Student Disengagement and School Dropout: Parenting Practices as Context

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Dissertation submitted in partial fulfilment of a Ph.D.-degree
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Student Disengagement and School Dropout: Parenting Practices as Context

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Ágrip

Skuldbinding nemenda til náms og brotthvarf úr framhaldsskóla: Þáttur uppeldisaðferða foreldra

Í ljósi aukinnar áherslu á menntun í samfélaginu eru þau ungmenni sem ekki ljúka framhaldsskóla að mörgu leyti vegg stödd nú en áður fyrr. Rannsóknir benda til þess að brotthvarf hafi svipaðar neikvæðar afleiðingar í mismunandi löndum bæði fyrir einkakringar og samfélagið. Ungt fólk sem hverfur frá námi á að jafnaði minni möguleika á vinnumarkaði, fær vegg launum störf, á frekar á hættu að vera atvinnulaust og tekur minni þátt í símenntun (e.g., Belfield og Levin, 2007; DG EAC 2005; OECD 2001; Rumberger og Lamb 2003). Í ljósi þess hve miklu máli skiptir fyrir framtíð ungmenna að ljúka framhaldsskóla má segja að ákvörðun þeirra um hvort þau hverfr í eða ljúki námi sé eitt af stærstu þroskaverkefnum þessa aldurskeiðs.


Meginmarkmið þessarar doktorsritgerðar er að auka þekkingu og skilning á brotthvarfi frá námi. Ritgerðin er samsett af visindagreininum (180 ECTS) þar sem greint er frá langtimarannsókn á brotthvarfi íslenskra ungmenna frá námi út frá tveimur sjónarhornum: Annars vegar með hlíðsjón af kenningum um brotthvarf þar sem lykilugtakið er skuldbinding til náms og skóla. Litið er að brotthvarf frá

Nánar tiltekið eru markmið doktorsritgerðarinnar eftirfarandi: Í fyrsta lagi að kanna (a) hvernig hegðunarleg og tilfinningaleg skuldbinding nemenda við 14 ára aldur og (b) hvernig hún þróast frá 14 til 15 ára aldurs tengist námsstöðu þeirra við 22 ára aldur (útskrift/brotthvarf). Tillit er tekið til margbreytileika nemendahópsins. Sjönum er sérstaklegra beint annars vegar að nemendum sem voru í hættu að hverfa frá námi vegna slaks námsárangurs en útskrifuðust þrátt fyrir það og hins vegar nemendum sem síðu góðan námsárangur en hættu námi þvert á það sem vænta mátti. Í öðru lagi er kannað hvernig uppeldi foreldra, bæði með tilliti til uppeldisaðferða foreldra og þátttöku þeirra í skólagöngu barnsins á unglingsárum, tengist námsstöðu ungmennanna við 22 ára aldur. Í þriðja lagi er kannað hvernig leiðandi uppeldi foreldra við 14 ára aldur ungmnennanna hefur áhrif á námsstöðu við 22 ára aldur í gegnum skuldbindingu nemenda á unglingsárum.

Fraðilegt framlag doktorsverkefnisins er þýðingarmikið. Í fyrsta lagi er ungmnennunum fylgt eftir yfir átta ára tímbil sem er óvenju langt tímbil í rannsóknunum á tengslum félagsmótonar og brotthvarfs frá námi. Langtímsniðið gerir kleift að álykta með töluverðri vissu um að uppeldisaðferðir foreldra við 14 ára aldur ungmenna segi fyrir um hvort þau hafi lokið framhaldsskóla við 22 ára aldur. Í öðru lagi er nýmæli að kannað sé hvernig ólík námsframvinda nemenda í framhaldsskóla tengist skuldbindingu þeirra til náms og skóla við lok grunnskóla. Athyglíinni er sérstaklega beint að þeim nemendum sem sýna óvænta námsframvindu miðað við fyrra námsgengi, sem er sjálfgæft í rannsóknunum á brotthvarfi frá námi. Pessi nálgu gefur mikilvæga innsýn í mögulegar ástæður þrautseigjú þeirra nemenda sem standa illa að vигi námslega og þess hvaðaði sköðu nemenda sem eru sterkir námslega en hættu engu að síður í námi. Í þriðja lagi er bæði hegðunarleg og tilfinningaleg skuldbinding nemenda til náms og skóla könnuð og hvernig skuldbinding þeirra þróast yfir tíma við lok grunnskólan í tengslum við mismunandi námsframvindu í framhaldsskóla. Flestar rannsóknir á brotthvarfi frá námi kanna einungis hegðunarlega skuldbindingu og á einum tímapunkti.

Í fjórða lagi veitti nánari athugin á því hvernig uppeldisaðferðir foreldra t ænst brotthvarfi úr framhaldsskóla mikilvæga innsýn í hvað það er í


Önnur meginniðurstaða rannsóknarinnar er sú að unglingar sem við 14 ára aldur töldu sig búu við leidandi uppeldi (mikinn stuðning og jákvæða hegðunarstjórn) voru líklegri til að hafa lokióframhaldsskóla 22 ára samanbóð við unglinga skipandi, eftirlátra og afskiptalausra foreldra. Athyglisvert er að framangreindar niðurstöður komu fram að teknu tilliti til kynferðis og skapgerðar nemenda, félags- og efnahagslegar stöðu foreldra og þátttöku þeirra í skólagong barnsins. Þar að auki syndu niðurstöðurnar að unglingar leidandi foreldra voru líklegri til að hafa lokióframhaldsskóla 22 ára en þeir sem komu frá skipandi og afskiptalausum fjölskyldum þrátt fyrir að tekið væri tillit til fyrrí námsrárangurs ungmennanna sem er sá einstaki þátttur sem sterkast spár fyrir um brotthvarf.
Þriðja meginniðurstaðan er að uppeldisleg samskipti foreldra og unglinga spáði mun sterkar fyrir um hvort þeir útskrifuðust eða hurfu frá námi í framhaldsskóla heldur en þátttaka foreldra sem tengdist beint skólagöngu barnsins. Eftir því sem foreldrarnir notuðu meira leiðandi aðferðir við uppeldið (þ.e. stuðningur, jákvæð hegðunarstjórn og viðurkenning) á unglingsárum því líklegra var að umgenninnin hefðu lokiðframhaldsskóla við 22 ára aldur. Fjórða meginniðurstaðan er sú að skuldbinding nemenda á unglingsárum virðist spila lykilhlutverk í að skýra þessi tengsl á milli uppeldis foreldra og námsstöðu ungmenna. Fram kom að eftir því sem foreldrarnir voru meira leiðandi því skuldbundnari námi og skóla voru unglingarnir og jafnframset líklegri til að hafa lokið námi 22 ára.

Meginályktanir sem draga má af þessum niðurstöðum eru að samskipti foreldra og unglinga sem einkennast af leiðandi uppeldisaðferðum virðast draga úr þeirri almennu þróun að skuldbinding dvíni á unglingsárum sem eykur líkur á brotthvarfi. Á þessum árum sem einkennast af sálfélagslegum og liksamlegum breytingum, staða ungmennin frammi fyrir mikilvægum ákvöðunum er líta að menntun þeirra; val á námi og skóla á nýju skólastigli. Á sama tíma aukast námskröfurnar, og skólaummerfið verður flóknara og oft ópersónulegra (Eccles o.fl., 1993; Wang og Holcombe, 2010). Samskipti foreldra og barna sem einkennast af tilfinningalegum stuðningi og gagnkvæmri virðingu, þar sem foreldrarnir sína börnum sínum sínum viðurkenningu, setja þeim mörk með útskyringum og hvetja þau til að hugsa sjálfstætt, geta auðveldað umgennunum að takast á við þessar áskoranir með því að yta undir jákvæða skólahegðun og tilfinningar í garð náms og skóla. Á þessum mikilvæga tímapunkti í sildustu bekkjum grunnskólans geta tilfinningar nemenda í garð náms og skóla og hegðun þeirra þar ásamt því hverning skuldbinding þeirra þróast frá 14 til 15 ára aldurs skipt sköpum fyrir skólagöngu þeirra.

Draga má þá ályktun að til að auka skilning á þeim áhrifum sem foreldrar hafa á menntun barna sinna sé mikilvægara að beina athyglínni að uppeldis-aðferðum foreldranna í stað afmarkaðri þattra sem tengjast beint skólagöngu. Þar að auki benda niðurstöðurnar til þess að áhrif þátttöku foreldra í skólagöngu barna sinna fari eftir því hvað einkenni uppeldisleg samskipti þeirra og barnsins. Þessar niðurstöður ættu að vera foreldrum hvatning og veita þeim leiðsögn í þeirra þýðingarmikla hlutverki að styðja börn sín til að ná árangri í námi á unglingsárum. Þar að auki ættu þær að auka skilning kennara, náms- og starfsráðgjafa, skólastjórnanda og stefnumótunaraðila í menntamálum á mikilvægi þess að styðja við nemendur sem fá líttinn stuðning heima fyrir.
Summary

In our modern knowledge-based societies, with mass education and increasing reliance on highly skilled labor, young people who do not complete upper secondary education face more disadvantage than ever before. Findings from various western countries indicate that those who drop out of school are at risk of similar negative economic and psychosocial consequences, such as poorer prospects in the labor market and less participation in lifelong learning (e.g., Belfield & Levin, 2007; DG EAC 2005; OECD 2001; Rumberger and Lamb 2003). These negative personal and societal costs indicate that the adolescent decision on whether to drop out or persist within the formal school system can be described as one of the most crucial developmental tasks of this age period.

In recent years the problem of school dropout has received increased attention. The Council of the European Union (2004) proposed a common benchmark for the member states: by the year 2010, the early school leaving rate should be no more than 10%. This aim was not achieved but the benchmark has been extended by the Europe 2020 agenda. In the United States this problem has also been addressed nationally as one of the National Educational Goals adopted in 1990. In the federal reform plan, the No Child Left Behind (NCLB) Act of 2001, all states are required to incorporate graduation rates into their accountability systems for high schools (U.S. Department of Education, n.d.). Moreover in 2010, the America’s Promise Alliance launched the Grad Nation campaign, promoting forward the aim of a 90% national graduation rate by 2020.

In Iceland, where this study was conducted, the dropout issue is also of concern. In 2008 the Icelandic government legislated educational reforms that aim to reduce dropout and one of the objectives of the Iceland 2020 governmental policy statement is to reduce the percentage of Icelanders aged 25-64 without accredited skills from 30% to 10% by 2020. Thus, many nations are concerned with reducing the possibility that a student will leave school prematurely, before receiving an appropriate diploma or certification. At the same time, preventing dropout is a challenging task and it is important to understand what might lie behind students’ decision to drop out of school.

The main purpose of this paper-based thesis (180 ECTS) is to examine school dropout among Icelandic youth longitudinally, from two perspect-
ives: theories on school dropout that conceptualize students’ disengagement as the central concept in understanding the process of leaving school prematurely; and the literature on the influence that the family has on youth adjustment from the perspective of parenting practices. Icelandic youth were followed over an eight-year period, from age 14 to 22. This study is part of a larger ongoing longitudinal study: the Reykjavik Adolescent Risk-Taking Longitudinal Study (RAR-LS; Adalbjarnardottir, 1994). The findings have been presented in three papers (Blondal & Adalbjarnardottir, 2009, 2012, 2014 in press).

More precisely, the aim of this thesis is to further expand the existing literature on school dropout by following adolescents over an eight-year period through three approaches. First, it looks at multidimensional aspects of student engagement at age 14 and its development from age 14 to 15 in relation to school dropout. The diversity of the student group is taken into account, particularly those who appear to be at risk of dropping out but still beat the odds, and those who appear to be on promising educational pathways but fail to do well. Second, it explores general aspects of parenting in relation to school dropout, examining the longitudinal relationship of both parental involvement and parenting style with school dropout. Third, it further expands the combined findings of the study on student engagement and parenting practices in relation to educational status at age 22, by exploring how the context of authoritative parenting influences school dropout and graduation through students’ engagement in adolescence.

The thesis contributes to the literature in several ways. First, it uses a longitudinal design that covers a long period—over eight years—unusual in studies of socialization and school dropout. This design makes it possible to conclude quite confidently about the predictive power of family factors on school dropout. Second, the thesis contributes to the literature by exploring students’ different educational pathways in relation to multidimensional constructs of disengagement during adolescence. It places a special focus on students who are the exceptions to predictions about the expected pathways, an approach that is rare in research on school dropout but provides valuable insights into possible reasons for academic resilience among at-risk students and vulnerabilities for academically strong students. Third, it explores the behavioral and emotional components of engagement, as they change over time in relation to different educational pathways, unlike most research on dropouts, which includes only behavioral components and at one point in time.
Fourth, the ability to explore the relationship between multidimensional characteristics of parenting practices and school dropout revealed important pathways to consider for adolescent development. Previous research on the relationship between family characteristics has been criticized for being focused too narrowly, looking mainly at parental involvement in the child’s education. In general, the findings from studies with this focus have been inconsistent and weaker than expected. Thus, to better understand the influence that parents have on their child’s education it is important to look at a broader conceptualization of child upbringing that characterizes the parents’ actions in their communications with their child. Fifth, the thesis explores longitudinally how multifaceted parenting practices during adolescence (age 14) influence educational status at age 22 (graduation/dropout) through student engagement at age 15. Even though student engagement is a central concept in most theories of school dropout and dropout often seems to result from a long-term process of withdrawal from school, little research has focused on how parenting practices may relate to school dropout through the process of student disengagement.

The main results of the thesis indicate that adolescents’ behavioral and emotional disengagement differs according to their educational pathways. Based on their achievement at age 15 and educational attainment at age 22, they were classified into groups that took expected versus unexpected paths. Those who were “at risk” academically at age 14, but graduated contrary to expectations, showed less behavioral disengagement than the expected dropouts. Moreover, high achievers who dropped out unexpectedly showed more behavioral and emotional disengagement compared to expected graduates. In general, during the following year (age 15), disengagement increased among the unexpected dropouts but decreased among the expected graduates.

A second major finding is that adolescents who at age 14 characterized their parents as authoritative (showing acceptance and supervision) were more likely to have completed upper secondary education by age 22, compared to those who perceived their parents as authoritarian, indulgent, or neglectful. It is worth noting that this finding remained pronounced even after controlling for parents’ SES, adolescents’ gender, parents’ involvement in their education, and adolescents’ temperament. In addition, even when controlling for the strong influence that previous academic achievement had on standardized test scores at age 15, adolescents with authoritative parents were more likely to complete upper secondary education by age 22 than were those from authoritarian and neglectful families.
A third major finding is that a broader conceptualization of parenting was a considerably stronger predictor of school dropout than were the specific behaviors depicted in parental involvement in their child’s education. In the fourth major finding, the students’ level of engagement at age 15 mediated the association between multidimensional parenting practices as perceived by adolescents at age 14 and their educational status at age 22. Adolescents who perceived their parents as more authoritative (i.e., providing high levels of acceptance and supervision, and granting psychological autonomy) were more likely to have completed upper secondary school at age 22, compared to their counterparts who perceived their parents as less authoritative. Student engagement seems to play a critical role in this relationship between parenting practices and school dropout/graduation. Importantly, those adolescents who had more authoritative parents were not only less likely to feel disengaged at school, but also more likely to complete upper secondary school.

The main conclusions of these combined findings are that the context of authoritative parenting seems to protect adolescents from the general decline in engagement at an age that places them at risk of dropping out, even when they are doing well academically. During this challenging period of adolescence characterized by psychosocial and biological changes, young persons have to make critical decisions about their education. In addition they have to adjust to increased academic challenges as well as more complicated, less structured, and often more impersonal school environments than they experience in the lower grades [Eccles, et al., 1993; Wang & Holcombe, 2010]. The findings suggest that a parent-child relationship characterized by emotional support and mutual respect, in which the parents impart clear standards for their child’s behavior but at the same time grant autonomy, may buffer against the educational challenges in adolescence by fostering their child’s positive school behavior, along with positive feelings towards their studies and bonding with school. At this critical point students’ feelings towards their academic tasks and school, as well as their school behaviors and the way their disengagement develops the following year, can have an impact: some students who are at risk academically become more resilient and some who seem to be on a promising educational track become more vulnerable.

By using a broad conceptualization of parenting this thesis sheds light on the family processes that lie behind the strong relationship between family background and educational attainment. Furthermore it suggests that the effects that specific practices such as parental involvement have on youth’s educational attainment depend on the characteristics of the parent-child relationship. These findings should give parents encouragement and guidelines in their important role of supporting their children’s educational success during
adolescence. Moreover, they should enhance the understanding of teachers, school counselors, principals, and educational policy makers about the importance of working with students who are not in supportive relationships with their family.
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I would like to dedicate this thesis to my children Halldór and Ragnheiður, and to the memory of my mother, Renata Kristjánsdóttir (1938-1982), who is a constant source of inspiration.
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Other relevant publications:

1 Introduction

As a period of transition from childhood to adulthood, adolescence is significant for the later course of the person’s life, not least with respect to school success and later career options. During adolescence, as the young person becomes biologically, cognitively and psychosocially more mature, both the tasks and responsibilities of daily life, and the social environment, become increasingly complex and multifaceted. At school, adolescents’ academic work and social environment become more challenging, friendship and peers become more important, and they start to get interested in romantic relationships. Meanwhile, many start to work for pay and to take on more responsibility at home—and they may face challenging decisions regarding risky behaviors such as drug use and unsafe sex (e.g., see overview by Santrock, 2008).

This period is also a critical point in the young person’s life with regard to education. In western societies, completing upper secondary school is one indicator of a young person’s success and is considered the minimal acceptable level of educational attainment. Moreover, given the negative personal and societal costs of leaving school early (e.g., Belfield & Levin, 2007; DG EAC, 2005; OECD, 2001; Rumberger & Lamb, 2003), an adolescent’s decision on whether to graduate or drop out of school can be described as one of the most crucial developmental tasks of this age period (see Roisman, Masten, Coatsworth, & Tellegen, 2004). Interactions within the family and the school context are central to the daily life of young persons and considered vital to their educational success (Baumrind, 1971, 1991; Wang & Eccles, 2012).

School dropout is described as a gradual process of student disengagement from school; thus student engagement is at the heart of theories of school dropout (e.g., Finn, 1989; Newmann, Wehlage, & Lamborn, 1992; Rumberger, 1987; Tinto, 1975; Wehlage, Rutter, Smith, Lesko & Fernandez, 1989). To foster students’ active participation within and outside the classroom, it is crucial to encourage their academic interests, their feelings of bonding with and belonging to school, and their motivation to succeed academically; this complex of engagements is central to all the prevention and intervention efforts designed to keep them from leaving school (see Fredricks, Blumenfeld, & Paris, 2004). Thus, school is a significant part of daily life for young persons; at the same time students’
engagement tends to decrease during adolescence (e.g., Wang & Eccles, 2012) which places them at risk of dropping out of school (Alexander, Entwisle, & Horsey, 1997; Finn, 1993; Rumberger, 1995). The decline in engagement at this age period has been connected to changes in the school environment, which offer fewer opportunities for relatedness and autonomy. Compared to earlier grades, the school environment becomes more impersonal, with bigger schools, less teacher-student interaction, and many subject teachers instead of one class teacher; meanwhile more emphasis is placed on discipline and performance assessments, and students have fewer opportunities to make decisions (Eccles et al., 1993; Wang & Eccles, 2012; Wang & Holcombe, 2010). Researchers have found that supportive relationships with teachers and peers are important for adolescents to develop an engagement with school and with their studies (Van Ryzin, Gravely, & Roseth, 2009: Wang & Eccles, 2012). Similarly, schools that combine responsiveness to adolescents’ needs with academic and disciplinary demands have been found to foster student engagement and positive school outcomes (Pellerin, 2005; Steinberg, 2001).

A large body of evidence contradicts the general view that parents become less important in their child’s education in adolescence; instead, it shows that parenting continues to be important during adolescence (Hair, Moore, Garrett, Ling, & Cleveland, 2008; Steinberg, 2001; Wang & Eccles, 2012). The quality of the parent-child relationship during adolescence has been found to predict the development, adjustment and well-being of youth on various psychosocial and behavioral measures. Parenting characterized by authoritative practices seems to foster their children’s autonomy and positive behavior such as student engagement; it also seems to protect them from negative outcomes such as low academic achievement (Adalbjarnardottir & Hafsteinsson, 2001; Baumrind, 1991; Gray & Steinberg, 1999; Lamborn, Mounts, Steinberg, & Dornbusch, 1991).

Thus, adolescence is an important stage of growth and challenges. With regard to education it is important to better understand student engagement during that age period and understand which factors seem to facilitate their academic interests and valuing of school, not only because it is a significant part of their life but also to lower their risk of dropping out of school. The theme of this thesis is the longitudinal process of school dropout with a focus on student engagement and the quality of the parent-child relationship in adolescence in relation to their educational attainment eight years later in early adulthood. Icelandic youth were followed over an eight-year period, from age 14 to 22. Their student engagement at age 14 and
how it developed the next year is explored in relation to educational attainment at age 22. Emphasis is placed on the role of student engagement in explaining why some students who appear to be at risk of dropping out graduate nonetheless, and why some who appear to be on a promising educational path still drop out. Moreover, it explores parenting practices during adolescence, both more general and multidimensional parenting styles and parental involvement in their child’s education, in relation to young people’s educational attainment eight years later. Furthermore, in order to further understand the relationship between parenting practices and student educational attainment, the possible mediation effects of students’ engagement are explored.

The thesis is divided into eight main chapters besides the introduction, the first chapter. The second chapter focuses on the issue of dropping out and is divided into two sections: definitions and extent of school dropout, and reasons why school dropout is a problem. In the third chapter the Icelandic education system, which is the context of this study, is presented, along with the problem of school dropout in the country. In the fourth chapter the theoretical background is presented, in two sections: student engagement, and parenting practices. The aims of the study are presented in chapter five and the method of the study is presented in chapter six. In chapter seven the main findings of the study are presented and the main conclusions and implications are discussed in chapter eight. The three papers that make up the thesis are introduced in the last section of the thesis,
2 The issue of dropping out.

2.1 The definitions and extent of school dropout

Various terms are used for the group of young people who leave school without accredited skills or credentials; the most common terms are school dropouts and early school leavers. In general, the first term is more often used in North America and the second in Europe. Either term refers to individuals who have not completed the education that educational norms define as being desirable both for them and for the society. Initially the term referred to those who did not finish compulsory education; now that mass education is the norm in modern societies it is generally used for those who have not completed upper secondary education (Jónasson & Blondal, 2004; Lamb & Markussen, 2011). A recent accumulation of studies refer to college or university dropouts (i.e. Eggens, van der Werf, & Bosker, 2008; Hovdhaugen, 2011; Ishitani, 2006); here, however, the term is applied only to those who have started the higher education level but not completed it.

The use of upper secondary education as a reference when defining school dropout is reflected in the definitions used by the European Union, the OECD, and in the United States. The European Union refers to early school leavers as those aged 18 to 24 who have only a lower secondary education or less and are no longer in education or training (the EUROSTAT indicator for early school leaving). Thus it includes those who have never started that level and have thus, strictly speaking, not dropped out at that level. The OECD definition applies to people aged between 20 and 24 with an educational level below upper secondary who are not currently studying (DG EAC, 2005). In the United States a similar indicator is the status dropout rate (also called the prevalence rate) which measures the dropout rate as the proportion of 16- to 24-year-olds who have not completed high school and are not currently enrolled in school (DG EAC, 2005; Rumberger, 2011). The main difference between those three definitions is the age of the reference group.

There are many other definitions of school dropout. Examples of other common indicators are event and cohort dropout rates. The event rate, also referred to as the annual rate, estimates the percentage of students who leave upper secondary school between the beginning of one school year and the beginning of the next without graduating; this definition does include those who have never started. Cohort rate estimates the percentage of a
single group starting in a specific grade that drops out over a period of time and does thus not include non-starters. Status rate includes all the dropouts in a particular age group, including those who never attended upper secondary education. Therefore it typically yields a higher dropout rate than either event rate or cohort rate (Thurlow, Sinclair, & Johnson, 2006). It is a common misunderstanding to think that the dropout rate is the opposite (mirror image) of the graduation rate, the reason being that those who have not graduated may still be enrolled in school.

Different definitions of school dropout give different information; therefore, when discussing or comparing the extent of dropout, for example across districts, nations, or time, it is important to be explicit about which definition is being used. Moreover, various definitions are used in research, a situation that complicates the matter further (see Lamb & Markussen, 2011).

Another important issue when considering school dropout is the fact that it is not necessarily a permanent state. Individuals may drop out of school and in again and complete upper secondary education at a different age. It follows that depending on the point in time, the same individual can be defined as a dropout or not as she moves through various stages: being without accredited skills and not being in education, being in education (neither dropout nor completer), and then completing. Furthermore, the school systems from which students drop out also differ. Countries have different understandings of what counts as graduation, the modal age of graduation, and the flexibility to move in and out of the education system. For example, in Iceland the modal age of graduation is at age 20 compared to age 18 or 19 in most other European countries and the United States. Furthermore, compared to most other European systems, the Nordic countries are somewhat more flexible in allowing students to leave the education system and re-enter later on (OECD, 2012).

Commonly, OECD indicators are used to compare rates of school dropout and graduation between countries (Lamb & Markussen, 2011). However, as discussed above, several factors make it complicated to compare the extent of dropout between countries: different definitions and measures, different types of data used (e.g. administrative records, survey data, school census), different school systems, and differences in the modal age of completion. Therefore the following comparisons should be regarded with caution. Having said that, Figure 1 shows the percentage of early school leavers—those aged 20 to 24 who were not in education and had not attained at least upper secondary education—in 2007 across OECD and partner countries.
The issue of dropping out.

Figure 1 Proportion of 20-24 year-olds in OECD and partner countries who were not in education and had not attained upper secondary education in 2007.

The figure shows that in 2007, across OECD countries, on average 17% of young people in the 20-24 age group had not completed upper secondary education and were not enrolled in education. The figure also reveals the huge difference in the dropout rate between countries: from 6% in the Czech Republic, Poland and Slovenia to 52% in Turkey. In addition it shows that the dropout rate was 27% in Iceland where this study was conducted, a relatively high figure compared to most other OECD countries. I discuss this issue further in Chapter 3.

Over the past few decades, dropout rates have generally been declining in the Western countries, although there are some exceptions where the
rate has been stable or even rising. In 2009, in the 27 member states of the European Union, of those aged 18 to 14, on average 14.4% (16.3% of males, 12.5% of females)—more than 6,000,000 young people—left education and training with only a lower secondary education or less (European Commission, 2011). The trend within the European Union is that the early school leaving [ESL] rate has been dropping over the past decade, from around 17% in 2000 to 13.5% in 2011. The member states with the highest ESL rates have been Malta, Portugal and Spain (respectively in 2004: 45%, 39%, 30%; in 2011: 33.5%, 23%, 26.5) (DG EAC, 2005; European Commission, n.d.). In the United States, the dropout rate among those 16 to 24 declined from 11% in 2000 to 8% in 2008 (see Rumberger, 2011).

Rumberger (2011) raises an interesting question: Is there an acceptable dropout rate? There is of course no definite answer to this question but a widespread consensus holds across many countries that too many people leave school without accredited skills. Both Europe and the United States have proposed benchmarks for the year 2020 with regard to dropout. The common benchmark for the member states of the European Union is to reduce dropout to 10% by the year 2020 (European Commission, 2011). In Iceland, one objective of the government’s 2020 policy statement is to reduce the percentage of citizens aged 25-64 without accredited skills to 10% by 2020 (Prime Minister’s Office, 2011); in the United States the aim of a 90% national graduation rate by 2020 has been proposed (Balfanz, Bridgeland, Bruce, & Fox, 2012).

2.2 The problem of school dropout

In our modern knowledge-based societies, with its rapid technological progress, young people who do not complete upper secondary education face more disadvantage than ever before. Consistently, findings across countries indicate that those who leave school prematurely are at risk of similar negative economic and psychosocial factors. Most noticeable are their substantially poorer prospects in the labor market, with fewer work opportunities compared to those who finish school, along with a higher risk of short and long-term unemployment, less job security, considerably lower lifetime earnings, and less participation in lifelong learning (e.g., DG EAC 2005; OECD 2001, 2012; Owens, 2004; Rumberger & Lamb, 2003). In addition they seem to be a more risk of becoming dependent on welfare, having health problems, engaging in antisocial behavior, and being less engaged in citizenship activities (see Belfield & Levin, 2007; Lamb & Markussen, 2011; Owens, 2004). Moreover, children of early school leavers are
more likely to drop out of school themselves, creating intergenerational social problems (e.g., Battin-Pearson et al., 2000; Eurostat, 2003).

Leaving school early may be a rational choice. For example, some students leave school voluntarily because of employment opportunities or because of their economic situations and family responsibilities. An Icelandic cohort study showed that, when they looked back, at age 24, around half of the young people who had dropped out felt that leaving school had been the right decision, considering their situation at that time. However, half of that same group thought at age 24 that their situation in the labor market would be better if they had completed upper secondary education. Practically all of them wanted to add to their education, although 60% believed it would be difficult to start studying again within the formal education system (Blondal, Jónasson, & Tannhauser, 2011; Jónasson & Blondal, 2002).

Lack of a credential generally makes people less competitive in the job market regardless of their abilities and skills, in both the short and long term. Across the OECD countries, young people without upper secondary education are more likely to be unemployed than those with upper secondary education (OECD, 2011, 2012). In the Nordic countries the same trend can be seen: young people without accredited skills are at the highest risk of becoming unemployed (Nordic Social Statistical Committee, 2011). Moreover, young dropouts are the most vulnerable to labor market conditions; they were the group that was hardest hit by the global economic crisis that started in 2008, more at risk of both short- and long-term unemployment than those with an upper secondary education. In Iceland, for example, youth unemployment was almost unknown but during the crisis the unemployment rate rose sharply among young people, especially those without accredited skills (Nordic Social Statistical Committee, 2011; OECD, 2011).

