comprehensive schooling and have followed the participants in their progress from adolescence to young adulthood.

Study I, III and IV

In studies I, III and IV, the FinEdu dataset was used (Sample 1). At the beginning of the FinEdu study the participants were ninth-graders facing the transition to post-comprehensive schooling. The data was collected in a medium-sized town in eastern Finland and the aim was to include all the town's ninth-grade students (N = 954) in the study. The first data collection was conducted in 2004, since when 5 further data collections have been carried out (see Table 1 for further details). For the first three measurements, participants filled in questionnaires during school hours. For the last three measurements, questionnaires were sent to the participants' postal addresses. It was also possible to complete the questionnaire on the internet. In study I, the data obtained from the first, third and fifth measurements were analyzed, whereas in Study III data from the first five measurement points, and in Study IV all but the data from the second measurement point, were analyzed.

TABLE 1   Measurement points, participation rates and career situations in the FinEdu study (Sample 1)

Time 1	Time 2	Time 3	Time 4	Time 5	Time 6
January 2004	May 2004	January 2005	January 2006	Spring 2009	Spring 2011
Ninth grade	Ninth grade	Upper secondary education	Upper secondary education	Working-life/further studies	Working-life/further studies
n = 707, 74%[1]	n = 642, 67%[1]	n = 818, 86%[1]	n = 749, 87%[2]	n = 611, 71%[2]	n = 599, 70%[2]
Age = 16	Age = 16	Age = 17	Age = 18	Age = 21	Age = 23

[1]The participants from the original sample who were reached (N = 954).

[2] The participants from those who replied at least once at Times 1, 2 or 3 (N = 858).

Study II

In study II, the data obtained in the Towards Working Life Study were analyzed (Sample 2). The Towards Working Life Study comprises two cohorts: one collected in 2003 and the other in 2004. Both cohorts were formed from adolescents in two medium-sized towns in southern Finland facing the transition to post-comprehensive schooling. Altogether 1034 adolescents returned the questionnaire. In addition, data on the adolescents' parents were collected, and these data formed the main focus in Study II. Questionnaires were sent to the parents' homes, to mothers and fathers separately. Altogether, 720 mothers and 542 fathers participated in the study. Study II analyzed the data from the first measurement of each cohort and parents.

2.2 Variables and statistical methods

In the different studies, diverse sets of variables and statistical methods were used. A summary of these variables and methods are reported in Table 2.

TABLE 2   Summary of the variables and statistical methods used in studies I – IV

Study	Sample	Variables	Statistical methods
Study I	Sample 1	Gender Academic achievement Parents' SES Family structure Career-related goal Goal-related social ties School track Educational track Adolescents' educational aspirations	x^2-related samples test Logistic regression
Study II	Sample 2	Gender Parents' SES Psychological control Academic achievement Parents' educational aspirations for their children Adolescents' educational aspirations	Structural equation modeling
Study III	Sample 1	Gender Adolescents' educational expectations Academic achievement Parents' SES Perception on mother's and father's educational aspirations Ability-beliefs Success expectation Goal importance Upper secondary educational status Changes in educational status Tertiary level educational status	Latent class analysis Multinomial regression x^2-test
Study IV	Sample 1	Gender Career goal-related success expectations SES Parents' career-related support Goal importance GPA Full-time career activity Number of drop-outs from studies Upper secondary degree completed Having a job Having a job related to one's education	Growth mixture model Multinomial regression Logistic regression

Note. SES = socioeconomic status; GPA = grade point average

2.3 Person-oriented approach

Person-oriented analysis (Bergman & El-Khouri, 2003; Muthén & Muthén, 2000; Nylund, Asparouhov, & Muthén, 2007) was used in two of the studies comprising this research (Study III and Study IV). In traditional statistical analyses, the focus is on the associations between variables. However, in the person-oriented method, the interest is in the differences between individuals and in the typical patterns that appear among subgroups of individuals. By examining developmental change in the traditional variable-oriented way, it is possible to detect mean-level changes which describe the overall changes in the data. However, this is to ignore people who do not follow this normative, average developmental pathway. The identification of different sub-groups is important for understanding non-normative and maladaptive developmental pathways (Bergman & El-Khouri, 2003).

In Study III, a person-oriented statistical method, known as latent class analysis (LCA), was used. LCA is a statistical tool used with categorical variables that enable the identification of homogeneous, mutually exclusive latent classes that exist within a heterogeneous population. The proposed memberships are not clear-cut, but LCA gives a probability of membership in each latent class for any participant. The most conventional approach to comparing classes is to assign participants to the class for which they have the highest probability of membership (Nylund et al., 2007).

In study IV, another kind of person oriented method, called Growth Mixture Modeling (GMM, Muthén & Muthén, 2000), was used. GMM is used with continuous variables, and it estimates mean growth curves for each class, while permitting individual variation around these growth curves. In both LCA and GMM, different numbers of latent classes are generated and their fit indices and class frequencies then compared to find the number of latent classes that fits the data best. The solution that best fits the data based on the fit indices and is also deemed reasonable from the standpoint of the interpretation is chosen as the final solution.

3   OVERVIEW OF THE ORIGINAL STUDIES

3.1 Study I: Career goal-related social ties during two educational transitions: Antecedents and consequences

The aim of study I was to investigate adolescents' career goal-related social ties and their antecedents and consequences during the transition from compulsory to post-comprehensive education and during the transition from post-compulsory education to working-life or further studies.

Six hundred and eighty-seven ninth-graders facing the transition to post-comprehensive education filled in questionnaires measuring their career-goal related social ties, academic achievement, parents' SES, family structure, educational track and future educational aspirations. Of the adolescents reached at the first measurement point (n = 687), a total of 654 also participated one year later, and 497 three years later.

The results showed that, in line with the hypotheses, the adolescents mostly named strong ties, such as their mother, father and friends as their career goal-related supporters (Hypothesis 1.1), whereas teachers and other authority figures were rarely named (Hypothesis 1.2). Moreover, boy- and girlfriends were increasingly named as the participants grew older (Hypothesis 1.3). Differences in career goal-related social ties were found according to gender, GPA, family structure, and SES. Boys, adolescents from nuclear families and adolescents with a father working in a higher SES occupation were more likely to mention their father, whereas adolescents with a higher GPA and those with a mother working in a lower SES occupation were more likely to mention their mother as their career goal-related supporter. Thus, Hypothesis 1.4 on SES was confirmed with regard to fathers, whereas Hypothesis 1.5 on GPA was confirmed with regard to mothers. Friends and romantic partners were more likely to be mentioned by girls than boys (Hypothesis 1.6). No gender difference

emerged regarding naming teachers or other authority figures (Hypothesis 1.7). Adolescents who named a guidance counsellor or a romantic partner were more likely to enter a vocational track, while adolescents who named their father were more likely to enter an academic track.

3.2 Study II: The role of psychological control, socioeconomic status and academic achievement in parents' educational aspirations for their adolescent children.

Study II focused on the extent to which negative parenting, measured here as psychological control, was related to parents' socioeconomic background, and whether, together with SES, it was also related to parents' educational aspirations for their child. Furthermore, the mediating processes between the variables and the impact of parents' psychological control on adolescents' educational aspirations were also examined.

