

Changes in parental emotional support and psychological control during the transition to adulthood: Direct and indirect associations with educational, occupational, and financial adjustment through mental health symptoms

by

Tracy Desjardins
B.A., University of Windsor, 2006
M.Sc., University of Victoria, 2009

A Dissertation Submitted in Partial Fulfillment of the
Requirements for the Degree of

DOCTOR OF PHILOSOPHY

in the Department of Psychology

© Tracy Desjardins, 2014
University of Victoria

All rights reserved. This dissertation may not be reproduced in whole or in part, by photocopy or other means, without the permission of the author.

Changes in parental emotional support and psychological control during the transition to adulthood: Direct and indirect associations with educational, occupational, and financial adjustment through mental health symptoms

by

Tracy Desjardins
B.A., University of Windsor, 2006
M.Sc., University of Victoria, 2009

Supervisory Committee

Dr. Bonnie Leadbeater, Supervisor
(Department of Psychology)

Dr. Marsha Runtz, Departmental Member
(Department of Psychology)

Dr. Cecilia Benoit, Outside Member
(Department of Sociology)

Supervisory Committee

Dr. Bonnie Leadbeater, Supervisor
(Department of Psychology)

Dr. Marsha Runtz, Departmental Member
(Department of Psychology)

Dr. Cecilia Benoit, Outside Member
(Department of Sociology)

ABSTRACT

Young adulthood is a critical period during which advances in educational, occupational, and financial adjustment set the stage for lifelong economic capital, health, and well-being. Greater understanding of the factors that contribute to positive and negative adjustment in young adulthood is warranted. This longitudinal study highlights the important role of parents by investigating (1) changes in the emotional quality of parent-youth relationships during adolescence and the transition to adulthood, (2) whether such changes relate to young adults' adjustment outcomes in three age-salient domains, and (3) whether the effects of changes in parental relationships are associated with young adults' adjustment outcomes through the intervening effects of mental health symptoms. Specifically, I examined direct and indirect associations between changes in mother and father emotional support (ES) and psychological control (PC) and young adults' educational, occupational, and financial outcomes through youths' depressive and anxiety symptoms. Sex and SES group differences were also examined. Participants were 545 youth from a medium-sized Canadian city. They were assessed at four time points over a

six-year period. All analyses were conducted separately by two developmental transition groups: The *young adult transition group* included 240 participants who were initially 18 to 21 years old, and the *adolescent transition group* included 305 participants who were 14 to 17 years old at the initial assessment. Measures of parental ES and PC, youth's mental health symptoms, and youth's adjustment were obtained through self-reports. Multi-level modeling analyses showed that mother and father ES increased over time for both transition groups. Declines in mother and father PC were significantly greater for the young adult transition group. Results from latent growth curve mediation analyses revealed that parental ES was linked to positive and negative youth adjustment directly and indirectly through depressive symptoms. Findings also highlight the negative effects of parental PC on youth's adjustment outcomes directly and also indirectly through changes in youth's depressive and anxiety symptoms. Differences for mothers and fathers, males and females, and lower and higher SES groups are discussed. Overall, the quality of parent-youth relationships changes during the transition to adulthood, and such changes are important factors in understanding young adults' educational, occupational, and financial adjustment.

Table of Contents

Supervisory Committee	ii
Abstract	iii
List of Tables	vi
Table of Contents	v
List of Figures	vii
Acknowledgements	viii
Chapter I: Introduction	1
Salient Educational, Occupational, and Financial Outcomes in Young Adulthood	6
Parenting in the Transition to Adulthood	12
Mental Health Symptoms as Mechanisms Linking Parental Emotional Support and Psychological Control with Young Adults' Adjustment	22
The Current Study	27
Chapter II: Methods	33
Participants	33
Procedure	38
Measures	38
Analysis Plan	47
Data Screening	54
Chapter III: Results	56
Descriptive Statistics	56
Changes in Parent Variables over Time	75
Changes in Depressive and Anxiety Symptoms over Time	79
Educational Adjustment: Direct and Indirect Effects of Parent Emotional Support and Psychological Control	80
Occupational Adjustment: Direct and Indirect Effects of Parent Emotional Support and Psychological Control	95
Financial Adjustment: Direct and Indirect Effects of Parent Emotional Support and Psychological Control	102
Effects of SES	109
Chapter IV: Discussion	111
Adjustment Outcomes and Mental Health: How Are Young Adults Doing?	112
Parental Emotional Support and Psychological Control: Changes During the Transition to Adulthood	114
Effects of Parental Emotional Support on Young Adults' Adjustment Outcomes	120
Effects of Parental Psychological Control on Young Adults' Adjustment Outcomes	125
Limitations and Future Directions	133
Conclusions	136
References	140
Appendix A	158
Appendix B	159
Appendix C	160
Appendix D	161

List of Tables

Table 1. <i>Number, Sex, and Age of Participants in the Adolescent and Young Adult Transition Groups at Each Assessment</i>	36
Table 2. <i>Student, Employment, and Residential Status by Transition Group (As a Percentage of Transition Group Sample)</i>	37
Table 3. <i>Means (and Standard Deviations) for the Parent and Mental Health Variables by Transition Group</i>	57
Table 4. <i>Descriptive Information for the Adjustment Variables by Transition Group</i>	59
Table 5. <i>Pearson’s Correlations for the Parent and Mental Health Variables and Sex at T1, T2, T3 and T4 by Transition Group</i>	63
Table 6. <i>Pearson’s Correlations for the Adjustment Variables and Sex by Transition Group</i>	68
Table 7. <i>Pearson’s Correlations between the Adjustment Variables and the Parent and Mental Health Variables by Transition Group</i>	70
Table 8. <i>Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Univariate Models of Change in Parenting Variables over Time by Transition Group</i>	76
Table 9. <i>Significant Unstandardized Effects (b) and Confidence Intervals (CI) for all Indirect Effects of Parent Emotional Support and Psychological Control on Adjustment Variables Through Mental Health Symptoms by Transition Group</i>	84
Table 10. <i>Summary of Direct and Indirect Effects (Standardized Estimates) of Parent Emotional Support and Psychological Control on Outcomes for the Adolescent Transition Group</i>	87
Table 11. <i>Summary of Direct and Indirect Effects (Standardized Estimates) of Parent Emotional Support and Psychological Control on Outcomes for the Young Adult Transition Group</i>	92

List of Figures

<i>Figure 1. Example latent growth curve model assessing direct and indirect (through depressive and anxiety symptoms) effects of mother and father emotional support (ES) and psychological control (PC) on young adults' adjustment outcomes</i>	53
<i>Figure 2. Univariate models of change over time in mother and father emotional support (ES) and psychological control (PC) for both transition groups</i>	78
<i>Figure 3. Educational adjustment: Direct and indirect effects in the adolescent transition group.</i>	81
<i>Figure 4. Educational adjustment: Direct and indirect effects in the young adult transition group</i>	89
<i>Figure 5. Occupational adjustment: Direct and indirect effects in the adolescent transition group</i>	96
<i>Figure 6. Occupational adjustment: Direct and indirect effects in the young adult transition group</i>	99
<i>Figure 7. Financial adjustment: Direct and indirect effects in the adolescent transition group.</i>	103
<i>Figure 8. Financial adjustment: Direct and indirect effects in the young adult transition group.</i>	106

Acknowledgements

Thank you to my supervisor and mentor, Dr. Bonnie Leadbeater, for your guidance, support, and encouragement during the completion of this research and throughout my entire graduate training. Your keen and caring mentorship has challenged me to grow as a researcher and has also strengthened my professional development.

Thank you also to my committee members, Dr. Cecilia Benoit and Dr. Marsha Runtz, for your helpful contributions, expertise, and encouragement.

In addition, I extend great thanks to the Victoria Healthy Youth Survey participants and research team. This study was generously supported by a Social Sciences and Humanities Research Council of Canada (SSHRC) doctoral award and a Canadian Institutes of Health Research (CIHR) health professional student award.

Finally, thank you to my family and friends for your steady emotional and instrumental support along the way.

Chapter I: Introduction

In the last half-century in industrialized societies, 18- to 25-year-olds (sometimes referred to as young or emerging adults; Arnett, 2000) have become a demographically distinct group who are reaching adult roles in the areas of education, residence, work, and relationships at later ages. On average, young adults in North America are increasingly likely to (1) live with their parents and return to their parents' homes after having lived independently for some time; (2) pursue post-secondary education; (3) work in part-time jobs; (4) change jobs more frequently, or experience periods of unemployment; and (5) delay marriage and childbearing (see Clark, 2009 for Canadian data and Hill & Yeung, 1999 for U.S. data). The lengthening transition to adulthood compared to previous generations is attributed to shifting socio-economic conditions (e.g., the need for more education to secure a stable job in today's technical and information-based society, as well as higher costs of living) and social norms (e.g., greater tolerance of premarital sex and cohabitation; Arnett, 2007; Clark, 2009; Côté & Bynner, 2008; Furstenberg, Rumbaut, & Settersten, 2005). Today's youth are facing real challenges settling into adult roles due to demands for higher education. The recent North American economic downturn that began in 2008 has amplified economic struggles of youth, further extending the transition and prolonging reliance on parents.