Even though the prospects for those without accredited skills improve as they age, they are still disadvantaged in the job market compared to those with diplomas. For example in 2008 across OECD countries the average unemployment rate was 8.8% for people without an upper secondary education, 4.9% among those with that education, and 3.3% among those with higher education (OECD, 2012). Moreover, earnings are strongly related to educational attainment across the OECD countries. In 2009, those who had not completed upper secondary education earned on average 23% less than people with an upper secondary education (OECD, 2011). Further, during the recent economic crisis the importance of education for job security was apparent in all OECD countries, as unemployment increased the most among individuals without an upper secondary certificate. Between 2008 and 2010,
among people 25 to 64, on average the unemployment rate increased by 3.8 percentage points among those without an upper secondary education, 2.7 points for those with an upper secondary education, and 1.4 points among tertiary-educated individuals. Also, the gaps in earnings between people with lower and higher levels of education grew during the crisis (OECD, 2012). In addition to poorer prospects in the labor market, on average, people without an upper secondary education score lower on various indicators of psychosocial well-being than those with that education. For example, they generally seem to live a less healthy lifestyle, have less general life satisfaction, participate less in civic activities, and be more prone to engage in risky behaviors (OECD, 2011; see Rumberger, 2011).

These general findings about the poorer prospects of young people who leave school may suggest that the group is homogeneous. However, it is important to consider the rough dichotomous division used to categorize individuals into school dropouts vs. completers. This approach seems to be meaningful, partly because modern societies rely so strongly on credentials, using educational degrees to assess skills and give access to jobs or further education. Clearly, however, enormous diversity exists within both these groups with regard to individual, family and social factors. For example those who drop out leave at various points in their educational trajectory, a fact that probably reflects differences in groups of students. For example Stearns and Glennie (2006) found that students who dropped out early were more likely to do so because of behavioral problems, compared to older students. A second point is that so-called stop-outs, who leave school temporarily (Jónasson & Blondal, 2004; Rangvid, 2012), have different characteristics and leave school for other reasons than those who leave permanently (e.g., Rangvid, 2012).

Focusing on the diversity of early school leavers, Janosz and his colleagues (Janosz, Le Blanc, Bulerice, & Tremblay, 2000) defined four types of dropouts based on three school dimensions: school retention, school misbehavior, and commitment to schooling. They called the types quiet, disengaged, low-achiever, and maladjusted. The quiet group had the most positive school profile among the dropouts (high commitment and very little misbehavior in school) but their performance in school was poorer than that of the students who graduated. Those in the other three groups all had low commitment to school. The maladjusted had the most negative profile, including significant problems with both academics and school behavior. The other two groups misbehaved at a low to average level, but the low achievers did very poorly academically, while the disengaged had good achievement scores. Few researchers, however, have directly approached the issue of the
diversity of students who drop out (e.g., Englund, Egeland, & Collins, 2008; Janosz et al., 2000).

In sum, when considering the issue of school dropout among young people, several factors are important to keep in mind. The multiplicity of definitions makes the discussion imprecise and comparisons are difficult. Many students leave without accredited skills, and for many this may be a rational choice. Though they all seem to risk facing similar negative consequences, the group is diverse: they leave school at different times in their education, at different ages, and for different reasons. Having said that, another point is also important in evaluating the problem of school dropout across countries: the extent of dropout is unequally distributed by students’ socioeconomic background, race, region, and gender. This makes it an issue of social justice. The dropout rate tends to be higher among students from lower socioeconomic and minority backgrounds, poorer regions, and among males (see Rumberger, 2011). Thus, many nations are concerned with reducing the possibility that a student will drop out or leave school before receiving an appropriate diploma or certification. At the same time, reducing the dropout rate is a challenging task and it is important to understand what might lie behind young peoples’ choice to leave school.
The Icelandic educational system and the dropout issue

Iceland is one of the Nordic countries with a population of 325,000 people; about two-thirds of the population lives in the capital area of Reykjavík. At the beginning of the 20th century, the Icelandic education system was poorly developed, with no compulsory education and no legal framework for primary education. During the next hundred years, however, the system became mature, flexible and fairly advanced, largely on par with systems in the other Nordic countries (Guttormsson, 2008). Despite Iceland's small population, many studies have shown that the educational system has developed similarly to much larger systems and has faced many of the same problems (Blondal et al., 2011; Jónasson, 1999, 2003; Jónasson & Tuijnman, 2001). By comparison, the Icelandic system still faces one outstanding problem: a high dropout rate in upper secondary education (Blondal et al., 2011).

Icelandic society generally emphasizes education, with the ambition to ensure that every child and young person has an equal right to education, free of charge, in both compulsory school and upper secondary school. Traditionally the educational system has been organized within the public sector. The equal right to education is outlined in the Constitution of the Icelandic Republic as well as in the various laws pertaining to different educational levels. The following statement reflects a fundamental principle of the Icelandic education system:

“... everyone should have equal opportunities to acquire an education, irrespective of sex, economic status, residential location, religion, possible handicap, and cultural or social background” (Ministry of Education, Science and Culture, 2002, p. 7).

In 1907 the first law on compulsory education was passed in Iceland: children were supposed to attend school for four years, when they were aged 10 to 14 years. In 1936 compulsory education was expanded to seven years, and in 1974 to nine years, starting at age 7 (Lög um grunnskóla nr. 63/1974 [The Compulsory School Act, No. 63/1974]). Since 1991, it has been ten years (Lög um grunnskóla nr. 49/1991; The Compulsory School Act, No. 91/2008). Icelandic children normally start school at age 6 and progress automatically from one year to the next throughout 10 years of compulsory education. The structure of the Icelandic educational system is shown in Figure 2.
Implicit in the main principle of an equal right to education is the compulsory schools’ responsibility to attend to the educational needs of each student. Since 1974 students with special needs have had the right to attend school (Lög um grunnskóla nr. 63/1974 [The Compulsory School Act, No. 63/1974]) and for the last two decades, since 1991, inclusion has been the guiding policy. Students with special needs have the right to study support based on their needs, within the general school system (The Compulsory School Act, No. 91/2008; Lög um grunnskóla nr. 49/1991 [The Compulsory School Act, No. 49/1991]). Less than 0.5% of each cohort attends special schools (4 out of 172 schools in 2010); however, during the school year 2009–2010 around one quarter of pupils in compulsory schools received special educational support, along with attending mainstream classes. Moreover, even though 10 private schools operate in Iceland, and the number of students attending them has been increasing over the last decade, fewer than 2% attend them; private here means that in addition to the government fee for each student, parents pay an additional fee (Statistics Iceland, 2007, 2011a).

Everyone who has completed compulsory education or the equivalent has the right to upper secondary education, irrespective of their academic


Figure 2 The structure of the Icelandic educational system.
results at the end of compulsory school; this has been the case since 1988
(see Oskarsdottir, 2000; The Upper Secondary School Act, No. 92/2008; Lög
um framhaldsskóla nr. 80/1996 [The Upper Secondary School Act, No.
80/1996]). However, students’ options at the upper secondary level do
depend somewhat on their earlier achievement. Upper secondary schools
base their selection of students mostly on the student’s grades in 10th
grade (age 15) at the end of compulsory school. Moreover, there are
specialized lines of studies for those who performed poorly in 10th grade in
the core subjects of math, Icelandic, and English (Blondal et al., 2011).

Generally no tuition is charged at the upper secondary level, though
vocational students pay part of their materials costs and students in adult and
distance education pay partial tuition (Ministry of Education, Science and
Culture, 2002, 2008). Upper secondary school administration is based on
legislated regulations and the curriculum guide issued by the central
government. The structure of the system and the curriculum framework are
dictated by the central government, whereas the schools have increasing scope
for independent action. Thus, the administrative structure is essentially two-
layered: one layer represents the central government and the other the
individual schools (The Upper Secondary School Act, No. 92/2008).

There are about 30 upper secondary schools in the country, and they fall
into three main categories. First, the traditional grammar schools offer only
matriculation examination programs. Second, vocational schools offer
programs in the industrial arts. Third, comprehensive schools offer both
vocational programs and academic programs for the university entrance
examination (UEE). In 2007 and 2008, more than half of students aged 16 to
19 attended comprehensive schools, roughly one-third attended grammar
schools, and about 7% attended vocational schools.

Around 100 branches of study are offered, of which over 80 are
vocational. Every branch offers pathways to further education. The main
pathways are as follows: 1) academic programs, 2) arts programs, 3) a
multitude of vocational programs such as the industrial arts, which have
been the mainstay of vocational schooling, 4) a general program, and 5)
work-related programs designed for students who have had extensive
special education in compulsory school and are unable to participate in
other courses of study. The programs are defined in terms of credits.
Usually the students are expected to complete 17 to 18 credits per
semester (Ministry of Education, Science and Culture, 2008) but are allowed
to take more or fewer credits per semester. The matriculation examination
usually requires 140 credits. The upper secondary school level emphasizes
flexibility: students can transfer credits between different schools and fields. This makes it easier to change programs, both for students who want to switch tracks from vocational to academic studies and vice versa, as well as within fields (Ministry of Education, Science and Culture, 2008).

Compared to lower secondary school, the school environment at upper secondary level is less structured and more complicated socially. This is especially true for the two-thirds of all students who attend comprehensive schools. The study programs are organized based on course units, students select courses for each semester, and each student has his or her own timetable (The Upper Secondary School Act, No. 92/2008). This means that students do not belong to a given cohort of classmates but are with different groups in each course, all of which are mixed with regard to age and line of study. A recent study on the Icelandic school system indicates that students have less autonomy in their studies in upper secondary school than in lower secondary. The mode of teaching places more emphasis on lectures and less on students cooperating to solve problems (Oskarsdottir, 2012).

Students can finish their matriculation examination from either vocational programs or the arts program by taking additional courses (Ministry of Education, Science and Culture, 2007, 2008). The proportion of students completing the matriculation examinations using this option has been growing recently. In 2007, 15% of those completing matriculation did so by taking additional courses, compared to 6% in 2002 (Statistics Iceland, 2009). Recently, the vocational schools have been permitted to offer matriculation programs, typically in combination with their vocational programs. This merging of academic and vocational programs has been a key development since the 1970s (Jónasson, 1997). It is also a major principle behind the most recent law on upper secondary education, in which explicit rhetoric states that vocational and academic education should hold equivalent status within a holistic system, so that students can complete their university entrance examinations from either the vocational or the academic track (Frumvarp til laga um framhaldsskóla, 2007-2008, Þskj. 320 — 286. mál [Parliamentary bill on upper secondary school, 2007-2008]). As in other OECD countries, most students complete programs that give them access to higher education, and academic programs attract by far the most students. Statistics from 2008 show that roughly half of those in the 16- to 19-year-old cohorts attended academic programs, 16% were in VET (including apprenticeship), 8% in apprenticeships, around 10% in general studies, and 1% in work-related studies. One-fifth were not registered in upper secondary school.
The Icelandic educational system and the dropout issue

The upper secondary school system normally includes those aged 16 to 19, and in four years of study, with some notable exceptions, mainly involving expressly shorter programs. This means that most students are expected to complete their studies when they are 20. Still, the official description of the structure of the education system, shown in Figure 2, provides little insight into what is really happening inside the system apart from the basics: students start school at age six, progress automatically from one year to the next through compulsory school (the Icelandic system does not practice grade retention), and complete it at age 16, when almost all of them proceed to upper secondary school. During the last decade over 90% of 16-year-olds enrolled in upper secondary level each year, and the enrolment rate has been increasing steadily. In 2010 the enrolment rate was 95% of the cohort (Statistics Iceland, 2011b). On the other hand, less than half of the students complete upper secondary school by age 20. Many drop out, and many re-enter the system and finish later, some even after age 30, especially in vocational education (Blondal et al., 2011). A study on early school leavers (DG EAC, 2005) showed the Icelandic situation to be somewhat special, in that Icelandic people gradually do complete school, even after age 30, in larger proportions than in other countries.

<table>
<thead>
<tr>
<th>Status</th>
<th>4 years</th>
<th>6 years</th>
<th>7 years</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>%</td>
<td>%</td>
<td>%</td>
</tr>
<tr>
<td>Graduated</td>
<td>44</td>
<td>58</td>
<td>62</td>
</tr>
<tr>
<td>Dropped out</td>
<td>26</td>
<td>14</td>
<td>10</td>
</tr>
<tr>
<td>Enrolled in school</td>
<td>30</td>
<td>28</td>
<td>28</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
<td><strong>100</strong></td>
</tr>
</tbody>
</table>

Source: Statistics Iceland, 2012

In 2007, 44% of Icelandic students had completed their upper secondary education on time, as can be seen in Table 1, which shows the educational status of students four, six and seven years after they enrolled for the first time in upper secondary school in 2003. The numbers show that the Icelandic upper secondary system is flexible in two important ways: it tolerates slow progress and it allows a return to the system. First, even though upper secondary education is organized so that it generally takes
four years, a high proportion of students take longer for their studies. In the statistics reported in the table, the rate of graduation increased by 18 percentage points in the three years after the students were “expected” to complete. Second, a large group of the students who started in 2003 were enrolled four, sex and seven years later; that proportion is almost the same at the three time points, at 28% to 30%.

Three elements characterize the dropout situation in Iceland: the dropout group is relatively large, the extent has been rather stable over the last two decades, and students graduate at older ages than in other European countries. An Icelandic study of a cohort born in 1975 showed that at age 24, around 40% had not yet finished upper secondary school—a large proportion considering that 20 is the normal completion age for most study programs. This result resembles findings from cohorts born in 1969 and 1985. On the other hand, of those who had not completed the upper secondary level, around 16% were studying at that level at age 24 (Jónasson & Blondal, 2002). Moreover, fewer students complete their studies on time than in other OECD countries. The dropout rate is quite high for both males and females of every age group, but it gradually decreases with age to reach a low of around 20% for females in their 30s, and for males in their 40s. Thereafter it increases with age. This summation shows that school dropout does not center upon a small group of young people. This makes it important to gain a better understanding of which factors seem to protect students against the risk of dropping out.

Iceland’s central government is currently conducting a reform of the entire school system. It is particularly relevant here because the dropout issue was given absolute priority in the most recent legislation (the Preschool Act, No. 90/2008; the Compulsory School Act, No. 91/ 2008; the Upper Secondary School Act, No. 92/2008). The reform spells out several explicit intentions to decrease dropout rates. The education system should be organized so that it meets students’ requirements and expectations; it should substantially increase curriculum flexibility, offer more educational pathways, facilitate the completion of upper secondary programs in three rather than the current norm of four years, and create conditions for more students to complete defined study programs (Frumvarp til laga umframhaldsskóla, 2007-2008, Þskj. 320 — 286. mál [Parliamentary bill on upper secondary school, 2007-2008]).
4 Theoretical background

For the past three years, Magnus, age 19, has been a student in a grammar school in Reykjavik. He failed in his classes last year and decided to change his path from natural to social sciences as he “wasn’t interested in” his studies. He chose natural sciences because a meteorologist in his family, whom he respects, advised him to take this path to “keep your educational pathways open.” He asked for her advice since “she is so educated and my parents are not.” Now Magnus is failing class again. His explanations are that he has so many other interesting things to do in life: play the saxophone and computer games and meet up with friends. What he really wants to do in life is be a musician.

Lilja is an 18-year-old student in a comprehensive upper secondary school in Reykjavik. During her years in compulsory education she was doing well in her studies. Her trouble began when she entered upper secondary school and failed the second year. Her explanations are that her parents give her much more freedom to do whatever she likes and the school environment differs so much between lower and upper secondary school: “In lower secondary you just have to do what you are told and you just do it. But when you are in upper secondary school no one is paying attention to you; they don’t even notice whether you show up in class. But when I was in elementary school they would go crazy if you missed just one class.” Lilja is determined to complete upper secondary education as it will give her “a better future and better work than my parents have; they are not educated.”

Students who drop out of school are a large and diverse group that leaves for a variety of reasons as gets reflected in the vignettes above where two Icelandic teenagers discuss their trouble at school. Dropping out of school is a complex process of interactions between the individual and his or her environment which often happens over a long period of time, making it difficult to determine precisely what causes students to leave school. Research suggests
that risk and protective factors involve an interplay between characteristics of
the individual and her or his social context in the family, the school, and the
community she or he lives in (Alexander, Entwisle, & Kabbani, 2001; Entwisle,
Alexander, & Olson, 2005; Rumberger, 1987).

Students' cognitive skills are strongly associated with their educational
outcomes. Academic achievement is the single strongest predictor of school
dropout. Students who do not do well academically have been shown to be at
higher risk of dropping out of school than are other students (see Battin-
Pearson et al., 2000; Jónasson & Blondal, 2002; see Rumberger, 2011); the
same is true of those who repeat grades because of their low achievement
(Alexander et al., 1997; Stearns, Moller, Blau, & Potochnick, 2007). Non-
cognitive skills also predict school dropout. For example students who engage
in negative behaviors in school are more likely to leave school (e.g.
Archambault, Janosz, Fallu, & Pagani, 2009). Furthermore, students who are
engaged with school through participation in extracurricular activities are less
likely to drop out of school than are students who do not participate (Mahoney
& Cairns, 1997; McNeal, 1995; Randolph, Fraser, & Orthner, 2004). (Student
engagement is discussed in more detail below, in section 4.1.)

Also, early participation in adult roles such as work (McNeal, 2011) and
parenthood is related to dropout. In an Icelandic cohort study, having a
child was one of the most common reasons females gave for leaving school
and getting a job was one of the most common reasons among males
(Jónasson & Blondal, 2002). Furthermore, students who have friends who
do not value education and who have dropped out of school are themselves
more likely to drop out (Ream & Rumberger, 2008).

The link between family background and children’s educational outcomes is
well established. Findings consistently show that students in higher SES groups
are academically more successful and less likely to drop out of school than their
counterparts in lower SES groups (Entwisle, et al., 2005; Battin-Pearson, et al.,
2000; Davis-Kean, 2005; McNeal, 1999; Rosenthal, 1998). Moreover, males,
and students from racial and ethnic minority backgrounds, are at more risk of
dropping out (e.g. Entwisle et al., 2005; Stearns & Glennie, 2006). Researchers
looking at family processes that relate to school dropout have focused on
parental involvement in their children’s education. The findings have been
mixed, as I discuss in more detail below, but a key finding is that parental
expectations for their children’s academic achievement and educational
attainment seem to predict their educational outcomes, such as school
dropout (Entwisle et al., 2005; Fan & Chen, 2001). (The influence of the family
is discussed in more detail below, in section 4.2.)
Research on school factors in relation to school dropout commonly explores the characteristics of the student body, school structure, resources, and school practices (Rumberger, 2004). The social and economic composition of the student group predicts individual students’ outcomes over and above their socioeconomic backgrounds. Students who attend schools where the average SES of the student body is high are less likely to leave school, compared to students in lower SES schools, controlling for the student’s own background (Goldschmidt & Wang, 1999; Rumberger, 1995). With regard to school structure and dropping out, findings have been mixed with regard to size and location. However, most studies find that the rate of school dropout is lower in private schools than in public schools (see Rumberger, 2011). Also, research on school practices has found three elements that predict dropout: school climate, discipline policy, and student-teacher relationships (Rumberger, 1995, 2011). For example, findings by Pellerin (2005) indicate that when a high school's climate is both responsive and demanding (authoritative style), with high academic and behavioral standards and responsive adult care, the students are more likely to graduate than are those whose schools use authoritarian, permissive or indifferent socialization styles.

Community factors such as the social composition of the neighborhood and the situation in the labor market also seem to predict dropout (see Rumberger, 2011). When the conditions in the labor market are good, especially when it is easy to find low-skilled work, it may pull young students out of school (McNeal, 2011). On the other hand, when unemployment is high, young people without accredited skills are most at risk of becoming unemployed—which may push them back to school (OECD, 2011, 2012).

The above studies provide a few examples of findings about known risk and protective factors for school dropout. The relationship between these factors and school dropout are very complex, however; findings are mixed and they depend on interactions between characteristics of the student and of his or her environment (e.g., Entwisle, et al., 2005; Rumberber, 2011). For example, some students appear to be on promising educational pathways but fail to do well, while others appear to be at risk for failure but nevertheless negotiate successful educational pathways. Even though students’ early academic achievement is the strongest predictor of later performance (Ripple & Luthar, 2000) and low achievement is one of the strongest single risk factors for school dropout (see Alexander et al., 2001; Battin-Pearson et al., 2000; Rumberger, 1987, 1995) some students who have a history of academic failure still graduate from upper secondary
school (Englund et al., 2008). The opposite is also true: some students who are doing well academically drop out (Jansz et al., 2000).

Furthermore, the characteristics of individuals and their social context are often related, which makes it difficult to separate the influences of the two. For example, students’ backgrounds are often related to the resources, or lack of them, in the family, school, and neighborhood, and that situation can contribute to the risk of dropout. On average, students from higher educational and socioeconomic backgrounds do better in school and are less likely to drop out. This relationship is partly mediated by the different resources related to students’ backgrounds, such as parents’ educational expectations and behavior such as parental warmth (Davis-Kean, 2005; Davis-Kean & Sexton, 2009; Entwisle et al., 2005; Rumberger, 1995). Moreover, methodological difficulties make it hard to isolate the contributions of two groups of factors: the school factors that lead to dropout or graduation, and the individual and family factors that predict educational outcomes. This is especially true when schools are segregated by students’ background and previous achievement (see Rumberger, 2011).

In short, findings indicate that the gradual disengagement from school that can eventually lead to school dropout (Finn, 1989; Wehlage et al., 1989) is a consequence of the interplay between the student and his or her social context. The main purpose of this thesis is to longitudinally examine school dropout among Icelandic youth from two perspectives: theories on school dropout conceptualizing students’ disengagement as the central concept in understanding the process of leaving school; and the literature on the influence that family-youth interaction has on youth adjustment from the perspective of parenting practices. In the next two chapters students’ engagement and family factors will be discussed from a theoretical point of view. The following chapter is divided into discussions on three topics: the concept of student engagement (4.1.1.), engagement in theories of school dropout (4.1.2.), and student engagement and educational attainment (4.1.3).

### 4.1 Student engagement

In general, society is concerned at students’ lack of engagement with school. Too many students are not actively participating either academically or socially in school; they may be bored, see little point in their studies, not value the goals of schooling, or not be bonding with school (see Fredricks et al., 2004). This is especially true in the older grades as student engagement generally decreases substantively with age starting in early adolescence.
(Eccles et al., 1993; Wang & Eccles, 2012). The findings of Pisa 2000 across the OECD countries showed that at age 15 about one in four students had a low sense of belonging to school and one in five participated at a very low level—being frequently absent, skipping class, and/or arriving late at school (Willms, 2003). Being bored with their studies was one of the three top reasons Icelandic youth gave for leaving school (Blondal et al., 2011).

Concern for students' engagement is not surprising as school is central to the daily life of children and adolescents and considered vital to their educational success. Student engagement is related to educational outcomes such as academic achievement and school dropout (Alexander et al., 1997; Finn, 1993; Finn & Rock, 1997; Rumberger, 1995). It is also considered important for prevention purposes, as it can prevent their alienation from school, increase their academic motivation, and facilitate school success (see Fredricks et al., 2004). There is a consensus in theory and practice that encouraging students' engagement in school and learning is the key to promoting school completion (Finn, 1989; Newmann et al., 1992; Rumberger, 2011; Tinto, 1975; Wehlage et al., 1989). Increasing student engagement is central to prominent efforts at dropout prevention and intervention (Christenson & Reschly, 2010; Dynarski et al., 2008; Kortering & Christenson, 2009). Furthermore, engagement seems to be more amenable to support than many other psychosocial characteristics that have frequently been used in dropout prevention programs, such as self-esteem (Finn & Rock, 1997).

4.1.1 The concept of student engagement

The concept of student engagement has been a focus of research for the last 25 years and has its roots in the dropout prevention literature. Still there is little consensus on the definition of the concept, and on how it should be operationalized and measured. Moreover, at present the terms school engagement and student engagement are used interchangeably in the literature, even by the same authors (i.e. Archambault et al., 2009). As I become more familiar with the concept, I prefer to use student engagement instead of school engagement. I think it reflects a broader vision, recognizing not only the influences that the interaction between students and school has on engagement but also that of students’ family and community. Moreover, I think it is more in line with the basic idea of lifelong learning that takes place both outside and within the school setting across the lifespan (see also Appleton, Christenson, & Furlong, 2008).
In their literature review, Fredricks and her colleagues (2004) argue for engagement as a metaconstruct and define three distinct but related broad dimensions of student engagement: behavioral, emotional, and cognitive. Behavioral engagement refers to students’ conduct, schoolwork-related behavior, and participation in both the academic and social aspects of schooling. At one end of the behavioral spectrum are such positive behaviors as good attendance, following school rules, completing homework, and being involved in learning and extracurricular activities. At the other end are negative behaviors such as truancy, skipping school, behaving disruptively, or being withdrawn in the classroom.

Emotional engagement refers to students’ positive and negative affective reactions towards their school work, toward people at school, such as classmates and teachers, and toward school in general. This includes students’ interests in their academic work and sense of belonging to school, or the opposite: disidentification with school and boredom with school work. Both behavioral and emotional engagement can occur in the context of the academic and the nonacademic or more social aspects of school. Behavioral engagement includes both classroom participation and involvement in the student government, and emotional engagement generally means the student’s reactions to his or her academics or to teachers and fellow students. The third dimension, more recently defined in the literature, is cognitive engagement: students’ preparedness to invest in their learning and their preference for and persistence in the face of academic challenges (Appleton et al., 2008; Fredricks et al., 2004; Rumberger, 2004).

Overall, theory and research support the idea that engagement is a multidimensional concept, comprised of behavioral, emotional, and cognitive dimensions. Empirical findings suggest that it has subtypes that are fundamental to understanding student engagement (Glanville & Wildhagen, 2007). It provides a richer comprehension of student engagement to look at the combinations of different dimensions—behavioral, emotional, and cognitive—rather than to explore only a single component. The three dimensions are dynamically interrelated within the individual, with possible interactive and additive effects on students’ adjustment (Fredricks, et al. 2004).

4.1.2 Engagement in theories of school dropout

Student engagement is a central concept in influential theories on school dropout (Finn, 1989; Newmann et al., 1992; Rumberger & Larsson, 1998; Tinto, 1975; Wehlage et al., 1989). Dropping out is increasingly seen as a gradual,
cumulative process of students withdrawing from school, often starting early in their school years (Alexander et al., 2001; Ensminger & Slusacick, 1992).

In his theoretical review Finn (1989) presented the participation-identification model, a conceptual framework viewing school dropout as a developmental process. The model describes the positive process that leads to students identifying with and bonding with school, which leads to school success. In Finn’s model engagement has two dimensions: participation in the academic and social aspects of school (behavioral engagement) and identification with school (emotional engagement). Students who participate actively, both academically and socially, are likely to succeed academically and these experiences promote their gradual identification with school.

Students’ identification is reflected in their feelings of belonging and bonding with school and in their finding it important to succeed in school-relevant goals; this, in turn, positively influences their active participation. Participation is defined at four levels, depending on the age and maturity of the student, from the student being able to respond to basic class requirements such as attending and responding to teachers’ directions (level one) to taking more active roles. Taking initiative in the classroom and doing extra homework is an example of level-two participation. At level three, students participate extensively in the academic aspects of school and/or in extracurricular and social activities. Finally, level four includes participation in school governance. Given this model, it follows that students who do not participate actively at school, either academically or socially, are more likely to fail at school, and that leads to gradual disengagement from school or alienation (Finn, 1989; Finn & Rock, 1997; Griffin, 2002).

In their theory of dropout prevention Wehlage and his colleagues (1989; Newmann et al., 1992) also describe the positive development of engagement that leads to success in school, similar to Finn’s participation-identification model. However, they use different definitions of engagement. In their theory, two key facilitators of school success are educational engagement in the academics of schooling and school membership in the social aspect. Educational engagement is defined as the psychological investment students must make to master the knowledge or skills that academic work entails, and their preferences for academic challenges and will to go beyond requirements. It is not simply a question of the desire to complete an assignment or get good grades. In the literature this definition is referred to as cognitive engagement, as discussed above (Fredricks et al., 2004).
School membership refers to social ties to others, commitment to the institution, involvement in school activities, and belief in the value and legitimacy of school. It therefore reflects both behavioral and emotional engagement. The dropout process is influenced jointly by educational engagement and school membership; students who fail to engage academically and reach school membership are more likely to drop out of school (Fredricks et al., 2004; Newmann et al., 1992; Wehlage et al., 1989). Building on Tinto’s theory, described below, Wehlage and his colleagues (1989) defined four possible hindrances to school membership. These are a) problems with adjusting socially and academically to a new and often more impersonal school setting; b) difficulty in mastering academic requirements; c) incongruence reflected in how well or poorly the values and goals of the students match those of the school; and d) isolation from peers and teachers in both social and academic aspects of school. They also described several hindrances to educational engagement. First, schoolwork often lacks explicit and valued goals. Second, the dominant learning process in school is too abstract, verbal, competitive, and controlled by others, as opposed to being more concrete, problem-oriented, cooperative and autonomous. Third, school knowledge is often superficial because the teachers are too preoccupied with covering the subject matter.

Tinto (1975, 1982, 1987) developed a theory of students’ dropout or departure in higher education. The theory is designed to explain the longitudinal process of departure from a specific institution of higher education, not from the educational system. The focus is on what happens within the institution that may lead to students departing. The main concepts are students’ integration, both social integration with the institution and academic integration or engagement in meaningful learning; and students’ commitment to the educational goal of finishing school and commitment to school. When entering school, students’ family background and characteristics—including skills and abilities as well as previous school experience—affect their commitment to the educational goal of completing higher education and in that specific institution.

More important for student integration, however, is their experience over time of interacting with the academic and social systems of the institution; that process influences their engagement in school-related tasks and activities and investment in the institution. That experience continuously re-modifies students’ commitment to their goals and to the school. Insufficient interactions with students and staff at school and incongruence with the value system will lead to a lack of social commitment. If the formal and informal interactions lead to the individual
experiencing full membership in the school society or/and congruence with the intellectual climate, that will strengthen the commitment to educational goals and to the institution. If the integration is inadequate, the commitment is reduced and the student might drop out. A given student can integrate into the social life of the institution but not the academic life and therefore drop out—and vice versa. Still, according to the theory, there is a reciprocal relationship between the two spheres, assuming that integration in one leads to integration in the other.