In total, 1034 ninth-graders participated in a study on their educational aspirations, motivation and well-being. Questionnaires were also sent to their mothers and fathers at their postal addresses, inquiring about their SES, parenting style and educational aspirations regarding their adolescent child. The questionnaire was returned by 720 (67%) mothers and 542 (51%) fathers. For 776 of the adolescents (72%), at least one parent returned the questionnaire. The analyses were conducted separately for mothers and fathers. The results showed, as expected, that the use of psychological control was more common among parents with lower SES (Hypothesis 2.1). Moreover, high parental SES was related to higher educational aspirations for their child (Hypothesis 2.2a). High psychological control was related to low parental educational aspirations for their child and the impact of SES on parental educational aspirations was partly mediated by parents' use of psychological control (Hypothesis 2.2b). The lower the SES of the parents was and the more psychological control they imposed, the lower was their child's GPA (Hypotheses 2.3a and 2.3b). The impact of SES was partially mediated by psychological control (Hypothesis 2.3c), and the impact of psychological control on parental educational aspirations was partially mediated by their adolescent children's academic achievement (Hypothesis 2.3d). Psychological control by parents had no impact on their children's own educational aspirations when parental educational expectations were controlled for, and thus Hypothesis 2.4 was not confirmed. The results were similar for mothers and fathers. Moreover, no gender differences between the adolescents were found.

3.3 Study III: Trajectories of educational expectations from adolescence to young adulthood in Finland

The aim of study III was to examine the developmental trajectories of adolescents' educational expectations during the transition from adolescence and comprehensive education to young adulthood and further studies or working life. Moreover, personal and social antecedents of the trajectories were examined. Finally, the extent to which the trajectories of educational expectations were related to the educational situation of the participants at the last measurement point was analyzed.

Altogether, 853 adolescents reported their educational expectation, firstly at the beginning of the last term of comprehensive school and 4 further times during the following five years. Participants who filled in the questionnaire at least once were included in the analyses. At Time 1, the participants were also asked about their GPA, SES, and perceived parental educational aspirations, and at Time 2 and 3 about their ability beliefs, success expectations and the importance they attributed to their educational expectation.

Latent class analysis showed that five trajectories of educational expectations fitted the data best: stable-university (38%), stable-vocational (18%), stable-polytechnic (24%), increasing-expectations (10%), and decreasing-expectations (10%). In line with Hypothesis 3.1a, for the majority, their educational expectations were stable. Similarly, as expected, a decreasing trajectory was identified (Hypothesis 3.1b), but also another unstable (increasing) trajectory appeared.

In line with the expectancy-value theory, adolescents' academic achievement, SES, perception of their parents' educational expectations for them and ability beliefs were all related to their trajectories of educational expectations. The higher the adolescent's SES, perception of parental educational expectations and GPA, the more likely the participant was to be in the stable-university trajectory compared to the stable-vocational trajectory, thereby supporting Hypotheses 3.2b, 3.2c and 3.2d. Gender had an indirect effect on the trajectories via GPA. Moreover, participants with higher ability beliefs were more likely to be in trajectories with high and stable educational expectations compared to those in the unstable trajectories, and thus Hypothesis 3.3 was partly supported. The results showed further, that ability beliefs increased significantly among the participants in the trajectory of decreasing educational expectations.

The trajectories of educational expectations were related to the participants' educational situation after comprehensive school. In line with the Finnish educational system (Hypothesis 3.4), participants who were on an academic track after comprehensive school were more likely to be in the trajectories of higher educational expectations than those on a vocational track. Participants in the decreasing and increasing trajectories were less likely than others to have completed their upper secondary education by the last time point of the study.

3.4 Study IV: Career goal-related success expectations across two career transitions: a 7-year longitudinal study.

The aim of study IV was to examine change in, and trajectories of, career goal-related success expectations from adolescence to young adulthood in the context of the expectancy–value theory. Also examined was the extent to which gender, GPA, goal importance, parents' career-related support and SES were related to the trajectories. Finally, the study analyzed the extent to which the trajectories of career goal-related success expectations were related to the career situation at the last measurement point. Altogether 850 adolescents reported their success expectations regarding their career-related goals, first in the last year of comprehensive school and four times during the following seven years.

Overall, in support of our Hypothesis 4.1a, there was a significant increase in adolescents' success expectations over the seven years. However, heterogeneity in this change was also detected (Hypothesis 4.1b). Growth Mixture Modeling showed that four trajectories of success expectations fitted the data best: high-increasing (78%), low-increasing (9%), decreasing (6%) and U-shaped (7%). Thus, for the majority, their success expectations were high and increasing (Hypothesis 4.2a), although unstable trajectories were also identified (Hypothesis 4.2b). The trajectories differed in terms of GPA, gender, SES, goal importance, and perception of parental career-related support. Boys, participants with higher GPA and higher goal importance, and those with higher parental SES and parental career-related support tended to be in the high-increasing trajectory, thereby supporting Hypotheses 4.3a–4.3d. The trajectories were also related to the career situation at the last time point, as those in the decreasing trajectory were less likely to be working or studying full-time and more likely to be unemployed than the participants in the high-increasing trajectory (Hypothesis 4.4).

4   GENERAL DISCUSSION

This research focused on adolescents' career-related goals during the transition from adolescence to young adulthood, covering two educational transitions. The processes of developmental regulation in the life-span model of motivation (co-regulation, channeling, choice, compensation; Salmela-Aro, 2009) were reflected in adolescents' career goal pursuit. Moreover, the results were mainly in line with the associations postulated in the expectancy-value theory (Eccles et al., 1983; Wigfield et al., 2009) and family socialization model (Jacobs & Eccles, 2000).

The results showed that parents play an important role in career goals from adolescence to young adulthood. Naming the father as one's career goal-related social tie was related to entering an academic track after comprehensive education. Moreover, parental high career-related support was related to higher levels of career goal-related success expectations and parental high educational aspirations for their child promoted high educational expectations in their offspring. Results showed further that parents' high psychological control was related to parents' lower educational expectations for their child.

In addition to parents, also other career-goal related social ties were found to be important. The results showed that naming a romantic partner or guidance counselor as career goal-related social tie was related to entering a vocational track after comprehensive school.

Adolescents' educational expectations and career goal-related success expectations showed different developmental trajectories. Most adolescents were doing well in terms of their motivational development, that is, they showed persistence in their educational expectations and had high and increasing career goal-related success expectations. However, decreasing and increasing trajectories were also detected with regard to both educational expectations and career goal-related success expectations.

A higher level of academic achievement was related to higher educational expectations and a higher level of career goal-related success expectations. Girls had higher levels of academic achievement, but lower levels of career goal-related success expectations. In addition, girls named more peers and overall

more career goal-related supporters than boys, whereas boys were more likely to name their father than girls. Ability beliefs also had an impact on career goal pursuit.

4.1 Career-related goals

In this research, career-related goals were measured, first, by reference to current personal goals related to work or education (Study 1 and IV) and second, by reference to the adolescents' and their parents' highest level of educational expectations and aspirations for them (Study II and III). When adolescents' were asked about their current career-related goal the majority reported an education-related career goal at four of the six measurement points (Sample 1). At the last time point work- and education-related goals were mentioned as frequently. This shows that goals related to education are highly relevant for adolescents, but as they move into young adulthood and the transition to working-life becomes closer, goals related to work become more common (Salmela-Aro et al., 2007). With regard to educational expectations, it was shown in Study III that a majority (~72%) aimed for a university of a polytechnic degree at age 20 to 21, which shows the high value attached to education in Finland.

4.1.1 Developmental trajectories in educational expectations

Study III examined what kinds of trajectories the participants would show in their educational expectations during the transition from comprehensive education to upper secondary education and from upper secondary education to tertiary education or working-life. As found in earlier studies (Alexander et al., 2008; Eccles, 2008; Janosz et al., 2008; Neuenschwander & Garrett, 2008; Trusty, 2000), most of the participants (80%) belonged to the latent trajectory characterized by stable educational expectations. Thus, in light of the life-span model of motivation (Salmela-Aro, 2009), most adolescents were doing well in engaging in and holding on to their important developmental goal of finding a suitable education and occupation. The stability in educational expectations shows also that although separate tracks are not implemented before the end of comprehensive school in Finland, adolescents have nevertheless formed their academic self-concept and found its reflection in the Finnish education system by the end of comprehensive education.