How have parents responded to the elongated transition to adulthood? Parents are continuing to provide financial, residential, and emotional supports well into this period (Aquilino, 1997; Fingerman, Miller, Birditt, & Zarit, 2009; Gitelson & McDermott, 2006; Goldscheider & Goldscheider, 1999). Research from the United States shows that parents' provision of financial assistance has positive effects on young adults' living

standards, educational attainment, and movement into career-related employment (e.g., Fingerman, Cheng, Wesselmann, Zarit, & Furstenberg, 2012; Johnson & Benson, 2011; Public Agenda, 2010; Swartz, Kim, Uno, Mortimer, & O'Brien, 2011). Conversely, less research has investigated nonmaterial aspects of parent-youth relations during the contemporary transition to adulthood. Little is known about the emotional quality of parent-youth relationships in the transition to adulthood, or how this relates to young adults' real-world outcomes.¹ However, previous research has linked the quality of parent-youth relationships to internalizing symptoms, which may be particularly problematic as young adults work towards establishing their educational, occupational, and financial foundations (Barber, 1996; Crouce & Corbin, 2010; Hefner & Eisenberg, 2009). Depressive and anxiety symptoms increase from adolescence to young adulthood, making the transition to adulthood a period of vulnerability to mental health problems (Leadbeater, Thompson, & Gruppuso, 2012). Thus, the role of individual differences in mental health symptoms is likely important to understanding the links between parent-youth relationships and young adults' adjustment.

Parents may offer continued or increasing levels of emotional support as young adults navigate this lengthy and potentially stressful transition. Emotional support is defined as “the extent to which personal relationships are perceived as close, confiding, and satisfying” (Slavin & Rainer, 1990, p. 409). Key components of emotional support

¹ While this study focuses on the associations between parental and mental health factors during the transition to adulthood and subsequent psychosocial outcomes, it is important to acknowledge that other individual and contextual considerations, such as young adults' physical health status and cultural background, are likely to affect their transition (e.g., see Osgood, Foster, & Courtney, 2010).

include the provision of care, empathy, concern, trust, respect, acceptance, and listening (Colarossi & Eccles, 2003; Cutrona & Russell, 1990). Emotional support is helpful in response to a wide variety of stressors and has long been linked to positive psychological adjustment in recipients (Cohen & Wills, 1985). Parental emotional support, in particular, is negatively related to depressive symptoms in adolescence (Carbonell, Reinherz, & Giaconia, 1998; Colarossi & Eccles, 2003; Helsen, Vollebergh, & Meeus, 2000) and in young adulthood (Hefner & Eisenberg, 2009; Pettit, Roberts, Lewinsohn, Seeley, & Yaroslavsky, 2011). Thus, parental emotional support may be an important resource that facilitates positive adjustment in young adults as they navigate the challenges and opportunities of this transitional period (Cohen & Wills, 1985).

Parents may also respond less favourably during the elongated transition to adulthood. For example, some parents experience psychological distress related to young adults' educational or occupational uncertainties or choices, future economic prospects, and continued residential or financial dependency on them. This may be exacerbated by parents' own financial limitations, attenuating the quality or amount of parental support offered to young adults (e.g., Stein et al., 2011). Some parents may resort to psychological control of young adults in an attempt to push young adults into making what parents consider to be good decisions for their futures, or they may use such strategies in response to their own distress about young adults' uncertainty or limited choices. Psychologically controlling strategies may include frequent or excessive intrusion into the young adult's psychological world, inducing guilt or withdrawing love when noncompliance with parents' expectations occurs, or constraining self-expression and other verbal interactions (Barber, 1996; Schaefer, 1965). Previous research with

child and adolescent samples shows a trend of higher psychological control among families with lower parent education and socioeconomic status (SES; see Barber, Bean, & Erickson, 2002). However, parental psychological control undermines autonomy and is positively linked to internalizing symptoms (see Barber & Harmon, 2002). Thus, parental psychological control may hinder young adults' positive adjustment during the transition to adulthood. Despite increasing recognition of parents' importance during the transition to young adulthood, empirical research focusing on their influence is still limited (Levitt, Silver, & Santos, 2007). More research is needed to disentangle which aspects of—and to what degree—the emotional quality of parent-youth relationships during the transition to adulthood might be helpful or hurtful for young adults.

The current study examines changes in mother and father emotional support and psychological control, youth mental health, and young adult adjustment outcomes using longitudinal data from a community sample of youth followed across a 6-year period. In order to highlight differences in parenting in adolescence and young adulthood, data from two separate age groups that reflect two developmental stages were examined: an *adolescent transition group* (ages 14 to 17 at first assessment), which captures the processes that occur leading up to and during the transition to young adulthood, and a *young adult transition group* (ages 18 to 21 at first assessment), which captures the relational processes that occur exclusively during the transition to adulthood period (roughly defined as age 18 and beyond). First, developmental changes in levels of parental emotional support and psychological control over a 6-year period (spanning ages 14 to 27) were investigated. I also examined whether these patterns of change vary by sex, student status, employment status, place of residence, or parents' SES.

Secondly, I investigated the direct effects of parental emotional support and psychological control during the transition to adulthood on young adults' adjustment in three stage-salient outcomes: educational, occupational, and financial adjustment. Specifically, I tested whether changes in mother and father emotional support and psychological control (assessed in 2005, 2007, and 2009) predicted young adults' educational, occupational, and financial adjustment (assessed in 2011). From a developmental perspective, young adults' adjustment in these three domains is important in laying the foundation for future status and health (e.g., Faragher, Cass, & Cooper, 2005; Stein et al., 2011). Third, I examined whether changes in parental emotional support and psychological control were associated with educational, occupational, and financial adjustment *through* changes in youths' depressive and anxiety symptoms (also assessed in 2005, 2007, and 2009) during the transition to adulthood.

In summary, the transition to adulthood represents a key period for elucidating the processes that promote adaptive functioning in later adulthood (e.g., Arnett, 2000; Masten et al., 2004). As young adults navigate the stresses of this transition, the emotional qualities of the parent-youth relationship may provide crucial resources or restraints that influence young adults' mental health experiences and real-world outcomes. Further research in this area will provide evidence-based information for parents, practitioners, researchers, and policy makers who want to support healthy development during this transitional period. In the remainder of this introduction, I discuss key tasks youth face in the transition to adulthood and briefly review the extant research in the areas of educational, occupational, and financial adjustment during this period. I then examine the existing research on changes in parent-youth relationships

during the transition to adulthood and how such changes relate to young adult's educational, occupational, and financial functioning. This is followed by a review of how parenting can affect individual differences in youth mental health problems, which in turn may have important implications for young adults' stage salient outcomes.

Salient Educational, Occupational, and Financial Outcomes in Young Adulthood

Across the lifespan, there are a variety of age-salient developmental tasks “by which adaptation to life can be judged” (Roisman, Masten, Coatsworth, & Tellegen, 2004, p. 123). Adjustment in these domains has been likened to ‘competence,’ or how successfully individuals meet the expected developmental tasks for a given age within a specific cultural context (Lewinsohn, Rohde, Seeley, Klein, & Gotlib, 2003; Olino, Seeley, & Lewinsohn, 2010). Fifty years ago, young adult development followed a predictable sequence. Most young adults started a career, married, and had children by the late teens or early twenties (Furstenberg et al., 2005; Hogan & Astone, 1986). Today, however, there is significant variability in the timing of these events, and on average they are happening at later ages (Arnett, 2000; Côté & Bynner, 2008; Hill & Yeung, 1999). For example, the mean age of marriage and childbearing has steadily increased from the early- to the late-twenties in both Canada and the U.S. over the last half century (Arnett, 2000; Clark, 2009). Other tasks are now salient for young adults. Between ages 18 to 25, young adults are typically working towards building their economic capital by establishing themselves in the areas of education, employment, and financial independence (Bell, Allen, Hauser, & O'Connor, 1996). This study examined young adults' adjustment outcomes in these three key domains by ages 20 to 23 (in the adolescent transition group) and 24 to 27 (in the young adult transition group).

Education. Education is an important domain for building economic capital during the transition to adulthood (Roisman et al., 2004). There is an increased demand for higher education to gain employment and remain competitive in today's information- and technology-based globalized economy, and the economic downturn created increases in competition for skilled and unskilled work (Arnett, 2000; Côté & Bynner, 2008; Danziger & Ratner, 2010). The proportion of young people who pursue post-secondary education has risen, and higher education often extends well into the twenties (Hamilton & Hamilton, 2006). In Canada, almost 80% of 18- to 26-year-olds enrol in some type of post-secondary program, with more females than males participating (Shaienks & Gluszynski, 2007). The proportion of Canadians who complete post-secondary schooling has increased since the 1980s, and by 2005 one quarter of 25- to 34-year-olds held a university degree (Chung, 2006). Additionally, the proportion of Canadian 25- to 34-year-olds without a high school diploma has declined over the past 25 years, with current rates below 15% (Chung, 2006). However, one Canadian study found that a quarter of those who attend university never earn a degree (Côté & Allahar, 2007), and data from the U.S. suggest that as many as 25% of students drop out in the first year of college (U.S. Department of Education, 2002). Clearly, there is significant variability in individual adjustment in the educational domain.