In their conceptual model of the process of school dropout Rumberger and Larson (1998; Rumberger, 2011) divide engagement into social and academic dimensions based on the work of Tinto and Wehlage and his colleagues. Furthermore, based on Finn, they say that engagement is reflected both in students’ emotions and behavior. Students’ social engagement is reflected in such behavior as class attendance, compliance with rules, and active participation in school-related activities; emotional social engagement is reflected in positive social relationships with peers and school staff. Academic engagement is reflected in emotions toward school, educational expectations, and participation in school work. Both types of engagement are seen as crucial for understanding the process underlying a student’s decision to leave school. Dropping out is depicted as one of three interrelated dimensions of student educational performance: These are educational stability, that is, whether students persist or drop out from a particular school or the educational system; academic achievement; and educational attainment, reflected in students’ progression in school, credits earned, and diplomas (Rumberger, 2011). According to this model, both students’ engagement and their educational performance are influenced by personal attributes including their background, prior school experience, and performance. Moreover, these authors suggest that reciprocal relationships change over time between and within the dimensions of engagement and performance. Furthermore, these individual-level characteristics are influenced by the context and characteristics of the family, school, and community, especially as reflected in the composition, structure, resources, and practices (Rumberger, 2011; Rumberger & Larson, 1998).

Taken together, these theoretical models fruitfully describe several important aspects of dis/engagement. First, they see the decision to drop out as a long-term developmental process of disengagement, possibly beginning as early as the student’s first days in school. Second, they describe this process as shaped by engagement in both the academic and social aspects of the school environment as well as academic performance. Third, they say that engagement is reflected in students’ behavior such as
school participation and emotions such as school commitment, and students’ cognitions or motivation in some models (i.e. Wehlage and his colleagues, and Tinto). Fourth, although school performance or grades are important, dropping out is not seen as simply the result of academic failure; rather, academic failure is viewed as part of the process leading to disengagement. Fifth, the main guideline for prevention efforts building on these models is that increasing student engagement is critical in preventing school dropout and that at-risk students can be identified based on their behaviour and attitudes. Students who behaviorally engage in school (academically and socially) are those who develop identification with school, invest in it emotionally, and participate in behaviors that support this investment; they are therefore more likely to succeed at school. Sixth, the disengagement process is influenced by contextual factors such as the characteristics of the family, school and community as well as students previous’ school experience. To varying degrees, all the models consider the educational environment of the school as the determinant of the quality of students’ school experience. They never regard the process leading to school dropout as based solely on individuals' characteristics, and school educational practices always appear as major determinants of the quality of students' participation, achievement, and motivation.

What differentiates these models is how these various factors play out in fostering the process of gradual disengagement and ultimately dropping out. For example, in the participation-identification model academic performance serves as a mediation variable for the influence of participation on students’ levels of identification and bonding with school (Finn, 1989). However, according to the model of Wehlage and his colleagues (1989), academic performance is the outcome of participation in school reflected in educational engagement as well as school membership.

Regardless of these differences in the way the authors conceptualize the interplay of the major factors leading to disengagement there seem to be similarities in the theoretical understanding of engagement as reflected in concepts of participation-identification, membership, and social and academic or educational engagement.

4.1.3 Student engagement and educational attainment

Research indicates that student engagement is related to educational outcomes such as academic achievement and educational attainment (Alexander et al., 1997; Finn, 1993; Finn & Rock, 1997; Rumberger, 1995). However, in their literature review Fredricks and her colleagues (2004)
point to several limitations of current research on student engagement. First, they criticize the narrow focus on behavioral engagement in most studies on the relationship of engagement and school dropout, ignoring the multidimensional characteristics of the concept. Second, in the relatively few studies that include both emotional and behavioral components, the two components are often combined in a single indicator, which makes it impossible to explore the possibly different relationships between the two dimensions and dropout. Third, the majority of studies do not distinguish between subcategories of engagement, such as different sources of emotions. That may be problematic, as one student may disidentify with school as a whole while another may be disinterested in the school work itself. In addition, Fredricks and her colleagues emphasize that only a minority of engagement studies use longitudinal designs.

Among studies that focus on students’ behavioral engagement in relation to educational attainment, Rumberger (1995) found that students who were disengaged behaviorally with school in 8th grade, and showing negative school behaviors, were more likely to drop out than students who were engaged. Similarly, Finn and Rock (1997) studied 10th grade minority students from low-income homes, looking at their behavioral engagement in academic aspects of school and positive school behavior. They found that academically successful school completers showed the most engagement behaviors and students who dropped out showed the fewest. Moreover, Ream and Rumberger (2008) found that both behavioral engagement in the academic and social aspects of school in 10th grade predicted school dropout.

One group of researchers responding to the criticism made by Fredricks and her colleagues (2004), outlined above, is Archambault and her colleagues (2009), who studied the relationship between emotional and cognitive as well as behavioral engagement and early high school dropout. Their findings indicated that multidimensional or global engagement (all the three dimensions combined) predicted early school dropout, but when the three dimensions were examined separately, only behavioral engagement could predict early school dropout. However, one explanation of these findings could be that the study focused only on early dropouts; Stearns and Glennie (2006) found that students who dropped out early were more likely to do so because of behavioral problems, compared to older students. Moreover, Archambault and her colleagues (2009) only examined engagement at one time point (age 13). Based on their findings, Janosz, Archambault, Morizot, and Pagani (2008) argue that it is important to use a developmental approach, tracking engagement over time in relation to school dropout. They studied the distinct trajectories of global student
engagement over a 3-year period with students aged 12 to 16 and concluded that the risk of dropout was closely linked to unstable development of students’ engagement.

4.2 Parenting practices

The family has been recognized as one of the primary contributors to the competence, psychosocial adjustment, and educational success of both children and adolescents (e.g., Baumrind, 1971; Lamborn et al., 1991; Rumberger, 1995; Steinberg, 2001; Wang & Eccles, 2012). In this context it has been pointed out that parental support may be especially salient for children’s adjustment in modern societies that have high rates of family dissolution and many two-parent working families (see Jeynes, 2007). Parents’ positive attitudes and expectations towards their children’s behavior, and the ways that parents connect and communicate with their children—seem to foster their children’s competence and positive adjustment and also protect them from risky behaviors. Findings from various studies focusing on different outcomes of children and adolescents confirm the importance of quality of parent-child relationships (e.g., Adalbjarnardottir & Hafsteinsson, 2001; Lamborn et al, 1991; Resnick et al., 1997).

During the transition from childhood to adulthood adolescents experience enormous growth and change biologically, cognitively, and psychosocially. Moreover, both their tasks and responsibilities and their social environment become increasingly complex and multifaceted (e.g., see overview by Santrock, 2008). These changes call for adolescents to play different roles within and outside the family and for changes to occur in the parent-child relationship, especially around the young person’s shift toward increased autonomy (see Steinberg & Silk, 2002). In spite of these changes, findings show that parents continue to play important roles in their children’s adjustment during adolescence (Hair et al., 2008; Steinberg, 2001; Wang & Eccles, 2012).

Within the research on the influence that family has on young people’s educational success, a strong focus has been on the relationship between the parents’ social and economic background (SES) and the students’ educational outcomes. Researchers have found that students from higher-SES backgrounds are more likely to succeed at school and less likely to drop out than those from lower-SES backgrounds (see review by Jeynes, 2002; McNeal, 1999; Rosenthal, 1998). Thus SES seems to be a powerful predictor of educational outcome, but as some have pointed out, it does not provide information on what it is in the family life that promotes school success (Davis-Kean, 2005; Entwisle et al.,
What we do know is that the parental behavior and beliefs that benefit children’s and adolescents’ education vary according to their socioeconomic status (e.g. Davis-Kean, 2005), and that parents of higher SES are more involved in their child’s education (see review of Fan and Chen, 2001). One of the main purposes of this thesis is to longitudinally examine school dropout among Icelandic youth based on the literature on the influence of family-youth interactions on youths’ adjustment; the focus is on parenting practices. Following is a discussion on parenting practices and youth’s educational outcomes, which is divided into sections on parental involvement (4.2.1.) and authoritative parenting (4.2.2).

### 4.2.1 Parental involvement

Researchers studying the influence of parenting on school outcomes have mainly focused on specific parental practices such as involvement in their child’s education, but mostly in relation to academic achievement and rarely in relation to school dropout (McNeal, 1999; Rumberger, 1995). The concept refers to different practices or activities that involve parents in their children’s education which may promote their school success (Anguiano, 2004). Common indicators of parental involvement include contacts between parents and school, parental involvement in school activities, parent-child communication about school, parental supervision involving homework, and parents’ educational aspirations for their child (Fan & Chen, 2001; McNeal, 1999). Despite the many studies on parents’ involvement and the children’s academic achievement, the nature of the relationship remains unclear (Jeynes, 2007; McNeal, 1999). In their meta-analysis, Fan and Chen (2001) concluded that the association between parental involvement and students’ academic achievement was weaker than expected. The strongest predictor was parental expectations that their children would do well in school. Moreover, the findings of these studies have been inconsistent. In some, parental involvement seemed to relate positively to children’s achievement (e.g., Hoge, Smit, & Crist, 1997), but other studies found no association, or even a negative one. For example, McNeal (1999) found that adolescents whose parents participated in the parent-teacher association got lower grades than their peers.

In one of the few studies in this area of school dropout, Alexander and his colleagues (1997) found that young people whose parents had low expectations for their educational attainment at the beginning of their schooling were more likely to drop out. A couple of other studies indicate that parental involvement in parent-teacher organization activities and
parental supervision of adolescents’ homework reduces the risk of dropping out (McNeal, 1999; Rumberger, 1995). However, McNeal’s findings (1999) suggest that the association between parental involvement and school success varies depending on the indicator used for success. For example, parent-child communication about school was positively associated with higher grades but did not seem to reduce the risk of dropout.

The literature outlined above suggests that to better understand the influence that parents have on their child’s education it is important to look at a broader conceptualization of child upbringing that characterizes the parents’ actions in their communications with their child (Steinberg, 2001) instead of using overly specific definitions of parental support (see Jeynes, 2007) such as parental involvement in school activities, and parent-child communication about school. Accordingly, such an approach might help parents better understand how to motivate and encourage their children’s educational aspirations and support them in succeeding at school.

4.2.2 Authoritative parenting

Authoritative parenting is most consistently associated with Baumrind’s (1971, 1991) pioneering work. In her theory Baumrind describes how distinct styles of parenting behavior lead to differences in the adjustment of children and adolescents; she suggested a typology of parenting styles based on two dimensions: responsiveness and demandingness. Most commonly used is the fourfold typology of authoritative, authoritarian, indulgent, and neglectful parenting styles.

Demandingness refers to the claims parents make on children to become integrated into the family whole, by their maturity demands, supervision, disciplinary efforts and willingness to confront the child who disobeys. Responsiveness refers to the extent to which parents intentionally foster individuality, self-regulation, and self-assertion by being attuned, supportive, and acquiescent to children’s special needs and demands. (Baumrind, 1991, p. 62)

In their measure Lamborn and her colleagues (1991) applied the fourfold typology of parenting style, using the interactive effects of the parenting dimensions responsiveness and demandingness based on Baumrind’s work (1971, 1991) and on the Maccoby and Martin (1983) revision of her conceptual work. Authoritativeness, characterized by both high parental responsiveness and demandingness, has been described as “a constellation
of parent attributes that include emotional support, high standards, appropriate autonomy granting, and clear, bidirectional communication” (Darling & Steinberg, 1993, p. 487). Authoritative parents are responsive: accepting, warm, and encouraging towards their children. At the same time, they are demanding: they supervise their children’s behavior, impart clear standards, and enforce developmentally appropriate expectations without being intrusive or restrictive.

The other three types emphasize one, or neither, of these dimensions. The characteristics of authoritarian parenting are high demandingness and control, but low responsiveness and warmth. The parents emphasize obedience and respect for authority, and have clear rules that their children are not supposed to question. Indulgent parenting is characterized by high responsiveness and low demandingness. The parents are accepting but exercise little behavioral control. They allow considerable self-regulation, and are lenient and avoid confrontation. Neglectful parenting is characterized by neither demandingness nor responsiveness. The parents do not monitor or guide their children and do not support them or relate to them with warmth (Baumrind, 1991; Lamborn et al., 1991).

This typology of parenting styles has been considered promising since it provides an opportunity to explore the relationships between the multidimensional characteristics of parenting and the adjustment of youth. Children and adolescents from authoritative families have been shown to score higher on a wide variety of measures of adjustment, psychosocial development, and academic achievement compared to their peers raised with other styles (Adalbjarnardottir & Hafsteinsson, 2001; Baumrind, 1971, 1991; Lamborn et al., 1991; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994; Türkel & Tezer, 2008).

Research on the relationship between parenting and the development of children and youth has been criticized for ignoring the possible influence of children’s characteristics on the bidirectional interactive relationship between parent and child. Temperament is described as constitutionally-based individual differences in self-regulation and reactivity that are fairly stable from early on, but can also be modified by experience (Collins et al., 2000; Windle, 1992). It has been pointed out that the same characteristics in the child, that may evoke authoritative parenting practices, may also relate to positive developmental outcomes (see Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000). Findings show that parenting practices are related to childrens’ temperament (e.g., Crockenberg, 1986; Porter et al., 2005; Rothbart & Bates, 1998) which indicate that differences in temperament may moderate
the quality of parent-child interactions and therefore relate to children’s and adolescents’ psychosocial and behavioral adjustment.

There is some debate on the applicability of Baumrind’s parenting style model across culture. For example, it has been argued that the model does not apply to cultures that emphasize collectivism and that research in the field has lacked focus on sociocultural and contextual processes underlying racial and ethnic differences (see Chao & Otsuki-Clutter, 2011; Sorkhabi, 2005). The argument is that although findings across ethnic groups support the belief that authoritative parenting fosters the positive adjustment of youth (Glasgow, Dornbush, Troyer, Steinberg, & Ritter, 1997; Lamborn et al., 1991; Türkel & Tezer, 2008), other parenting styles may have different influences depending upon the ethnic group. For example, there is some evidence that authoritarian upbringing have more negative effects for European American youth compared to their Asian American peers (Chao, 1994; Deater-Deakard, Dodge, Bates, & Pettit, 1996).

Sorkhabi (2005) reviewed studies that explored Baumrind’s parenting style model in relation to children’s and adolescents’ outcomes in cultures that are said to emphasize collectivism versus individualism. Her main conclusion is that the model of parenting styles is applicable across these cultures in the way that is has similar functions on children’s and adolescents’ outcomes, especially when comparing authoritative and authoritarian parenting. She argues that the model differentiates between similar structures of parenting styles and that children and adolescents interpret different forms of parenting in similar ways in these cultures. Findings of Lamborn and Felbab (2003) are in line with the conclusion of Sorkhabi that the parenting style model has a cross-contextual validity. More precisely they used a culturally sensitive approach to evaluate meaningful dimensions of parenting practices among African-American families based on the teens’ open-ended and structured descriptions of their parents. Their parents’ behavioral control and warmth towards their child were central features in the youths’ descriptions of their parents. These findings indicated that the parenting style model is applicable for African-American teens and their families. This debate continues. In their review on ethnic and racial diversity in studies of adolescence Chao and Otsuki-Clutter (2011) argue that parenting dimensions of support, behavioral and psychological control are differently defined across culture reflecting different cultural values. For example, studies among African American, Latino, Asian-American and Asian adolescents that defined parental support as acceptance or “being there” for the children showed relationship between parental support and positive adolescents’ outcomes.
It should be noted, however, that there is more inconsistency in findings among these groups when parental support is also defined as parental affection and praise. This is a growing field of study and further research will continue to shed light on the applicability of Baumrind’s theory of parenting style across culture.

During adolescence parents’ high level of responsiveness and demandingness continues to be important for successful development. In addition, the dimension of psychological autonomy granting, in which parents use democratic discipline and encourage their children to express their thoughts and feelings, seems to be especially significant in adolescence in order for parents to match their children’s level of development, including their claim for more independence (Baumrind, 1991; Steinberg, 2001; Steinberg, Lamborn, Dornbusch, & Darling, 1992). For example, Gray and Steinberg (1999) examined autonomy granting as well as responsiveness and demandingness, the other core dimensions of authoritative parenting, and found that all three related to adolescents’ academic competence. Regarding education, adolescents who perceive their parents as authoritative are more likely to earn higher grades than adolescents who perceive their parents as non-authoritative (e.g., Adalbjarnardottir & Blondal, 2004; Baumrind, 1991).

Steinberg and his colleagues (1992) argue that the association between parental involvement in their child’s education (such as helping with schoolwork when asked and knowing how the student is doing in school) and academic achievement may vary across the parenting styles. Their findings indicate that the emotional context of authoritative parenting made parental involvement more effective in improving adolescents’ academic achievement. Adolescents whose parents were involved in their child’s education did better in school only if their parents were authoritative in their parenting style.

These findings suggest that in order to understand the processes through which parenting influences child development we must see two different aspects of parenting. These are (a) the specific practices parents use to help their children attain particular goals, like doing well in school; and (b) the parenting style or emotional context in which they offer that help. The style is independent of the content of the specific practices, such as direct involvement with school activities. It is a general climate that characterizes the behavior of the parents towards their children in different situations; it influences the child’s openness to being socialized and can
therefore determine how effective the specific practices are (Darling & Steinberg, 1993; Steinberg, 2001; Steinberg et al., 1992).

Researchers have rarely examined the relationship between a broader conceptualization of parenting style and school dropout. An exception is the cross-sectional study by Rumberger and his colleagues (Rumberger, Ghatak, Poulos, Ritter, & Dornbusch, 1990) based on Baumrind’s work. Their study provides some indication that adolescents of permissive parents are more likely to drop out of school than adolescents raised in authoritative and authoritarian families. They did not make a distinction between parents who were caring but permissive and those who were uncaring and neglectful (cf. the measure of Lamborn et al., 1991, based on Baumrind’s work). Moreover, the group of school dropouts was too small to allow the researchers to account for important factors like parents’ SES.

Substantial research has documented the importance of the school and the classroom environment as well as the social relations with teachers in fostering student engagement (Fredricks et al., 2004; Van Ryzin et al., 2009). For instance, Wang and Holocombe (2010) found that social support from teachers facilitates adolescents’ school engagement. Only a few studies, however, have examined the importance of multidimensional parenting practices—a broader conceptualization of child upbringing—to promote student engagement among adolescents. Findings from these studies indicate that authoritative parenting is positively associated with student engagement (Steinberg et al., 1994). Moreover, findings by Simon-Morton and Chen (2009) of the over-time relationship between authoritative parenting and engagement (students were followed from grade 6 to 9) indicate that this relationship remains substantial during adolescence, but that authoritative parenting practices declined as the adolescents got older. More important for the focus of the present study, little research has been conducted on the association, through student engagement, between parenting practices and dropout. Given that student disengagement is seen as the beginning of a long process that can ultimately lead to dropout (Alexander et al., 1997; Finn, 1989) and that engagement may be malleable, it is important to identify family factors associated with it (Fredricks et al., 2004).

4.3 The gaps in the existing literature

The existing literature on the association between parenting practices on the one hand and student engagement on the other and school dropout has important limitations. Although the concept of student engagement
Theoretical background

...figures prominently in most theories about dropout, little empirical research has been conducted on its nature and course and, more importantly, its association with dropout (Archamboult et al., 2008). Several issues need to be addressed. First, most of the studies focus on behavioral engagement, and only a few on emotional engagement and then usually in combination with behavioral engagement in only one construct. Given that the dimensions of engagement can be distinguished clearly and that it has a strong relationship to dropout, these different dimensions need to be dissociated. Second, a majority of the studies do not differentiate between the various sources of students’ emotional disengagement and there are indications that these sources may have differential effects. Third, studies on school dropout have been criticized for ignoring the diversity of students, particularly those who appear to be at risk but still beat the odds and persist within the system and those who appear to be on promising educational pathways but fail to do well. Fourth, studies on the association between students’ engagement and school dropout have been criticized for using cross-sectional rather than longitudinal data (Fredricks et al., 2004). Since school dropout often seems to result from a long-term process of withdrawal from school (see Finn, 1989; Newmann et al., 1992; Rumberger, 2011) it is particularly important to look longitudinally at the factors that seem to put students at risk or to protect them from leaving school early.

Studies of the family’s influence on school dropout have been criticized for having at least four important shortcomings. First, such studies tend to focus strongly on structural characteristics, such as parents’ socioeconomic status (SES), whereas parental behavior has shown to have differential effects. Second, few studies have analyzed the relationship between multidimensional parenting practices and school dropout; the focus has tended to be on academic achievement (McNeal, 1999). Third, studies in this area have also been criticized for using a narrow definition of parental support (see Jeynes, 2007) such as involvement in their child’s education (McNeal, 1999; Rumberger, 1995), rather than examining how parents guide or support their children—which may be equally important. Fourth, even though student engagement is a central concept in most theories of school dropout and dropout often seems to result from a long-term process of withdrawal from school (Finn, 1989), little research has focused on how parenting practices may relate to school dropout through the process of student engagement. The purpose of this thesis is to contribute to this understanding.
5 Aims and hypothesis

The main purpose of this paper-based thesis is to longitudinally examine school dropout among Icelandic youth from the following perspectives: theories on school dropout conceptualizing students’ disengagement as the central concept in understanding the process of leaving school; and the literature on the influence of family interaction with the student on youth adjustment from the perspective of parenting practices. Icelandic youth were followed over an eight-year period, from age 14 to 22.

The specific aims and research hypothesis in the papers are discussed below. The titles of the papers are as follows.

- Student disengagement in relation to expected and unexpected educational pathways. It will be referred to as *Student disengagement and educational pathways*.
- Parenting practices and school dropout: A longitudinal study. It will be referred to as *Parenting and school dropout*.
- Parenting in relation to school dropout through student engagement: A longitudinal study. It will be referred to as *Parenting, student disengagement, and school dropout*.

5.1 Student disengagement and educational pathways

The aim of this paper is to explore how student engagement processes distinguish between students who follow expected versus unexpected educational tracks across time. The focus is on both behavioral and emotional disengagement at age 14 and in addition on the over-time change in disengagement from age 14 to age 15. The expectation of students’ educational attainment at age 22 is built on their academic achievement at the end of compulsory school (age 15).

The main hypothesis is that that adolescents’ disengagement at age 14 and over-time change in disengagement between age 14 and 15 differentiates between students who follow different educational tracks. It is anticipated that (1) expected dropouts (low-achieving students who drop out) will be more disengaged at age 14 compared to unexpected graduates (low-achieving students who graduate), and (2) unexpected dropouts (high-
achieving students who drop out) will be more disengaged at age 14 compared to expected graduates (high-achieving students who graduate).

Also, it is anticipated that (3) expected dropouts (low-achieving students who drop out) will become more disengaged from age 14 to 15 compared to unexpected graduates (low-achieving students who graduate), and (4) unexpected dropouts (high-achieving students who drop out) will become more disengaged from age 14 to 15 compared to expected graduates (high-achieving students who graduate). These relationships are expected to persist even after taking the adolescents’ background (gender and SES) into account.

5.2 Parenting and school dropout

The main aim of the paper is to contribute to the understanding of the longitudinal association between parenting practices during adolescence and educational attainment at age 22 by exploring multifaceted indicators of parenting practices based on Baumrind’s (1971) theory and parental involvement in their child’s education.

The main hypothesis is that parenting style predicts school dropout: It is expected that adolescents who at age 14 characterize their parents as authoritative are more likely to finish their upper secondary education by age 22, compared to adolescents who perceive their parents as non-authoritative. This relationship is expected to persist even after taking into account adolescents’ background (gender and SES) and temperament, as well as their previous academic achievement at the end of compulsory school (age 15). Furthermore, possible mediation effects are explored of achievement on the relationship between parenting style and school dropout.

It is hypothesized that parental involvement at age 14 predicts school dropout: the adolescents who at age 14 perceive their parents as willing to participate in their education are more likely to complete upper secondary school. However, compared to parental involvement, parenting style is expected to relate more strongly to school dropout.

Furthermore, parenting style is expected to moderate the relationship between parental involvement and school dropout.

5.3 Parenting, student disengagement, and school dropout

The main purpose of this paper is to explore longitudinally how multifaceted parenting practices during adolescence (age 14) influence educational status at age 22 (graduation/dropout) through student engagement at age 15. Both
indicators of behavioral and emotional engagement are used in the study. The model posited suggests two specific hypotheses: a) Those adolescents who have more authoritative parents are more likely than their counterparts with less authoritative parents to have completed upper secondary education by age 22 and this relationship exists partly because they are less likely to be disengaged at school at age 15. That is, it is partly mediated by engagement. b) This relationship is expected to persist even after taking into account previous academic achievement at the end of compulsory school (age 15) as well as adolescents’ background (SES and gender).
6 Methods

This thesis is based on data from two sources: an ongoing, longitudinal study, the Reykjavik Adolescent Risk-Taking Longitudinal Study (RAR-LS; Adalbjarnardottir, 1994) which started in 1994, and official registered data on students’ performance on the standardized national tests at the end of compulsory school (10th grade) and on the educational status of the participants at age 22. In this chapter I will describe the participants and procedure in the basic survey, and the different samples, measurements, and analysis used in each of the three separate papers.

6.1 Participants

6.1.1 The baseline study

The initial sample in the all the original articles in the thesis are 1,010 14-year-old students (51% female) who participated at baseline in the longitudinal study: the Reykjavik Adolescent Risk-Taking Longitudinal Study (RAR-LS; Adalbjarnardottir, 1994). The sample was drawn from the population of students attending the 9th grade of compulsory school in Reykjavik, the capital city of Iceland. Approximately 90% of Reykjavik’s 9th-grade public-school population participated in the study at baseline. It should be noted that in Iceland traditionally very few students attend private schools. For example only around 1% attended private compulsory schools in the years 1998 to 2000 (Statistics Iceland, 2013). The case loss in the study was the result of absenteeism (9%) and parental exclusion (8 cases, less than 1%).

The sample was homogeneous with respect to culture (native Icelanders), religion (Lutheran) and language (Icelandic) and thus representtative of Reykjavik. At baseline, 70.4% of the adolescents lived with both biological parents, 14.3% lived with a single parent, 13.6% lived in blended families (one biological parent and one stepparent) and 1.7% lived in other types of households. In terms of SES, based on the Hollingshead (1975) categories, 3.7% were in Class 1 (the lowest class); 18.9% were in Class 2, 25.4% in Class 3, 18.3% in Class 4, 15.4% in Class 5, and 18.3% in the highest, Class 6.
6.1.2 Student disengagement and educational pathways

In this paper the focus is on 832 adolescents who met four criteria. They (a) participated in the baseline study at age 14 (9th grade); (b) participated in the follow-up study at age 15; and (c) completed standardized national achievement tests at the end of compulsory school (10th grade, age 15). In addition, (d) registered data on their educational progress was available within Statistics Iceland (age 22). Attrition from the initial sample is mostly due to missing data on some of the variables and the complex sources of the data, as the survey data was combined with information from the Educational Testing Institution of Iceland and Statistics Iceland.

6.1.3 Parenting and school dropout

In the paper the focus is on 427 adolescents who were classified at baseline (age 14) into one of four parenting styles: authoritative, authoritarian, indulgent and neglectful. These 427 were a subgroup of the initial sample of 1,010 14-year-old students. The attrition was mostly due to the method used to categorize students into the four parenting styles which consisted of omitting part of the sample that could not be clearly classified (see more detailed description below, in section 6.3.1.). Furthermore, for 47 of the adolescents, information was missing on one or more of the research variables, which is not surprising given the longitudinal design of the study. The students were followed over an eight-year period up to age 22.

A series of analyses was conducted to determine whether the attrition in sample size from age 14 to 22 was due to systematic effects. Looking at those for whom one or more study variables were missing, the final sample was biased in favor of students with more school success, fewer temperament difficulties, and higher SES, but it was not biased with regard to parenting variables. These attrition biases suggest that generalization of results needs to be considered cautiously. One implication might be that our estimates of effects are restricted, as the variability of risk factors for dropping out is constrained.

6.1.4 Parenting, student disengagement, and school dropout

Participants in this paper were 835 adolescents who met four criteria. They (a) participated in the baseline study at age 14 (9th grade); (b) participated in the follow-up study at age 15; and (c) completed standardized national achievement tests at the end of compulsory school (10th grade, age 15). In addition, (d) registered data on their educational progress at age 22 was available from Statistics Iceland. Attrition from the initial sample is mostly
due to missing data on some of the variables and the complex sources of the data, as we combined the survey data with information from the Educational Testing Institution of Iceland and Statistics Iceland. We used multiple imputation procedures to impute missing data on the independent variables using R 2.15.0 (R Core Team, 2012), and the package mice 2.18 (Van Buuren & Groothuis-Oudshoorn, 2011). Mice uses multiple imputation by chained equations to impute incomplete data, and has been found to work well in simulation studies (e.g. Drechsler & Rassler, 2008; Van Buuren, Brand, Groothuis-Oudshoorn, & Rubin, 2006).

6.2 Procedure

Permission for the study was granted by the Icelandic Data Protection Commission, the Ministry of Education, and the Educational Testing Institution of Iceland. All of the principals at the 19 compulsory schools in Reykjavik provided their written permission to collect data in their schools. Letters describing the study were sent to the adolescents and their parents. The parents were asked to contact the research project if they or their adolescent did not want to participate in the study. This approach was used because researchers have found that in studies requiring active parental consent for an adolescent to participate, well-functioning families tend to be overrepresented (see Lamborn et al., 1991). The self-report questionnaire was administered during school hours both at age 14 and 15 with the help of trained data collectors. The adolescents were informed that they could refuse or discontinue participation at any time and were assured that their answers were strictly confidential. The second round of data collection took place when the adolescents were 15, in 10th grade, their final year of compulsory school.

In addition to the survey data, information was obtained from the Educational Testing Institution of Iceland. This resource provided information on students’ performance on the standardized national tests given at the end of compulsory school (10th grade). Moreover, Statistics Iceland, the national statistical institute, provided information on the upper secondary education of the participants at age 22.

6.3 Measures

We used same measures of school dropout, socioeconomic status and academic achievement in all three papers. In addition, each of the three papers used other measures which I describe below.