Also, processes of compensation and disengagement were detected, as some adolescents changed their expectations over the years. A trajectory in which adolescents changed their educational expectations from academically more demanding to less demanding qualifications appeared, in line with earlier findings (Alexander et al., 2008; Hanson, 1994; Messersmith & Schulenberg, 2008; Neuenschwander & Garret, 2008). This trajectory was labeled decreasing-expectations. The participants in this trajectory disengaged from their expectation and replaced it with an academically less demanding goal, for example

switching from an academic to a vocational qualification. In another non-stable trajectory, the adolescents raised their educational expectations, mainly from general upper secondary school to polytechnic. Thus, disengagement may also mean revising a goal upward from less demanding to more demanding. Most of the participants in this trajectory had entered general upper secondary school after comprehensive school, and may thus already have realized that, after matriculation from general upper secondary school, it is common practice to apply for further studies, since matriculation alone does qualify one for any specific occupation. It may also be that many participants in this trajectory did not know, when still in comprehensive school, what they wanted to do after general upper secondary school, and for that reason had postponed their decision.

The trajectories of educational expectations were related to the adolescents' actual educational situation, as may be expected in the Finnish educational system. Most of the participants in the stable-vocational and stable-polytechnic trajectories were on a vocational track, whereas most of the participants in the stable-university trajectory were on an academic track. This shows that participants tend to set their expectations according the normative cultural educational pathways that exist in Finland, even though in principle the system is flexible. At the last time point, there were more individuals who had not yet completed their upper secondary studies than expected in the unstable trajectories. Thus, uncertainty in expectations tends to be reflected in delayed upper secondary studies.

4.1.2 Developmental trajectories in career goal-related success expectations

The results showed that for the majority (78%) of the adolescents their career goal-related success expectations increased over the seven years from comprehensive education onwards. This result implies that the majority of the adolescents are, as expected, engaged and working on their urgent developmental task of finding a suitable career (Dietrich et al., 2012; Salmela-Aro, 2009) and that most seem to have found a suitable career goal, as their expectations regarding their goals were high (Wigfield et al., 2009). This finding is also in line with Savicka's (2011) career construction theory, which proposes that being engaged in and exploring career goals during adolescence leads to increased career confidence over the years, as young people start to find the career goals most suited to them. Moreover, the relevant social structures (i.e. career guidance at school, financial support system) are likely to facilitate career goal pursuit and channel adolescents towards goal engagement (Lent et al., 1994). This was the first study to show empirically that for the majority of adolescents their success expectations remain high and continue to increase slightly as they move towards adulthood.

It was expected that some instability in success expectations would also appear as the participants went through major changes in their career situation, i.e. two educational transitions (Eccles, 2004), both processes which impose new demands on one's academic and career-related performance. This expectation

was confirmed as three unstable trajectories of career goal-related success expectations were identified: low-increasing (9%), decreasing (6%) and U-shaped (7%). The low-increasing trajectory seemed to be a group of "late starters" who were initially very low in their expectations, but who eventually got a hold on their career goals with the result that ultimately their career goal-related success expectations were as high as those in the "normative", high-increasing trajectory. Moreover, they did not differ from the high-increasing trajectory in terms of their career situation at age 23.

In the U-shaped trajectory, expectations were initially high, but during the transitions they dipped and then rose again. This may be a group where the transition from comprehensive school to upper secondary education did not go smoothly, as these adolescents' success expectations started to decline after the transition. Further results confirmed this, as it emerged that those in the U-shaped trajectory tended to show more dropouts from studies than participants in the high-increasing trajectory, although the significance of this result was only marginal. Even though success expectations started to increase again at the second transition point, the participants in the U-shaped trajectory were less likely to be working or studying full-time compared to those in the high-increasing trajectory. However, this result was no longer significant after taking into account the impact of GPA.

In the decreasing trajectory, expectations were initially high and rising slightly, but at the second transition from upper secondary education onwards their success expectations started to fall. Thus, for this trajectory, the transition from upper secondary school onwards appeared to be difficult. This was also shown in their career situation at age 23 as the participants in the decreasing trajectory were less likely to be engaged full-time in either education or working-life at the last time point. Moreover, they were more likely to report being unemployed at age 23 than participants in the high-increasing trajectory. There was also a marginally significant tendency for more educational dropout among those in the decreasing than high-increasing trajectory. Moreover, they were less likely to have completed an upper secondary qualification but this result was no longer significant when GPA and SES were taken into account. All in all, it appears that participants in the decreasing trajectory experienced some difficulties during their upper secondary education which may have contributed to the decrease in their career goal-related success expectations.

Interestingly, most of the non-linear changes that appeared among the trajectories took place at the transition from upper secondary school to further studies or working-life. This may be due to the fact that at this point adolescents are forced to set new career goals and thus, explore their abilities and possibilities anew. Moreover, the transition from upper secondary school onwards is very challenging, as some adolescents enter working life for the first time, while for others the entrance examinations to tertiary-level education are, in many fields, very demanding.

4.2 Parents as key socialization agents

Overall, the results showed that parents were important figures of co-agency and co-regulation in adolescents' career goal pursuit. Structural factors, such as SES and family composition played a role, but parenting behaviors and parents' aspirations regarding their child's education also had a significant impact on career goal pursuit.

4.2.1 Support

The results showed that most adolescents named their mother and father as their career-goal related supporter. Mothers were mentioned by 84% and fathers by 54% of the adolescents. This result supports earlier findings on social support among adolescents (Furman & Buhrmester, 1992; Kenny et al., 2003; Malmberg, 1996; Markward et al., 2003), and is also in line with the family socialization model, which emphasizes the role of parents as the key socialization agents for children and adolescents (Jacobs & Eccles, 2000). Moreover, the results showed that although romantic partners were increasingly named, parents remained important support figures over both educational transitions into young adulthood. This result is similar to that of Youniss and Smollar (1985), who found that parents remain important figures, especially in career-related issues. However, this is the first longitudinal study to show, using an open-ended question, that adolescents themselves continue to report their parents as their career goal-related supporters way into young adulthood.

The results showed interestingly that the mother was named as a career goal-related supporter clearly more often than the father. This result differs from previous findings, which have suggested that education and work are one of the topics that are discussed in particular with fathers (Shulman & Seiffge-Krenke, 1997; Youniss & Smollar, 1985). This may reflect the fact that Finland has one of the highest divorce rates in Europe (Council of Europe) and thus the sample may differ from the samples used in some earlier studies (e.g. Colarossi & Eccles, 2003; Furman & Buhrmester, 1992). In line with this, the results showed that adolescents who lived in a nuclear family were more likely to name their father as their goal-related tie.

It was also found, as expected, that fathers with higher SES were mentioned more often as the social ties than the other SES categories, (Hickman et al., 1995). However, mothers with blue-collar or lower white-collar occupations were mentioned more often than the other SES categories, which was contrary to expectations. One explanation for this result may be that blue-collar and lower white-collar mothers have more time to spend with their children compared to higher-professional, career pursuing mothers (Luthar, 2008). These results imply that SES may be related to mother's and father's support in different ways.

The results showed further, that adolescents who named their father as their career-related social tie were more likely to enter an academic track after comprehensive education than adolescents who did not name their father. This confirms the finding of Harris, Furstenberg, and Marmer (1998), according to which the father's involvement is important in adolescents' educational achievement, especially in supporting the development of academic confidence and self-efficacy. However, naming the father as a supporter did not have any impact on educational aspirations during the transition from post-comprehensive education to further education or working-life. Thus, the results are in line with those of earlier studies (Hansen, 1997; Schnabel et al., 2002), where parents have been shown to have an impact, in particular, in earlier transitions.