Educational adjustment has important implications for young adults' futures (see Pascarella & Terenzini, 1991, for a review). For example, the amount and quality of post-secondary education are positively related to occupational status, career outcomes, income, and lifetime earnings (Hogan & Astone, 1986; Shaienks & Gluszynski, 2009). Employment rates, income, and opportunities for wage growth are lower for individuals

with little education (Danziger & Ratner, 2010; Hamilton & Hamilton, 2006; Hill & Yeung, 1999). An analysis of Canadian Census data from 1997 to 2012 showed that full-time employment rates were consistently higher as education levels increased among 20- to 34-year-olds, and this difference has widened over time (Frenette & Morissette, 2014). While the earnings gap across education levels has narrowed in recent years (linked to the oil boom, unionization rates, and temporary positions), full-time workers with a university degree still earn higher income overall compared to those with a high school diploma (Chung, 2006; Frenette & Morissette, 2014).

Work. A primary reason for pursuing higher education is to improve employment opportunities and income, and the early 20s are spent working towards establishing a successful career (Arnett, 2004; Roisman et al., 2004). The extension of schooling as preparation means that fewer individuals move into full-time work immediately following high school, and employment during this period is likely to consist of part-time positions, frequent job changes, multiple entries into and exits from the labour market, or some combination of these along with school enrolment (Hamilton & Hamilton, 2006; Shaienks & Gluszynski, 2009). Moreover, the transition to work is more complex due to recent declines in agricultural, manufacturing and industrial jobs, and fewer well-paid opportunities for unskilled and semi-skilled workers (Furstenberg et al., 2005). The expansion of automated technologies, globalization, and larger employee pools (e.g., due to longer life spans and later retirement) compounds the scarcity of steady full-time jobs (Clark, 2009; Côté & Bynner, 2008; Danziger & Ratner, 2010). Canadian national data reveal that the economic downturn disproportionately affected the employment of 15- to 24-year-olds compared to older age groups (Bernard, 2013;

LaRochelle-Côté & Gilmore, 2009). Most youth experience some period of unemployment before landing their first job and many choose to return to full-time education to improve their prospects (Bernard, 2013). For those who remain in the job market work is increasingly characterized by part-time and temporary positions that offer entry-level workers less security and fewer benefits (Mortimer, Staff, & Oesterle, 2003).

Despite these overall trends, work is a relatively understudied domain in the young adult literature (Mortimer & Staff, 2004; Murphy, Blustein, Bohlig, & Platt, 2010). One analysis of more than 300 qualitative interviews with 20- to 29-year-olds from the U.S. found that the early 20s were mainly characterized by work instability and uncertainty, and individuals had only established stable work by the mid-to-late 20s (Arnett, 2004). Part-time work may provide young adults with job experience—and thus a path to more stable employment—during the transition to young adulthood. Additional research on adjustment in the work domain by the mid- to late-twenties—and the factors that relate to it—is warranted, since holding a job and job quality have critical consequences for future economic success (Danziger & Ratner, 2010; Hill & Yeung, 1999). A meta-analysis of job satisfaction and health revealed an “immensely strong relationship between job satisfaction and both mental and physical health,” with low job satisfaction especially linked to burnout, lowered self-esteem, and anxiety (Faragher et al., 2005, p. 111). Overall, adjustment in the work domain has important consequences for both individual and societal success (e.g., national productivity and outputs, taxes, income assistance; Sandefeur, Eggerling-Boeck, & Park, 2005).

Finances. Around age 18, young people are expected to assume increased responsibility for their own finances and to build the foundation for their future financial

independence (Arnett, 1997; Arnett, 2000; Shim, Barber, Card Xiao, & Serido, 2010). However, there is considerable variability in access to money, accumulation of debt, and financial stress during the transition to adulthood (Schoeni & Ross, 2005). Research reveals differences in the benefits enjoyed by young adults from families with high or low SES in educational, financial, and residential support from parents (Sandefeur et al., 2005; Schoeni & Ross, 2005; Swartz, 2008). For example, youth from higher socioeconomic backgrounds receive almost four times the amount of direct monetary transfers from their parents—and also stay living in their parents' homes longer—compared to youth from lower socioeconomic backgrounds. Other research also highlights the educational disadvantages low-income youth face, including lower likelihood of pursuing and completing post-secondary education, which are in turn negatively linked to later financial attainment (Furstenberg, 2008; Melby, Conger, Fang, Wickrama, & Conger, 2008; Schoeni & Ross, 2005; Shaienks & Gluszynski, 2007; Shim et al., 2010).

The contemporary social and economic climate poses particular challenges for today's young adults (Côté & Bynner, 2008; Danziger & Ratner, 2010; Hill & Yeung, 1999; Lee & Mortimer, 2009). More schooling means delayed labour force entry and earnings, yet in the last 30 years jobs that require a university degree have offered stagnant earnings (Hamilton & Hamilton, 2006). Annual earnings in 2004 were approximately \$13,000 for 20- to 24-year olds, and approximately \$25,000 for 25- to 29-year-olds (Luong & Hébert, 2009). More recent findings from the 2011 Canadian National Household Survey reveal that youth aged 15 to 24 years earn an average income of \$10,563, while adults aged 25 to 54 earn \$46,548 on average (Statistics Canada, 2011).

Furthermore, the cost of post-secondary tuition has substantially increased over time. In Canada, average tuition fees doubled between 1989/1990 and 2008/2009 (Luong, 2010). Such patterns have led to an upsurge in student borrowing, with a greater proportion of students graduating with student loans—and with higher loan amounts—between 1995 and 2005 (Luong, 2010). At the same time, housing prices and other costs of living are also higher (Clark, 2009) and as noted, the financial prospects (e.g., employment rate, income, wage growth) for individuals without post-secondary education are bleak (Danziger & Ratner, 2010; Hamilton & Hamilton, 2006; Hill & Yeung, 1999). Together, such conditions leave many young adults—even those “with seemingly good jobs and adequate earnings...plagued by overwhelming debt and financial insecurity” (Lee & Mortimer, 2009, p. 46).

The financial foundation that is established during the transition to adulthood is likely to persist over time (Shim et al., 2010). Economic success shapes access to basic needs, goods, services, and opportunities. It affects the ability to secure independent housing, provide for a family, access health care, and live without income assistance (Danziger & Ratner, 2010; Goldscheider & Goldscheider, 1999; Hill & Yeung, 1999; Lee & Mortimer, 2009). One recent study found that young adults’ (mean age 21 years) current economic pressure (e.g., difficulty affording food or paying bills, borrowing money) was significantly related to their symptoms of depressed mood and generalized anxiety (Stein et al., 2011). In addition, parents’ worries about young adults’ future economic prospects were positively related to parents’ levels of depressed mood and anxiety in the same study. Financial adjustment has far-reaching implications. To date, however, little research has investigated the factors that shape financial adjustment from

ages 18 to 25, and research focusing on the factors that contribute to more optimal outcomes is needed (Lee & Mortimer, 2009).

Parenting in the Transition to Adulthood

As the transition to adulthood has lengthened, the role of parents has also undergone changes. Growing challenges for youth to become self-sufficient leaves many parents with continued pressure to support young adults (e.g., Fingerman et al., 2009; Gitelson & McDermott, 2006; Settersten, 2005). Popular media portrayals highlight the negative aspects of these circumstances, including prolonged dependence and ‘failure to launch’, as well as greater parental burden (e.g., Marantz-Henig, 2010). How-to guides, such as *Helping your twenty-something get a life...and get it now* (Campbell, 2007) and *Emptying the nest: Launching your young adult towards success and self-reliance* (Sachs, 2010) offer to help parents deal with these challenges. At present, however, there is little empirically based research available to confer in these guidebooks (Gitelson & McDermott, 2006).

Parent support comes from many avenues. One way parents support young adults is through the provision of material resources, such as money and housing. A recent longitudinal study of 712 individuals from the Midwestern U.S. showed that between ages 24 to 32, just over half received financial and housing support from their parents (52% and 51%, respectively; Swartz, et al., 2011). A separate study using data from the 1992-1993 National Postsecondary Student Aid Study (NPSAS) found that on average, undergraduate students received \$4,017 from their parents annually (Schoeni & Ross, 2005). More recent findings from a U.S. nationally representative sample of 22- to 30-year-olds showed that 70% of students’ parents covered all or some of their tuition costs

(Public Agenda, 2010). Moreover, those who did not receive financial assistance from their parents were less likely to complete their academic program (Public Agenda, 2010). Consistent with this finding, research shows that financial support from parents is a key to the intergenerational transmission of wealth, bolstering educational attainment, career-related work, living standards, and economic capital (Fingerman et al., 2012; Semyonov & Lewis-Epstein, 2001; Swartz, 2008). However, parents may influence young adults through a variety of mechanisms, including the emotional quality of their relationships and their capacity to influence the mental health of young adults (Settersten, 2005).