School dropout. The participants were considered to have dropped out of school if they had not completed, and were not registered in, an upper
secondary school at age 22; in Iceland students are generally supposed to graduate during the year of their 20th birthday.

Socioeconomic status. Socioeconomic status (SES) was assessed using the Hollingshead (1975) Index which links parents’ SES with their education and occupation. When the mother’s and father’s SES were not similar, we used the higher of the two scores. In the papers Student disengagement and educational pathways, and Parenting and school dropout the families of the children were divided into two socioeconomic classes. Those considered to be in the lower-status category were unskilled and skilled manual workers and workers in service occupations. In the higher-status category were executives, teachers, university-educated specialists, professionals, and owners of businesses. In the paper Parenting, student disengagement, and school dropout, SES was assessed on a six-point scale: Category I (e.g., unskilled employees), Category 2 (e.g., skilled manual workers), Category III (e.g., clericals, service occupations), Category IV (e.g., owners of small businesses), Category V (e.g., owners of larger businesses), and Category VI (e.g., university-educated specialists and professionals).

Academic achievement. In the two papers on parenting and school dropout, we used grades on standardized national tests in Icelandic, mathematics, and English at the end of compulsory school (10th grade, age 15) to measure previous academic performance. In the paper Student disengagement and educational pathways, the measurement of achievement was based on the tests in Icelandic and mathematics. The two combined measures provided identical findings.

6.3.1 Student disengagement and educational pathway

Student disengagement. In this paper, students’ disengagement was assessed twice, when the adolescents were 14 and 15 years old. In their review on student disengagement Fredricks and her colleagues (2004) criticized the fact that most studies have collapsed the dimensions of engagement. In this study, following their recommendations, we developed separate measurements of behavioral and emotional disengagement, and emotional disengagement was further divided into two constructs based on the sources of students’ emotions. Thus we used three measures of disengagement: negative school behaviors, academic disinterest, and disidentification with school. The construction of the three measures was guided by the results of exploratory factor analysis. Factor analysis was conducted on 10 items on school conduct and attitudes towards school and
academics, using the students’ answers at age 14 and again at age 15. Virtually identical three-factor solutions emerged each time.

Negative school behaviors consist of four items that capture students’ negative behaviors at school. Three of the items are from the Icelandic version (Arnkellson, 1987) of the Youth Self Report (YSR; Achenbach & Edelbrock, 1987). The adolescents were asked to rate the following statements: “I cut classes or skip school,” “I get into many fights,” “I disobey in school,” and “I do not prepare well for my classes.” Responses for the first three items were on a 3-point scale: not true (1), somewhat or sometimes true (2), and often true (3). Responses for the fourth item were: never or seldom applies to me (1), sometimes applies to me (2), and almost always or always applies to me (3). Cronbach’s alpha was .67 for the students’ answers at both age 14 and age 15.

To assess academic disinterest three items were used: “I feel bored with my studies”, “I am not interested in my studies”, and “I feel my studies are useless”. Finally, school disidentification was assessed using three items: “I am not happy at school”, “I want to attend a different school”, and “I want to quit school”. For the two constructs of emotional disengagement the adolescents were asked to respond to a 5-point Likert scale; it ranged from never applies to me (1) to almost always applies to me (5). Cronbach’s alpha for academic disinterest was .74 at age 14 and .75 at age 15. For disidentification with school Cronbach’s alpha was .72 at age 14 and .77 at age 15. The items in all three disengagement components were coded so that the higher scores indicate higher disengagement.

6.3.2 Parenting and school dropout

Temperament. The Revised Dimensions of Temperament Survey (DOTS-R) developed by Windle and Lerner (Windle, 1992; Windle & Lerner, 1986) was used. This scale consists of 54 items assessing 10 temperament attributes defined as: (1) Activity level–general (7 items, $\alpha = .80$), (2) activity level–sleep (4 items, $\alpha = .82$), (3) approach-withdrawal (7 items, $\alpha = .56$), (4) flexibility-rigidity (5 items, $\alpha = .77$), (5) mood quality (7 items, $\alpha = .86$), (6) rhythmicity-sleep (6 items, $\alpha = .71$), (7) rhythmicity-eating (5 items, $\alpha = .70$), (8) rhythmicity-daily habits (5 items, $\alpha = .48$), (9) distractibility (5 items, $\alpha = .70$), and (10) persistence (3 items, $\alpha = .65$). In line with Windle (1992) we created one temperament construct; for each of the attributes a dichotomous score was derived (0, 1) with 1 indicating that the adolescents were in the 30th percentile along with those who had the most difficulties
on a given temperament attribute (see Windle, 1992). The possible range was 0 to 10, with higher scores indicating more temperament difficulties.

**Parental involvement.** Three dimensions commonly used in studies on parental involvement were used: adolescents’ perception of parents’ assistance with homework, parent-child communication about school, and educational aspirations (Fan & Chen, 2001; McNeal, 1999). The adolescents were asked about perceived but not actual parental support—the factor usually evaluated in studies on parental involvement (e.g., McNeal, 1999; Rumberger, 1995). The adolescents were asked how willing their mother/father was to assist them with homework, show interest in their studies, and encourage them to get further education. The Cronbach’s alpha for the six items (three items for each parent) was .82. Higher scores reflect more parental involvement.

**Parenting style.** Adolescents’ perceptions at age 14 of parenting styles were measured using the acceptance/involvement and strictness/supervision scales developed by Lamborn and her colleagues (1991) based on Baumrind’s (1971) work. The acceptance scale assesses the perceptions that adolescents hold of their parents’ affection, responsiveness, and involvement (10 items, α = .75). Typical statements included “When (he/she) wants me to do something, (he/she) explains why” and “I can count on (him/her) to help me out if I have some kind of problem.” On the supervision scale adolescents are asked about their parents’ limit setting, monitoring and supervision (8 items, α = .77). Typical statements to be rated include “In a typical week, what is the latest you can stay out on Friday or Saturday night?” and “How much do your parents REALLY know where you go at night?”

Of the 1,010 adolescents participating in the study at age 14, 474 were classified according to one of four parenting styles: authoritative, authoritarian, indulgent, and neglectful. Following the methodology of Lamborn and her colleagues (1991) the sample was trichotomized on the two scales of acceptance/involvement and strictness/supervision, and those results were combined to yield four different parenting styles. Authoritative parents were defined as those who scored in the upper third on both scales. Authoritarian parents were those who scored in the lowest third on the acceptance/involvement scale, but in the highest third on the strictness/supervision scale; meanwhile indulgent parents were those who scored in the highest third on the acceptance/involvement scale, but in the lowest third on the strictness/supervision scale. Finally, neglectful parents were those who scored in the lowest third on both scales. To distinguish more clearly between
the four styles, we omitted from our analysis those adolescents whose perceptions of their parents placed them in the middle third on either scale.

6.3.3 Parenting, student disengagement, and school dropout

Parenting practices were assessed when the adolescents were at age 14, using the scales of acceptance/involvement, strictness/supervision, and psychological autonomy granting developed by Lamborn and her colleagues (1991) based on Baumrind’s (1971) work. These are the three core dimensions corresponding to authoritative parenting; in this study we treat each subscale as a continuous variable (see Gray & Steinberg, 1999; Steinberg et al., 1992). Acceptance/involvement included six items on parents’ responsiveness, affection, and involvement. Typical statements included: “My mother/father keeps pushing me to do my best in whatever I do,” and “I can count on my mother/father to help me out if I have some kind of problem.” Strictness/supervision included six items about parents’ limit setting, and supervision. Typical questions were: “How much do your parents TRY to know where you go at night?” and “How much do your parents REALLY know where you go at night?” Psychological autonomy granting included four items assessing the extent to which the adolescents perceive their parents as employing non-coercive discipline and encouraging their individuality. Examples of statements are (reverse scored): “When I get a POOR grade my mother/father makes my life miserable,” and “My mother/father won’t let me do things with her/him when I do something she/he doesn’t like.” The items were coded so that the higher scores indicate more psychological autonomy granting, acceptance, and supervision.

Student disengagement was assessed when the adolescents were at age 15 using nine items on school behavior, and on attitudes towards academics and school. The items were hypothesized to reflect three first-order latent concepts of behavioral and emotional disengagement—negative school behaviors, academic disinterest, and disidentification with school—that would further converge into one global construct of disengagement (see review by Fredricks et al., 2004).

Negative school behaviors consist of three items from the Icelandic version (Arnkellsnon, 1987) of the Youth Self Report (Achenbach & Edelbrock, 1987), for example: “I cut classes or skip school,” and “I disobey in school.” Responses were on a 3-point scale: not true (1), somewhat or sometimes true (2), and often true (3). Academic disinterest consists of three items, for example: “I feel bored with my studies,” and “I feel my studies are useless.” Finally, school disidentification was assessed using
three items, for example: “I am not happy at school,” and “I want to quit school.” For the constructs of emotional disengagement the responses were on a 5-point scale; from never applies to me (1) to almost always applies to me (5). The items in all three disengagement components were coded so that the higher scores indicate more disengagement.

Academic achievement is based on standardized national tests in Icelandic, English, and mathematics in 10th grade (age 15).

6.4 Analysis

Different statistical analyses were used in the three papers of this thesis.

6.4.1 Student disengagement and educational pathways

The first step in conducting the analysis for this paper was to predict educational attainment at age 22 (dropout vs. graduation) based on academic achievement at age 15 using binary logistic regression (Englund et al., 2008).

The analysis of disengagement was run in two phases. First, using univariate analyses of variance (ANOVA), comparisons of negative school behaviors, academic disinterest, and disidentification with school at age 14 were made for the student groups following the four different educational pathways (expected dropouts, expected graduates, unexpected dropouts, and unexpected graduates), along with gender and SES. The Tukey test was used to conduct pairwise post-hoc comparisons of the student groups. The second phase consisted of univariate analyses of covariance (ANCOVA); we explored the over-time changes in the disengagement variables from age 14 to 15, controlling for corresponding disengagement at age 14 for the student groups, taking gender and SES into account. Through this process we assessed the over-time changes in engagement from age 14 to 15 taking into account the existing difference at age 14 as well as the effects of regression to the mean (Fitzmaurice, 2000). Pairwise post-hoc comparisons were based on 95% confidence intervals for the adjusted changes in engagement of the student groups.

6.4.2 Parenting and school dropout

For this paper, logistic regression analyses were performed to determine whether the six independent variables—SES, gender, temperament, parental involvement, parenting style, and previous school achievement—predicted the likelihood of school dropout. The analysis was conducted in four steps. First, we explored the association between parenting style and
parental involvement at age 14 on the one hand and school dropout on the other, controlling for gender, SES, and temperament. Next, we examined whether the relationship between parental involvement and school dropout varied across parenting style. Finally, we compared two logistic models, with and without academic achievement, to evaluate whether achievement partly mediates the relationship between parenting style and school dropout (e.g., Baron & Kenny, 1986).

Students who had completed upper secondary school by age 22 were coded 0 and those who had dropped out were coded 1. In a logistic regression, given the increased value of the independent variables, an odds ratio greater than 1 indicates an increased risk of dropping out and an odds ratio below 1 indicates reduced risk. The independent variables were adolescents’ (1) gender (males coded as 0 and females as 1); (2) SES (lower status coded as 0 and higher status as 1); (3) temperament; (4) parenting style (which was quadrivalent and represented by three dummy coded variables with authoritative serving as a comparison group); (5) parental involvement; and (6) academic achievement. The continuous variables—temperament, parental involvement, and academic achievement—were centered at the sample mean in the regression models to account for problems associated with multicollinearity and interaction terms (Aiken & West, 1991). Moreover this method allows for easier interpretation as the regression coefficient for a given variable represents its effect when all other continuous variables in the model are at their mean.

6.4.3 Parenting, student disengagement, and school dropout

In this paper we conducted a four-step analysis using Lisrel 8.72. First, we conducted a first-order confirmatory factor analysis (CFA) for the measurement model consisting of the seven latent variables, including three for parenting practices, three for school disengagement, and one for academic achievement. Second, when this model was established we tested a second-order model for the global constructs of disengagement (measuring the behavioral and emotional dimensions) and authoritative parenting (based on acceptance/involvement, autonomy granting, and strictness/supervision). Third, we evaluated a structural equation model (SEM) for school dropout including the six latent variables of parenting practices and students’ disengagement as well as the second-order concepts of disengagement and authoritative parenting. Fourth, we tested the SEM model, controlling for academic achievement and the structural variables (SES and gender).
The model is based on an eight-year longitudinal design, extending from when the students were 14 until they were 22. Students who had completed upper secondary school by age 22 were coded 0 and those who had dropped out were coded 1, and males were coded as 0 and females as 1. Since the items presumably do not have interval-level properties, we used polychoric correlation and asymptotic covariance matrices as input matrices in Lisrel and the Diagonally Weighted Least Squares (DWLS) as our estimation method (Flora & Curran, 2004).

We used several indices to estimate the fit of the models, as recommended by Hu and Bentler (1999). To estimate the overall fit, we used the chi-square ratio ($\chi^2/df$) statistic, which adjusts for the sensitivity of the chi-square test to sample size and complexity of models. A chi-square ratio value of 3 or less indicates a good model fit (Bentler & Bonnett, 1980). We also report the models’ comparative fit index (CFI) and root mean square error of approximation (RMSEA), which have been shown to be good indicators of fit (McDonald & Ho, 2002). An excellent fit is indicated by a value of 0.95 for CFI (Bentler & Bonnett, 1980) and a value of less than .05 for RMSEA (McDonald & Ho, 2002). Because we violated multivariate normality we used the Satorra-Bentler chi-square statistic to estimate the overall fit of the models (see Jöreskog, Sörbom, Du Toit, & Du Toit, 2000).
7 Results

Around 32% of the youth who participated in the study at baseline had not completed upper secondary school at age 22. Males were more likely (38%) than females (28%) to have dropped out, $\chi^2 (1, N = 978) = 11.3, p = .001$. Moreover, adolescents from lower socioeconomic backgrounds were more likely to have dropped out than those with higher SES (SES 1 to 6: 52%; 51%; 39%; 31%; 22%; and 10%, respectively), $\chi^2 (5, N = 964) = 86.3, p < .001$.

In the following sections I summarize the main findings of the three papers.

7.1 Student disengagement and educational pathways

We examined students’ different educational pathways in relation to their disengagement during adolescence. The participants were Icelandic youth ($N = 832$) who were followed from age 14 to 22. Academic achievement at age 15 was used to identify expected and unexpected educational pathways (using logistic regression, see below). Multidimensional constructs of students’ emotional and behavioral disengagement were explored at age 14, along with the way their disengagement developed the following year.

Table 2  Classification of expected and unexpected educational pathways groups

<table>
<thead>
<tr>
<th>Predicted</th>
<th>Actual</th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>Graduated</td>
<td>Dropped out</td>
<td>Total</td>
<td></td>
</tr>
<tr>
<td>Predicted to graduate</td>
<td>511</td>
<td>84</td>
<td>595</td>
<td></td>
</tr>
<tr>
<td>Expected graduates</td>
<td>Unexpected dropouts</td>
<td>81</td>
<td>156</td>
<td>237</td>
</tr>
<tr>
<td>Predicted to drop out</td>
<td>592</td>
<td>240</td>
<td>832</td>
<td></td>
</tr>
</tbody>
</table>

The logistic regression model using academic achievement was 80% accurate in predicting educational attainment at age 22 ($b = -.98, p < .001$, $SE b = .06, OR = .38$, pseudo $R^2$ (Naglekerke) = .47) and produced four groups, as Table 2 shows. As can be seen in Table 2, of the 595 students predicted to graduate, 84 dropped out (unexpected dropouts) and of the 237 students predicted to drop out, 81 graduated (unexpected graduates).
A higher proportion of the males were classified as expected dropouts whilst a higher proportion of the females belonged to the group of high achievers who graduated as expected, $\chi^2(3, N = 832) = 11.7, p < .001$. Compared to the adolescents from higher-SES families, the adolescents from lower-SES families were roughly three times more likely to belong to the group of low-achiever students who dropped out; they were much less likely to be in the group of high achievers who graduated, $\chi^2(3, N = 832) = 71.7, p < .001$.

**Table 3  Analysis of variance for students' disengagement at age 14**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Negative behaviours</th>
<th>Academic disinterest</th>
<th>Disidentification with school</th>
</tr>
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<tbody>
<tr>
<td>Gender (G)</td>
<td>1</td>
<td>19.6***</td>
<td>4.3*</td>
<td>0.6</td>
</tr>
<tr>
<td>SES</td>
<td>1</td>
<td>1.6</td>
<td>4.0*</td>
<td>5.9*</td>
</tr>
<tr>
<td>Student groups (SG)</td>
<td>3</td>
<td>21.9***</td>
<td>10.6***</td>
<td>10.7***</td>
</tr>
<tr>
<td>G X SES</td>
<td>1</td>
<td>1.2</td>
<td>0.6</td>
<td>0.1</td>
</tr>
<tr>
<td>G X SG</td>
<td>3</td>
<td>1.4</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>SES X SG</td>
<td>3</td>
<td>1.1</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>G X SES X SG</td>
<td>3</td>
<td>1.5</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>Within-groups</td>
<td>816</td>
<td>0.15</td>
<td>0.58</td>
<td>0.71</td>
</tr>
</tbody>
</table>

* $p < .05$.  *** $p < .001$.

In general, the results of the ANOVAs and ANCOVAs indicated that adolescents’ school disengagement at age 14 and their over-time change in disengagement between ages 14 and 15 distinguished between the different educational pathways. The findings showed that adolescents’ behavioral disengagement (negative school behaviors) and emotional disengagement (academic disinterest, disidentification with school) differentiated according to their pathways, controlling for students’ gender and SES. As shown in Table 3, at age 14, those “at risk” academically who later graduated unexpectedly showed fewer negative behaviors than those who did drop out. Moreover, high achievers who dropped out unexpectedly showed more disengagement, both behavioral (negative behaviors) and emotional (academic disinterest, disidentification with school), compared to the expected graduates. The following year (age 15), in general, disengagement increased among the
unexpected dropouts but decreased among the expected graduates. Males and students from lower-SES backgrounds were generally more disengaged, and males from those backgrounds became more emotionally disengaged during their last year in compulsory school.

### 7.2 Parenting and school dropout

In this paper, we examined adolescents’ perceptions of parenting style and parental involvement in their education longitudinally, in relation to school dropout among Icelandic youth \( N = 427 \). In the study we used the well-known typology of parenting style in Baumrind’s (1971, 1991) tradition to explore how various parenting styles (authoritative, indulgent, authoritarian, and neglectful) relate to school dropout. The adolescents were followed from age 14 until age 22 to assess relationships over time between parenting practices and school dropout. Other study variables were adolescents’ gender, socioeconomic status, temperament, and parental involvement. Temperament was controlled for as studies on parenting have been criticized for ignoring the influence of children’s characteristics on the parent-child relationship (see Collins et al., 2000).

All six of the independent variables—SES, gender, temperament, parental involvement, parenting style, and previous school achievement—correlated with school dropout. School dropout rate was lower among females than among males and those of higher SES. Furthermore, the dropout rate was higher among those with more temperament difficulties and lower academic achievement.

Logistic regression analyses were performed to determine whether the six independent variables predicted the likelihood of school dropout (see Table 4). Our findings supported the three main hypothesis of the study. First, parenting style predicted school dropout. The adolescents who at age 14 characterized their parents as authoritative (showing acceptance and supervision) were more likely to finish their upper secondary education by age 22, compared to adolescents who perceived their parents as non-authoritative. This relationship persisted taking into account adolescents’ background (gender and SES), temperament, and parental involvement in their child’s education. Furthermore, even after controlling for previous academic achievement, adolescents from authoritative families were less likely to drop out than adolescents from authoritarian and neglectful families.

Second, the adolescents who at age 14 perceived their parents as willing to participate in their education were more likely to complete upper secondary school. However, as expected, compared to parental involvement, parenting
style related more strongly to school dropout. Third, parenting style moderated the relationship between parental involvement and dropout, but not in all groups; only in authoritative families did parental involvement decrease the likelihood of school dropout.

Table 4  Multiple logistic regression for relationship of adolescents’ perceived parenting practices with later school dropout

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1</th>
<th>Model 2</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
</tr>
<tr>
<td>Females</td>
<td>-0.70</td>
<td>0.24</td>
</tr>
<tr>
<td>Higher SES</td>
<td>-1.12</td>
<td>0.23</td>
</tr>
<tr>
<td>Temperament</td>
<td>0.03</td>
<td>0.07</td>
</tr>
<tr>
<td>Parental involvement</td>
<td>-0.33</td>
<td>0.24</td>
</tr>
<tr>
<td>Parenting style</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neglectful</td>
<td>1.04</td>
<td>0.30</td>
</tr>
<tr>
<td>Authoritarian</td>
<td>1.44</td>
<td>0.38</td>
</tr>
<tr>
<td>Indulgent</td>
<td>0.78</td>
<td>0.38</td>
</tr>
<tr>
<td>Academic achievement</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.50</td>
<td>0.29</td>
</tr>
</tbody>
</table>

\* Nagelkerke $R^2$ = 0.22

Note. OR = Odds ratio.
* Model 1, likelihood ratio $\chi^2(7, N = 427) = 74.19; p = .000$.
+ Model 2, likelihood ratio $\chi^2(6, N = 427) = 180.70; p = .000$.

7.3 Parenting, student disengagement, and school dropout

To address family influences on dropout this longitudinal study examined the contribution of multifaceted parenting practices to students’ completion of upper secondary school through their student engagement over an eight-year period. Icelandic youth ($N = 835$, 54% female) were followed from age 14 to 22. Analyses based on structural equation modeling revealed that adolescents (age 14) with more authoritative parents (high acceptance, supervision, and psychological autonomy granting) were more likely to have completed upper secondary school at age 22, compared to adolescents with less authoritative parents, as shown in Figure 3. Moreover, the level of multidimensional student engagement at age 15 partly mediated the relationship between authoritative parenting and educational status. The findings suggest that authoritative
parenting practices foster students’ engagement which, in turn, reduces their risk of dropping out.

Furthermore, even after controlling for academic achievement at age 15 and student socio-demographic background (gender SES), the influence of parenting practices on school dropout persisted through the mechanism of student engagement. These findings emphasize how important the nature of the parent-child relationship is in enhancing adolescents’ engagement with both school and their studies, and that engagement, in turn, reduces the risk of dropping out of school.

Coefficients are standardized. Model fit statistics: Satorra-Bentler $\chi^2 = 776.35$, df = 289; $\chi^2$/df = 2.69; CFI = .98; RMSEA = .045.

a Graduation = 0; Dropout = 1.

** p < .01. *** p < .001.

Figure 3 Influence of parenting practices on educational status at age 22
8 Discussion and conclusion

Dropout is of concern across nations. Compared to those who graduate, students without accredited skills have poorer prospects in the labor market, with lower-paid jobs, and are more at risk of becoming unemployed; they are also less likely to participate in lifelong learning and more likely to experience health problems and to engage in antisocial behavior (Nordic Social Statistical Committee, 2011; OECD, 2011). School dropout has been described as a complicated longitudinal process of interactions between students’ characteristics and their social context that lead to gradual student disengagement.

The context of this paper-based thesis is the challenging years of adolescence when students tend to become less engaged, and meanwhile face critical decisions about their education. Although most students in Iceland proceed directly to upper secondary school after completing compulsory education at age 16, many fail to complete their studies. The findings of this thesis indicate that a multidimensional aspect of student engagement at age 14 and the way it develops the following year can distinguish between youth’s educational pathways at the upper secondary level. Moreover the study indicates that looking at general aspects of parenting practices during adolescence extends our understanding of the longitudinal influences that parents have on their children’s educational attainment. Students who perceived their parents as authoritative at age 14 were more likely to have completed their studies at age 22 compared to their peers from authoritarian, neglectful, or indulgent families. In addition, the results indicate that parenting practices influence school dropout and graduation through student engagement in adolescence. A major conclusion of the thesis is that the style of parenting and the nature of student engagement are useful concepts when attempting to understand the mechanisms underlying the process of dropping out.

8.1 Student disengagement and school dropout

One of the clearest findings of the thesis is that multifaceted student disengagement, as reflected both in their behavior and emotions in the period of 9th and 10th grades (age 14 and 15; at the end of compulsory education in Iceland) can distinguish between their educational pathways at
the upper secondary level. During adolescence, a critical point in students’ education, their feelings towards their academic tasks and school, as well as their school behaviors and the way their disengagement develops the following year, can have an impact: some students who are at risk academically become more resilient and some who seem to be on a promising educational track become more vulnerable.

This was especially the case for high-achieving students. Compared to the students who graduated as expected, those who dropped out unexpectedly were more disengaged at age 14, both behaviorally and emotionally. Those who dropped out despite the expectations for them were, at age 14, already showing more negative behaviors, academic disinterest (e.g. being bored and seeing no point in their studies) and lack of identification with school (e.g. feeling bad at school and wanting to quit), compared to those who followed a successful track and graduated. Moreover, in general, while the expected graduates became less disengaged the following year, the unexpected dropouts became more disengaged.

Among low achievers, the difference between those who dropped out (expected dropouts) and those who did not (unexpected graduates) is that at age 14 the expected dropouts showed more behavioral disengagement than the unexpected graduates. The following year, behavioral disengagement did not change for these two groups. Our findings remained pronounced after we took into account the parents’ SES and the adolescents’ gender.

Another major finding indicates the importance of looking not only at concurrent disengagement but also at how it develops over time (e.g., Janosz et al., 2008). Our findings for over-time changes in disengagement are particularly interesting for the two groups of high academic achievers who followed different educational pathways: the expected graduates and the unexpected dropouts. The unexpected dropouts, who were already disengaged at age 14, became more emotionally disengaged the following year with regard to both academic interest and identification with school. The reverse was found for expected graduates, those who were the least disengaged at age 14: their situation even improved from age 14 to 15 as both their negative behaviors and disidentification with school decreased. Thus the process of moving towards dropping out may be seen as a process of gradual emotional disengagement.

The above findings are important: unlike earlier studies, ours not only compared the characteristics of students who drop out and those who complete school (see Janosz et al., 2008) but also focused on the disengagement of students who are the exceptions to the predictions and
follow unexpected educational pathways. Even though students tend to become less motivated during adolescence (e.g. Fredricks & Eccles, 2002) our study suggests that this general pattern may vary among students and that this variation is important in relation to educational attainment. In this regard our findings corroborate those of Janosz and his colleagues (2008) who found that students follow distinct trajectories of school engagement from age 12 to 16. By using a developmental approach in our study, and tracking engagement over a one-year period, we were able to distinguish between those who follow different educational paths.

With respect to gender and socioeconomic background at age 14, students from lower-SES backgrounds were more emotionally disengaged with regard to academic disinterest and identification with school. Moreover, at age 14 males were more disengaged than females, showing more negative school behaviours and more disinterest in their studies. This general pattern of comparative disengagement between males and females and those of different SES is in line with findings from other studies (Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002; Janosz et al., 2008; Martin, 2007). Further, compared to other students, males from lower-SES backgrounds became more emotionally disengaged during their last year in compulsory school.

The findings of the thesis support the main theoretical frameworks describing school dropout as a gradual process in which students disengage and withdraw from school (see Finn, 1989; Newmann et al., 1992; Rumberger, 2011). Further, the study supports the importance of using a developmental approach to students’ engagement (Janosz et al., 2008) and acknowledging its multifaceted nature (Finn, 1989; Fredricks et al., 2004). The study also supports the view that it is informative to explore not only students’ behavioral engagement but also their emotional engagement (Fredricks et al., 2004). We found that not only students’ behavior at school but also their feelings towards their studies and school are important indicators of disengagement towards school and education, factors that place them at risk of dropping out, even when they are doing well academically. Therefore our findings suggest that in order to prevent dropout it is important to pay attention to students’ school behaviors as well as to how they feel about their studies and how they relate to school.

8.2 Parenting practices as context

One of the major findings of this thesis indicates that looking at general aspects of parenting practices during adolescence extends our understanding of the role parents play in supporting their adolescent in completing upper secondary
school. Adolescents who at age 14 perceived their parents as authoritative—accepting, encouraging, and responsive to their needs but at the same time imparting clear standards for their behavior, and enforcing developmentally appropriate expectations without being intrusive—were more likely to have completed upper secondary school by age 22, compared to those who perceived their parents as authoritarian, neglectful, or indulgent.

The findings are particularly noteworthy, as they apply to both males and females (OECD, 2007) regardless of socioeconomic background (e.g., Jeynes, 2002; Rosenthal, 1998) parents’ involvement in their education (McNeal, 1999; Rumberger et al., 1990), or adolescents’ temperament (see Collins et al., 2000). In addition, net of the influential factors of previous academic achievement (see Alexander et al., 2001; Battin-Pearson et al., 2000; Blondal et al., 2011; Rumberger, 1995), and of SES and gender, adolescents from authoritative parents fare better at school than do those whose parents are authoritarian or neglectful.

A second major finding relating to the parents’ practices supports the suggestion that using broader characteristics of the parent-child relationship like parenting style, rather than merely parental involvement in the child’s education, might be a fruitful way to detect the essential role the family plays in the children’s education (Jeynes, 2007; Steinberg, 2001). One possible explanation may be that even though the schools and society in general encourage parents to participate in their child’s education (Jeynes, 2007; McNeal, 1999), parents may need more information on how to support their children educationally. For example, adolescents may sometimes experience traditional parental questions (how they did at school today or whether they have completed homework) as interference rather than involvement. Our findings imply that rather than solely stressing parental involvement around academic issues, the message could be that a parent-child relationship that conveys general interest in the child’s life and well-being, as well as communicating clear and fair standards, might be more helpful in encouraging them to do well in important areas of life, such as at school.

The above findings suggest how strongly adolescent-perceived parenting styles relate to their school dropout. Also, in general they support previous findings about the benefits of authoritative parenting compared to other parenting styles (Baumrind, 1991; Lamborn et al., 1991; Steinberg et al., 1992, 1994). One explanation might be that adolescents who experience their parents as providing warmth, trust, and respect—while also setting fair limits and demanding mature behavior—may be more receptive to
their parents’ socialization. In addition, authoritative parenting seems to foster adolescents’ engagement towards their school and studies.