Study IV showed that participants who perceived their parents to be supportive of their career-related goals were more likely to be in the trajectory of high- and increasing success expectations than in the unstable trajectories. This result is in line with the family socialization model (Jacobs & Eccles, 2000), which states that parents' support and encouragement promotes the development of one's control beliefs with regard to achievement tasks. Furthermore, earlier empirical studies have shown that parental support is important for the development of career goal-related self-efficacy (Turner & Lapan, 2002). It is also possible that supportive parents help their children to find a suitable career goal (Dietrich & Kracke, 2009; Young et al., 2008), which is then reflected in high success expectations. However, this is the first study to reveal that those with less parental support tend to show more fluctuation in the development of their success expectations.

4.2.2 Psychological control

The present results (Study II) showed that among both fathers and mothers the use of psychological control, e.g. shaming and guilt induction, was related to the educational aspirations parents had for their children: the higher the parental level of psychological control, the lower the level of parental educational aspirations for their adolescent children. This new finding is important as it shows the implications that negative parenting, such as the use of psychological control, may have for the aspirations parents have for their children, and it indicates that negative parenting attitudes should be taken into account in studies related to parents' role in their children's career development. A possible explanation for this effect is that psychological control reflects a need by parents to exert control over their child's internal world (Barber, 1996). High educational attainment by the child might represent a threat to the parent, as the child learns new skills and acquires new knowledge and thus becomes less dependent on her or his parents.

As was expected, psychological control was used more among the lower SES parents (Aunola et al., 1999).This result is in line with research showing that working in a lower status occupation is related to the use of negative, harsh

parenting as a control mechanism. It has been stated that this may be due to the fact that lower SES is often related to stressful life events or economic hardship which in turn may increase hostility in parents and thus lead to lower quality parenting (Aunola et al., 1999; McLoyd, 1998). However, it may also reflect differences in child rearing values between SES groups. For parents with lower SES it may seem natural to rear their child in a harsher way, because their own life conditions may require a tough stance. As also was expected, among both mothers and fathers, high psychological control was associated with children's low GPA. A similar result has been found in other studies (Aunola & Nurmi, 2004; Barber & Harmon, 2002). The impact of parental psychological control on GPA may be explained by the fact that parental use of psychological control may interfere with their children's school work by causing anxiety and by enhancing maladaptive strategies (Aunola, Stattin, & Nurmi, 2000), which may in turn lead to lower GPA.

The parental socialization model implies that many mediation effects between child's and parents' characteristics should appear. Furthermore, it shows that stable parental characteristics (i.e. SES) and parenting style (i.e. psychological control) may have an impact on parents' child-specific beliefs (i.e. educational aspirations) and that parenting style may also act as a mediator. Mediation effects were tested also in this study. First, psychological control partially mediated the impact of SES on parents' educational aspirations, and second, psychological control partially mediated the association between SES and GPA. These results lend support to the assumption that the impact of parental SES on the child is often mediated by parenting style (Eccles & Wigfield, 2002; Melby et al., 2008). Third, GPA partially mediated the association between parents' psychological control and their educational aspirations for their child. A possible explanation for this mediation process is that parental psychological control may affect adolescents' short-term academic achievement strategies in a negative way, e.g. enhancing task avoidance (Aunola et al., 2000), leading parents to view their children as less competent. Overall, partial support for the suggested mediation effects in the parental socialization model was found. However, the effects were only partial mediations and rather small. The small effects suggest that, in addition to psychological control, it might be fruitful to add other measures of negative parenting into the model.

It was also tested whether parental psychological control had an impact on their adolescents' educational aspirations. As zero-order correlations were examined, a significant association between psychological control and adolescents' educational aspirations was found, but the effect was no longer significant after controlling for SES, GPA and parental educational aspirations. This shows that there is a tendency for parental use of psychological control to be associated with their adolescents' aspirations, but this seems to be mediated by adolescents' GPA and parental educational aspirations and SES. As an additional analysis, it was examined whether the interaction between mother's and father's psychological control would have an impact on their child's aspirations, but no significant effect was found.

It has been suggested that the parenting of mothers and fathers might be different (e.g. Aunola, et al., 1999), and thus, the effects of mothers' and fathers' parenting styles should be studied separately. For example, Aunola and Nurmi (2004) found that mothers' psychological control had a negative impact on their child's performance in mathematics. The results of Study II were strikingly similar among mothers and fathers, suggesting that psychological control is related to parents' educational aspirations for their child in a very similar way. Moreover, it has been found that boys may elicit harsher parenting, because boys tend to show more maladaptive behavior than girls (Aunola et al., 2000). Thus, gender should be taken into account in the analyses, as boys and girls may elicit different parenting behaviors (Aunola et al., 2000; Pomerantz et al., 2005). However, the present results showed no gender differences.

4.2.3 Parents' educational aspirations for their children

The impact of perceived parental educational aspirations was also shown in this research (study III): the higher the perceived educational aspirations of both mothers and fathers, the more likely the participant was to be in trajectories characterized by higher educational expectations, which is in line with many earlier studies (Garg et al., 2002; Neuenschwander et al., 2007; Schoon et al., 2007) and with what is expected in the family socialization model (Jacobs & Eccles, 2000). For example, those who perceived their parents to have higher educational aspirations for them were more likely to be in the stable-university trajectory than stable-vocational trajectory. Similarly, the higher the mother's aspirations, the less likely the adolescent was to be in the stable-polytechnic compared to the stable-university trajectory and the more likely to be in the increasing-expectations trajectory than stable-vocational trajectory. Mother's aspirations played a stronger role than fathers' in the adolescents' expectations, which is line with previous findings (Trusty, 2000).

Expectedly (Garg et al., 2002; Neuenschwander et al., 2007; Schoon & Parsons, 2002; Trusty & Pirtle, 1998), the higher their SES, the more likely the participants were to be in the trajectories of higher educational expectations. Furthermore, participants in the decreasing expectations trajectory were from families with lower SES which accords with previous findings (Alexander et al., 2008; Hanson, 1994; Trusty, 2000). It is noteworthy that although the participants in both the decreasing and stable-vocational trajectories were from families with lower SES, those in the decreasing-expectations trajectory perceived their parents to have higher educational aspirations for them. This may be one of the reasons why the participants in the decreasing-expectations trajectory set themselves higher expectations in the beginning than the participants in the stable-vocational trajectory. In light of these results, the impact of SES eventually had a stronger impact on adolescents' educational expectations than perceived parental educational aspirations. It may be that in lower SES families there is less adequate support and resources available for holding on to one's

academic goals, even where parents aspirations for their offspring are high (Davis-Kean, 2005; Garg et al., 2002; Trusty et al., 1997).

4.3   Non-familial social ties

Study I also showed that non-familial social ties are important agents of co-regulation in career goal pursuit. Peers, especially, form an important group with whom adolescents plan and discuss their career goals. Over 40% of the adolescents named their friend as their career goal-related supporter. Moreover, romantic partners were increasingly named: at the first time point, only 7% named a romantic partner, whereas at time point 5 as many as 43% named a romantic partner as their career goal supporter. This change in social ties testifies to the developmental changes that take place in social relationships during the transition from adolescence to young adulthood (Crosnoe & Johnson, 2011; Furman & Buhrmeister, 1992; Youniss & Smollar, 1985).