Parental emotional support. Healthy relationships have long been recognized as a key factor in the successful development of individuals across all stages of life, and parent-youth relationships are especially important (Thornton, Orbuch, & Axinn, 1995). One theoretical explanation for the importance of high-quality relations with parents is attachment theory. According to this perspective, attachment figures are reliably available to provide safety, security, and comfort in stressful situations, and although the form of seeking out a secure base may change with age (e.g., from seeking physical proximity to emotional support), the function is parallel (Laursen & Collins, 2009). Moreover, by providing a safe and secure base, attachment figures facilitate exploration, discovery, skill acquisition, independence, and the development of beliefs about the self, including self-confidence and competence (Ainsworth, 1982; Bowlby, 1973). Thus, emotional support may function as a type of secure base during the transition to adulthood, which facilitates successful exploration and, in turn, skill development and self-confidence (Sarason, Pierce, & Sarason, 1990). Ultimately, these experiences allow individuals to grow psychologically and to function adaptively (Bowlby, 1973).

Across the transition from adolescence to young adulthood, parent-youth relationships are typically characterized as increasing in interdependence, mutuality, closeness, and affection (Aquilino, 2006; Shulman & Ben-Artzi, 2003). The intergenerational similarity hypothesis predicts that parent-youth relationships become even closer once young adults assume adult roles due to increasingly similar life experiences and mutuality (Bengtson & Black, 1973, cited in Aquilino, 1997). For example, a qualitative study of over two hundred 18- to 25-year-old college students found that their reports of open communication and closeness with parents increased when students began college (Lefkowitz, 2005). One participant said, “I’ve gotten closer and more honest with them. I see that they were only trying to help me get on the right path in high school,” and another noted that “my relationship with my parents is now more open, they are more aware of what my actions are” (quoted in Lefkowitz, 2005, p. 47). Similarly, one of Arnett’s (2000) 18- to 25-year-old interviewees stated, “I probably had more conversation time with my parents my first year at college than my entire high school career. I found myself telling them things I would never have dreamed about telling them, and they also shared many things with me” (p. 51).

Quantitative research also supports this increase in the quality of parent-youth relationships. A longitudinal study of 918 ninth, tenth, and eleventh grade high school students who were followed for two years showed that only the oldest grade cohort reported increases in perceived parental emotional support (Aseltine & Gore, 1993). Parental emotional support was assessed as adolescents’ self-reports of how much their parents loved and trusted them, and how much they enjoyed spending time with their parents (Aseltine & Gore, 1993). Similarly, a longitudinal study by Thornton et al.

(1995) found that young adults' reports of parental emotional support increased from ages 18 to 23, with greater increases in ratings of mother support. Emotional support was assessed by self-report as feeling respected, accepted, and understood by mothers and fathers; receiving affection from them; and enjoying doing things with them (Thornton et al., 1995).

Longitudinal evidence also suggests that parents typically offer increasing emotional closeness and support as young adults navigate the transition to adulthood. One study found that parents listened and provided emotional support to young adults more frequently (at least once per week) than they gave them advice, practical support, or financial support (on average, every few weeks; Fingerman et al., 2009). Thus, parents appear to provide a unique and significant source of emotionally based support during the transition to adulthood—and this may be especially characteristic of mothers (Thornton et al., 1995). However, additional longitudinal research is needed to understand changes in emotional support from mothers and fathers across today's prolonged transition to young adulthood, as well as the factors that predict variability and outcomes of parents' provision of emotional support.

Parental ES and adjustment. Research shows that parent-youth relationships characterized by a positive and supportive emotional quality may facilitate adjustment in salient domains during the transition to adulthood. For example, one cross-sectional study of college students (mean age 20.7 years) from southeastern U.S. found that students who reported higher levels of parental attachment had higher self-perceived academic competence (but not higher grade point averages; Fass & Tubman, 2002). A study by Wintre and Yaffe (2000) found that positive relations with parents at the

beginning of the academic year were associated with university adjustment and achievement measured the following spring in a sample of 408 first-year university students (mean age 19.2 years) from a metropolitan Canadian city. Specifically, males who reported higher reciprocity (assessed using a scale measuring mutual respect and to what extent the parent-youth relationship was viewed as being more egalitarian) in their relationship with parents had higher self-reported adjustment to college (including perceptions of academic, social, and emotional adjustment). Females who reported having more discussions with parents about university life (e.g., classes and social life) had better adjustment and higher grade point averages. Thus, different aspects of the parental relationship were important for both male and female students. A study that assessed parents' provision of broad social support (including advice/information, tangible aid, expressions of caring and love, respect for abilities and personal qualities, and mutual interests/concerns) found that college students who reported higher levels of parental social support had higher grade point averages, after controlling for academic aptitude, family achievement orientation, and family conflict (Cutrona, Cole, Colangelo, Assouline, & Russell, 1994).

Recent findings suggest that parent support may also affect young adults' work adjustment, a resource that is "often overlooked" (Schultheiss, Kress, Manzi, & Glasscock, 2001, p. 216). In a qualitative study of relational influences on college students' career development, participants clearly identified emotional support from parents as an important factor in their career exploration and decision-making (Schultheiss et al., 2001). As one participant explained,

I kind of tested the waters at home because I wanted to know what kind of backlash would happen if I decided, hey I want to change majors and transfer. You know, they spent the money to put me there. I can see where they would be a little upset if I decided to wash this. I talked with my Mom and Dad and they were very supportive. They said, "If it is not going to be you, then don't do it." I was kind of knocking at the door and they said, "Do what you need to." Then I told everyone I made the decision not to go back (Schultheiss et al., 2001, p. 216).

A separate study of young adults (mean age 23.44 years) who had graduated from post-secondary schooling three or fewer years earlier used qualitative interviews to explore salient themes that arose when participants were asked to discuss their career development and experiences of the college to career transition (Murphy et al., 2010). One of the most common themes was the importance of social support: In particular, interviewees suggested that support from family members—especially mothers—facilitated an adaptive transition to work.

Quantitative research also supports parents' importance for young adults' work adjustment and outcomes. For example, Bell et al. (1996) found that parent-youth dyads with high levels of relatedness-autonomy (defined as confidence in stating opinions, validation and agreement with the other's opinions, attending to the other person, and expressing and discussing disagreements) when youth were 14 years old predicted higher educational attainment and occupational prestige when they were 25. Other empirical studies have linked high levels of emotional support from parents to college students' career maturity (Blustein, Walbridge, Friedlander, & Palladino, 1991; Kenny, 1990).

In a comprehensive review of published studies investigating family influences on career development and occupational choice, Whiston and Keller (2004) concluded that parental variables are linked to 18- to 25-year-old's career development and maturity, vocational identity, career-related abilities, career commitment, and occupational selection. Specifically, emotional support, encouragement, autonomy support, and attachment were especially important. However, 29 of the 32 studies reviewed were conducted with exclusively college student samples. Whiston and Keller (2004) highlight the lack of research on young adults not enrolled in college as a notable limitation in this literature, as well as a lack of longitudinal studies.

No known research has investigated the influence of the emotional quality of parent-youth relationships on young adults' financial adjustment. Shim et al. (2010) found that parents' direct efforts to teach financial management to their children while growing up were related to young adults' financial knowledge in the first year of university, which was in turn related to positive financial behaviours (e.g., tracking finances, spending within a budget). Lee and Mortimer (2009) found that parents' communication about their own work and finances when their children were ages 14 to 15 predicted greater youth economic self-efficacy (e.g., beliefs that they will have a job that pays well, that they will be able to own a home) at ages 17 to 18; higher economic self-efficacy was in turn related to increased financial independence (covering a higher percentage of living costs oneself) at ages 23 to 24. Research is needed to illuminate the effects of emotionally supportive parenting during the transition to adulthood on young adults' financial adjustment.

Parental psychological control. The emotional quality of some parent-youth relationships may be less positive during the prolonged transition to adulthood; however, little research has addressed this. Parents themselves may be distressed or financially stressed by the period of instability and economic dependency in young adulthood. Continued residential or financial dependency on parents and parents' own financial pressures (e.g., retirement, supporting other family members) may negatively affect the amount or quality of parental emotional support that can be offered. Parents may attempt to exert control over young adults' autonomy and choices by using psychological control (Barber, 1996; Schaefer, 1965). In contrast to behavioural control, in which parents try to promote standards of conduct, psychological control is achieved through efforts to intrude on, manipulate, and constrain young adults' thoughts, feelings, and attachments to parents (Barber & Harmon, 2002). Intrusive methods include demanding, strict, coercive, or hostile interchanges; manipulative methods can include guilt or anxiety induction, love contingency or withdrawal, shaming, or invalidation; and constraining methods can include limiting verbal interaction or discouraging self-expression (Barber & Harmon, 2002). By restraining independent expression, psychological autonomy, identity, worth, and self-competence parental psychological control can hinder healthy autonomy development (Barber, Bean, & Erickson, 2002). It is also associated with a particular vulnerability to internalizing problems such as depression and low self-esteem (Barber, 1996; Barber & Harmon, 2002; Schaefer, 1965; Steinberg, 1990).