Furthermore, in this thesis we took a step beyond earlier research: We examined the mechanism behind the association between parenting practices and educational status by focusing on a multidimensional construct of student engagement. Among the most interesting finding of this longitudinal study is the association between multidimensional parenting practices as perceived by adolescents at age 14 and their educational status at age 22, mediated by their level of engagement at age 15. First, adolescents who perceived their parents as more authoritative (i.e., providing high levels of acceptance and supervision, and granting psychological autonomy) were more likely to have completed upper secondary school at age 22, compared to their counterparts who perceived their parents as less authoritative. Second, students from more authoritative homes were less likely to be disengaged from school, as they showed less negative school behavior, less academic disinterest, and less disidentification with school during adolescence. Moreover, student engagement seems to play a critical role in the relationship between parenting practices and school dropout/graduation. Importantly, those adolescents who had more authoritative parents were not only less likely to feel disengaged at school, but also more likely to complete upper secondary school.

The finding of the thesis that students from more authoritative homes were less likely to be disengaged—that they show fewer negative school behaviors, and less academic disinterest and disidentification with school—is an important one that corroborates and contributes to the limited research on multidimensional parenting practices in relation to student engagement (Simons-Morton & Chen, 2009). Further, because of the focus on parenting practices, the findings support the literature on the role that contextual factors play in increasing or decreasing student engagement. For example, substantial evidence indicates that school climate and teacher-student relations relate to student engagement (Fredricks et al., 2004; Van Ryzin et al., 2009).

Even more importantly, our finding that parenting practices can help predict young people’s educational status in their early twenties, through the mediation of engagement during adolescence, helps to fill a gap in the research literature. It indicates that those adolescents whose parents are both responsive and demanding, and also grant autonomy, are less disengaged at the end of compulsory school, compared to their counterparts, and that this relationship makes them more likely to graduate from upper secondary school.
It is particularly noteworthy that in this study parenting practices continued to have an influence, through students’ disengagement, on their children’s educational status at age 22 even though we accounted for the strong impact that previous academic achievement (standardized tests at age 15) has on dropout in addition to students’ background (SES and gender). In other words, our findings indicate that regardless of students’ academic achievement, the quality of the relationship between parents and their adolescents can lead to students having positive feelings towards their academic tasks and school, and to behaving well in school, and thereby increase the chance that they will complete upper secondary education.

8.3 Limitations and strengths of the study

A number of limitations qualify the research findings. First, the analysis relied on adolescents’ self-reports on parenting style, involvement, and student disengagement; an objective validation of these measures through other data sources was not obtained. Similar results, however, have been obtained on parenting styles and for the relationship between behavioral disengagement and school dropout by researchers using different methods to collect their data (see Baumrind, 1991; Finn & Rock, 1997; Lamborn et al., 1991). Second, the first round of data was collected in 1994 and cognitive disengagement was not included and thus is not discussed here. Today it is considered to be the third major dimension of students’ engagement but it seems to be missing from the literature on school dropout (see Fredricks et al., 2004).

Third, in one of the two studies on parenting in relation to school dropout we used the well-known typology of parenting style in Baumrind’s tradition, differentiating styles by focusing on the extreme thirds in the sample in order to emphasize the contrasting characteristics (see Lamborn et al., 1991). This method excludes part of the data and results in a sample-specific categorization of parenting styles. However we found similar results by using a different approach to the measurement of multidimensional parenting practices, assessing the degree of parenting authoritativeness in relation to school dropout. Fourth, due to attrition, we lost data on the follow-up 8 years later; this poses a threat to the validity of the findings. Those omitted from the study appeared to be at greater academic risk with regard to SES, gender, academic achievement, temperament, and school dropout than those who remained. It should be noted, however, that our results on the effects of parenting were detected in spite of lesser variability and possible range restrictions in this study sample. In addition the findings corroborate the
evidence from previous research in this area (Gray & Steinberg, 1999; Rumberger et al., 1990; Steinberg et al., 1992).

One clear strength of this thesis is the longitudinal design; we were able to explore the relationship between parenting practices and dropout over a period of eight years (age 14 to 22), taking into account several influential predictors of school dropout (SES, gender, academic achievement). This enabled us to conclude with more confidence that parenting practices relate to adolescents’ likelihood of dropping out of school through the mechanism of student engagement. A second strength is the use of multifaceted assessment of student engagement (Fredricks et al., 2004), including both concurrent and over-time changes in adolescents’ behavioral and emotional engagement in relation to school dropout. A third strength is that we explored the relationship between multidimensional characteristics of parenting practices and school dropout, in response to criticisms that the literature on educational outcomes has commonly used a narrow definition of parental support (Jeynes, 2007). The fourth strength is that the study relied on official, and highly reliable, data on educational outcomes. Data on previous academic achievement (10th grade) came from the Educational Testing Institution of Iceland and those on educational attainment from Statistics Iceland.

8.4 Future perspectives

This thesis provides several take-home messages for students, parents, teachers, other school staff, school authorities, and policy makers.

The findings that student engagement at age 14 and the way it develops the following year can distinguish between students following different educational tracks supports the dominant theoretical models and empirical evidence that the process of disengagement ultimately leads to dropout (Alexander et al., 1997; Finn, 1989; Rumberger, 2011). The findings underscore the importance of focusing on different facets of students’ engagement in adolescence, as reflected in their school behavior, and feelings about their studies and about school, for prevention and intervention purposes. This period seems to be especially risky as many students become less engaged—they take little part in the academic and social aspects of school, they show low sense of belonging, and are bored with and see little point in their studies—a package of experiences that has, in part, been connected to changes in the school environment (Simons-Morton & Chen, 2009; Wang & Eccles, 2012).

One of the novelties of this study is its focus on student engagement and school dropout within the context of general parenting practices. The
findings suggest that authoritative parenting practices can foster student engagement during the critical period of adolescence and thus prevent dropout. By looking at general aspects of parenting practices we extended our understanding of long-term influences that parents have on their adolescents’ educational attainment. The important message to parents is that they continue to play an important role in their child’s education during adolescence. This is especially important as parental involvement and monitoring seem to decrease during this age period (Simons-Morton & Chen, 2009) and at the same time the social environment of school becomes less personal, with fewer opportunities for relatedness and for autonomy (Eccles et al., 1993; Wang & Eccles, 2012; Wang & Holcombe, 2010). The findings imply a message to parents that might facilitate adolescents’ success through secondary school: that the parent-child relationship should convey general interest in the adolescents’ life and well-being, and that parents should communicate clear and fair standards and respect adolescents’ need for autonomy.

The findings support the view that the developmental course of student engagement may lead either to school dropout or educational success. The students in this study who became more disengaged from age 14 to 15 were more likely to drop out. This implies that schools should be able to identify adolescents at risk of dropping out by monitoring their engagement as reflected in their behavior and emotions. Moreover, those students who became more engaged were less likely to drop out, a finding that is in line with the general notion that encouraging students’ engagement in school and learning is the key to promote school completion (Finn, 1989; Newmann et al., 1992; Rumberger, 2011; Tinto, 1975; Wehlage et al., 1989). The findings further suggest that even though initiatives in early grades are recommended, successful intervention is also possible in later grades. Thus this is something a school can attend to directly, at least in principle, and thus contribute in a significant way to counter the dropout process.

The study also brings out the heterogeneity of those students who drop out. In this study we found that a decline in engagement put at risk of dropout not only the students who were not doing well, but also some high achievers. Further, the findings suggest that special attention should be paid to males as they seem to be less engaged than females, and in particular males from lower-SES backgrounds. Compared to other students they seem to be at greater risk of becoming more emotionally disengaged during their last year in compulsory school. These findings may contribute to the development of successful prevention and intervention programs by
underscoring the importance of differential initiatives that take into account the special needs and strengths of different at-risk groups.

To advance success in school one implication of the current study would be to increase social awareness among all parties—the students themselves, their parents, teachers, other school staff, and school authorities—of the important role engagement plays in positive educational outcomes. They should also be informed that adolescence is an especially sensitive period as students tend to become less engaged (e.g., Simons-Morton & Chen, 2009; Wang & Eccles, 2012) and that when that happens, it puts students at risk of dropping out. In addition it should be highlighted that students’ engagement seems to be amenable and reactive to interactions between the student and his or her social environment (Finn & Rock, 1997; Fredricks et al., 2004).

Another implication would be to design evidence-based initiatives focusing on the interactions between adolescents and their environment. These could provide students with the conditions, opportunities, and expectations that lead them to become more involved in school, to show positive behaviors in school, take interest in their academic endeavors, and find meaning in their studies. Corroborating influential theories on school dropout (Finn, 1989; Newmann et al., 1992; Rumberger & Larsson, 1998; Tinto, 1975; Wehlage et al., 1989), the findings suggest that prevention and intervention should focus on fostering students’ positive participation in and emotions towards both the academic and social aspects of school. With regard to the interaction between students and their school environment, there is substantial evidence that supportive relationships between adolescents and their teachers foster engagement (Fredricks et al., 2004; Van Ryzin et al., 2009; Wang and Holocombe, 2010).

The above findings should be informative for educators and policy planners as schools can play a role in reducing dropout by stressing that quality parent-child relationships continue to promote school success during adolescence. In cases where parents are not likely to offer the supportive, authoritative style of interaction which is most likely to benefit the student, the school authorities might contemplate providing this kind of support.

These findings also lead to suggestions for future research for intervention purposes. One is to further explore the interaction between students and their environment among those who become more engaged during adolescence; this would extend our knowledge about the mechanisms behind the normative decline in student engagement during adolescence. Another is to study how psychological characteristics such as beliefs about own competence and control may promote adolescents’ positive school behavior, positive feelings
toward studying and bonding with school to get a more complete picture of antecedents of student engagement. A third is to focus on how changes in parenting practices during adolescence may relate to school dropout through changes in students’ engagement; this would let us better understand the mechanism behind the relationship between parenting practices and school dropout. A fourth is to study a combination of the multidimensional practices of both parents and teachers in relation to student engagement and school dropout; this would let us better understand how the effects of these important agents interact to promote success in school. A fifth is to explore the relationship of parenting practices and school dropout among different ethnic groups in Iceland. Such a study would be important; the Icelandic population was very homogenous at the time of the data collection for this study, but recently immigration has rapidly increased.

The study has been couched in terms of dropping out as an all-or-nothing experience. Still, our approach has been to look at most of the variables on a continuum. We can assume that a sizable proportion of students would need only a relatively modest amount of support to stay in school, and that a sizable group is on the verge of dropping out, but does not. Thus an informed intervention by the schools or the education system could potentially make a very important difference. Finally, children develop within systems, such as the family and schools so it is important that these systems coordinate their efforts, as they work to find positive outcomes for adolescents across time.
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Hollingshead, A. B. (1975). *Four factor index of social status*. Unpublished manuscript. Department of sociology, Yale University, New Haven, CT.


Students’ different educational pathways were examined in relation to their disengagement during adolescence. The participants were Icelandic youth (N = 832) who were followed from age 14 to 22. Based on their academic achievement at age 15 and educational attainment at age 22 they were classified into groups that took expected versus unexpected paths. The findings indicate that adolescents’ behavioral disengagement (negative school behaviors) and emotional disengagement (academic disinterest, disidentification with school) differentiated according to their pathways. At age 14, those “at risk” academically who graduated unexpectedly showed fewer negative behaviors than the expected dropouts. Moreover, high achievers who dropped out unexpectedly showed more behavioral (negative behaviors) as well as emotional (academic disinterest, disidentification with school) disengagement compared to expected graduates. The following year (age 15), in general, disengagement increased among unexpected dropouts but decreased among expected graduates. Males and students from lower-SES backgrounds were generally more disengaged, and males from those backgrounds became more emotionally disengaged during their last year in compulsory school.

Keywords: emotional school engagement, behavioral school engagement, school dropout, longitudinal study

In our modern knowledge-based societies, young people who do not complete upper secondary education face more disadvantage than ever before. Findings from various western countries indicate that those who leave school early face similar negative economic and psychosocial consequences. They have poorer prospects in the labor market compared to those who finish school, along with lower lifetime earnings and higher rates of unemployment (e.g. European Commission Directorate General for Education and Culture, 2005;
Rumberger & Lamb, 2003). In addition they seem to be more at risk of becoming dependent on welfare, having health problems, and engaging in antisocial behavior (see Rumberger & Thomas, 2000). The negative personal and societal costs of school dropout indicate that the adolescent decision on whether to drop out or persist with the formal school system can be described as one of the most crucial developmental tasks of this age period.

In recent years the problem of school dropout has received increased attention. The Council of the European Union (2004) has proposed a common benchmark for the member states: by the year 2010, the early school leaving rate should be no more than 10%. In the US this problem has also been addressed nationally, as one of the National Educational Goals adopted in 1990 (US Department of Education, 1990). In this federal reform plan, the No Child Left Behind (NCLB) Act of 2001, all states are required to incorporate graduation rates into their accountability systems for high schools (US Department of Education, 2002). In Iceland, where this study was conducted, the dropout problem is also of concern; in 2008 the Icelandic government legislated educational reforms that aim to reduce dropout (The Upper Secondary School Act No. 92/2008). Thus, multiple nations are concerned with reducing the possibility that a student will drop out or leave school before receiving an appropriate diploma or certification. At the same time, reducing the dropout rate is a challenging task and it is important to understand what might lie behind young people’s choice to leave school.

School Engagement

School engagement is a central concept in most theories of school dropout (Finn, 1989; Newmann, Wehlage, & Lamborn, 1992; Rumberger & Larsson, 1998). Dropping out is increasingly viewed as the end to a long-term process in which students disengage from school, frequently beginning in the early grades (Alexander, Entwisle, & Kabbani, 2001; Ensminger & Slusacick, 1992). Researchers have found that among children and adolescents, school engagement is related to educational outcomes such as academic achievement and school dropout (Alexander, Entwisle, & Horsey, 1997; Finn, 1993; Finn & Rock, 1997; Rumberger, 1995).

Students’ school engagement is considered important for prevention purposes: it is seen to prevent students’ alienation from school, increase their academic motivation, and facilitate school success (see Fredricks, Blumenfeld, & Paris, 2004). Finn (1989) presents two conceptual models that describe dropout as the final stage of a cumulative and dynamic development of school disengagement. In the frustration-self-esteem model the process begins with the student failing to achieve at school, which leads to frustration. In order to protect his or her self-esteem the student rejects school by engaging in disruptive behavior and even withdrawing from school. The process is described as a vicious cycle in which students fail repeatedly, leading to increasing frustration that in turn produces low self-esteem and results in problem behavior or behavioral disengagement (Finn, 1989; Griffin, 2002; Rumberger, 2004).

In the participation-identification model students’ engagement involves two dimensions: behavioral and emotional. Students who engage in school are those who invest emotionally in it and participate in behaviors that support this investment; they are therefore more likely to succeed at school. Over a period of time, good performance and active participation result in the student gradually identifying with school. The student develops a feeling of belonging, bonds with the school and finds it important to succeed in school-relevant goals. Accordingly, it is assumed that students who do not participate in school and classroom activities do not
bond with school and are more likely to fail at school, which leads them to gradually disidentify with it (Finn, 1989; Griffin, 2002; Newmann et al., 1992).

In both of these frameworks school failure or dropout is seen as a result of a long-term process of disengagement; thus school performance plays an important role in the students’ developing views of themselves and in whether or not they identify with and bond with school. The difference between the models is that the frustration-self-esteem model highlights behavioral disengagement while the participation-identification model of students’ engagement or disengagement includes both behavioral and emotional components (Finn, 1989; Finn & Rock, 1997; Rumberger, 2004).

Empirical findings suggest that engagement is a multidimensional concept (Glanville & Wildhagen, 2007). In a literature review, Fredricks and her colleagues (2004) define three broad dimensions of school engagement: behavioral, emotional, and cognitive. Behavioral engagement refers to students’ conduct, schoolwork-related behavior, and participation in both the academic and social aspects of schooling. At one end of the behavioral spectrum are such positive behaviors as good attendance, following school rules, completing homework, and being involved in learning. At the other end are negative behaviors such as truancy, skipping school, behaving disruptively, or being withdrawn in the classroom. Emotional engagement refers to students’ positive and negative affective reactions towards their schoolwork, toward people at school, such as classmates and teachers, and toward school in general. This includes students’ interests in their academics and sense of belonging to school, or the opposite: disidentification with school and boredom with schoolwork. Cognitive engagement is seen as students’ preparedness to invest in their learning and their preference for and persistence in the face of academic challenges (see Fredricks et al., 2004; Rumberger, 2004).

School Engagement and Educational Attainment

In their review on school engagement Fredricks and her colleagues (2004) point to several limitations of current research on student engagement. First, they say, most studies on the relationship of engagement and school dropout focus only on behavioral engagement. Second, in the relatively few studies that include both emotional and behavioral components, the two components are often combined in a single indicator, which makes it impossible to explore the possibly different relationships between the two dimensions and dropout. Third, the majority of studies make no distinction between subcategories of engagement constructs that may be problematic, such as different sources of emotions. For example, one student may disidentify with school as a whole while another may be disinterested in the schoolwork itself. In addition, Fredricks and her colleagues emphasize that only a minority of engagement studies use longitudinal designs.

Among studies that focus on students’ behavioral engagement in relation to educational attainment, Rumberger (1995) found that students who were engaged behaviorally with school in the 8th grade were less likely to drop out than students who were disengaged. Similarly, Finn and Rock (1997), who explored the behavioral engagement in the 10th grade of minority students from low-income homes, found that resilient students who completed high school showed the most engagement behaviors and students who dropped out showed the fewest.

Meeting the criticism made by Fredricks and her colleagues, and outlined above, is a study by Archambault, Janosz, Fallu, and Pagani (2009) on the relationship of emotional and cognitive as well as behavioral engagement and early high school dropout. Their results indicated
that of the three dimensions only behavioral engagement predicted early school dropout. However, one explanation of these findings could be that the study focused only on early dropouts; Stearns and Glennie (2006) found that students who dropped out early were more likely to do so because of behavioral problems, compared to older students. Moreover, Archambault and her colleagues (2009) only examined engagement at one time point (age 13). Based on their findings, Janosz, Archambault, Morizot, and Pagani (2008) argue for the importance of using a developmental approach, tracking engagement over time in relation to school dropout. They studied the distinct trajectories of global school engagement over a three-year period with students aged 12 to 16 and concluded that the risk of dropout was closely linked to unstable development of school engagement.

**Heterogeneity of students who drop out**

Studies on school dropouts have been criticized for ignoring the psychosocial heterogeneity of students who drop out, treating them as a homogenous group (Feinstein & Peck, 2008; Janosz, Le Blanc, Boulerice, & Tremblay, 2000). Few researchers, however, have directly approached the issue of the diversity of students who drop out (e.g. Englund, Egeland, & Collins, 2008; Janosz et al., 2000).

In their typological study, Janosz and his colleagues (2000) identified four types of dropouts based on the three school dimensions of school grades, school misbehavior, and commitment to schooling. They called the types quiet, disengaged, low-achiever, and maladjusted. The quiet group had the most positive school profile among the dropouts (high commitment and very low school misbehavior) but their school performance was poorer than that of the students who graduated. The three other groups all had low commitment to school. The maladjusted had the most negative profile, including significant problems with both academics and school behavior. The other two groups showed low to average misbehavior, but the low achievers had very poor academic performances while the disengaged had good achievement scores.

Another approach to examining the heterogeneity of students who drop out is to explore the factors that distinguish between those who do and do not follow the normative, and thus predicted, educational tracks (see Feinstein & Peck, 2008). One way to define which students are and are not on a normative track is to look at their academic achievement. Some students appear to be on promising educational pathways but fail to do well, while others appear to be at risk for failure but nevertheless negotiate successful educational pathways. Even though students’ early academic achievement is the strongest predictor of later performance (Ripple & Luthar, 2000) and low achievement is one of the strongest single risk factors for school dropout (see Alexander et al., 2001; Battin-Pearson et al., 2000; Blondal & Adalbjarnardottir, 2009; Rumberger, 1987, 1995), some students who have a history of academic failure still graduate from upper secondary school (Englund et al., 2008). The opposite is also true: some high-achieving students drop out. For example, the disengaged students in the study by Janosz and his colleagues (2000) performed at about the average in school, but had low commitment to school and still dropped out.

Focusing on the factors that distinguish between students who follow predicted directions at key turning points in their education and those who follow unexpected pathways can provide valuable information on the nature of educational risk. In addition, such research could contribute to the development of successful dropout prevention and intervention.
programs that take into account the special needs and strengths of different at-risk groups (see Janosz et al., 2000).

In sum, the existing literature on the association between student engagement and school dropout has important limitations. First, most of the studies focus on behavioral engagement, and only a few on emotional engagement, and then usually in combination with behavioral engagement in only one construct. Second, a majority of the studies do not differentiate between the various sources of students’ emotional disengagement. Third, studies on school dropout have been criticized for ignoring the diversity of students who drop out, particularly those who appear to be at risk but still beat the odds and those who appear to be on promising educational pathways but fail to do well. Fourth, studies on the association between students’ engagement and school dropout have been criticized for using cross-sectional rather than longitudinal data (Fredricks et al., 2004). Since school dropout often seems to result from a long-term process of withdrawal from school (Finn, 1989) it may be especially important to analyze the predictors of school dropout longitudinally.

The major aim of this study is to respond to these limitations in previous research.

The Present Study

In our study we explore how school engagement processes distinguish between students who follow expected versus unexpected educational tracks across time. We focus on both behavioral disengagement (negative school behaviors) and emotional disengagement (academic disinterest and disidentification with school) at age 14. In addition we focus on the over-time change in disengagement between age 14 and 15.

We build our expectations of students’ educational attainment at age 22 on their academic achievement at the end of compulsory school (age 15), as previous achievement is such a salient predictor of graduation (e.g. Englund et al., 2008). In Iceland, young people normally complete upper secondary education at age 20.

Our main hypothesis is that adolescents’ disengagement at age 14 and over-time change in disengagement between age 14 and 15 differentiates between students who follow different educational tracks. We anticipate that (1) expected dropouts (low-achieving students who drop out) will be more disengaged at age 14 compared to unexpected graduates (low-achieving students who graduate), and (2) that unexpected dropouts (high-achieving students who drop out) will be more disengaged at age 14 compared to expected graduates (high-achieving students who graduate).

Also, we anticipate that (3) expected dropouts (low-achieving students who drop out) will become more disengaged from age 14 to 15 compared to unexpected graduates (low-achieving students who graduate), and (4) unexpected dropouts (high-achieving students who drop out) will become more disengaged from age 14 to 15 compared to expected graduates (high-achieving students who graduate). We expect these relationships to persist even after taking the adolescents’ background (gender and SES) into account.

Method

Participants

This study is part of a larger ongoing, longitudinal study: the Reykjavik Adolescent Risk-Taking Longitudinal Study (RAR-LS; Adalbjarnardottir, 1994). The focus is on 832 adolescents who (1) participated in the baseline study at age 14 (9th grade); (2) participated in the follow-up study at age 15; (3) completed standardized national achievement tests at the
end of compulsory school (10th grade, age 15); and (4) for whom registered data on their educational progress was available within Statistics Iceland (age 22).

These 832 were a subgroup of the initial sample of 1,010 14-year-old students (51% female) drawn from the population of students attending the 9th grade of compulsory school in Reykjavik, the capital city of Iceland. Approximately 90% of Reykjavik’s 9th-grade public-school population participated in the study at baseline. The case loss was the result of absenteeism (9%) and parental refusal to participate (eight cases, less than 1%). The sample was homogeneous with respect to culture (native Icelanders), religion (Lutheran), and language (Icelandic), and thus representative of Reykjavik. At baseline, 70.4% of the adolescents lived with both biological parents, 14.3% lived with a single parent, 13.6% lived in blended families (one biological parent and one stepparent) and 1.7% lived in other types of households. In terms of SES, based on the Hollingshead (1975) categories, 3.7% were in Class 1 (the lowest class); 18.9% were in Class 2, 25.4% were in Class 3, 18.3% were in Class 4, 15.4% were in Class 5, and 18.3% were in Class 6, the highest.

Procedure

Permission for the study was granted by the Icelandic Data Protection Commission, the Ministry of Education, and the Educational Testing Institution of Iceland. All of the principals at the 19 compulsory schools in Reykjavik provided their written permission to collect data in their schools. Letters describing the study were sent to the adolescents and their parents. The parents were asked to contact the research project if they or their adolescent did not want to participate in the study. Researchers have found that in studies requiring active parental consent for an adolescent to participate, well-functioning families tend to be overrepresented (see Lamborn, Mounts, Steinberg, & Dornbusch, 1991). The self-report questionnaire was administered during school hours with the help of trained data collectors. The adolescents were informed that they could refuse or discontinue participation at any time and were assured that their answers were strictly confidential. The second round of data collection took place when the adolescents were 15, in 10th grade, their final year of compulsory school.

In addition to the survey data, information was obtained from the Educational Testing Institution of Iceland. This resource provided information on students’ performance in the standardized national tests given at the end of compulsory school (10th grade). Moreover, Statistics Iceland, the national statistical institute, provided information on the upper secondary education of the participants at age 22.

Measures

School dropout. The participants were considered to have dropped out of school if they had not completed, and were not registered in, an upper secondary school at age 22; in Iceland students are generally supposed to graduate during the year of their 20th birthday.

Academic achievement. Academic achievement at the end of compulsory school was used to set the expectations for students’ educational attainment at age 22. A composite of grades on standardized national tests in Icelandic and mathematics in 10th grade (age 15) was used.
to measure academic achievement at the end of compulsory school. The grades on the two subjects were highly correlated \( r = .75, p = .00. \)

**Socioeconomic status.** Socioeconomic status (SES) was assessed using the Hollingshead (1975) Index, which links parents’ SES with their education and occupation. The families of the children were distributed between two socioeconomic classes. Those considered to be in the lower-status category were unskilled and skilled manual workers and workers in service occupations. In the higher-status category were executives, teachers, university-educated specialists, professionals, and owners of businesses.

**School disengagement.** Students’ disengagement was assessed twice, when the adolescents were 14 and 15 years old. In their review on school disengagement Fredricks and her colleagues (2004) criticized the fact that most studies have collapsed the dimensions of engagement. In this study, following their recommendations, separate measurements of behavioral and emotional disengagement were developed and emotional disengagement was further divided into two constructs based on the sources of students’ emotions. Thus we use three measures of disengagement: negative school behaviors, academic disinterest, and disidentification with school. The construction of the three measures was guided by the results of exploratory factor analysis. Factor analysis was conducted on 10 items on school conduct and attitudes towards school and academics, using the students’ answers at age 14 and again at age 15. Virtually identical three-factor solutions emerged each time.

Negative school behaviors consist of four items that capture students’ negative behaviors at school. Three of the items are from the Icelandic version (Arnkelsson, 1987) of the Youth Self Report (YSR; Achenbach & Edelbrock, 1987). The adolescents were asked to rate the following statements: “I cut classes or skip school”, “I get into many fights”, “I disobey in school”, and “I do not prepare well for my classes”. Responses for the first three items were on a 3-point scale: not true (1), somewhat or sometimes true (2), and often true (3). Responses for the fourth item were: never or seldom applies to me (1), sometimes applies to me (2), and almost always or always applies to me (3). Cronbach’s alpha was .67 for the students’ answers at both age 14 and age 15.

To assess academic disinterest three items were used: “I feel bored with my studies”, “I am not interested in my studies”, and “I feel my studies are useless”. Finally, school disidentification was assessed using three items: “I am not happy at school”, “I want to attend a different school”, and “I want to quit school”. For the two constructs of emotional disengagement the adolescents were asked to respond to a five-point Likert scale; it ranged from never applies to me (1) to almost always applies to me (5). Cronbach’s alpha for academic disinterest was .74 at age 14 and .75 at age 15. For disidentification with school Cronbach’s alpha was .72 at age 14 and .77 at age 15. The items in all three disengagement components were coded so that the higher scores indicate higher disengagement.

**Analysis**

The first step of the analysis was to predict educational attainment at age 22 (dropout vs graduation) based on academic achievement at age 15 using binary logistic regression (Englund et al., 2008).
The analysis of disengagement was run in two phases. First, using univariate analyses of variance (ANOVA), comparisons of negative school behaviors, academic disinterest, and disidentification with school at age 14 were made for the student groups following the four different educational pathways (expected dropouts, expected graduates, unexpected dropouts, and unexpected graduates), along with gender and SES. The Tukey test was used to conduct pairwise post-hoc comparisons of the student groups. The second phase consisted of univariate analyses of covariance (ANCOVA); we explored the over-time changes in the disengagement variables from age 14 to 15, controlling for corresponding disengagement at age 14 for the student groups, taking gender and SES into account. Through this process we assessed the over-time changes in engagement from age 14 to 15, taking into account the existing difference at age 14 as well as the effects of regression to the mean (Fitzmaurice, 2000). Pairwise post-hoc comparisons were based on 95% confidence intervals for the adjusted changes in engagement of the student groups.

Results

Expected and Unexpected Educational Pathways Groups

Academic achievement at age 15 was used to identify expected and unexpected educational pathways. The logistic regression model using academic achievement was 80%
accurate in predicting educational attainment at age 22 (b = -0.98, p = .00, SE b = .06, OR = .38, pseudo R² (Naglekerke) = .47) and produced four groups, as Table 1 shows. As can be seen in Table 1, of 595 students predicted to graduate, 84 dropped out (unexpected dropouts) and of 237 students predicted to drop out, 81 graduated (unexpected graduates).

In Table 2 descriptive statistics are summarized for the four groups of students who followed different educational pathways, by gender and SES. A higher proportion of the males were classified as expected dropouts whilst a higher proportion of the females belonged to the group of high achievers who graduated as expected, χ²(3, N = 832) = 11.7, p = .00. Compared to the adolescents from higher-SES families, the adolescents from lower-SES families were roughly three times more likely to belong to the group of low-achiever students who dropped out; they were much less likely to be in the group of high achievers who graduated, χ²(3, N = 832) = 71.7, p = .00.