Interestingly, the results showed that those who named a romantic partner as their goal-related social tie were more likely to enter vocational education. This might reflect the previous finding that adolescents in vocational education have many adult life-oriented goals (Klaczynski & Reese, 1991), suggesting that, rather than a long educational career, they might be more interested in starting a family and going to work earlier than adolescents aiming at entry to an academic track. Furthermore, it has been found previously that having a romantic relationship in adolescence can lower one's educational aspirations, as this relationship may become more important than high educational aspirations (Crissey, 2006). This is an important and new finding, as romantic relationships and their impact are often neglected in the study of adolescent development (Smetana et al., 2006) and especially with regard to career development.

As was expected, teachers, guidance counsellors and other authorities were seldom named as social ties (Malmberg, 1996). However, we found that those who named a teacher or other authority figure were more likely to enter a vocational than academic track. This result might reflect the fact that in Finland vocational schools offer a choice of occupational lines, which may mean more complex decision making and therefore a greater need of support compared to entering a senior secondary school (academic track). Alternatively, as found in earlier studies, those with lower academic achievement generally need more support, and thus turn to their teachers (Kenny et al., 2002; Morrison et al., 1997).

4.4 Individual characteristics

Overall, individual characteristics, especially GPA and gender, had a significant impact on adolescents' career goals. Thus, the process of individual agency in career goal pursuit is notable also in adolescents' career goal pursuit.

4.4.1 Gender

In terms of career goal-related social ties, as hypothesized, girls more often than boys named peers, both friends and romantic partners as their career goal-related social tie (Study I) (Colarossi & Eccles, 2003; Malmberg, 1996). In the family context, boys named their fathers clearly more often than girls. These results suggest that boys and girls seem to plan their future and make their educational choices in different social contexts. Moreover, girls named more supporters overall than boys, which suggests that the process of co-agency and co-regulation in career goal pursuit is more heightened among girls than boys.

In trajectories of educational expectations (Study III) it was assumed that girls would be more likely to be in the trajectories of higher educational expectations than boys; however, gender did not play as strong a role as expected. However, additional analyses showed that while girls were more likely to be in the higher than lower trajectories of educational expectations, this effect seemed to be mediated by GPA. Thus, our results suggest that girls have a higher level of academic achievement at the end of comprehensive school, and that this may lead them to set higher educational expectations for themselves. Higher academic achievement in girls has been shown in previous studies (Schoon et al., 2007; Steinmayr & Spinath, 2008).

With regard to career goal-related success expectations it was found that boys were more likely to be in the high-increasing, "normative" group than in the low-increasing or U-shaped group. It was surprising that more girls than boys were in the low-increasing, "late starters" group, as girls generally tend to be more motivated and do better in school during adolescence (Schoon et al., 2007), as has also been found in the FinEdu data (Study III). However, this phenomenon may be related to self-esteem, which is highly related to self-efficacy (Judge, Erez, Bono, & Thoresen, 2002). It has been shown that girls tend to experience a stronger dip in psychological well-being, e.g. self-esteem, than boys during adolescence (Donnellan, Trzeniewski, & Robins, 2006). Furthermore, Baldwin and Hoffman (2002) reported more fluctuations in girls' self-esteem due to stressors in life during adolescence. Thus, girls may be more sensitive to possible setbacks that they counter during the major educational transitions, which may be reflected by the proportion of girls in the U-shaped group. This result is important, as it suggests that girls are more likely to experience fluctuations in the development of their career goal-related success expectations than boys, despite their higher level of academic achievement.

4.4.2 Academic achievement

GPA played a role in whom adolescents named as their career goal-related social tie. Adolescents with a high GPA named their mother more often compared to those with low GPA. These results are in line with the findings of many earlier studies (Spera, 2005; Wenzel, 1998), showing that parents whose children have a high GPA often have high educational expectations for them and a positive attitude towards school, and thus may be more likely to support their children's educational goals and plans.

The results on GPA and trajectories of educational expectations and trajectories of career goal-related success expectations were in line with those of previous work on academic abilities and educational expectations (Garg et al., 2002), that is, higher GPA was related to a trajectory of more demanding educational expectations and high-increasing career goal-related success expectations (Wigfield et al., 2009). Thus, high academic achievement tends to support the development of confidence in one's abilities in tackling career-related goals, whereas those with low academic achievement tend to have lower educational expectations and are more prone to fluctuations in their career goal-related success expectations.

In educational expectations, GPA separated the stable-university and stable-vocational trajectories most sharply from the other trajectories. Intermediate GPA thus seemed to be related to the polytechnic expectation. These results are consistent with the Finnish education system, as a polytechnic is considered to be academically less demanding than a university, but more demanding than a vocational school. The differences in GPA may also explain why the participants in the decreasing-expectations trajectory gave up their expectations of achieving a university-degree, as they may not have been as academically inclined as the participants in the stable-university trajectory. GPA may also explain why the participants in the increasing-expectations trajectory postponed their decision on post-upper secondary education, as it may be more difficult to define one's abilities on the basis of one's intermediate academic achievement.

4.4.3 Ability beliefs and goal importance

In terms of trajectories of educational expectations, the results showed that those with higher ability beliefs were more likely to have stable and high educational expectations than the participants with lower ability beliefs. Thus, it seems that differences in ability beliefs may be one factor explaining the instability in educational expectations, which is also in line with the expectancy-value theory (Wigfield et al., 2009). For example, there were participants in the decreasing-expectations trajectory who had aimed for university at the outset of the study, but who it seems, even at that point, did not really believe in their ability to achieve that goal, which may have led them subsequently to lower their educational expectations (Eccles & Wigfield, 2000). These results also support the results on GPA: the participants in the unstable trajectories had mid-

dling GPA; this in turn may have led them to be uncertain of what they are capable of achieving.

When the extent to which ability beliefs changed between Time 2 and Time 3 was examined, it was found that the ability beliefs of the participants in the decreasing trajectory had increased, while at the same time they had lowered their educational expectations. It appears that the participants in the decreasing-expectations trajectory may have aimed for qualifications that were academically too demanding for them at the end of comprehensive school, but when they found that they lacked the ability to realize their expectations, they changed their expectation in an academically less demanding direction. This also increased their belief in their ability to achieve their expectation. Thus, it seems that for these participants, the process of disengagement was an adaptive process.

In terms of goal importance and career goal-related success expectations, the results showed (Study IV), that those young people who had placed higher importance on their career goal at age 16 were more likely to be in high-increasing than decreasing expectations group. This result suggests that the trouble the participants' in the decreasing group experienced during upper secondary education may have been partly due to lack of interest and engagement, leading eventually to decreases in success expectations. Moreover, those with higher goal importance were more likely to be in the high-increasing or U-shaped group than in the low-increasing groups. This may be due to the fact that at Time 1, when goal importance was measured, those in the low-increasing group had very low success expectations, whereas those in the high-increasing group and U-shaped group had high success expectations. The levels of success expectations and goal importance tend to be related (Wigfield et al., 2009). This result also lends support to the assumption, that those in the low-increasing group are "late starters", since they did not place high importance on their career goals at the end of comprehensive school, and thus at that point may not have been very engaged with their career goal or not as yet found the right career goal. Goal importance did not play a role in the trajectories of educational expectations.

4.5 Adolescents' career goals in the Finnish context

In light of this research, most Finnish adolescents' have high educational expectations and high career goal-related success expectations, and most also seem to be holding on to their career goals.