Overall, little is known about the effects of parents' psychological control in young adulthood, although a handful of studies bear on this topic (e.g., Kins & Beyers, 2012; Manzeske & Stright, 2009). One longitudinal study of 364 Belgian college

students found significant interindividual variability in young adults' perceived levels of parental psychological control (reports of mother and father control combined), although intraindividual ratings were stable across a 2.5-year period from ages 18 to 21 (Luyckx, Soenens, Vansteenkiste, Goossens, & Berzonsky, 2007). It is possible that once parents use psychologically controlling strategies they use them steadily, reflecting an enduring component of parental hostility (Barber & Harmon, 2002). A cross-sectional study that included young adults in its sample (mean age 20 years, range = 15 to 22 years) found that participants who lived with their parents reported significantly higher levels of mother and father psychological control compared to those who lived independently, but age and sex were not related to parental psychological control (Leondari & Kiosseoglou, 2002).

A recent study using cluster analysis to identify the parenting styles of the parents of 403 U.S. college and university students (mean age 19.89 years) identified four main parenting clusters, three of which were identical in mothers and fathers: *authoritative* (high on responsiveness such as warmth/support and autonomy, but low on control such as psychological control and verbal hostility), *controlling-indulgent* (high on psychological control and low on responsiveness; high on indulgence, such as submitting to a child's requests or permitting certain behaviours to avoid conflicts), and *uninvolved* (low on responsiveness, control, and indulgence; Nelson, Padilla-Walker, Christensen, Evans, & Carroll, 2011). The fourth cluster was characterized by *inconsistent* parenting (high control, responsiveness, and indulgence) for mothers, and *average* parenting (mean levels of responsiveness, control, and indulgence) for fathers. The controlling-indulgent parenting style characterized 17% of mothers ($n = 47$) and 7% of fathers ($n = 9$) in the

sample, suggesting that psychological control (which also clusters with verbal hostility and punishment) may be an important dimension of differences in parenting during the transition to adulthood. Furthermore, young adults with controlling-indulgent parents were the most poorly adjusted, having lower levels of self-worth and social acceptance, and higher levels of depression and anxiety.

Parental PC and adjustment. Although parents may exert psychological control without malicious intent, considerable research shows that parental psychological control is associated with problematic adjustment in adolescence, including poorer academic achievement, negative self-processes (e.g., self-worth, self-esteem, self-expression, psychosocial maturity), and greater internalizing (e.g., depression, anxiety, withdrawal; see Barber & Harmon, 2002, for a review). Less research has investigated whether parental psychological control is linked to economic and educational adjustment in young adult samples. For example, it is currently unknown whether mother or father psychological control during the transition to adulthood is associated with post-secondary academic outcomes. With respect to occupational adjustment, one study found that fathers' undermining of autonomy at age 14 (e.g., ending discussions, exerting pressure for adolescents to agree with their positions) was associated with lower occupational prestige at age 25 (Bell et al., 1996). Cross-sectional research has shown that parental psychological control during the transition to adulthood (i.e., control of 18- to 25-year-olds) is associated with lowered self-esteem (Leondari & Kiosseoglou, 2002), restricted identity formation (Luyckx et al., 2007), and poor emotion regulation (Manzeske & Stright, 2009).

Research to date suggests that parental psychological control remains important for understanding adjustment in young adulthood. However, parental psychological control across the transition to adulthood is understudied, and most available research is cross-sectional. More research is needed to understand if and how parents alter their use of psychological control during the transition to young adulthood, and to clarify whether parents' use of psychologically controlling strategies is related to young adults' later educational, occupational, and financial adjustment.

Mental Health Symptoms as Mechanisms Linking Parental Emotional Support and Psychological Control with Young Adults' Adjustment

The potential effects of parental emotional support and psychological control on young adults' educational, occupational, and financial adjustment may be direct or indirect. One potential indirect mechanism through which parental emotional support and psychological control may relate to young adults' real-world outcomes is through their psychological adjustment.

Mental health during the transition to adulthood. Some research suggests that psychological well-being generally improves during the transition to young adulthood (Galambos, Leadbeater, & Barker, 2004; Johnston, O'Malley, Bachman, & Schulenberg, 2004; Pettit, Roberts, Lewinsohn, Seeley, & Yaroslavsky, 2011; Wickrama, Conger, Lorenz, & Jung, 2008). For example, research with a large community sample of Canadians followed over a 7-year period found that self-esteem increased and depressive symptoms declined and from ages 18 to 25 (Galambos, Barker, & Krahn, 2006). However, not all young adults are unaffected by mental health problems (Grant & Potenza, 2010; Wickrama, Conger, Lorenz, & Martin, 2012). A recent longitudinal study

of Canadian youth ages 12 to 18 followed over a 6-year period found that anxiety symptoms (for males and females) and depressive symptoms (for males only) increased from adolescence to young adulthood (Leadbeater, Thompson, & Gruppuso, 2012). Similarly, national survey data from the U.S. showed that the age of onset for these mental health concerns increased sharply starting between ages 18 to 29 (Costello, Copeland, & Angold, 2011; Hasin, Goodwin, Stinson, & Grant, 2005). Other longitudinal research has highlighted the heterogeneity in levels of depressive symptoms among 18-to 25-year-olds who were followed over a 10-year-period (Salmela-Aro, Aunola, & Nurmi, 2008). Specifically, 23% of participants showed a low and stable level of symptoms; 61% showed a moderate and stable level of symptoms; and 16% showed a high and increasing pattern of depressive symptoms during young adulthood.

With respect to incidence rates, a cross-sectional study of 2,843 students randomly sampled from a large public U.S. university found that 16% of undergraduate and 13% of graduate students met criteria for a depressive or anxiety disorder (Eisenberg, Gollust, Golberstein, & Hefner, 2007). In the general population, one study using data from the Epidemiologic Catchment Area study found that almost 9% of young adults met criteria for major depressive disorder, 8% for severe major depressive disorder, and almost 12% met criteria for any mood disorder (Jonas, Brody, Roper, & Narrow, 2003). Incidence rates for anxiety vary, as there are several distinct anxiety disorders. However, anxiety disorders are among the most common psychiatric disorders (28.2% lifetime prevalence rates), and the incidence of anxiety symptoms increases during the young adult period (APA, 2000; Costello et al., 2011; Leadbeater et al., 2012).

Thus, for some individuals the transition to young adulthood is a period of vulnerability to mental health symptoms. Young adults are faced with broad choices and challenges in several age salient domains as they navigate the intermediary between continued financial and/or residential support from parents and independent adult functioning (Burt & Masten, 2010). Current economic conditions have likely amplified not only the pressure and stress associated with achieving traditional markers of adult status, but also the risk of vulnerability to mental health symptoms. The emotional quality of relationships with parents may help explain individual differences in young adults' mental health, which in turn may have important implications for understanding the variability in young adults' educational, occupational, and financial outcomes.

Associations between depressive and anxiety symptoms and parental ES and PC. Considerable research shows that both parental emotional support (e.g., Colarossi & Eccles, 2003; Leadbeater, Kuperminc, Blatt, & Hertzog, 1999; Stice, Ragan, & Randall, 2004) and psychological control (e.g., Barber, 1996; Barber & Harmon, 2002; Pettit & Laird, 2002; Nanda, Kitchick, & Grover, 2012; Schleider, Vélez, Krause, & Gillham, 2014) are associated with internalizing problems—most consistently depressive symptoms—in children and adolescents. Greater emotional support is linked to fewer symptoms, whereas greater psychological control is linked to more symptoms. In addition, some studies have linked parental emotional support to fewer depressive symptoms (Hefner & Eisenberg, 2009; Levitt et al., 2007; Pettit et al., 2010) and more happiness (Holahan, Valentiner, & Moos, 1994) in young adulthood. For example, one longitudinal study found that decreases in depressive symptoms were uniquely associated with increases in parental emotional support (defined as the extent to which young adults

felt loved and trusted by parents, and enjoyed spending time with them) across a two-year period following high school graduation (Aseltine & Gore, 1993).

Less is known about the associations between supportive parenting and anxiety symptoms during the transition to adulthood. Past research has mainly examined associations of support with measures of a composite of internalizing symptoms (e.g., Conger, Conger, & Scaramella, 1997; Stone, Beuhler, & Barber, 2002) or depressive symptoms only (e.g., Barber, 1996; Garber, Robinson, & Valentiner, 1997). It has not included anxiety symptoms alone or relative associations with both depression and anxiety symptoms. Furthermore, no known research to date has examined the associations between parent psychological control and mental health symptoms during the transition to young adulthood period.