The results of the ANOVAs and ANCOVAs indicated that adolescents’ school disengagement at age 14 and their over-time change in disengagement between ages 14 and

Table 3
Analysis of Variance for Students’ Disengagement at Age 14

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Negative behaviors F</th>
<th>Academic disinterest F</th>
<th>Disidentification with school F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Gender</td>
<td>1</td>
<td>19.6***</td>
<td>4.3*</td>
<td>0.6</td>
</tr>
<tr>
<td>SES</td>
<td>1</td>
<td>1.6</td>
<td>4.0*</td>
<td>5.9*</td>
</tr>
<tr>
<td>Student groups (SG)</td>
<td>3</td>
<td>21.9***</td>
<td>10.6***</td>
<td>10.7***</td>
</tr>
<tr>
<td>G X SES</td>
<td>1</td>
<td>1.2</td>
<td>0.6</td>
<td>0.1</td>
</tr>
<tr>
<td>G X SG</td>
<td>3</td>
<td>1.4</td>
<td>0.6</td>
<td>0.4</td>
</tr>
<tr>
<td>SES X SG</td>
<td>3</td>
<td>1.1</td>
<td>0.3</td>
<td>0.8</td>
</tr>
<tr>
<td>G X SES X SG</td>
<td>3</td>
<td>1.5</td>
<td>0.6</td>
<td>0.5</td>
</tr>
<tr>
<td>Within-groups</td>
<td>816</td>
<td>MS: 0.15</td>
<td>0.58</td>
<td>0.71</td>
</tr>
</tbody>
</table>

* p < .05. *** p < .001.

Table 4
Mean Scores for Disengagement at Time 1 (Age 14) and Adjusted Mean Scores for Over-Time Change from Age 14 to 15 among Different Student Groups Controlling for Gender and SES

<table>
<thead>
<tr>
<th>Group</th>
<th>Negative school behaviors T1***</th>
<th>Change***</th>
<th>Academic disinterest T1***</th>
<th>Change***</th>
<th>Disidentification with school T1***</th>
<th>Change***</th>
</tr>
</thead>
<tbody>
<tr>
<td>Expected dropouts</td>
<td>1.62a</td>
<td>0.03−</td>
<td>2.83a</td>
<td>0.10−</td>
<td>2.37a</td>
<td>0.08−</td>
</tr>
<tr>
<td>Unexpected graduates</td>
<td>1.45b</td>
<td>−0.05−</td>
<td>2.68a</td>
<td>0.06−</td>
<td>2.13b</td>
<td>0.06−</td>
</tr>
<tr>
<td>Unexpected dropouts</td>
<td>1.48b</td>
<td>0.03−</td>
<td>2.72a</td>
<td>0.19+</td>
<td>2.14b</td>
<td>0.33+</td>
</tr>
<tr>
<td>Expected graduates</td>
<td>1.28c</td>
<td>−0.10−</td>
<td>2.39b</td>
<td>−0.03−</td>
<td>1.82b</td>
<td>−0.08−</td>
</tr>
</tbody>
</table>

*** p < .001. Notes. Different superscripts at T1 indicate significant difference between groups on disengagement at age 14, at p < .05. For over-time change from age 14 to 15 superscript of − indicates decrease in disengagement, = indicates no change, and + indicates increase at p < .05. Negative school behaviors: Scores for the replies ranged from 1–3. Academic disinterest and disidentification with school: Scores ranged from 1–5.
Distinguished between the different educational pathways. The results are shown in Tables 3, 4, and 5.

Disengagement at Age 14

Negative school behaviors. As Table 3 shows, negative school behaviors differed across the student groups, controlling for gender and SES. As Table 4 shows, on average, expected dropouts showed the most negative school behaviors and expected graduates the least, Tukey $p < .05$. No difference, however, was detected between the two groups that followed unexpected pathways: the low achievers who graduated unexpectedly and the high achievers who nevertheless dropped out. Moreover, males were more disengaged behaviorally ($M = 1.46$) than females ($M = 1.32$).

Academic disinterest. As shown in Table 3, adolescents’ academic disinterest at age 14 differed significantly between student groups, taking gender and SES into account. As Table 4 indicates, the expected graduates were less disinterested than the three other student groups, Tukey $p < .05$. Furthermore, males were more disinterested ($M = 2.62$) than females ($M = 2.46$), as were students from lower-SES backgrounds ($M = 2.65$) compared to their counterparts from higher-SES backgrounds ($M = 2.43$).

Disidentification with school. The groups of students also differed in their levels of identification with school (see Table 3). As Table 4 indicates, the expected graduates scored lower on disidentification with school than the other students, Tukey $p < .05$. Furthermore, students from lower-SES backgrounds scored higher on disidentification ($M = 2.15$) compared to their counterparts from higher-SES backgrounds ($M = 1.84$).

Over-time Change in Disengagement between Ages 14 and 15

Negative school behaviors. As Table 5 shows, the analyses of the adjusted over-time change from age 14 to 15 revealed a difference between the negative school behaviors of the student
groups, controlling for gender and SES. As Table 4 indicates, negative behaviors decreased from age 14 to 15 among expected graduates ($CI = -0.13 \text{ to } -0.07$). However, negative behaviors did not change from age 14 to 15 among the three other student groups (expected dropouts: $CI = -0.03 \text{ to } 0.8$; unexpected graduates: $CI = -0.12 \text{ to } 0.02$; unexpected dropouts: $CI = -0.04 \text{ to } 0.9$). In addition, from age 14 to 15 negative behaviors decreased among females ($CI = -0.10 \text{ to } -0.02$) but did not change among males ($CI = -0.03 \text{ to } 0.05$).

**Academic disinterest.** As shown in Table 5, the analyses of the over-time change in academic disinterest from age 14 to 15 revealed a difference between the student groups, taking gender and SES into account. As Table 4 indicates, academic disinterest increased for the unexpected dropouts ($CI = 0.05 \text{ to } 0.33$), but did not change for the other three groups (expected dropouts: $CI = -0.02 \text{ to } 0.22$; unexpected graduates: $CI = -0.09 \text{ to } 0.21$; expected graduates: $CI = -0.09 \text{ to } 0.03$).

Moreover, the analysis detected a two-way interaction between SES and gender. Among males from lower-SES backgrounds, academic disinterest increased from age 14 to 15 ($CI = 0.12 \text{ to } 0.34$), but that did not happen among higher-SES males ($CI = -0.16 \text{ to } 0.11$) or among females of any SES level (lower SES: $CI = -0.09 \text{ to } 0.14$; higher SES: $CI = -0.04 \text{ to } 0.22$).

**Disidentification with school.** As Table 5 shows, the analyses of the adjusted over-time changes in disidentification with school from age 14 to 15 revealed differences between the student groups, controlling for gender and SES. As Table 4 indicates, for unexpected dropouts, disidentification increased during that period ($CI = 0.16 \text{ to } 0.49$). On the other hand, levels of disidentification decreased among the expected graduates ($CI = 0.15 \text{ to } -0.01$) but did not change for the expected dropouts ($CI = -0.06 \text{ to } 0.21$) and the low achievers who graduated unexpectedly ($CI = -0.11 \text{ to } 0.23$).

Moreover, the findings indicated that disidentification with school increased from age 14 to 15 among students from lower-SES families ($CI = 0.08 \text{ to } 0.26$), but not among students from higher-SES families ($CI = -0.08 \text{ to } 0.13$). However, a two-way interaction indicated that the SES difference was dependent on gender: the disidentification increased among males from lower-SES families ($CI = 0.16 \text{ to } 0.41$) but neither among males from higher-SES families ($CI = -0.16 \text{ to } 0.15$) nor among females of any SES level (lower SES: $CI = -0.08 \text{ to } 0.19$; higher SES: $CI = -0.10 \text{ to } 0.20$).

**Discussion**

One of the clearest findings of the study is that both the behavioral and emotional disengagement of students in the period of 9th and 10th grades (at the end of compulsory education in Iceland) can distinguish between their educational pathways at the upper secondary level. During adolescence, a critical point in students’ education, their feelings towards their academic tasks and school, as well as their school behaviors and the way their disengagement develops the following year, can have an impact: some students who are at risk academically are more resilient and some who seem to be on a promising educational track are more vulnerable.

This was especially the case for high-achieving students. Compared to the expected graduates, those who dropped out unexpectedly were more disengaged at age 14, both behaviorally and emotionally. Moreover, in general, while the expected graduates became even less
disengaged the following year, the unexpected dropouts became more disengaged. Among low achievers, the difference between those who dropped out (expected dropouts) and those who did not (unexpected graduates) is that at age 14 the expected dropouts showed more behavioral disengagement than the unexpected graduates. The following year, behavioral disengagement did not change for these two groups.

These findings are important: unlike earlier research on this question we not only compared the characteristics of students who drop out and those who complete school (see Janosz et al., 2008) but also focused on the disengagement of students who are the exceptions to the predictions and follow unexpected educational pathways.

More precisely, our study indicates that the extent to which students disengage from school at age 14 distinguishes not only between low-achieving students who drop out and high-achieving students who graduate but also between those who follow expected versus unexpected educational tracks. First, students who received low grades at age 15 and had not completed upper secondary school by age 22 (expected dropouts) were at age 14 the most behaviorally disengaged (e.g. cutting classes and disobeying at school) of the four groups; and those who received high grades at age 15 and had completed upper secondary school by age 22 (expected graduates) were the least behaviorally disengaged. This finding corroborates previous research findings and theory (Alexander et al., 1997; Archambault et al., 2009; Finn, 1989; Newmann et al., 1992).

Second, among the low achievers, the expected dropouts showed more negative behaviors, compared to the low achievers who beat the odds and graduated (unexpected graduates). Third, all three dimensions of disengagement differentiated between the high achievers who dropped out (unexpected dropouts) and the high achievers who graduated. Students who dropped out despite the expectations for them showed more negative behaviors, academic disinterest (e.g. being bored and seeing no point in their studies) and lack of identification with school (e.g. feeling bad at school and wanting to quit), compared to those who followed a successful track and graduated. In general, the expected graduates were less disengaged, both behaviorally and emotionally, than the unexpected graduates and the two dropout groups. Our findings remained pronounced even after we took into account the parents’ SES and the adolescents’ gender.

Another major finding indicates the importance of looking not only at concurrent disengagement but also at how it develops over time (e.g. Janosz et al., 2008). Our findings for over-time changes in disengagement are particularly interesting for the two groups of high academic achievers who followed different educational pathways: the expected graduates and the unexpected dropouts. The unexpected dropouts, who were already disengaged at age 14, became more emotionally disengaged the following year with regard to both academic interest and identification with school. The reverse was found for expected graduates: the least disengaged at age 14, their situation even improved from age 14 to 15 as both their negative behaviors and disidentification with school decreased.

Even though students tend to become less motivated during adolescence (e.g. Fredricks & Eccles, 2002), our study suggests that this general pattern may vary among students and that this variation is important in relation to educational attainment. In this regard our findings corroborate those of Janosz and his colleagues (2008), who found that students follow distinct trajectories of school engagement from age 12 to 16. By using a developmental approach in our study, and tracking engagement over a one-year period, we were able to distinguish between those who follow different educational paths.
With respect to gender and socioeconomic background at age 14, students from lower-SES backgrounds were more emotionally disengaged with regard to academic disinterest and identification with school. Moreover, at age 14 males were more disengaged than females, showing more negative school behaviors and more disinterest in their studies. This general pattern of comparative disengagement between males and females and those of different SES is in line with findings from other studies (Jacobs, Lanza, Osgood, Eccles, & Wigfield, 2002; Janosz et al., 2008; Martin, 2007).

Further, our findings suggest that special attention should be paid to males from lower-SES backgrounds. Compared to other students they seem to be at greater risk of becoming more emotionally disengaged during their last year in compulsory school, showing both increased disinterest in their studies and negative feelings (disidentification) towards school. For males, disengagement has been one of the main explanations provided in the literature on their academic underachievement and higher rate of school dropout. For example, theories on “laddishness” hold that boys, and especially white, working-class, anti-school boys, are supposed to disengage from school, rejecting schools’ values and resisting schoolwork, to protect their masculinity, resulting in lower achievement (see Jackson, 2002).

Our findings support the main theoretical frameworks describing school dropout as a gradual process in which students disengage and withdraw from school (see Finn, 1989; Newmann et al., 1992). Further, our study supports the importance of using a developmental approach to students’ engagement (Janosz et al., 2008) and acknowledging its multifaceted nature (Finn, 1989; Fredricks et al., 2004). Our study also supports the view that we must explore not only students’ behavioral engagement but also their emotional engagement (Fredricks et al., 2004). We found that not only students’ behavior at school but also their feelings towards their studies and school are important indicators of disengagement towards school and education; factors that place them at risk of dropping out, even when they are doing well academically. Therefore our findings suggest that to prevent dropout it is important to pay attention to how students feel about their studies and their school as well as their behavior at school. Moreover, they suggest that the at-risk groups have different needs and strengths that should be taken into consideration in developing prevention and intervention programs (see Janosz et al., 2000).

This study has at least two limitations. First, our analysis relied on adolescents’ self-reports on their disengagement; we obtained no objective validation of that measure through other data sources. Similar results, however, have been obtained for the relationship of disengagement and school dropout in spite of different methods of data collection (see Finn & Rock, 1997). Second, our first round of data was collected in 1994 and cognitive disengagement was not included, and thus is not discussed here. Now it is considered to be the third major dimension of students’ engagement but seems to be missing from the literature on school dropout (see Fredricks et al., 2004).

Our study also has several strengths. First, we included behavioral and emotional mechanisms separately and further distinguished between students’ emotions towards their academics and towards school. A second strength is that we also explored students’ disengagement in relation to different educational pathways. Moreover, we focused especially on students who are the exceptions to predictions about the expected pathway; this is very rare in research on school dropout (Englund et al., 2008). This approach provides a valuable insight into possible reasons for academic resilience among at-risk students and vulnerabilities for academically strong students. The third strength of our study is its
longitudinal design, which makes it possible to look at students’ educational attainment eight years later and conclude with more certainty that behavioral and emotional disengagement at age 14, as well as changes in it over time, distinguish between different educational pathways. The fourth strength is that the study relied on official, and highly reliable, data on educational outcomes. Data on previous academic achievement (10th grade) came from the Educational Testing Institution of Iceland and those on educational attainment from Statistics Iceland.

In short, by exploring students’ disengagement with a focus on their expected and unexpected educational pathways as well as both their behavioral and emotional disengagement, we were able to detect important critical differences in what happens to some proportion of students during the period of age 14 to 15: some become more vulnerable to dropout and others become more resilient. The findings about change over time are particularly interesting in the case of academically competent students; those who eventually dropped out became even more disengaged the following year and those who graduated became even less disengaged.

Students’ engagement seems to be more amenable to support than many other psychosocial characteristics that have frequently been used in dropout prevention programs, such as self-esteem (Finn & Rock, 1997). In light of the above findings, this study should be informative for prevention and intervention practices both for those who work with young people and for policy planners in education.

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Lot 3: Early School Leavers


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Paper II
PARENTING PRACTICES AND SCHOOL DROPOUT: A LONGITUDINAL STUDY

Kristjana S. Blondal and Sigrun Adalbjarnardottir

ABSTRACT

Adolescents’ perceptions of parenting style and parental involvement in their education were examined longitudinally and related to school dropout among Icelandic youth (N = 427). Results indicated that adolescents who, at age 14, characterized their parents as authoritative (showing acceptance and supervision) were more likely to have completed upper secondary school by age 22 than adolescents from non-authoritative families, controlling for adolescents’ gender, socioeconomic status (SES), temperament, and parental involvement. Parenting style seems to more strongly predict school dropout than parental involvement. Further, parenting style may moderate the relationship between parental involvement and dropout, but not in all groups; only in authoritative families does parental involvement decrease the likelihood of school dropout. Furthermore, even after controlling for previous academic achievement, adolescents from authoritative families were less likely to drop out than adolescents from authoritarian and neglectful families. These findings emphasize the importance of encouraging quality parent-child relationships in order to reduce the likelihood of school dropout.

When adolescents drop out of school, the results are psychosocially and economically costly, for both the individual and society. As our modern knowledge-based societies increasingly rely on a highly skilled labor force, young people without upper secondary education are more

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vulnerable than ever before. They have fewer work opportunities, and are less likely to return to education and training later in life, compared to those who finish school (e.g., Rumberger & Lamb, 2003). They also face a higher risk of various negative outcomes; they may be unemployed, live in poverty, have health problems, and engage in antisocial behavior (see Rumberger & Thomas, 2000).

In recent years the problem of school dropout has received increased attention. The European Union has proposed a common benchmark for the member states: by the year 2010, the early school-leaving rate should be no more than 10% in any given country (Council of the European Union, 2004). In the U.S. this problem has also been addressed nationally as one of the National Educational Goals adopted in 1990 (U.S. Department of Education, 1990). Moreover, in the federal reform plan, the No Child Left Behind Act of 2001, all states are required to incorporate graduation rates into their accountability systems for high schools (U.S. Department of Education, 2002). In Iceland, where this study was conducted, the dropout problem is also of concern; currently the Icelandic government is presenting educational reforms that aim to reduce dropout (Upper Secondary School Act No. 92/2008).

The family has been recognized as one of the primary contributors to children's success at school (Rumberger, 1995). Studies of the family's influence on school dropout, however, have at least four important shortcomings. First, such studies tend to focus too strongly on structural characteristics, such as parents' socioeconomic status (SES). Second, studies examining parental influence on school success have mainly focused on the relationship between parental involvement in their child's education and academic achievement but seldom on school dropout. Third, findings about the relationship between parental involvement and school success have been inconsistent, and fourth, most studies on school dropout are cross-sectional. The purpose of this study was to explore more general aspects of parenting in relation to school dropout; we examine the relationship of both parental involvement and parenting style with school dropout. Moreover, we use a longitudinal design.

THE FAMILY AND EDUCATIONAL OUTCOMES

Research on family influences has been criticized for focusing on such structural characteristics as parents' socioeconomic status to explain children's school success and failure (e.g., Alexander, Entwisle, & Horsey, 1997). Findings consistently show that students in higher SES
groups are academically more successful and less likely to drop out of school than students in lower SES groups (see McNeal, 1999; Rosenthal, 1998). These studies, however, provide little insight into what is occurring in family life that helps the students succeed at school (Davis-Kean, 2005). Studies in this area have also been criticized for using a narrow definition of parental support (see Jeynes, 2007).

**Parental Involvement**

Studies on the influence of parenting on school outcomes have mainly focused on specific parental practices such as involvement in their child's education, mostly in relation to academic achievement and rarely in relation to school dropout (McNeal, 1999; Rumberger, 1995). Common indicators of parental involvement include contacts between parents and school, parental involvement in school activities, parent-child communication about school, parental supervision involving homework, and parents' educational aspirations for their child (Fan & Chen, 2001; McNeal, 1999). Despite the many studies on parents' involvement and children's academic achievement, the nature of the relationship remains unclear (Jeynes, 2007; McNeal, 1999). In their meta-analysis, Fan and Chen (2001) concluded that the association between parental involvement and students' academic achievement was weaker than expected. Moreover, the findings of these studies have been inconsistent. In some, parental involvement seems to relate positively to children's achievement (e.g., Hoge, Smit, & Crist, 1997); other studies indicate no association, or even a negative one. For example, McNeal (1999) found that adolescents whose parents participated in the parent-teacher association got lower grades than their peers.

In one of the few studies in the area of school dropout, Alexander and his colleagues (1997) found that young people whose parents had low expectations for their educational attainment at the beginning of their schooling were more likely to drop out. Other studies indicate that parental involvement in parent-teacher organization activities and parental supervision of adolescents' homework also reduces the risk of dropping out (McNeal, 1999; Rumberger, 1995). However, McNeal's findings (1999) suggest that the association between parental involvement and school success varies depending on the indicator used for success. For example, parent-child communication about school was positively associated with higher grades but did not seem to reduce the risk of dropout.

**Parenting Style**

The literature outlined above suggests that to better understand parenting in relation to school dropout it might be more useful to look
at parenting style as an indicator of the general quality of the parent-adolescent relationship, instead of focusing solely on specific parental behaviors such as participation in their children’s education. Accordingly, such an approach might help parents better understand how to motivate and encourage their children’s educational aspirations and support their success at school.

Parenting style is most consistently associated with Baumrind’s (1971) pioneering work. In their well-known approach Steinberg and his colleagues (Lamborn, Mounts, Steinberg, & Dornbusch, 1991; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994) assessed parenting styles using the interactive effects of the parenting dimensions of support and control. In their measure they used a fourfold typology of parenting style based on Baumrind’s work (1971) and on the Maccoby and Martin (1983) revision of her conceptual work.

The prototypes of the parenting styles are authoritative, authoritarian, indulgent, and neglectful. Authoritative parents are accepting, warm, and encouraging toward their children but at the same time firm; they impart clear standards for their children’s behavior, enforcing developmentally appropriate expectations without being intrusive or restrictive. Authoritarian parents are demanding and controlling, but not responsive or warm. They have clear rules that their children are not supposed to question. Indulgent parents are responsive and warm. They allow considerable self-regulation, but are lenient and avoid confrontation. Neglectful parents are neither responsive nor demanding. They do not monitor or guide their children and do not support them or relate to them with warmth.

This typology of parenting style has been considered promising since it provides an opportunity to explore relationships between the multi-dimensional characteristics of parenting and the adjustment of youth (Adalbjarnardottir & Hafsteinsson, 2001; Lamborn et al., 1991; Steinberg et al., 1994; Türkkel & Tezer, 2008). Compared to their peers raised in non-authoritative families, children from authoritative families have been shown to score higher on a wide variety of measures of psychosocial development and competence (see overview by Steinberg, 2001). Regarding education, adolescents who perceive their parents as authoritative are more likely to earn higher grades than adolescents who perceive their parents as non-authoritative (e.g., Adalbjarnardottir & Blöndal, 2004; Baumrind, 1991).

In addition, Steinberg and his colleagues (Steinberg, Lamborn, Dornbusch, & Darling, 1992) argue that the association between parental involvement and academic achievement may vary across parenting style. Their findings indicate that the emotional context of authorita-
tive parenting increased the effectiveness of parental involvement for adolescents' academic achievement. Adolescents whose parents were involved in their child's education did better in school only if their parents were authoritative in their parenting style. These findings suggest that in understanding the processes through which parenting style relates to child development, we must separate different aspects of parenting, namely (a) the specific practices parents use in order to help their children attain particular goals such as being successful at school and (b) the parenting style or emotional context where the socialization takes place (Steinberg, 2001).

Researchers have rarely examined the relationship between a broader conceptualization of parenting style and school dropout. An exception is the cross-sectional study by Rumberger and his colleagues (Rumberger, Ghatak, Poulos, Ritter, & Dornbusch, 1990) based on Baumrind's work. Their study provides some indication that adolescents of permissive parents are more likely to drop out of school than adolescents raised in authoritative and authoritarian families. In their study no distinction was made between parents who were caring but permissive and those who were uncaring and neglectful. Moreover, the group of school dropouts was too small to take into account other important factors like parents' SES.

Research on parenting has been criticized for ignoring the bidirectional interactive relationship between parent and child by not taking into account the possible connection between characteristics of the child, such as temperament, and the parent-child relationship (see Collins, Maccoby, Steinberg, Hetherington, & Bornstein, 2000). Temperament is considered to be constitutionally based individual differences in self-regulation and reactivity that are fairly stable from early on, but can also be modified by experience (Collins et al., 2000; Windle, 1992). For example, some researchers (Crockenberg, 1986) have found that individual differences in temperament may moderate the quality of interactions with parents and therefore relate to children's and adolescents' psychosocial and behavioral adjustment.

**School Dropout**

**Definition.** Definitions of school dropout can be divided into two categories. The inclusive definition depends on the norm of education in the society, while the exclusive definition defines dropouts as those who do not complete the education they have started (see Jonasson & Blondal, 2004). In Iceland the inclusive definition is used more often, as upper secondary education is presently the norm for the society and therefore those who do not complete upper secondary education are
defined as school dropouts independent of whether or not they start upper secondary school. In Iceland compulsory education lasts 10 years, from age 6 to 15, and over 90% of those in each age cohort start upper secondary education at age 16 even though it is not compulsory. Upper secondary school is normally a four-year system (including both academic programs which qualify students for higher education and programs for industrial arts and other work-oriented courses—VET). This means that most students are expected to complete their studies at age 20. Still the system is flexible as everyone has the legal right to upper secondary education regardless of age and many students use that flexibility (Ministry of Education, Science and Culture, 2002). In this study we therefore define school dropouts as those who have not completed, and are not enrolled in, upper secondary education as of age 22.

Academic achievement and school dropout. Students who show low academic achievement have consistently been shown to be at higher risk of dropping out of school than are other students. Academic achievement is one of the strongest predictors of school dropout (see Battin-Pearson et al., 2000; Jonasson & Blondal, 2002; Rumberger, 1995). Moreover, it may mediate, at least partly, the relationship between parenting style and school dropout as adolescents’ achievement varies by parenting style (Adalbjarnardottir & Blondal, 2004). Therefore parenting style may influence the likelihood of dropping out of school partly because of its influence on adolescents’ academic achievement.

THE PRESENT STUDY

The literature on the association between parenting practices and school performance is limited in at least three important ways. First, few studies focus on the relationship between parenting practices and school dropout. Second, they have provided little insight into what it is in family life that enhances the probability of a student finishing upper secondary school. The purpose of this study is to contribute to this understanding. Third, studies of dropout have been criticized for using cross-sectional rather than longitudinal data (Doll & Hess, 2001). Since school dropout often seems to result from a long-term process of withdrawal from school (Finn, 1989), it may be especially important to analyze the predictors of school dropout longitudinally. In this study we use a longitudinal design.

The major aim of this study is to explore and compare the relationship between parenting style and parental involvement on the one
hand and school dropout on the other. We use the well-known typology
of parenting style in Baumrind’s (1971, 1999) tradition to explore how
various parenting styles (authoritative, indulgent, authoritarian, and
neglectful) relate to school dropout. Further, we use a longitudinal
design that covers an unusually long period in studies of socialization
(Collins et al., 2000); the adolescents were followed from age 14 until
age 22. This long period makes it possible to assess relationships over
time between parenting practices and school dropout.

Our main hypothesis is that parenting style predicts school dropout.
We expect that adolescents who at age 14 characterize their parents
as authoritative are more likely to finish their upper secondary educa-
tion by age 22, compared to adolescents who perceive their parents as
non-authoritative. We expect this relationship to persist even after
taking into account adolescents’ background (gender and SES) and
temperament, as well as their previous academic achievement at the
end of compulsory school (age 15). Furthermore, we explore possible
mediation effects of achievement on the relationship between parent-
ing style and school dropout.

Second, we hypothesize that parental involvement at age 14 predicts
school dropout. We expect that the adolescents who at age 14 perceive
their parents as willing to participate in their education are more likely
to complete upper secondary school. However, compared to parental
involvement, we expect parenting style to relate more strongly to
school dropout. Third, we expect parenting style to moderate the rela-
tionship between parental involvement and school dropout.

METHOD

Participants

This study is part of a larger ongoing, longitudinal study: the Reyk-
javik Adolescent Risk-Taking Longitudinal Study (RAR-LS; Adalbjarn-
ardottir, 1994) with a focus on 427 adolescents who were classified
at baseline (age 14) into one of four parenting styles: authoritative,
authoritarian, indulgent and neglectful. These 427 were a subgroup of
the initial sample of 1,010 14-year-old students (51% female) drawn
from the population of students attending the 9th grade of compulsory
school in Reykjavik, the capital city of Iceland. Approximately 90% of
Reykjavik’s 9th-grade public school population participated in the
study at baseline. The case loss was the result of absenteeism (9%)
and parental exclusion (8 cases, less than 1%). The sample was hom-
geneous with respect to culture (native Icelanders), religion (Lutheran)
and language (Icelandic).
Of the initial sample, 474 subjects could be categorized into the four parenting styles; 47 were missing information on one or more of the research variables, which is not surprising given the longitudinal design of the study. Table 1 presents descriptive data of the study variables for the total sample \( (N = 1,010) \), the sample for those who were classified into the four parenting styles at baseline \( (N = 474) \), and the final sample used in this study \( (N = 427) \).

### Table 1

**Proportions (%) or Mean and Range Values for the Study Variables in the Total Sample, Total Sample within Parenting Styles, and Study Sample**

<table>
<thead>
<tr>
<th>Variable</th>
<th>Total sample ( (N = 1,010) )</th>
<th>Parenting style sample ( (N = 474) )</th>
<th>Study sample ( (N = 427) )</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>( n )</td>
<td>%/ M</td>
<td>( n )</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Males</td>
<td>478</td>
<td>47.3</td>
<td>225</td>
</tr>
<tr>
<td>Females</td>
<td>532</td>
<td>52.7</td>
<td>249</td>
</tr>
<tr>
<td>Socioeconomic status</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Higher status</td>
<td>529</td>
<td>53.1</td>
<td>244</td>
</tr>
<tr>
<td>Lower status</td>
<td>467</td>
<td>46.9</td>
<td>223</td>
</tr>
<tr>
<td>Temperament Range</td>
<td>999</td>
<td>2.57</td>
<td>453</td>
</tr>
<tr>
<td></td>
<td>0-9</td>
<td></td>
<td>0-9</td>
</tr>
<tr>
<td>Parenting style</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Authoritative</td>
<td>184</td>
<td>38.8</td>
<td>184</td>
</tr>
<tr>
<td>Neglectful</td>
<td>184</td>
<td>38.8</td>
<td>184</td>
</tr>
<tr>
<td>Authoritarian</td>
<td>56</td>
<td>11.8</td>
<td>56</td>
</tr>
<tr>
<td>Indulgent</td>
<td>50</td>
<td>10.5</td>
<td>50</td>
</tr>
<tr>
<td>Parental involvement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>995</td>
<td>3.74</td>
<td>453</td>
</tr>
<tr>
<td></td>
<td>1-4</td>
<td></td>
<td>1-4</td>
</tr>
<tr>
<td>Academic achievement</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Range</td>
<td>932</td>
<td>6.71</td>
<td>442</td>
</tr>
<tr>
<td>School dropouts</td>
<td>319</td>
<td>32.6</td>
<td>164</td>
</tr>
<tr>
<td>Completers</td>
<td>659</td>
<td>67.4</td>
<td>294</td>
</tr>
</tbody>
</table>
A series of analyses was conducted to determine whether the attrition in sample size from age 14 to 22 was due to systematic effects. The 47 subjects who were missing one or more study variables were compared to the 427 for whom we had complete data. Males were more likely to be missing one or more variable(s) $\chi^2(1, N = 474) = 4.24, p = .04$ as were those from the lower SES groups, $\chi^2(1, N = 467) = 5.22, p = .02$. Moreover, on average, those with missing data had more temperament difficulties, $t(467) = -3.48, p = .00$, and lower grades at the end of compulsory school, $t(440) = 3.54, p = .00$, and were more likely not to have completed upper secondary school by age 22, $\chi^2(1, N = 458) = 14.75, p = .00$. No differences were observed for parenting style and parental involvement.