With regard to educational expectations, it was shown in Study III that a majority (72%) aimed for a university of a polytechnic degree at the age of 20 to 21. This shows that education was highly valued in Finland at the time of the Study (2011). However, in 2009, only 33% of 25- to 34-year-olds in Finland had actually received a tertiary level education, which indicates that it is likely that many participants in this study will give up on their expectations later. This

raises a concern whether young adults in Finland today are possibly over-ambitious, as it is likely that not everyone will realize their expectations. Similar concerns have been expressed in studies concerning the US (e.g. Reynolds, Stewart, MacDonald, & Sischo, 2006). Reynolds et al. (2006) argue that even though high expectations are often related to high achievements, unrealistic expectations may in the end lead to a cut-down of motivation and cause distress and disappointment, which may be harmful for one's career development. Here too (Study III), it was shown that lowering one's educational expectations may sometimes be adaptive, as at the same time an increase in one's ability beliefs was detected.

High educational expectations may be related to the economic situation in Finland, as unemployment among young people has been the highest in Finland of all the EU countries during 2000. Unemployment fell to 17% between 2004 and 2007, but thereafter increased significantly due to the economic recession, and had risen to 21.5 % in 2010 (Central statistical office of Finland, 2010). The uncertainty in the employment situation may thus turn young people to studying, as it may seem as a way to ensure employment in the future and educational institutions may also serve as a storage or waiting room for unemployed school leavers (Kivinen, Hedman, & Kaipainen, 1997). Unemployment is related to the motivational development of young people, as was also shown in this study, where those who were unemployed at age 23 had also experienced a strong decline in their career goal-related success expectations.

The results support earlier findings (Alexander et al., 2008; Eccles, 2008; Janosz et al., 2008; Neuenschwander & Garrett, 2008; Trusty, 2000) that stability in educational expectations seems to be the norm in flexible education systems, such as exist in Finland and the US, as well in countries like Switzerland or Germany, where educational tracks are decided very early and are not very easy to change later on. This may reflect two things. First, even in countries where separate tracks are implemented rather late, at age 15 to 16, adolescents have formed their academic self-concept by the end of comprehensive education, and thus know quite well the level of education that is suitable for them. Second, it may be that once one has entered an educational track, usually academic or vocational, further career expectations are based on a culturally normative career pathway. For example, although it is possible to apply for university after vocational school, it is very rare, as this means changing one's main track from vocational to academic. Thus, although academic abilities are likely to play a significant role, the channeling already exerted by the culturally defined educational system is also likely to guide expectations.

Adolescents' academic achievement played a prominent role in career choices in Finland. This indicates that abilities are a major determinant in adolescents' career pathways in Finland. However, it should be kept in mind that those from higher SES and more supportive families typically also had higher academic achievement (Garg et al., 2002; Schoon & Parsons, 2002). Thus, academic achievement does not reflect genetically determined abilities alone, but also the environment in which one has been brought up. This may be one of the

reasons why in Finland educational and occupational status continues to be transferred from generation to generation (Kivinen et al., 2007) despite the fact that in Finland educational opportunities are very equal and in principle everyone with adequate abilities should be able to attain the kind of career they aspire to.

4.6 Practical implications

The results of the present research have some practical implications. The results revealed longitudinal information on the role of social context for adolescents' career goals as they moved from adolescence to young adulthood. The results showed that career goals are discussed mainly with strong ties, such as parents, friends and romantic partners, whereas, for example, teachers and guidance counselors are rarely mentioned. The role of parents as career-related supporters remains very strong also in young adulthood. This information is useful for guidance counselors and those planning interventions on adolescents' career choices. These results suggest that since adolescents view their parents as their key allies in matters pertaining to their career goals, parents should be given the support and information they need to help their children make their career choices. Parents may not have enough knowledge in fields other than their own, and thus collaboration among parents, guidance counselors and adolescents would be beneficial. The results showed, further, that having supportive parents is beneficial for the development of career goal-related success expectations. Thus, parents should be encouraged to explicitly show their support of adolescents' career goal pursuit.

While support and positive interaction may help to advance adolescents' career plans, it should also be understood that guilt-inducing parenting, i.e. psychological control, in turn can have a negative impact on adolescents' educational aspirations via their academic achievement and parental educational aspirations. The use of psychological control is more prevalent among parents with lower SES, and in light of our results it partially mediates the impact of low SES on both the child's academic achievement and the parents' educational aspirations for the child. This may help to understand why adolescents in lower SES families tend to aim for lower educational credentials. This has implication for clinicians working with families. Guilt-inducing parenting may have far-reaching consequences, not just in terms of well-being, but in terms of children's future careers and future economic status. This may also help guidance counselors to better understand the reasons why children from less privileged backgrounds may do less well in school and hold lower educational aspirations.

This research indicates that the different trajectories of educational expectations are mostly rather stable from the end of comprehensive school on into young adulthood. Moreover, the trajectories of educational expectations clearly reflect the division between a vocational and an academic orientation, and also that the majority aimed for a tertiary-level education. One group of adolescents was identified who reduced their expectations. These students seemed to have

set their expectations too high in the beginning, and consequently for them lowering their educational aspirations seemed to be a good adjustment. However, it is likely that many more will have to adjust their expectations later on. This suggests that it is important for the system to be permeable enough to adapt to students changing interests without leading to problems of low person-environment fit or dropping out of the career pathway altogether (Neuenschwander & Garret, 2008). Furthermore, it would be important to pay attention to unrealistic expectations already in comprehensive education, as setting one's expectations too high may lead to a drop in motivation and well-being when these expectations are not realized.

The results suggest that transitions points are crucial in the development of adolescents' career goal-related success expectations. A group of participants was detected whose success expectations fell during the transition from comprehensive education to upper secondary school. In another group, success expectations increased during the transition to upper secondary school, but at the transition to further studies or working-life there was a significant decrease. Thus, enhanced career-related support should be offered during these important transitions, especially to those from more disadvantaged backgrounds.

4.7 Limitations

The findings of the present studies are subject to several limitations. Despite good participation rates, there was some attrition in the data set, especially among boys and those with lower academic achievement. Moreover, in comparison with the national statistics, the data are not representative of those who had wholly dropped out of education after comprehensive school. Thus, it seems that the participants who had more difficulty succeeding at school and setting and achieving their career-goals are the same adolescents who dropped out of this data collection. Also, among the participating parents, those of nuclear families, with higher SES, and with children who had a higher GPA were overrepresented in the study on parental psychological control.This bias in the data set should be kept in mind when interpreting and generalizing the results.

The present study was carried out in Finland, and thus one has to be cautious in generalizing the results to other education and career contexts. For example, in contrast to many middle-European school systems, in Finland all adolescents receive the same basic education up to age 16, and it is only at this point that different educational trajectories start to emerge. Similarly, Finland lacks a broad apprenticeship system, which is an essential part of the educational system in many other European countries. Finally, in contrast to many other countries, all education in Finland is state-provided and tuition is free, and therefore the possibility to access higher education has been ranked as the most equal in the world (Usher & Medow, 2010).

The measures used in the present research were based on self-reports. Although it can be assumed that subjective experience is particularly important

in the case of internal constructs like motivation, e.g. reporting career-goals, self-reports are not always the most valid and reliable method of data collection (Shaffer, 2002). For example, the goal-related social ties reported by adolescents are likely to be affected by cognitive errors, such as memory bias and priming effects. In addition, participants may have interpreted some of the questions differently and their answers may have been affected by the need to give a good impression (Freeman, Romney, & Freeman, 1987).

Despite the longitudinal data sets used here, firm causal conclusions regarding the results cannot be drawn. It is likely that there are a number of intervening variables that have not been captured in this study. Also, it was not possible to consider possible reciprocal processes. For example, parental career-related support is likely to be part of a reciprocal process between parents and adolescents in which adolescents who are active in exploring their career choices actively seek support from their parents (Dietrich, Kracke, & Nurmi, 2011). As the time from adolescence to young adulthood is one of many changes, an even more intensive data set would be required to fully capture the changes and reciprocal processes that take place between parents and adolescents during this period. Moreover, Study II, in which the data were parental self-reports, was cross-sectional, as no longitudinal data on parents was available.