Associations between depressive and anxiety symptoms and educational, occupational, and financial adjustment. Mental health has important implications for young adults' ability to succeed academically, financially, and in the workplace (Cronce & Corbin, 2010). Depressive and anxiety symptoms can contribute to impaired functioning through various means (e.g., social, emotional, cognitive, and behavioural). Such impairments may be especially detrimental as young adults attempt to establish themselves in salient adult domains. Research with a large sample of U.S. college students found that anxiety and depressive symptoms impaired the academic performance of 44% of students, and 18% of students did not complete academic obligations due to their symptoms (Eisenberg et al., 2007). Other research with university students (mean age = 22) has shown that anxiety symptoms, including worry, are associated with low exam performance and overall course grades (Keogh, Bond, French, Richards, & Davis,

2004). Depressive symptoms have been associated with failure to attend and delayed entry into post-secondary schooling, lower commitment to completing a degree, lower academic achievement, and lower likelihood of graduating from post-secondary school in young adult samples (Fletcher, 2008; Ruthig, Haynes, Stupnisky, & Perry, 2009; Salmela-Aro et al., 2008).

With respect to employment, depressive symptoms have been linked to young adults' work instability, lower work quality, and career path uncertainty (Rottinghaus, Jenkins & Jantzer, 2009; Wickrama et al., 2012). Depressive symptoms also contribute to burnout, feeling exhausted in the face of work demands, having a cynical attitude toward work, and feeling incompetent as an employee (Schaufeli, Martinez, Marques Pinto, Salanova, & Bakker, 2002). A Canadian longitudinal study found that greater depressive symptoms at age 18 were associated with lower career satisfaction at age 32, but only for females and not males (Howard, Galambos, & Krahn, 2010). Anxiety symptoms have also been linked to various employment indicators, including decreased work productivity and greater absenteeism (Hoffman, Dukes, & Wittchen, 2008; Lepine, 2002). Compared to their peers, university students with symptoms of social anxiety seek out less career-related information and express greater career uncertainty (Phillips & Bruch, 1988). Other research has also shown that socially anxious young adults tend to have less developed career identities and less mature attitudes toward career planning and exploration (Hamer & Bruch, 1997).

Less is known about the associations between mental health symptoms and financial adjustment in young adulthood. However, a study of undergraduate students (mean age = 21 years) followed over almost 10 years showed that those with a trajectory

of high depressive symptoms had lower salaries at age 30 (Salmela-Aro et al., 2008). A separate study found that higher levels of depressive symptoms at age 18 predicted poorer economic stability (i.e., having to make financial cutbacks, receiving wage cuts, receiving government assistance) six years later. Given the associations between mental health, educational, and occupational adjustment reviewed above, it is clear that depressive and anxiety symptoms are linked to considerable personal and public economic burden (e.g., due to lower education levels, lower job performance and productivity; APA, 2000; Koerner et al., 2004). Overall, depressive and anxiety symptoms appear to negatively contribute to various aspects of young adults' future adjustment, although more research is needed to understand the functional effects of anxiety symptoms on salient tasks in young adulthood (Leadbeater et al., 2012).

The Current Study

Growing research highlights the continued importance of parents during the lengthening transition to adulthood. However, important questions remain. Some research has shown that parents' provision of material support, such as financial and residential aid, has positive effects on young adults' living standards, educational attainment, and movement into stable employment (Johnson & Benson, 2011; Public Agenda, 2010). However, changes in and the effects of the emotional quality of parent-youth relationships on these young adult outcomes are not known. In particular, emotional support (ES) and psychological control (PC) are two potential parental responses to the lengthening transition to adulthood that reflect the emotional quality of parental relationships. More research is needed to understand changes in these processes

during the transition to adulthood, as well as how they relate to young adults' real-world outcomes.

Mental health may be an important mechanism linking parental ES and PC with young adults' educational, occupational, and financial outcomes. Research shows that the transition to young adulthood is a period of vulnerability to mental health symptoms (Costello et al., 2011; Grant & Potenza, 2010; Leadbeater et al., 2012). To the extent that parental PC can promote and ES can protect against depressive and anxiety symptoms, such symptoms are in turn likely to have important implications for young adults' adjustment (Cronce & Corbin, 2010). Thus, parents may influence young adults' adjustment outcomes *directly* or *indirectly* through changes in their mental health symptoms. Consistent with contemporary approaches to examining intervening variable effects, this study uses the terminology of 'indirect' effects (as opposed to 'mediated' effects; Hayes, 2009; MacKinnon et al., 2002). Young adults' educational, occupational, and financial adjustment during the transition to adulthood is crucial in setting the stage for their futures, but parents' roles in supporting this elongated transition are unclear (Chung, 2006; Faragher et al., 2005; Shaienks & Gluszynski, 2009). This research uniquely models the effects of both parenting and individual mental health differences together. It also examines not only traditional measures of achievement (e.g., full-time employment, educational attainment, and income—the typical indicators of socio-economic status), but also other aspects of real-world adjustment (e.g., trouble with teachers/professors, job satisfaction, subjective financial stress), which are less frequently considered by researchers. These adjustment outcomes offer a snapshot of functioning in

three key domains during the transition to adulthood, when the foundations for future status and health are laid (Arnett, 2000; Masten et al., 2004).

Research questions. This study seeks to address these gaps by exploring the following research questions with a longitudinal community sample of youth leading up to and during the transition to adulthood:

- (1) a. What is the pattern of change in mother and father ES and PC from adolescence to young adulthood? (*Changes in parenting*)
 - b. Does the pattern of change differ based on youth's sex, student status, employment status, residential status, or parents' SES?
- (2) a. Do changes in mother and father ES and PC directly predict young adults' later educational, occupational, and financial adjustment? (*Direct effects*)
 - b. Are these associations moderated by youth's sex or parents' SES?
- (3) a. Are changes in mother and father ES and PC linked to young adults' later educational, occupational, and financial adjustment indirectly through changes in depressive and anxiety symptoms? (*Indirect effects*)
 - b. Are these associations moderated by youth's sex or parents' SES?

Hypotheses. On the basis of past research and theory, the following hypotheses were made:

- (1) a. Given the pattern of increasing closeness and mutuality in young adult-parent relationships, ES from mothers and fathers will increase over time (Aseltine & Gore, 1993; Aquilino, 2006; Lefkowitz, 2005), possibly with steeper increases observed for mother emotional support (Murphy et al., 2010; Thornton et al., 1995). As young adults

continue to establish greater independence, it is expected that parental PC will decline over time, on average, (Aquilino, 2006; Dubas & Petersen, 1996).

b. Young adults who take on more adult roles, thereby facilitating their similarity to and mutuality with parents, will report steeper patterns of change in parental ES and PC. Specifically, attending school full- or part-time, working full-time, and living independently from parents will be associated with steeper increases in ES (Aquilino, 1997; Dubas & Petersen, 1996; Masche, 2008; Shaver, Furman, & Buhrmester, 1985) and steeper decreases in PC (Leondari & Kiosseoglou, 2002). Sex differences in the patterns of change in parental ES and PC are not expected (Leondari & Kiosseoglou, 2002; Manzeske & Stright, 2009). Parents from lower SES families may find young adults' transition particularly difficult due to financial strain and/or general stress, which could compromise the quality of parent-young adult relationships, I expect that lower parental SES will be associated with attenuated (less steep) decreases in PC and attenuated increases in ES, compared to the average pattern of change.

(2) a. Consistent with past findings, mother and father ES will be positively related to young adults' educational, occupational, and financial adjustment (e.g., Fass & Tubman, 2002; Murphy et al., 2010; Schultheiss et al., 2001), whereas PC will be negatively related to adjustment (Leondari & Kiosseoglou, 2002; Luyckx et al., 2007).

b. No specific predictions are made about sex differences in these direct effects given the abundance of adjustment outcomes assessed and limited past research regarding sex differences in these associations. Young adults from lower SES families may have fewer buffering resources (e.g., financial, residential, or material support) available to them compared to those from higher SES families. When parental PC occurs, it may be

especially detrimental in the context of low SES. It is therefore expected that the negative associations between PC and young adults' educational, occupational, and financial adjustment will be stronger in lower SES families. In contrast, positive associations between parental ES and young adults' adjustment outcomes will not differ by SES based on the expectation that when present, ES will be a robust protective factor.

(3) a. Mental health symptoms will partially explain the associations between mother and father ES and PC and young adults' educational, occupational, and financial adjustment. That is, some but not all of the relationships between parental ES and PC and young adults' adjustment outcomes will occur indirectly through depressive and anxiety symptoms. Mother and father ES will be negatively associated with young adults' depressive and anxiety symptoms (Conger et al., 1997; Hefner & Eisenberg, 2009; Pettit et al., 2011), while mother and father PC will be positively associated with depressive and anxiety symptoms (see Barber & Harmon, 2002). In turn, higher levels of depressive and anxiety symptoms will be negatively associated with educational, occupational, and financial adjustment (Lewinsohn et al., 2003).

b. Sex will moderate some of the proposed indirect effects. Specifically, indirect effects through depressive symptoms may be stronger for females than for males, given females' greater vulnerability to depressive symptoms (e.g., Galambos, Barker, & Krahn, 2006; Galambos, Leadbeater, & Barker, 2004; Leadbeater, Blatt, & Quinlan, 1995; Leadbeater et al., 1999). For the same reasons outlined above (See hypothesis (2) b), it is expected that the indirect associations between parental PC and educational, occupational, and financial adjustment through depressive and anxiety symptoms will be stronger in lower SES families. However, indirect associations between parental ES and

the adjustment outcomes through depressive and anxiety symptoms will not differ by SES.