Thus, relative to those who were missing one or more of the study variables, the final sample was biased in favor of students with more school success, fewer temperament difficulties, and higher SES, but it was not biased with regard to parenting variables. These attrition biases suggest that generalization of results needs to be considered cautiously. One implication might be that our estimates of effects are restricted as the variability of risk factors for dropping out is constrained.

**Procedure**

Permission for the study was granted by the Icelandic Data Protection Commission, the Ministry of Education, and the Educational Testing Institution of Iceland. All of the principals at the 19 compulsory schools in Reykjavik provided written permission to collect data for their schools. Letters describing the study were sent to the adolescents and their parents. The parents were asked to contact the research project if they or their adolescent did not want to participate in the study. Researchers have found that in studies requiring active parental consent for an adolescent to participate, well-functioning families tend to be overrepresented (see Lamborn et al., 1991). The self-report questionnaire was administered during school hours with the help of trained data collectors. The adolescents were informed that they could refuse or discontinue participation at any time and were assured that their answers were strictly confidential.

In addition to the survey data, information from the Educational Testing Institution of Iceland was obtained: the students’ performance on the standardized national tests given at the end of compulsory school (10th grade). Moreover, Statistics Iceland, the national statistical institute, provided information on the upper secondary education of the participants at age 22.
Measures

School dropout. The participants were considered to have dropped out of school if they had not completed, and were not registered in, an upper secondary school at age 22.

Academic achievement. A composite of grades on standardized national tests in Icelandic, mathematics, and English at the end of compulsory school (10th grade, age 15) was used to measure previous academic performance. The grades on the three subjects were highly correlated (ranging from \( r = .60 \) to \( r = .75 \)) and were thus averaged to provide an index of academic performance.

Socioeconomic status. Socioeconomic status was assessed using the Hollingshead (1975) Index which links parents' SES with their education and occupation. Those considered to have lower status were unskilled and skilled manual workers and workers in service occupations. In the higher status category were executives, teachers, university-educated specialists, professionals, and owners of businesses.

Temperament. The Revised Dimensions of Temperament Survey (DOTS-R) developed by Windle and Lerner (Windle, 1992; Windle & Lerner, 1986) was used. This scale consists of 54 items assessing 10 temperament attributes defined as: (1) Activity level—general (7 items, \( \alpha = .80 \)), (2) activity level—sleep (4 items, \( \alpha = .82 \)), (3) approach—withdrawal (7 items, \( \alpha = .56 \)), (4) flexibility-rigidity (5 items, \( \alpha = .77 \)), (5) mood quality (7 items, \( \alpha = .86 \)), (6) rhythmicity—sleep (6 items, \( \alpha = .71 \)), (7) rhythmicity—eating (5 items, \( \alpha = .70 \)), (8) rhythmicity—daily habits (5 items, \( \alpha = .48 \)), (9) distractibility (5 items, \( \alpha = .70 \)), and (10) persistence (3 items, \( \alpha = .65 \)). In line with Windle (1992) we created one temperament construct; for each of the attributes, a dichotomous score was derived (0, 1) with 1 indicating that the adolescents were in the 30th percentile along with those who had the most difficulties on a given temperament attribute (see Windle, 1992). The possible range was 0–10 with higher scores indicating more temperament difficulties.

Parental involvement. Three dimensions commonly used in studies on parental involvement were used: adolescents' perception of parents' assistance with homework, parent-child communication about school, and educational aspirations (Fan & Chen, 2001; McNeal, 1999). The adolescents were asked about perceived but not actual parental support—the factor usually evaluated in studies on parental involvement (e.g., McNeal, 1999; Rumberger, 1995). The adolescents were asked how willing their mother/father was to assist them with homework, show interest in their studies, and encourage them to get further education. The Cronbach’s alpha for the six items (three items for each parent) was .82. Higher scores reflect more parental involvement.
Parenting style. Adolescents' perceptions at age 14 of parenting styles were measured using the Acceptance/Involvement and Strictness/Supervision scales developed by Lamborn and her colleagues (1991) based on Baumrind's (1971) work. The Acceptance/Involvement Scale assesses the perceptions adolescents hold of their parents' affection, responsiveness, and involvement (10 items, $\alpha = .75$). Typical statements included "When (he/she) wants me to do something, (he/she) explains why" and "I can count on (him/her) to help me out if I have some kind of problem." On the Strictness/Supervision scale adolescents are asked about their parents' limit setting, monitoring, and supervision (8 items, $\alpha = .77$). Typical statements to be rated include "In a typical week, what is the latest you can stay out on Friday or Saturday night?" and "How much do your parents REALLY know where you go at night?"

Of the 1,010 adolescents participating in the study at age 14, 474 were classified according to one of four parenting styles: authoritative, authoritarian, indulgent, and neglectful. Following the methodology of Lamborn and her colleagues (1991) the sample was trichotomized on the two scales of Acceptance/Involvement and Strictness/Supervision, and those results were combined to yield four different parenting styles. Authoritative parents were defined as those who scored in the upper third of both scales. Authoritarian parents were those who scored in the lowest third on the Acceptance/Involvement scale, but in the highest third on the Strictness/Supervision scale; indulgent parents were those who scored in the highest third on the Acceptance/Involvement scale, but in the lowest third on the Strictness/Supervision scale. Finally, neglectful parents were those who scored in the lowest third on both scales. To distinguish more clearly between the four styles, we omitted from our analysis those adolescents whose perceptions of their parents placed them in the middle third on either scale.

Analysis

Logistic regression analyses were performed to determine whether the six independent variables—SES, gender, temperament, parental involvement, parenting style, and previous school achievement—predicted the likelihood of school dropout. The analysis was conducted in four steps. First, we explored the association between parenting style and parental involvement at age 14 on the one hand, and school dropout on the other, controlling for gender, SES, and temperament. Next, we examined whether the relationship between parental involvement and school dropout varied across parenting style. Finally, we compared
two logistic models, with and without academic achievement, to determine whether achievement partly mediates the relationship between parenting style and school dropout (e.g., Baron & Kenny, 1986).

Students who had completed upper secondary school by age 22 were coded 0 and those who had dropped out were coded 1. In a logistic regression, given the increased value of the independent variables, an odds ratio greater than 1 indicates an increased risk of dropping out and an odds ratio below 1 indicates reduced risk. The independent variables were adolescents' (1) gender (males coded as 0 and females as 1); (2) SES (lower status coded as 0 and higher status as 1); (3) temperament; (4) parenting style (which was quadrivalent, and represented by three dummy coded variables with authoritative serving as a comparison group); (5) parental involvement; and (6) academic achievement. The continuous variables—temperament, parental involvement, and academic achievement—were centered at the sample mean in the regression models to account for problems associated with multicollinearity and interaction terms (Aiken & West, 1991). Moreover, this method allows for easier interpretation as the regression coefficient for a given variable represents its effect when all other continuous variables in the model are at their mean.

RESULTS

All six of the independent variables correlated with school dropout as follows: gender $r = -0.15$, $p = 0.00$; SES $r = -0.28$, $p = 0.00$; temperament $r = 0.11$, $p = 0.03$; parenting style Cramer's $V = 0.30$, $p = 0.00$; parental involvement $r = -0.16$, $p = 0.03$; and academic achievement $r = -0.58$, $p = 0.00$. Furthermore, the correlations indicated a low to moderate significant intercorrelation between the independent variables; gender was an exception as it correlated only with parenting style. The correlation ranged from $0.12$ to $0.41$. The strongest correlation was between the two parenting variables: parenting style and involvement. Adolescents from authoritative and indulgent families were most likely to perceive their parents as involved in their education, while adolescents from neglectful families perceived the least parental involvement, $F(3, 423) = 29$, $p = 0.00$, Tukey $p < 0.05$.

The first step of the logistic regression analysis was conducted to explore the relationship between parenting style and parental involvement on the one hand and school dropout on the other, controlling for gender, SES, and temperament. Table 2 illustrates the results. First, as Table 2, Model 1 indicates, the school dropout rate was lower among
Table 2
Multiple Logistic Regression for Relationship of Adolescents' Perceived Parenting Practices with later School Dropout, Controlling for Students' Background, Temperament and Academic Achievement

<table>
<thead>
<tr>
<th>Variable</th>
<th>Model 1^a</th>
<th></th>
<th></th>
<th></th>
<th>Model 2(^b)</th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>B</td>
<td>SE</td>
<td>OR</td>
<td>B</td>
<td>SE</td>
<td>OR</td>
<td></td>
</tr>
<tr>
<td>Females</td>
<td>-0.70</td>
<td>0.24</td>
<td>0.49**</td>
<td>-0.78</td>
<td>0.27</td>
<td>0.46**</td>
<td></td>
</tr>
<tr>
<td>Higher SES</td>
<td>-1.12</td>
<td>0.23</td>
<td>0.33***</td>
<td>-0.45</td>
<td>0.27</td>
<td>0.64+</td>
<td></td>
</tr>
<tr>
<td>Temperament</td>
<td>0.03</td>
<td>0.07</td>
<td>1.03</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parental involvement</td>
<td>-0.33</td>
<td>0.24</td>
<td>0.72</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Parenting style</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Neglectful</td>
<td>1.04</td>
<td>0.30</td>
<td>2.83***</td>
<td>0.63</td>
<td>0.32</td>
<td>1.87*</td>
<td></td>
</tr>
<tr>
<td>Authoritarian</td>
<td>1.44</td>
<td>0.38</td>
<td>4.22***</td>
<td>1.41</td>
<td>0.43</td>
<td>4.11**</td>
<td></td>
</tr>
<tr>
<td>Indulgent</td>
<td>0.78</td>
<td>0.38</td>
<td>2.19*</td>
<td>0.65</td>
<td>0.45</td>
<td>1.92</td>
<td></td>
</tr>
<tr>
<td>Academic achievement</td>
<td></td>
<td></td>
<td></td>
<td>-0.97</td>
<td>0.11</td>
<td>0.38***</td>
<td></td>
</tr>
<tr>
<td>Constant</td>
<td>-0.50</td>
<td>0.29</td>
<td>0.61+</td>
<td>-0.84</td>
<td>0.32</td>
<td>0.43**</td>
<td></td>
</tr>
</tbody>
</table>

Nagelkerke \(R^2\) 
.22

.48

Note. OR = Odds ratio.
^a Model 1, likelihood ratio \(\chi^2(7, N = 427) = 74.19; p = .000\).
\(^b\) Model 2, likelihood ratio \(\chi^2(6, N = 427) = 180.70; p = .000\).
+ \(p < .01\). * \(p < .05\). ** \(p < .01\). *** \(p < .001\).

females than among males and those of higher SES. Second, parenting style at age 14 predicted school dropout, controlling for gender, SES, temperament, and parental involvement in the child's education. Adolescents who at age 14 characterized their parents as authoritative were more likely to have completed upper secondary school by age 22 than adolescents who perceived their parents as neglectful, authoritarian or indulgent. As also shown in Table 2, Model 1, neither temperament nor parental involvement at age 14 significantly predicted school dropout, controlling for parenting style, gender, and SES. These findings suggest that parenting style relates more strongly to school dropout than does parental involvement.
The second step of the logistic regression was conducted to explore possible interaction effects between parenting style and parental involvement on school dropout, controlling for SES, gender, and temperament. A significant interaction term emerged in relation to parental involvement, between the authoritative and neglectful parenting styles ($b = 1.34, SE = 0.65, OR = 3.82, p = .04$). Among adolescents who perceived their parents as authoritative, parental involvement decreased the risk of dropping out ($r = -.20, p = .01$) but this was not true among adolescents who perceived their parents as neglectful ($r = .01, p = .87$). This interaction term, however, did not significantly improve the main effect of Model 1 presented in Table 2 (likelihood ratio $\chi^2(3, N = 427) = 5.16; p = .16$).

The third step of the multiple logistic regression analysis was conducted to explore whether the parenting style at age 14 predicted school dropout at age 22, controlling for SES and gender as well as previous academic achievement at age 15. Table 2, Model 2 shows the results. Parenting style predicted school dropout even when the strong predictors of previous academic achievement, as well as SES and gender, were taken into account. As shown in Table 2, Model 2, adolescents who perceived their parents as authoritative at age 14 were more likely to have completed upper secondary school at age 22 compared to those who perceived their parents as either authoritarian or neglectful. Taken together, parenting style, SES, gender, and academic achievement explained 48% of the variation in school dropout.

Finally, to assess a possible mediation effect of achievement on the relationship between parenting style and school dropout, we compared the effects of parenting style in Model 2 using the same model without achievement. Including achievement in the analysis produced a drop in the effects of parenting style on school dropout observed in Model 2 (see Thorlindsson & Bernburg, in press). Results showed that the coefficients for comparing the authoritative to the other parenting styles dropped substantially when achievement was included; for neglectful parenting they dropped by 48% (from 1.22 to 0.63), for authoritarian parenting by 8% (from 1.54 to 1.41), and for indulgent parenting by 18% (from 0.79 to 0.65). These findings indicate that parenting style has an effect on the odds of dropping out, in part because it influences adolescents' academic achievement.

**DISCUSSION**

One of the main findings of this study is that perceived parenting style at age 14 predicts dropout from upper secondary school. Adoles-
cents who at age 14 perceived their parents as authoritative were more likely to have completed upper secondary school by age 22 compared to those who perceived their parents as authoritarian, neglectful or indulgent. Our findings are particularly noteworthy, as they remained pronounced even after we took into account the influential factors of parents' SES (e.g., Rosenthal, 1998), adolescents' gender (OECD, 2007), parents' involvement in their education (McNeal, 1999; Rumberger et al., 1990), and adolescents' temperament (see Collins et al., 2000).

A second major finding is that a broader conceptualization of parenting seemed to be a stronger predictor of school dropout, rather than the specific behavior depicted in parental involvement in their child's education. Once we took into account adolescents' gender, SES, and temperament, as well as parenting styles, parental involvement no longer related significantly to school dropout. This finding supports the suggestion that using broader characteristics of the parent-child relationship—like parenting style rather than merely parental involvement in the child's education—might be a more meaningful way to detect the essential role the family plays in the children's education (Jeynes, 2007; Steinberg, 2001).

Also, interestingly, we found some indication that parental involvement decreased the likelihood of dropping out within authoritative families, but not among neglectful families. This finding is in line with those of Steinberg and his colleagues (1992) who found, in their cross-sectional study, that adolescents who experienced high parental involvement showed better academic achievement than their peers in authoritative families but not in non-authoritative families. Accordingly, our findings in this longitudinal study may further support the importance of separately assessing specific parenting practices and broader characteristics of parenting style to understand the processes involved in parental practices in relation to adolescents' educational outcomes (see Steinberg, 2001).

One explanation for the weaker relationship between dropout and parental involvement compared with dropout and parenting style might be that parents become more involved if their child needs educational support (see McNeal, 1999). It should be noted, however, that in this study, rather than asking the adolescents about parental involvement in action, we asked them how willing their parents were to support them whether or not they needed it. In other words, adolescents who do well academically and need less actual parental involvement, compared to those who struggle in their studies, may still perceive their parents as highly involved, knowing that the support is there if needed.
Another possible explanation may be that even though the schools and society in general encourage parents to participate in their child's education (Jeynes, 2007; McNeal, 1999), parents may need more information on how to support their children educationally. For example, adolescents may sometimes experience traditional parental questions (how they did at school today or whether they have completed homework) as interference rather than involvement. Our findings imply that rather than solely stressing parental involvement around academic issues, the message could be that a parent-child relationship that conveys general interest in the child's life and well-being, as well as communicating clear and fair standards, might be more prominent in encouraging them to do well in important areas of life, such as at school.

Third, it is particularly noteworthy that parenting style predicts school dropout even though we took into account not only adolescents' gender and SES but their previous academic achievement (standardized at age 15). Research has repeatedly shown that academic achievement is one of the strongest predictors of school dropout (see Battin-Pearson et al., 2000; Rumberger, 1995). Adolescents who perceived their parents as authoritative at age 14 were more likely to graduate from upper secondary school than those from either neglectful or authoritative families, regardless of their grades at age 15. This finding is also of particular interest as it indicates that adolescents who at age 14 characterized their parents as authoritative showed generally better academic achievement when they were 15, compared to adolescents who characterized their parents as non-authoritative (Adalbjarnardottir & Blöndal, 2004). Thus, parenting style still predicts school dropout even though academic achievement partly mediates this relationship.

The above findings suggest how strongly adolescent-perceived parenting styles relate to their school dropout. Also, in general they support previous findings about the benefits of authoritative parenting compared to other parenting styles (Baumrind, 1991; Lamborn et al., 1991; Steinberg et al., 1992, 1994). One explanation might be that adolescents who experience their parents as providing warmth, trust and respect—while also setting fair limits and demanding mature behavior—may be more receptive to their parents' socialization.

Several important limitations qualify our research findings: self-report measures, the nature of the method used for measuring parenting style, and attrition. First, our analysis relied on adolescents' self-reports on parenting style and involvement; an objective validation of that measure through other data sources was not obtained. Similar
results, however, have been obtained on parenting styles in spite of different methods of data collection (see Baumrind, 1991; Lamborn et al., 1991). Second, parenting styles were measured by focusing on the extreme thirds in the sample in order to emphasize the contrasting characteristics (see Lamborn et al., 1991); this method excludes part of the data and results in a sample-specific categorization of parenting styles. However, our main purpose in this study was to explore a broader conceptualization of parenting in relation to school dropout, so we chose to use the well-known typology of parenting style in Baumrind's tradition.

Third, due to attrition, we lost additional data on the follow-up 8 years later, this poses a threat to the external validity of the findings. Those omitted from the study appeared to be at greater academic risk with regard to SES, gender, academic achievement, temperament, and school dropout than those who remained. It should be noted, however, that our results on the effects of parenting styles were detected in spite of lesser variability and possible range restrictions in this study sample. Also, the attrition obviously decreases the power of the study somewhat, as it limits the probability of detecting differences when contrasting the smaller parenting style categories (indulgent and authoritarian) to the neglectful and authoritative categories. However, given the corroborative evidence of previous research in this area (Gray & Steinberg, 1999; Rumberger et al., 1990; Steinberg et al., 1992), the findings should contribute to the validation of the measure developed by Lamborn and colleagues (1991).

Among the strengths of the present study is its exploration of the relationship between multidimensional characteristics of parenting practices and school dropout. The literature on risk-taking behavior has been criticized for most commonly using single dimensions of the parent-child relationship (Adalbjarnardottir & Hafsteinsson, 2001; Gray & Steinberg, 1999; Lamborn et al., 1991). One of the main arguments for this study is that previous studies on the relationships between family characteristics and school dropout have been too narrow, focusing mainly on parental involvement instead of the broader characteristics of the parent-child relationship which are our focus here. Another strength of the study is that it explores the relationship between parenting practices and school dropout, taking into account several influential predictors of school dropout (SES, gender, academic achievement). This provides the opportunity to conclude with more confidence that parenting style relates to adolescents' likelihood of dropping out of school.

A third strength is that we controlled for adolescents' temperament. Studies on parenting have been criticized for ignoring the influence of
children's characteristics on the parent-child relationship (see Collins et al., 2000). The fourth strength of the study is the longitudinal design, which made it possible to conclude with more certainty that parenting style at age 14 predicts the likelihood of having completed upper secondary school 8 years later. It is important to note, however, that we cannot make inferences about any causal relationship between parenting and school dropout. It is possible that adolescents who show “good” academic performance and are engaged in school—both situations that relate to reduced school dropout—may provoke authoritative parenting. At the same time another finding is worth noticing: regardless of previous achievement, adolescents who experience authoritative parenting are still more likely to have completed upper secondary school at age 22 than those from authoritarian and neglectful homes. By taking into account adolescents’ achievement and temperament—which can be at least in part genetically innate (see Collins et al., 2000; Windle, 1992)—we can better distinguish between the effects of parenting practices and genetic factors. The fifth strength is that the study relied on official data on educational outcomes that are highly reliable. Information on previous academic achievement came from the Educational Testing Institution of Iceland and the educational status data from Statistics Iceland.

In conclusion, our findings indicate that the quality of the relationship between parents and their child seems to better predict the likelihood of the child’s staying in school than do specific parental actions that are aimed directly at the child’s education. Adolescents who perceive their parents as being more authoritative fare better at school than adolescents who perceive their parents as being more authoritarian or neglectful. This applies to both males and females, regardless of their socioeconomic background and previous academic achievement. These findings are important, since school dropout is a risk factor for the well-being of the young. For example, without upper secondary education they are more likely to have poorly paid jobs or to be unemployed, and less likely to participate in further education (see Rumberger & Lamb, 2003; Rumberger & Thomas, 2000). Our findings corroborate several other studies, suggesting that a parenting style characterized by granting of autonomy, warmth, and support, as well as firmness and clear standards for the child’s behavior, benefits adolescents’ general adjustment (e.g., Adalbjarnardottir & Hafsteinsson, 2001; Baumrind, 1991; Lamborn et al., 1991; Steinberg et al., 1992, 1994)—in this case, educational attainment. As such, the results of this study should be informative for parents, family practitioners, educators, and policy planners.
REFERENCES


Paper III
Parenting in Relation to School Dropout through Student Engagement:

A Longitudinal Study

Kristjana S. Blondal and Sigrun Adalbjarnardottir

University of Iceland

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Abstract

Dropping out of school generally has negative consequences for both individuals and society and the decision to do so has been described as a crucial developmental task of adolescence. This longitudinal study examined the contribution of parenting practices to students’ completion of upper secondary school through their school engagement. Icelandic youth (N=835, 54% female) were followed from age 14 to 22. Analyses using structural equation modeling revealed that adolescents (age 14) with more authoritative parents (high acceptance, supervision, and psychological autonomy granting) were more likely to have graduated at age 22, compared to adolescents with less authoritative parents. Moreover, the level of student engagement at age 15 partly mediated the relationship between authoritative parenting and educational status. These findings emphasize the importance of quality parent-child relationships to enhance adolescents’ school engagement, which in turn reduces the risk of school dropout.

Key words: adolescent school achievement/ failure, longitudinal, parenting, parent-child relations, structural equation modeling, student engagement
Parenting in Relation to School Dropout through Student Engagement: A Longitudinal Study

Given the negative personal and societal costs of leaving school early, an adolescent’s decision regarding whether to graduate or drop out of school can be described as one of the most crucial developmental tasks of this age period. Findings from various countries indicate similar negative economic and psychosocial consequences for students who leave school before graduating. They face poorer prospects in the labor market compared to those who finish school, along with lower lifetime earnings and higher rates of unemployment (e.g., DG EAC, 2005; OECD, 2001; Rumberger & Lamb, 2003). In addition, they seem to be at greater risk of becoming dependent on welfare, having health problems, and engaging in antisocial behavior (see Belfield & Levin, 2007; Lamb & Markussen, 2011). Many nations are concerned with reducing the possibility that a student will drop out or leave school before receiving an appropriate diploma or certification. At the same time, preventing dropout is a challenging task.

The family has been recognized as one of the primary contributors to children’s education (e.g., Baumrind, 1971; Rumberger, 1995; Steinberg, 2001). Thus, the main purpose of this study was to explore multidimensional aspects of parenting practices (Baumrind, 1971; Lamborn, Mounts, Steinberg, & Dornbusch, 1991) in relation to the educational status of young people (age 22), with a focus on their school dropout/graduation and how this relationship might be explained. More precisely, we examined longitudinally how authoritative parents may contribute to their child’s completing upper secondary school through the effect they have on that child’s school engagement during the critical period of adolescence when students tend to become less motivated (e.g., Simons-Morton & Chen, 2009; Wang & Eccles, 2012). This
approach should contribute to better understanding of the roles parents play in their children’s educational aspirations and success in school.

Parenting and School Dropout

Researchers in the field have focused strongly on structural factors such as family background in relation to students’ academic achievement and school dropout. Although studies have consistently found that students of higher socioeconomic status (SES) are more successful at school and less likely to drop out than students from lower SES families (e.g., McNeal, 1999), such findings do not provide insights into what it is in family life that promotes school success (Davis-Kean, 2005). Studies in the field have also been criticized for using overly specific definitions of parental support (see Jeynes, 2007) such as contacts between parents and school, parental involvement in school activities, and parent-child communication about school, all of which are said to reflect involvement in the child’s education (Fan & Chen, 2001). In general, the findings from studies with this focus on parenting practices in relation to children’s educational outcomes have been inconsistent and weaker than expected (see the review by Fan & Chen, 2001). Thus, to better understand the influence that parents have on their child’s education it is important to look at a broader conceptualization of child upbringing that characterizes the parents’ actions in their communications with their child (Steinberg, 2001). Research has shown that parenting style (Baumrind, 1971), a broader conceptualization, predicts school dropout more strongly than parental involvement in the child’s education (Blondal & Adalbjarnardottir, 2009).

The authoritative parenting prototype is most consistently associated with Baumrind’s (1971, 1991) pioneering work on the multidimensional characteristics of parenting. This approach suggests that most effective parenting practices are characterized by a responsive and
demanding style as well as the granting of psychological autonomy (Maccoby & Martin, 1983; Steinberg, 2001). Authoritative parents are responsive: accepting, warm, and encouraging toward their children. At the same time, they are demanding: They supervise their children’s behavior, impart clear standards, and enforce developmentally appropriate expectations without being intrusive or restrictive.

Compared to their peers raised in nonauthoritative families, children and adolescents from authoritative families have been shown to score higher on a wide variety of measures of adjustment, psychosocial development, and academic achievement (Adalbjarnardottir & Hafsteinsson, 2001; Baumrind, 1991; Gray & Steinberg, 1999; Steinberg, Lamborn, Darling, Mounts, & Dornbusch, 1994; Türkel & Tezer, 2008). During adolescence, the parents’ high level of acceptance and supervision continues to be important for successful development. Moreover, the dimension of psychological autonomy granting, in which parents use democratic discipline and encourage their children to express their thoughts and feelings, seems to be especially significant in that it allows parents to match their adolescents’ level of development, including their claims for more independence (Baumrind, 1991; Steinberg 2001; Steinberg, Lamborn, Dornbusch, & Darling, 1992). For example, Gray and Steinberg (1999) examined the core dimensions of authoritative parenting—autonomy granting, acceptance, and supervision—and found that all three related to adolescents’ academic competence.

The relationship between a broader conceptualization of parenting practices and school dropout has rarely been studied. An exception is the cross-sectional study conducted by Rumberger and his colleagues (Rumberger, Ghatak, Poulos, Ritter, & Dornbusch, 1990) which was based on Baumrind’s (1971, 1991) work. Their study provides some indication that adolescents with authoritative parents are less likely to drop out of school compared to
adolescents raised with permissive parents (those who show acceptance but exercise little behavioral supervision). Another exception is our earlier work related to the present longitudinal study (Blondal & Adalbjarnardottir, 2009). Our 2009 findings indicate that 14-year-olds from authoritative families are more likely to have completed upper secondary education by age 22 compared to adolescents from nonauthoritative families, when controlling for gender, SES, temperament, and parental involvement. Moreover, even though we also took into account students’ previous academic achievement, we found that students from the more authoritative families were more likely to have graduated than students from neglectful families (characterized by low acceptance and little supervision) and authoritarian families (characterized by low acceptance and high supervision). However, in this earlier work we did not explore the relationship between parenting and school dropout through student engagement, which is a central concept in most theories of school dropout (Finn, 1989; Newmann, Wehlage, & Lamborn, 1992).

Student Engagement and School Dropout

Student engagement (or disengagement) and dropout have been conceptualized as developmental processes rather than outcomes. Dropping out is viewed as the end of a long-term process in which students disengage from school, frequently beginning in the early grades (e.g., Alexander, Entwisle, & Kabbani, 2001). Students’ engagement is considered important for prevention purposes. It has been shown to prevent their alienation from school, increase their academic motivation, and facilitate school success (see Fredricks, Blumenfeld, & Paris, 2004). Researchers have found that among both children and adolescents, student engagement is related to educational outcomes such as academic achievement and low rates of school dropout (e.g.,
Fredricks and her colleagues (2004), however, criticized the narrow focus on behavioral engagement; they claimed that engagement is a multidimensional concept. In their literature review, they defined three broad dimensions of student engagement: (a) behavioral, (b) emotional, and (c) cognitive. Behavioral engagement refers to students’ conduct, and participation in both the academic and social aspects of schooling. At one end of the behavioral spectrum are such positive behaviors as good attendance, following school rules, completing homework, and being involved in learning. At the other end are negative behaviors such as truancy, behaving disruptively, or being withdrawn in the classroom. Emotional engagement refers to students’ positive and negative affective reactions toward their schoolwork, toward people at school, and toward school in general. This includes students’ interest in their academics and sense of belonging to school, or the opposite: disidentification with school and boredom with schoolwork. Cognitive engagement is seen as students’ preparedness to invest in their learning and their preference for and persistence in the face of academic challenges (see Fredricks et al., 2004; Rumberger, 2011).

The majority of studies on the relationship between engagement and school dropout have focused only on behavioral engagement (Fredricks et al., 2004). In general, the findings indicate that students who are engaged behaviorally with school are less likely to drop out than students who are disengaged (Rumberger, 1995; Finn & Rock, 1997). Among the few studies that have used a multidimensional concept of engagement in relation to school dropout is that by Janosz and his colleagues (2008). Their main conclusion was that a multidimensional construct of students’ engagement is related to their school dropout. Another example is our earlier related study (Blondal
& Adalbjarnardottir, 2012): We found that both behavioral and emotional engagement during adolescence differentiated longitudinally between students who were following distinct educational tracks. The students who were academically weak at age 15 and had not completed upper secondary education at age 22 were those who showed the most disengagement, that is, negative school behaviors, academic disinterest, and disidentification with school at age 14 whereas those who were academically strong and had completed upper secondary education were the least disengaged. It is worth noting that academically strong students who did drop out became more disengaged, both behaviorally and emotionally, from age 14 to 15.