Despite its advantages, the person-oriented approach has some limitations. It has been argued that the statistical methods used in this study (GMM, LCA) tend to extract multiple trajectory classes even when there is no real underlying taxonomic structure (Sterba & Bauer, 2010). This means that theoretical assumptions of the models should be always kept in mind, and common sense applied, when interpreting their results. Moreover, the fact that the class memberships detected are always based on the most likely class memberships should be taken into account when examining the differences between the extracted classes.

With respect to social support, more varied measures, such as differentiating between emotional support and informational support, would have been beneficial (Taylor, 2011). It is possible that different support providers differ in the kinds of support they deliver, and therefore have different meanings for the adolescent.

4.8 Future directions

The findings of the present research also open up new avenues for future research. Despite the existing literature on the impact of parents on adolescents' career goals and educational expectations, the reciprocal processes, e.g. co-regulation between parents and adolescents and parents and young adults, are not very well known (Dietrich et al., 2011). More research has been reported on this topic concerning younger children, but for adolescents such research is lacking. Thus more intensive longitudinal studies are needed to examine the reciprocal processes that operate between parents and adolescents in career goal pursuit.

This research showed the role of non-familial people in adolescents' career goals. Thus, potentially a wide network of people should be considered when analyzing career goals in social context. For example, this study showed that having a romantic partner as one's career goal-related social tie was related to entry into vocational education. The mechanisms behind this result should be examined more closely in further studies.

The transition from comprehensive school to upper secondary school and later to further studies or working-life is a very mixed time period. As this research showed, many developmental patterns, both linear and non-linear, are possible during this transition. Thus, despite its limitations, the use of a person-oriented perspective should also be considered in future studies examining adolescents' development. Furthermore, most of the changes that appeared in the adolescents' expectations of success in attaining their career-related goals took place either during the transition from comprehensive school to upper secondary school or during the transition from upper secondary school to further studies or working-life. This result underscores the need for longitudinal studies which follow young people across their educational transitions as critical turning points for motivational development.

This was the first study to show that negative parenting behaviors, i.e. psychological control, was related to parental educational aspirations for their child. In future studies, more attention should be paid to the impact negative parenting styles may have on parents' beliefs concerning their child's achievement.

4.9 Conclusion

The present research examined adolescents' career-related goals in social context during the transition from comprehensive school to further studies or working-life. The life-span model of motivation (Nurmi, 2004; Salmela-Aro, 2009) and expectancy-value theory (Eccles et al., 1983; Jacobs & Eccles, 2000; Wigfield et al., 2009) formed the theoretical framework for the research, one aim of which was to integrate the postulates of the two theoretical models. The main results of the studies comprising this research are summarized in Figure 2 below.
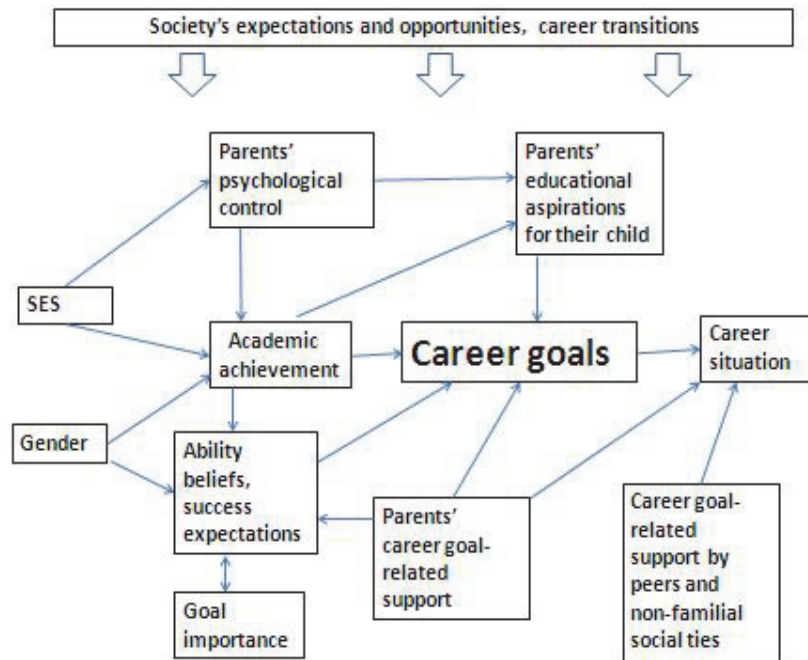
FIGURE 2   Adolescents' career goals in social context: A summary of the investigated con-
            structs and main results.

Both the life-span model of motivation (Nurmi, 2004; Salmela-Aro, 2009) and
expectancy-value theory (Eccles et al., 1983; Jacobs & Eccles, 2000; Wigfield et
al., 2009) helped to understand adolescents' pursuit of their career goals.
Whereas the life-span model of motivation takes a more general perspective
and emphasizes the role of developmental transitions, co-regulation and cultur-
al context in goal pursuit, the expectancy-value theory more explicitly reveals
the interplay between the adolescent's individual characteristics, family context
and choice of career-related goals. The results of this research showed support
for all of the four processes suggested by the life-span model of motivation: co-
regulation, choice, channeling and compensation (Nurmi, 2004; Salmela-Aro,
2009), and also for many of the associations suggested by the expectancy-value
theory and the parental socialization model. First, parents were important fig-
ures of co-regulation (Salmela-Aro, 2009) and socialization agents (Jacobs & Ec-
cles, 2000) in adolescents' and young adults' career development. Both structur-
al factors, such as parents' SES, and psychological characters, such as parenting
style, parents' aspirations and career-related support, played an important role.
Parents' career-related support enhanced participants' career goal-related suc-
cess expectations, whereas parents' use of psychological control was related to
parents' lower educational aspirations for their adolescent. Moreover, high psy-
chological control was related to lower child academic achievement. Those with

parents of high SES set higher educational expectations and had higher levels of career goal-related success expectations. In addition, those who perceived their parents to have higher educational expectations for them set themselves more demanding educational expectations. Naming the father as one's career goal-related supporter was related to entry onto an academic track. The results showed that also peers and other social ties may be important figures in co-regulation, as naming a boy- or girlfriend or guidance counselor was related to entry onto a vocational track after comprehensive school.

Many individual factors had an impact on the process of career goal pursuit, supporting both the role of choice in life-span model of motivation (Nurmi, 2004, Salmela-Aro, 2009) and the assumptions in the expectancy-value theory (Eccles et al., 1983; Jacobs & Eccles, 2000; Wigfield et al., 2009). Academic achievement was an important determinant in young people's career goals and their career situation later on. However, success expectations and ability beliefs were also important factors. Those with higher ability beliefs were more likely to have stable and high educational expectations than those with lower ability beliefs. Again, those who experienced a decrease in their success expectations during the transition to young adulthood were more likely to be unemployed at age 23 than participants with high and stable success expectations. Gender also played a role, as girls had higher academic achievement but also experienced more fluctuations in their career goal-related success expectations than boys.

As suggested by the life-span model of motivation (Nurmi, 2004, Salmela-Aro, 2009), the culturally defined career pathways indicated by the Finnish educational system channeled the trajectories of adolescents' educational expectations. Those who entered an academic track after comprehensive school were more likely to aim for tertiary level education later on, whereas those who entered a vocational track were more likely to continue into working-life or aim for other vocational qualification. Also, processes of compensation and disengagement were detected, as some adolescents' changed their educational expectations over the years. Participants in the decreasing-expectations trajectory disengaged from their initial educational expectation and replaced it with an academically less demanding goal, which, in their case, seemed to be a good adjustment for them. In another non-stable trajectory, the adolescents increased their educational expectations, mainly from general upper secondary school to polytechnic.