In the remaining chapters, I first describe the research method, design, and statistical analysis employed in the current study, followed by descriptive characteristics of the research sample. Next, I present the results and conclude by discussing the main findings, the study's strengths and limitations, and the implications of the study's findings.

Chapter II: Methods

This chapter focuses on the methodology employed in the present study. I first describe the processes involved in recruiting and screening participants, and then describe several pertinent characteristics of the final sample, including participants' age, sex, ethnicity, and family demographics. I also describe how participants were grouped in the adolescent and young adult transition groups. Next I review how the data were collected from participants and the measures that were used to assess the study's variables. This is followed by a discussion of the analytical plan, which outlines the specific statistical analyses conducted, as well as their strengths and limitations. Finally, I summarize the data screening process and results, as well as their implications for the subsequent statistical analyses.

Participants

Data are from the Victoria Healthy Youth Survey (V-HYS), a collaborative longitudinal project between an interdisciplinary team of university-based researchers that was approved by the University of Victoria's Human Research Ethics Board. V-HYS data collection began in 2003 in a medium-sized Canadian city. Participants were recruited from a random sample of 9,500 private telephone listings, which identified 1,036 households with an eligible youth (aged 12 to 18 years). Of these, 187 youth and 185 parents or guardians refused participation, and 2 youth who were outside of the eligible age range were dropped from the sample. Data were available from 662 participants in 2003. This study uses data collected in 2005 as a baseline (hereafter referred to as Time 1; T1) because by then, a reasonably sized subgroup of participants who had entered the transition to adulthood years was available. Data are also used from

assessments in 2007 (T2), 2009 (T3), and 2011 (T4). Due to this study's focus on parental support and control, participants who indicated that one or more of their parents had died during the course of the study ($n = 37$) were excluded from analyses.

The final sample for the study included 545 participants (285 females) at T1, 508 (274 females, 1 female-to-male [FTM] transgendered) at T2, 428 (234 females, 1 FTM transgendered) at T3, and 435 (231 females) at T4. In all analyses, the FTM transgendered individual is included with males (APA, 2010). The mean age of all participants was 17.57 years ($SD = 1.93$) at T1, 19.51 years ($SD = 1.94$) at T2, 22.32 years ($SD = 1.95$) at T3, and 24.19 years ($SD = 1.96$) at T4. Their ethnic make-up was 85% European-Canadian, 5% Asian or Asian-Canadian, 4% bi-racial, 3% Aboriginal, and 4% other ethnicities, which is representative of the population from which the sample was drawn (Albrecht, Galambos, & Jansson, 2007).

With respect to family demographics at T1, 3% of mothers and 8% of fathers did not complete high school; 20% of mothers and 18% of fathers completed high school only; and 49% of mothers and 45% of fathers completed college or university. Fifty-nine percent of mothers and 80% of fathers were employed full-time; 16% of mothers and 3% of fathers were employed part-time; and 6% of mothers and < 1% of fathers were homemakers. Scores on the Hollingshead Occupational Scale (Hollingshead, 1975; see Appendix D), which quantify the types of jobs parents held, spanned the maximum possible range from 1 to 9 ($M = 5.86$, $SD = 1.96$ for mothers; $M = 5.68$, $SD = 2.08$ for fathers). The most frequently occurring (modal) occupational status score was 6 for mothers and 4 for fathers. Of mothers, 14% received a score that fell in categories 1 to 3, 40% received a score in categories 4 to 6, and 36% received a score in categories 7 to 9

(8% of mothers were homemakers). Of fathers, 16% received a score that fell in categories 1 to 3, 44% received a score in categories 4 to 6, and 39% received a score in categories 7 to 9. Thirty-nine percent of parents were separated or divorced at T1. By T4, this value increased to 44%.

Selective attrition was assessed by testing for differences at T1 on demographic and study variables between participants who remained in the longitudinal study and those who were lost to attrition by T4. Nonparticipants were more likely to have parents who were separated or divorced ($M = .46, SD = .04$) compared to those who remained in the study ($M = .34, SD = .02$), $p = .01$. Nonparticipants also reported higher initial levels of father PC ($M = 3.32, SD = .27$) compared to participants who remained in the study ($M = 2.71, SD = .15$), $p = .05$. No significant differences were found on the remaining variables.

Using T1 age, two developmental transition groups were created to in order to fully capture the processes unfolding leading up to and during this broad transitional period, as well as to permit group comparisons. At T1, participants in the *adolescent transition group* ranged from 14 to 17 years of age and participants in the *young adult transition group* ranged from 18 to 21 years of age. By T4, participants in the adolescent group were 20 to 24 years of age and participants in the young adult group were 24 to 27 years of age. Table 1 provides details about the number, sex, and age of participants in the adolescent and young adult transition groups at each assessment. Descriptive information for participants' student status, occupational status, and residential status is presented for each transition group separately in Table 2. In both groups, fewer participants were enrolled in school and more were employed full-time over time. In

Table 1

Number, Sex, and Age of Participants in the Adolescent and Young Adult Transition Groups at Each Assessment

Descriptor	T1		T2		T3		T4	
	AD	YA	AD	YA	AD	YA	AD	YA
<i>N</i> (females)	304 (163)	240 (122)	286 (153)	221 (121)	236 (132)	191 (102)	234 (126)	200 (105)
Age range	14 to 17	18 to 21	16 to 18	19 to 23	18 to 22	22 to 26	20 to 24	24 to 27
Mean age (<i>SD</i>)	16.10 (1.11)	19.43 (0.85)	18.05 (1.11)	21.39 (0.85)	20.81 (1.10)	24.17 (0.87)	22.65 (1.14)	25.99 (0.87)

Note. AD = adolescent transition group; YA = young adult transition group.

Table 2

Percentage of Student, Employment, and Residential Status by Transition Group

Variable	T1		T2		T3		T4	
	AD	YA	AD	YA	AD	YA	AD	YA
Full- or part-time student	99	59	79	58	60	33	49	22
Full-time employee	1	39	20	48	36	60	43	68
Lives with mother figure only	16	17	18	10	12	6	9	1
Lives with father figure only	5	5	4	5	3	3	3	2
Lives with both parent figures	76	54	60	40	44	16	27	11
Lives without parent figures	2	23	16	44	40	74	60	86

Note. AD = adolescent transition group; YA = young adult transition group.

addition, fewer participants lived with one or both parent figures and more lived independently over time.

Procedure

Participants and one parent or guardian (for youth under 18 years of age) gave written consent for participation in the study at each assessment. A trained interviewer administered the V-HYS survey in individual interviews that took place in participants' homes or another private location. To enhance privacy and increase responding, a portion of the V-HYS questions was collected using a strictly self-report questionnaire. These items dealt with sensitive issues, including mental health symptoms. This portion of the data collection was self-administered and completed questionnaires were placed in a sealed envelope not accessible to the interviewer. Interviews took 2 hours to complete, on average. Participants received a gift certificate at each interview. The same procedure was employed at each follow-up assessment.

Measures

Participants answered parent-related survey items with reference to the individuals they consider to be their mother and father, such as biological, adoptive, step, foster, or other parent figures. At T1, participants identified the following relationships with their father figures: 91% ($n = 497$) biological fathers, 5% ($n = 26$) stepfathers, 2% ($n = 9$) adoptive fathers, < 1% ($n = 2$) grandfathers, and < 1% ($n = 1$) each of mother's boyfriend, mother's ex-boyfriend, girlfriend's father, brother-in-law, mentor, and other father figure. One participant did not indicate their relationship to their father figure, and four participants (1%) had no father figure. Participants identified the following relationships with their mother figures at T1: 98% ($n = 534$) biological mothers, 2% ($n =$

8) adoptive mothers, and < 1% ($n = 1$) each of stepmother, father's girlfriend, and half-sister.

Parental emotional support. Mother and father ES were assessed using Schaefer's (1965) Children's Report of Parent Behaviour Inventory (CRPBI; see Appendix A). Participants rated how much they felt that 5 statements were like their mother and father separately (e.g., "My mother/father is a person who is able to make me feel better when I am upset," "My mother/father is a person who understands my problems and worries") on a 3-point scale (0 = *not like him/her*, 1 = *somewhat like him/her*, or 2 = *like him/her*). The CRPBI is one of the most frequently used inventories of perceptions of parenting and has demonstrated good internal consistency in previous research (Barber, Stolz, Olsen, Collins, & Burchinal, 2005; Desjardins & Leadbeater, 2011). At each assessment, total ES scores could range from 0 to 10. Cronbach's alphas (α) were .76 at T1, .73 at T2, .74 at T3, and .74 at T4 for mother ES, and .79 at T1, .83 at T2, .81 at T3, and .82 at T4 for father ES.