In regards to promoting engagement, a substantial amount of research has documented the importance of the proximal environment in fostering engagement (Fredricks et al., 2004; Van Ryzin, Gravely, & Roseth, 2009). For instance, Wang and Eccles (2012) found that social support from parents, teachers, and peers facilitates adolescents’ school engagement and that parental lack of social support is more important in reducing adolescents’ school engagement than that of peers.

Only a few studies, however, have examined the importance of multidimensional parenting practices—a broader conceptualization of child upbringing—to promote student engagement among adolescents (Simons-Morton & Chen, 2009). Findings from these studies indicate that authoritative parenting is positively associated with student engagement (Simons-Morton & Chen, 2009; Steinberg et al., 1994). More important for the focus of this study is the fact that little research has examined the association, through school engagement, between parenting practices and dropout. Given that student disengagement is seen as the beginning of a long process that can ultimately lead to dropout (Alexander et al., 1997; Finn, 1989) and that
engagement may be malleable, it is important to identify family factors associated with it (Fredricks et al., 2004).

The Present Study

The existing literature on the association between parenting practices and school performance is limited in at least three important ways. First, few studies have analyzed the relationship between multidimensional parenting practices and school dropout; the focus has tended to be on academic achievement. Second, studies in this area have also been criticized for using a narrow definition of parental support (see Jeynes, 2007), such as involvement in the child’s education (McNeal, 1999; Rumberger, 1995). Third, even though student engagement is a central concept in most theories of school dropout, and dropout often seems to result from a long-term process of withdrawal from school (Finn, 1989), little research has focused on how parenting practices may relate to school dropout through the process of student engagement. The purpose of this study was to contribute to this understanding.

The major aim of this study was to explore longitudinally how multifaceted parenting practices during adolescence (age 14) influence educational status at age 22 (graduation/dropout) through student engagement at age 15. In line with the empirical finding that engagement is a multidimensional concept (e.g., Glanville & Wildhagen, 2007), we used indicators of behavioral and emotional engagement in this study. Our conceptual model, presented in Figure 1, draws on Baumrind’s theory (1971, 1991) that parenting practices influence adjustment for children and youth. It also builds on theories describing school dropout as a process of gradual disengagement from school that can eventually lead to school dropout as a consequence of the interplay between the student and his or her social context (Finn, 1989; Wehlage, Rutter, Smith, Lesko, & Fernandez, 1989).
Building on Baumrind’s (1971, 1991) theory, the model illustrated in Figure 1 posits that authoritative parenting, characterized by parents’ autonomy granting, acceptance, and supervision, can counteract adolescents’ school disengagement as reflected in academic disinterest, negative school behaviors, and disidentification with school. Also, building on theories of school dropout that conceptualize students’ disengagement as the central concept in that process, the model posits that authoritative parenting practices decrease adolescents’ risk of dropping out by counteracting their disengagement.

Although substantive evidence supports Baumrind’s (1971, 1991) theory on the influence of multidimensional parenting practices on youth development, our approach is the first known application of the theory stating that authoritative parenting has a positive influence on educational attainment through student engagement in adolescence. In addition, the model posits that these relationships persist regardless of student academic achievement, which is the single strongest predictor of school dropout; low-achieving students have been shown to be at higher risk of dropping out of school than other students (see Battin-Pearson et al., 2000; see Rumberger, 2011). Furthermore, we hold that these relationships will persist regardless of student socioeconomic background and gender. Research has consistently shown that students in higher SES groups are academically more successful and less likely to drop out of school than their counterparts in lower SES groups (Battin-Pearson et al., 2000; Davis-Kean, 2005; Entwisle, Alexander, & Olson, 2005; McNeal, 1999). Moreover, males seem to be more at risk of dropping out than females (e.g. Entwisle et al., 2005; Stearns & Glennie, 2006).
The model posited here suggests two specific hypotheses. First, adolescents who have more authoritative parents are less likely than their counterparts with less authoritative parents to have dropped out from upper secondary school by age 22, and this relationship exists in part because they are less likely to be disengaged at school at age 15 (i.e., it is partly mediated by engagement). Second, we expected this relationship to persist even after taking into account previous academic achievement at the end of compulsory school (age 15) as well as adolescents’ background (SES and gender).

METHOD

Participants

This study is part of a larger, ongoing longitudinal project: the Reykjavik Adolescent Risk-Taking Longitudinal Study (Adalbjarnardottir, 1994). The initial sample of 1,010 fourteen-year-old students (51% female) was drawn from the population of students attending the 9th grade of compulsory school in Reykjavik, the capital city of Iceland. Approximately 90% of Reykjavik’s 9th-grade public school population participated in the study at baseline in 1994. The case loss was the result of absenteeism (9%) and parental refusal to allow their adolescents to participate (8 cases, less than 1%). The sample was homogeneous with respect to culture (native Icelanders), religion (Lutheran), and language (Icelandic) and thus representative of Reykjavik. At baseline, 70.4% of the adolescents lived with both biological parents, 14.3% lived with a single parent, 13.6% lived in blended families (one biological parent and one stepparent), and 1.7% lived in other types of households. In terms of SES, based on the Hollingshead (1975) categories, 3.7% were in Class 1 (the lowest class), 18.9% were in Class 2, 25.4% were in Class 3, 18.3% were in Class 4, 15.4% were in Class 5, and 18.3% were in the highest category, Class 6.
The focus of this study was on 835 adolescents (54% females) who met four criteria: They (a) participated in the baseline study at age 14 (9th grade), (b) participated in the follow-up study at age 15, and (c) completed standardized national achievement tests at the end of compulsory school (10th grade, age 15); in addition, (d) registered data on their educational progress at age 22 were available from Statistics Iceland (http://www.statice.is/), the national statistical institute.

Of the original sample, 835 (82.7%) students completed the questionnaires both at baseline and in the follow-up study and information on their academic achievement and educational attainment was available. We used multiple imputation procedures to impute missing data on the independent variables using R Version 2.15.0 (R Core Team, 2012), and the package mice 2.18 (Van Buuren & Groothuis-Oudshoorn, 2011). The mice software uses multiple imputation by chained equations to impute incomplete data and has been found to work well in simulation studies (e.g. Drechsler & Rassler, 2008; Van Buuren, Brand, Groothuis-Oudshoorn, & Rubin, 2006).

We conducted a series of analysis to determine whether the attrition in sample size from age 14 to 22 was due to systematic effects with regard to student background, academic achievement on standardized tests at age 15, and school dropout. The 835 participants in this study were compared with the 175 who did not participate. No difference was observed for SES or gender. However, participants in this study scored higher on academic achievement in Icelandic, English, and mathematics than those who did not participate, \( t(926) = 4.7, p < .001; t(183) = 4.05, p < .001; \) and \( t(177) = 3.3, p < .01 \), respectively. Also, participants were less likely to drop out of school, \( \chi^2 (1, N = 978) = 32.4, p < .01 \). One implication might be that our estimates of effects are restricted because the variability of risk factors for dropping out of school is constrained.
Procedure

Permission for the study was granted by the Icelandic Data Protection Commission, the Ministry of Education, and the Educational Testing Institute of Iceland. All of the principals at the 19 compulsory schools in Reykjavik provided their written permission to collect data in their schools. Letters describing the study were sent to the adolescents and their parents. The parents were asked to contact someone at the research project if they or their adolescent did not want to participate in the study. Researchers have found that in studies that require active parental consent for an adolescent to participate, well-functioning families tend to be overrepresented (see Lamborn et al., 1991). The self-report questionnaire was administered during school hours with the help of trained data collectors. The adolescents were informed that they could refuse or discontinue participation at any time and were assured that their answers were strictly confidential. The second round of data collection took place when the adolescents were 15, in 10th grade, their final year of compulsory school.

In addition to the survey data, information was obtained from the Educational Testing Institute of Iceland. This resource provided information on students’ performance on the standardized national tests given at the end of compulsory school (10th grade). Moreover, Statistics Iceland provided information on the upper secondary education of the participants at age 22.

Measures

Socioeconomic status was assessed with the Hollingshead (1975) Index which links parents’ SES with their education and occupation on a six-point scale: Category 1 (e.g., unskilled employees), Category 2 (e.g., skilled manual workers), Category 3 (e.g., clerical workers, service occupations), Category 4 (e.g., owners of small businesses), Category 6 (e.g., owners of larger
businesses), and Category VI (e.g., university-educated specialists and professionals). When the mother’s and father’s SES were not similar, we used the higher of the two scores.

We assessed parenting practices when the adolescents were at age 14, using the scales of Acceptance, Supervision, and Psychological Autonomy Granting developed by Lamborn and her colleagues (1991) on the basis of Baumrind’s (1971) work. These are the three core dimensions corresponding to authoritative parenting; in this study we treated each subscale as a continuous variable (see Gray & Steinberg, 1999; Steinberg et al., 1992). Acceptance included six items on parents’ responsiveness, affection and involvement. Typical statements included “My mother/father keeps pushing me to do my best in whatever I do” and “I can count on my mother/father to help me out if I have some kind of problem.” Responses were made on a 2-point scale: 1 = usually false and 2 = usually true. Supervision included six items about parents’ limit setting, and supervision. Typical questions were “How much do your parents TRY to know where you go at night?” and “How much do your parents REALLY know where you go at night?” Responses were given on a 3-point scales: 1 = “They don’t try,” 2 = “They try a little,” and 3 = “They try a lot,” and 1 = “They don’t know,” 2 = “They know a little,” and 3 = “They know a lot,” respectively. Psychological Autonomy Granting included four items assessing the extent to which the adolescents perceive their parents as using noncoercive discipline and encouraging their individuality. Examples of statements are (reverse scored) are: “When I get a POOR grade my mother/father makes my life miserable,” and “My mother/father won’t let me do things with her/him when I do something she/he doesn’t like.” Responses were made on a 2-point scale: 1 = usually false and 2 = usually true. The items were coded so that the higher scores indicate more psychological autonomy granting, acceptance, and supervision.
We assessed **student disengagement** when the adolescents were age 15 using nine items on school behavior and on attitudes toward academics and school. The items were hypothesized to reflect three first-order latent concepts of behavioral and emotional disengagement—negative school behaviors, academic disinterest, and disidentification with school—that would further converge into one global construct of disengagement (Blondal & Adalbjarnardottir, 2012; see review by Fredricks et al., 2004).

Negative school behaviors were evaluated with three items from the Icelandic version (Arnkelsson, 1987) of the Youth Self Report and Profile (Achenbach & Edelbrock, 1987), for example “I cut classes or skip school,” and “I disobey in school.” Responses were given on a 3-point scale: 1 = “not true”, 2 = “somewhat or sometimes true” and 3 = “often true.” Academic disinterest was assessed with three items, for example “I feel bored with my studies” and “I feel my studies are useless.” Finally, school disidentification was assessed with three items, for example “I am not happy at school” and “I want to quit school.” For the constructs of emotional disengagement responses were given on a 5-point scale that ranged from 1 (*never applies to me*) to 5 (*almost always applies to me*). The items in all three disengagement components were coded so that the higher scores indicate more disengagement.

**Academic achievement** was based on standardized national tests in Icelandic, English, and mathematics in 10th grade (age 15). Cronbach’s alphas ranged from .90 to .95 (Namsmatsstofnun, 1998).

**School dropout.** The participants were considered to have dropped out of school if they had not completed, and were not registered in, an upper secondary school at age 22; in Iceland students are generally supposed to graduate during the year of their 20th birthday.
Analysis

We conducted a four-step analysis using Lisrel 8.72. First, we conducted a first-order confirmatory factor analysis for the measurement model consisting of the seven latent variables: three for parenting practices, three for school disengagement, and one for academic achievement. Second, once this model was established we tested a second-order model for the global constructs of disengagement (measuring the behavioral and emotional dimensions) and authoritative parenting (based on acceptance, autonomy granting, and supervision). Third, we evaluated the structural equation model for school dropout that is proposed in Figure 1, including the six latent variables of parenting practices and students’ disengagement as well as the second-order concepts of disengagement and authoritative parenting. Fourth, we tested the structural equation model, controlling for academic achievement and the background variables (SES and gender).

The model is based on an eight-year longitudinal design, extending from when the students were 14 until they were 22. Students who had completed upper secondary school by age 22 were coded 0 and those who had dropped out were coded 1, and males were coded as 0 and females as 1. Because the items presumably do not have interval-level properties, we used polychoric correlation and asymptotic covariance matrices as input matrices in Lisrel and the diagonally weighted least squares as our estimation method (Flora & Curran, 2004).

We used several indices to estimate the fit of the models, as recommended by Hu and Bentler (1999). To estimate the overall fit, we used the chi-square ratio ($\chi^2/df$) statistic, which adjusts for the sensitivity of the chi-square test to sample size and complexity of models. A chi-square ratio of value of 3 or less indicates a good model fit (Bentler & Bonett, 1980). We also report the models’ comparative fit index (CFI) and root-mean-square error of approximation.
(RMSEA), which have been shown to be good indicators of fit (McDonald & Ho, 2002). An excellent fit is indicated by a value of .95 for CFI (Bentler & Bonett, 1980) and a value of less than .05 for RMSEA (McDonald & Ho, 2002). Because we violated multivariate normality we used the Satorra-Bentler chi-square statistic to estimate the overall fit of the models (see Jöreskog, Sörbom, Du Toit, & Du Toit, 2000).

RESULTS

Approximately 29% of the youth had not completed upper secondary school at age 22. Males were more likely (34%) than females (24%) to have dropped out, $\chi^2 (1, N = 835) = 10.7, p < .001$. Moreover, adolescents from lower SES backgrounds were more likely to have dropped out than those from higher ones (SES 1 to 6: 50%; 48%; 34%; 27%; 21%; and 8%, respectively), $\chi^2 (5, N = 835) = 71.4, p < .001$. Descriptive statistics and correlations for the study variables are shown in Tables 1 and 2. The correlations show that the indicators within the latent constructs are related to each other.

<Table 1 and 2 about here>

The Measurement Model

We conducted simultaneous confirmatory factor analyses on the three latent variables of parenting (psychological autonomy granting, acceptance, and supervision), the three latent variables of disengagement (negative behaviors, academic disinterest, and disidentification with school), and the latent variable of achievement. To determine the validity of the latent constructs, we inspected the factor loadings in the measurement model. In all instances the individual factor loadings ($\lambda$s) were statistically significant ($t$ values ranged from 3.55 to 71.86) and ranged from .59 to .94. Therefore the factor loadings were all greater than the recommended
value of .3 (Floyd & Widaman, 1995) and suggested that each of the measured constructs had acceptable validity. The results are shown in Table 3. All the fit indices showed that the overall fit of the measurement model was acceptable ($\chi^2/df = 2.73$, CFI = .98, RMSEA = .046).

The Structural Models

In using structural equation modeling to test the theoretical model demonstrated in Figure 1, we first explored how parenting practices experienced at age 14 influenced school dropout (upper secondary school dropout/graduation by age 22) through their association with student dis/engagement during adolescence. Second, we tested the structural equation model, controlling for academic achievement at age 15, and students’ background (SES and gender). The findings are shown in Figures 2 and 3 as well as Table 4.

As shown in Figure 2 and Table 4, there was a significant direct effect of authoritative parenting on school dropout ($\beta = -.24, p < .001$). In addition, there was an indirect relationship of authoritative parenting to school dropout through student disengagement at age 15 ($\beta = -.13, p < .001$). These results indicate that the influence of authoritative parenting on school dropout was partially mediated through student disengagement: The adolescents with more authoritative parents were less likely to have dropped out (and more likely to have completed upper secondary education at age 22) compared to those with less authoritative parents. This relationship can partly be explained by the finding that those with more authoritative parents were less disengaged from school at age 15. The fit of the overall model was acceptable, because the $\chi^2/df$ ratio was below the recommended cutoff level of 3 (2.69), the CFI was greater than .95 (.98) and the RMSEA was below .05 (.045). The results support our hypothesis that student
dis/engagement during adolescence (at age 15) partly mediates the influence of authoritative parenting on school dropout (educational status at age 22). The proportion of variance in educational status at age 22 explained by the model was 17% (the reduced form of $R^2 = .17$) (see Jöreskog, 2000).

Figure 3 and Table 4 show the findings of structural equation modeling for the previous model, controlling for students’ academic achievement at age 15 (end of compulsory school), SES, and gender. As in the previous model shown in Figure 2, there was an indirect relationship between authoritative parenting and school dropout through school dis/engagement at age 15 ($\beta = -.12, p < .001$). The direct effect of authoritative parenting on school dropout, however, became nonsignificant ($\beta = .02, p > .05$) when we controlled for academic achievement and students background (SES and gender). This indicates that, once we controlled for the strong predictor of academic achievement ($\beta = -.47, p < .001$), the influence of authoritative parenting was fully mediated through students’ dis/engagement. The higher their academic achievement at age 15, the less likely these young people were to have dropped out of school. Moreover, gender had direct effect on educational status, with males being more likely to drop out than females ($\beta = -.08, p < .05$). However, SES was not significantly related to school dropout. The fit of the overall model was acceptable, because the $\chi^2/df$ ratio was within the recommended level of 3 (2.87), the CFI was greater than .95 (.97), and the RMSEA was below .05 (.047). The proportion of variance in educational status at age 22 explained by the model was 33% (reduced form of $R^2 = .33$).

The results of this model support our main hypothesis: Authoritative parenting during adolescence is indirectly related to school dropout at age 22 through student dis/engagement at age 15, controlling for academic achievement, gender, and SES. The students from the more
authoritative families were less likely to be disengaged at school at age 15 and therefore more likely to have completed upper secondary education at age 22. This relationship held even after we controlled for the strong prediction of academic achievement at age 15. However, we expected that authoritative parenting would also contribute uniquely to counteracting school dropout beyond the indirect effect through disengagement, that is, that it would not be fully mediated through disengagement. This hypothesis held when we did not control for the strong effects of academic achievement on school dropout.

DISCUSSION

The most interesting finding of this longitudinal study is the association between multidimensional parenting practices as perceived by adolescents at age 14 and their educational status at age 22, mediated by their level of engagement at age 15. First, adolescents who perceived their parents as more authoritative (i.e., providing high levels of acceptance, supervision, and psychological autonomy granting) were more likely to have completed upper secondary school at age 22, compared to their counterparts who perceived their parents as less authoritative. Second, students from more authoritative homes were less likely to be disengaged from school, in that they showed less negative school behavior, less academic disinterest, and less disidentification with school during adolescence. Moreover, student engagement seems to play a critical role in the relationship between parenting practices and school dropout/graduation. It is important to note that adolescents who had more authoritative parents were not only less likely to feel disengaged at school but also more likely to complete upper secondary school.

This finding—that a relationship exists between authoritative parenting and graduation from upper secondary school—corroborates substantive evidence from other studies showing the
positive effect of authoritative parenting practices on children’s and adolescents’ development, competence, and educational success (Adalbjarnardottir & Hafsteinsson, 2001; Baumrind, 1991; Lamborn et al., 1991; Steinberg, 2001; Türkel & Tezer, 2008). The important message is that parents continue to play an important role in their child’s education during adolescence. As such, the study contributes to the theory of social capital reflected in parent-child relationships, indicating how such positive social relationships can be important for the youths’ development and well-being (Coleman, 1988). In fact, social capital in the family has been shown to be more influential in promoting children’s academic achievement than social capital at school (Dufur, Parcel, & Troutman, 2013).

In this study we took a step beyond earlier research and examined the mechanism behind the association of parenting practices and educational status by focusing on a multidimensional construct of student engagement. Adolescence is a critical life period, because students are about to transition to upper secondary school which often entails larger schools and less teacher-student interaction (Wang & Holcombe, 2010). This also is a sensitive period: a time when students tend to become less engaged (e.g., Simons-Morton & Chen, 2009; Wang & Eccles, 2012) and when they face the challenging task of selecting their course of study.

Our finding that students from more authoritative homes were less likely to be disengaged—that they showed fewer negative school behaviors and less academic disinterest and disidentification with school—is an important one that corroborates and contributes to the limited research on multidimensional parenting practices in relation to student engagement (Simons-Morton & Chen, 2009). Further, because of our focus on parenting practices, our findings support earlier research on the role that contextual factors play in student engagement.
For example, substantial evidence indicates that school climate and teacher-student relations relate to student engagement (Fredricks et al., 2004; Van Ryzin et al., 2009).

Even more important, our findings that parenting practices can help predict educational status in the early twenties, through the mediation of engagement during adolescence, help to fill a gap in the research literature. They indicate that adolescents whose parents are both responsive and demanding, and grant autonomy, are less disengaged at the end of compulsory school, compared to their counterparts, and that this relationship makes them more likely to graduate from upper secondary school.

In general, these findings contribute to the theory that authoritative parenting practices are important for adolescents to adjust positively to school and to succeed there. This broad conceptualization of parenting could aid preventive educational work that helps parents promote their child’s engagement in school and its completion. Our findings imply a message to parents that might facilitate adolescents’ success through secondary school: that the parent-child relationship should convey general interest in the adolescents’ life and well-being and that parents should communicate clear and fair standards and respect adolescents’ need for autonomy. But researchers, schools, and society have thus far tended to focus on specific parenting practices to support school achievement, such as involvement in their child’s education, instead of focusing on broader and multidimensional parenting practices (see Fan & Chen, 2001; Jeynes, 2007).

It is particularly noteworthy that in our study parenting practices continued to have an influence, through students’ disengagement, on their children’s educational status at age 22, even though we accounted for the strong impact that previous academic achievement (standardized tests scores at age 15) has on dropout in addition to students’ background (SES and gender).
Previous research has shown that academic achievement is the single strongest predictor of school dropout (see Alexander et al., 2001; Battin-Pearson et al., 2000; Blondal, Jónasson & Tannhauser, 2011). In other words, our findings indicate that regardless of students’ academic achievement, the quality of the relationship between parents and their adolescents can lead to students having positive feelings toward their academic tasks and school, and to behaving well in school, and can thereby increase the chance that they will complete upper secondary education.

Some limitations of our study deserve mention. First, our analysis relied on adolescents’ self-reports on their parents’ practices and their own disengagement; we obtained no objective validation of these measures through other data sources. Similar results, however, have been obtained on both authoritative parenting and student engagement in spite of different methods of data collection (see Baumrind, 1991; Finn & Rock, 1997; Lamborn et al., 1991). Second, we need to be cautious in making inferences about a causal relationship between parenting and school dropout. It is possible that when adolescents do well academically and are engaged in their studies and in school—both situations that reduce the risk of dropout—they may in fact elicit authoritative behaviors from their parents.

Our study also has several strengths. First, it explored the relationship between multidimensional characteristics of parenting practices and school dropout, in response to criticisms that the literature on educational outcomes has commonly used a narrow definition of parental support (Jeynes, 2007). Second, to explore the association between parenting practices and school dropout we used a multidimensional construct of student engagement, one that includes both behavioral and emotional engagement, as recommended by the literature (Fredricks et al., 2004). Third, the study has a longitudinal design; we were able to explore the relationship between parenting practices and dropout over a period of eight years (age 14 to 22).
taking into account several influential predictors of school dropout (SES, gender, and academic achievement). This enabled us to conclude with more confidence that parenting practices relate to adolescents’ likelihood of dropping out of school through the mechanism of student engagement. The fourth strength is that the study relied on official, and highly reliable, data on educational outcomes. Data on previous academic achievement (10th grade) came from the Educational Testing Institute of Iceland and those on educational status from Statistics Iceland.

Our findings support the theoretical model that student disengagement is the beginning of a long process that ultimately leads to dropout (Alexander et al., 1997; Finn, 1989); they suggest that parenting practices may be able to counteract disengagement and thus prevent dropout. Our findings also confirm the important role that parents play in motivating and encouraging their children’s educational aspirations and thereby supporting their children’s success at school. This is especially important during the critical period of adolescence, when students face new challenges as they move into upper secondary school and tend to become less motivated (e.g., Wang & Eccles, 2012) and when parental involvement and monitoring seem to decrease (Simons-Morton & Chen, 2009). Accordingly, the results of this study should be informative to parents, family practitioners, educators, and policy planners.

To better explain the mechanism behind the processes of dropping out of school, for the purposes of prevention and intervention, future research should focus on how the interplay between parenting style and teaching practices may relate to school dropout through student engagement.
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Table 1
Descriptive Statistics for Imputed Study Variables (N = 835)

<table>
<thead>
<tr>
<th>Variable</th>
<th>M</th>
<th>SD</th>
<th>Range</th>
</tr>
</thead>
<tbody>
<tr>
<td>1. When I get a POOR grade my parents make my life miserable</td>
<td>2.64</td>
<td>0.54</td>
<td>1-3</td>
</tr>
<tr>
<td>2. When I get a POOR grade my parents make me feel guilty</td>
<td>2.61</td>
<td>0.51</td>
<td>1-3</td>
</tr>
<tr>
<td>3. My parents won’t let me do things with them when I do something they don’t like</td>
<td>1.78</td>
<td>0.36</td>
<td>1-2</td>
</tr>
<tr>
<td>4. My parents act cold and unfriendly if I do something they don’t like</td>
<td>1.72</td>
<td>0.40</td>
<td>1-2</td>
</tr>
<tr>
<td>5. When I get a GOOD grade my parents praise me</td>
<td>2.76</td>
<td>0.45</td>
<td>1-3</td>
</tr>
<tr>
<td>6. When I get a POOR grade my parents encourage me to try harder</td>
<td>2.76</td>
<td>0.48</td>
<td>1-3</td>
</tr>
<tr>
<td>7. I can count on my parents to help me out if I have some kind of problem</td>
<td>1.90</td>
<td>0.24</td>
<td>1-2</td>
</tr>
<tr>
<td>8. My parents keep pushing me to do my best in whatever I do</td>
<td>1.96</td>
<td>0.14</td>
<td>1-2</td>
</tr>
<tr>
<td>9. My parents keep pushing me to think independently</td>
<td>1.92</td>
<td>0.22</td>
<td>1-2</td>
</tr>
<tr>
<td>10. My parents help me with my school work if there is something I don’t understand</td>
<td>1.76</td>
<td>0.34</td>
<td>1-2</td>
</tr>
<tr>
<td>11. How much do your parents try to know where you go at night?</td>
<td>2.31</td>
<td>0.60</td>
<td>1-3</td>
</tr>
<tr>
<td>12. How much do your parents try to know what you do with your free time?</td>
<td>2.16</td>
<td>0.66</td>
<td>1-3</td>
</tr>
<tr>
<td>13. How much do your parents try to know where you are most days after school?</td>
<td>2.01</td>
<td>0.66</td>
<td>1-3</td>
</tr>
<tr>
<td>14. How much do your parents really know where you go at night?</td>
<td>2.46</td>
<td>0.60</td>
<td>1-3</td>
</tr>
<tr>
<td>15. How much do your parents really know what you do with your free time?</td>
<td>2.46</td>
<td>0.60</td>
<td>1-3</td>
</tr>
<tr>
<td>16. How much do your parents really know where you are most days after school?</td>
<td>2.31</td>
<td>0.63</td>
<td>1-3</td>
</tr>
<tr>
<td>17. I feel my studies are useless</td>
<td>2.12</td>
<td>0.95</td>
<td>1-5</td>
</tr>
<tr>
<td>18. I feel bored with my studies</td>
<td>2.95</td>
<td>0.97</td>
<td>1-5</td>
</tr>
<tr>
<td>19. I am not interested in my studies</td>
<td>2.61</td>
<td>0.98</td>
<td>1-5</td>
</tr>
<tr>
<td>20. I disobey in school</td>
<td>1.28</td>
<td>0.52</td>
<td>1-3</td>
</tr>
<tr>
<td>21. I get into many fights</td>
<td>1.12</td>
<td>0.37</td>
<td>1-3</td>
</tr>
<tr>
<td>22. I cut classes or skip school</td>
<td>1.27</td>
<td>0.53</td>
<td>1-3</td>
</tr>
<tr>
<td>23. I am not happy at school</td>
<td>2.16</td>
<td>0.98</td>
<td>1-5</td>
</tr>
<tr>
<td>24. I want to quit school</td>
<td>1.96</td>
<td>1.11</td>
<td>1-5</td>
</tr>
<tr>
<td>25. I want to attend a different school</td>
<td>1.87</td>
<td>1.10</td>
<td>1-5</td>
</tr>
<tr>
<td>26. Academic achievement in English</td>
<td>5.91</td>
<td>1.62</td>
<td>1-9</td>
</tr>
<tr>
<td>27. Academic achievement in Icelandic</td>
<td>8.07</td>
<td>1.50</td>
<td>2-10</td>
</tr>
<tr>
<td>28. Academic achievement in mathematics</td>
<td>6.44</td>
<td>2.01</td>
<td>1-10</td>
</tr>
<tr>
<td>29. SES</td>
<td>3.85</td>
<td>1.44</td>
<td>1-6</td>
</tr>
<tr>
<td>30. % Female</td>
<td>54</td>
<td></td>
<td></td>
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*a Standardized factor loadings. b Ordinal alpha (Gadermann, Guhn & Zumbo, 2012)
Table 4

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* $p \leq .05$. ** $p < .01$. *** $p < .001$.

* Standardized factor loadings. ** Reduced Form (Jöreskog, 2000).
Figure 1. Conceptual model
Figure 2. Influence of parenting practices on educational status at age 22. Coefficients are standardized. Model fit statistics: Satorra-Bentler $\chi^2 = 776.35$, $df = 289$; $\chi^2/df = 2.69$; $CFI = .98$; $RMSEA = .045$.

$^a$ Graduation = 0; Dropout = 1.

** $p < .01$. *** $p < .001$. 
Figure 3. Influence of parenting practices on educational status at age 22, controlling for academic achievement at age 15 and students' background. Coefficients are standardized. Model fit statistics: Satorra-Bentler $\chi^2 = 1204.05$, $df = 419$; $\chi^2/df = 2.87$; CFI = .97; RMSEA = .047.

*a Graduation = 0; Dropout = 1.  b Male = 0; Female = 1.

* $p < .05$. ** $p < .01$. *** $p < .001$. 