The research showed that person-oriented methods are useful in examining adolescent development, as different developmental trajectories may be discovered. The person-oriented method was used in two of the present studies, and in both of these studies small sub-groups were identified, in which the development was not found not to be stable but shifted over the years. These shifts were related to personal factors, such as GPA, although contextual factors such as support from parents also played a role. Moreover, the shifts in development were related to the educational transitions that the adolescents were experiencing, which indicates that these transitions may be critical turning points for motivational development.

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TIIVISTELMÄ

Nuorten uratavoitteet sosiaalisessa kontekstissa

Tämän tutkimuksen tavoitteena oli tutkia nuorten työhön ja opiskeluun liittyviä tavoitteita heidän siirtyessään peruskoulusta toisen asteen koulutukseen ja edelleen työelämään ja jatko-opintoihin. Tutkimuksen teoreettisena viitekehyksenä käytettiin kehitystehtävien saavuttamista mallintavaa teoriaa (Nurmi, 2004; Salmela-Aro, 2009) ja odotusarvoteoriaa (Eccles ym., 1983; Wigfield ym., 2009).

Tutkimus toteutettiin kyselylomaketutkimuksena ja se perustui kahteen aineistoon. Ensimmäisen otoksen aineisto (n = 858), joka oli tutkimuksen ensisijaisena kohteena, oli peräisin FinEdu (Finnish Educational Transitions) -pitkittäistutkimuksesta (Salmela-Aro ym., 2003). Toisen otoksen aineisto oli peräisin Kohti työelämää -tutkimusprojektista (n = 1034) ja tutkimuksen ensisijaisena kohteena oli vanhempien aineisto ($n_{äidit}$ = 720, $n_{isät}$ = 542) (Vuori ym., 2008). Kyselylomakkeet sisälsivät osioita liittyen nuorten opinto- ja työtavoitteisiin, sosiaaliseen tukeen, vanhemmuuteen, sosiaaliseen taustaan, motivaatioon ja koulumenestykseen.

Ensimmäisessä osatutkimuksessa kartoitettiin, keitä nuoret nimesivät uratavoitteisiin liittyviksi tukijoikseen, missä määrin nuorten taustatekijät olivat yhteydessä tukijoiden nimeämiseen ja missä määrin tukijat olivat yhteydessä nuorten peruskoulun jälkeisiin opintovalintoihin. *Toisen osatutkimuksen* tavoitteena oli tarkastella vanhempien käyttämän psykologisen kontrollin yhteyttä heidän nuorta koskeviin opintotoiveisiinsa. Lisäksi tutkittiin psykologisen kontrollin yhteyttä vanhempien sosioekonomiseen asemaan ja nuoren koulumenestykseen. *Kolmannessa osatutkimuksessa* tutkittiin, minkälaisia kehityspolkuja oli löydettävissä nuorten opintotoiveista siirryttäessä peruskoulusta toisen asteen opintoihin ja edelleen työelämään ja jatko-opintoihin. Myös kehityspolkuihin liittyvät taustatekijät ja yhteydet todelliseen opintotilanteeseen olivat kiinnostuksen kohteena. Vastaavat siirtymät olivat myös *neljännen osatutkimuksen* kohteena, jossa tutkittiin nuorten uratavoitteisiin liittyvän pystyvyydentunteen kehitystä ja kehityspolkuja. Tutkimuksessa tarkasteltiin myös kehityspolkuihin liittyviä taustatekijöitä ja tutkittavien työ- ja opiskelutilannetta 23 vuoden iässä.

Tulosten perusteella näyttää siltä, että vanhemmat ovat merkittävässä roolissa nuorten opinto- ja työtavoitteiden asettamisessa. Ensinnäkin, valtaosa nuorista nimesi vanhemmat uratavoitteisiin liittyviksi tukijoikseen sekä peruskoulun lopussa että myös varhaisaikuisuudessa, kun nuoret olivat siirtyneet jatko-opintoihin ja työelämään. Isän nimeäminen tukijaksi oli yhteydessä lukiokoulutukseen peruskoulun jälkeen. Toiseksi, nuoret, jotka kokivat saavansa vanhemmiltaan tukea uravalinnoissaan, uskoivat uratavoitteidensa saavuttamiseen enemmän kuin vähemmän tukea saaneet. Kolmanneksi, nuoret, jotka kokivat vanhempiensa toivovan heidän menevän lukiokoulutukseen peruskoulun jälkeen, asettivat todennäköisemmin haastavampia opintotoiveita itselleen. Neljänneksi, vanhemmat, joiden kasvatukselle oli ominaista psykologisen kontrol-

lin käyttö, johon liittyy esimerkiksi syyllistämisen käyttö kasvatuskeinona, raportoivat matalampia opintotoiveita lapsensa suhteen. Psykologisen kontrollin käyttö oli yleisempää matalamman sosioekonomisen taustan omaavilla vanhemmilla. Edelleen korkea psykologinen kontrolli oli yhteydessä nuoren heikompaan koulumenestykseen.

Tulokset osoittivat, että myös muut sosiaaliset suhteet voivat olla merkittäviä nuorten opintotavoitteiden kannalta. Nuoret, jotka nimesivät tyttö- tai poikaystävän tai opinto-ohjaajan tai opettajan uratavoitteensa tukijaksi peruskoulun lopussa, menivät todennäköisemmin ammatilliseen koulutukseen peruskoulun jälkeen.

Nuorten opintotoiveissa ja pystyvyydentunteen kehityksessä oli löydettävissä erilaisia kehityspolkuja siirryttäessä peruskoulusta toisen asteen opintoihin ja edelleen työelämään ja jatko-opintoihin. Valtaosa piti kiinni opintotoiveestaan ja koki uratavoitteeseen liittyvän pystyvyydentunteen korkeaksi, ja pystyvyydentunne myös vahvistui siirtymien aikana. Kuitenkin sekä opintotoiveiden että pystyvyydentunteen suhteen oli löydettävissä ryhmiä, joissa opintotoiveet tai pystyvyydentunne laski tai nousi siirtymän aikana. Pystyvyydentunteen kehityksestä löytyi myös ryhmä, jossa pystyvyydentunne laski voimakkaasti siirryttäessä peruskoulusta toisen asteen koulutukseen, mutta nousi taas seuraavan siirtymän aikana.

Nuoret, joilla oli parempi koulumenestys ja joiden vanhemmilla oli korkeampi sosioekonominen asema, asettivat haastavampia opintotoiveita ja uskoivat enemmän uratavoitteidensa saavuttamiseen. Tytöt menestyivät poikia paremmin koulussa, mutta poikiin verrattuna heidän uratavoitteeseen liittyvä pystyvyydentunteensa oli alttiimpi heilahteluille. Nuorten usko omiin kykyihin ennusti opintotoiveista kiinnipitämistä, ja mitä tärkeämmäksi uratavoite koettiin, sitä enemmän uratavoitteen saavuttamiseen uskottiin.

Yhteenvetona voidaan todeta, että vanhemmat vaikuttavat nuorten uratavoitteisiin monella tapaa. Kuitenkin myös muilla sosiaalisilla siteillä on merkitystä. Nuoren koulumenestys on merkittävä tekijä uratavoitteiden asettamisessa, mutta myös kykyuskomuksilla ja pystyvyydentunteella on merkitystä. Suurimmalla osalla nuorista opintotoiveet näyttävät pysyvän samoina ja uratavoitteeseen liittyvä pystyvyydentunne on korkea ja vahvistuu siirryttäessä toisen asteen opintoihin ja eteenpäin työelämään ja jatko-opintoihin.

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