Parental psychological control. Mother and father PC were assessed using Barber's (1996) Psychological Control Scale – Youth Self-Report (PCS-YSR; see Appendix B). Participants rated how well 8 items described their mother and father separately (e.g., "My mother/father is a person who is always trying to change how I feel or think about things") on a 3-point scale (0 = *not like him/her*, 1 = *somewhat like him/her*, or 2 = *like him/her*). The PCS-YSR is another widely used scale. Barber (1996) provided evidence supporting its psychometric properties, and research with young adults (Leondari & Kiosseoglou, 2002; Luyckx et al., 2007) has found good internal consistency for the scale. At each assessment, total PC scores could range from 0 to 16. Cronbach's

alphas (α) were .76 at T1, .78 at T2, .80 at T3, and .77 at T4 for mother PC, and .76 at T1, .78 at T2, .77 at T3, and .76 at T4 for father PC.

Depressive symptoms. Depressive symptoms were assessed using the self-report form of the Brief Child and Family Phone Interview (BCFPI; Cunningham, Boyle, Hong, Pettingill, & Bohaychuk, 2009; see Appendix C). The BCFPI was developed for standardized clinical intake screening and outcome evaluation and is not intended to yield diagnoses. Items tap current levels of symptoms delineated in the *Diagnostic and Statistical Manual of Mental Disorders*, 4th ed. (American Psychiatric Association, 1994). Participants rated the frequency with which they experienced 6 symptoms (e.g., “Do you notice that you have trouble enjoying yourself?”) on a 3-point scale (0 = *never*, 1 = *sometimes*, 2 = *often*). This scale has shown good internal consistency in previous research (e.g., Desjardins & Leadbeater, 2011). At each assessment, total depressive symptom scores could range from 0 to 12. Cronbach’s alphas (α) for depressive symptoms were .80 at T1, .84 at T2, .84 at T3, and .84 at T4.

Anxiety symptoms. Anxiety symptoms were also assessed using the BCFPI (Cunningham et al., 2009; see Appendix C). Participants rated the frequency with which they experienced 6 symptoms (e.g., “Do you notice that you worry about doing the wrong thing?”) on a 3-point scale (0 = *never*, 1 = *sometimes*, 2 = *often*). This scale has shown good internal consistency in previous research (e.g., Leadbeater et al., 2012). At each assessment, total anxiety symptom scores could range from 0 to 12. Cronbach’s alphas (α) for anxiety symptoms were .77 at T1, .76 at T2, .78 at T3, and .81 at T4.

Educational adjustment. Educational adjustment was evaluated using the following four variables.

Educational problems. Educational problems were assessed using two items from The Adolescent Perceived Events Scale (Compas, Davis, Forsythe, & Wagner, 1987). At each assessment (T1 – T4), participants were asked whether they (1) had trouble with teachers at school during the last 12 months, and (2) had failed a course during the last 12 months (0 = *no*, 1 = *yes*). Responses to these 8 items were summed to create an index of educational problems. Final scores were coded on a 3-point scale (0 = *0 problems*, 1 = *1 problem*, 2 = *2 problems*, 3 = *3 or more problems*).

Type of educational enrolment (adolescent transition group only). At T3 and T4, participants provided a detailed history of their educational enrolments and achievements since leaving high school. Specifically, participants were asked to provide (1) the names of each postsecondary institution attended, along with the start and end dates of enrolment for each institution, (2) the name of their current or most recent postsecondary program, and (3) the name of each completed postsecondary qualification to date. Responses were coded by V-HYS researchers to create educational history variables that reflected the most up-to-date information available for each participant.

Because fewer years had elapsed since high school for participants in the adolescent transition group, they had less opportunity to complete their education compared to those in the young adult group. Hence, the type of educational program enrolled in was used as a measure of educational adjustment in the adolescent transition group. Using the integrative educational history information, educational enrolment type was coded as 0 = *less than 4 years of high school*, 1 = *4 years of high school*, 2 = *some college*, 3 = *some university*.

Type of education completed (young adult transition group only). For the young adult transition group, the type of education completed was used as an outcome measure. Education type completed was coded as 0 = *less than high school*, 1 = *high school diploma*, 2 = *2-year degree, diploma, or certificate*, 3 = *4-year bachelor degree or higher*.

Educational abilities. Educational abilities were assessed using items from the Youth in Transition Survey (Statistics Canada, 2007). At T4, participants were asked to evaluate their educational/academic abilities on a 5-point scale (0 = *poor*, 1 = *fair*, 2 = *good*, 3 = *very good*, and 4 = *excellent*) in response to 6 items: “How would you rate your...” (1) ability to use a computer, (2) writing abilities, (3) reading abilities, (4) oral communication abilities, (5) ability to solve new problems, and (6) mathematical abilities. Responses to the items were summed to create an index of self-perceived educational abilities. Total scores could range from 0 to 24.

Occupational adjustment. Occupational adjustment was evaluated using the following four variables.

Occupational problems. Occupational problems were assessed using two items from The Adolescent Perceived Events Scale (Compas et al., 1987). At T2, T3, and T4, participants were asked whether they (1) had trouble with supervisors at work during the last 12 months, and (2) had been fired from a job during the last 12 months (0 = *no*, 1 = *yes*). Responses to these 6 items were summed to create an index of occupational problems. Final scores were coded on a 4-point scale (0 = *0 problems*, 1 = *1 problem*, 2 = *2 problems*, 3 = *3 or more problems*).

Occupational status. At T4, participants indicated their current occupational status on a 3-point scale: 0 = *not employed*, 1 = *employed part-time* (< 30 hours per week), 2 = *employed full-time* (> 30 hours per week). To disentangle the influence of student status from this occupational adjustment variable, occupational status scores for participants who were enrolled in school at T4 were removed, providing an outcome that measures occupational status for those individuals who were fully available to participate in the workforce (i.e., not having restrictions on full-time work due to educational commitments).

Occupational satisfaction. At T4, participants rated their occupational satisfaction for each job they held since T3. Specifically, occupational satisfaction was assessed using the question, “Considering all aspects of your job, how satisfied were/are you with it?” on a 4-point scale (0 = *very dissatisfied*, 1 = *dissatisfied*, 2 = *satisfied*, 3 = *very satisfied*; Statistics Canada, 2007). Responses regarding participants’ current or most recent job (if they were not currently employed) were used to create the occupational satisfaction variable. When participants held multiple current jobs, mean satisfaction scores were used.

Occupational stress/worry. At T4, participants’ occupational stress/worry was assessed using responses to two items. The first question asked, “How significant a source of stress is work for you?” on a 4-point scale (0 = *not at all significant*, 1 = *not very significant*, 2 = *somewhat significant*, 3 = *very significant*; American Psychiatric Association, 2008). The second question asked, “How often do you worry about finding or keeping a job?” on a 3-point scale (0 = *never*, 1 = *sometimes*, 2 = *often*; Cunningham et al., 2009). As recommended by Little (2013), the narrower scale (0 – 2) was converted

to the metric of the wider scale (0 – 3) and responses to the two items were summed. Final scores could range from 0 to 6, with higher scores indicating greater occupational stress/worry.

Financial adjustment. Financial adjustment was evaluated using the following four variables.

Income. At T4, participants provided their total personal income, before taxes, from all sources (including tips, commissions, scholarships, bursaries, etc., but not including school loans) in the previous fiscal year.

Consumer debt. At T4, participants reported whether they currently had any financial debt (0 = *no*, 1 = *yes*). Those who had debt specified the amount of money they owed to various sources, including (1) line of credit, (2) major credit cards, (3) store credit cards, (4) bank loans, (5) car loans, and (6) other (e.g., back taxes owed to the government). Reports of student loan debt were not included in the consumer debt variable. The dollar amounts owed to these six sources were summed for participants who had debt, and those who had no debt were assigned a value of \$0. Final scores were coded on a 5-point scale (0 = *no debt*, 1 = *\$1 to \$4,999*, 2 = *\$5,00 to \$9,999*, 3 = *\$10,000 to \$14,999*, 4 = *\$15,000 or more*).

Financial strain. At T3 and T4, participants were asked whether they had trouble paying for basic necessities and whether they had put off or delayed health care (including going to the dentist, doctor visits, filling a prescription for medication, and/or therapy or other mental health treatment) due to financial reasons during the past 6 months (0 = *no*, 1 = *yes*). Responses to these 4 items were summed to create an index of

financial strain. Final strain scores were coded on a 4-point scale (0 = 0 problems, 1 = 1 problem, 2 = 2 problems, 3 = 3 or more problems).

Financial stress/worry. At T4, participants' financial stress/worry was assessed using responses to two items. The first question asked, "How significant a source of stress is money for you?" on a 4-point scale (0 = *not at all significant*, 1 = *not very significant*, 2 = *somewhat significant*, 3 = *very significant*; American Psychiatric Association, 2008). The second question asked, "How often do you worry about your financial independence?" on a 3-point scale (0 = *never*, 1 = *sometimes*, 2 = *often*; Cunningham et al., 2009). The narrower scale (0 – 2) was converted to the metric of the wider scale (0 – 3) and responses to the two items were summed (Little, 2013). Final scores could range from 0 to 6, with higher scores indicating greater financial stress/worry.

Socioeconomic status. SES was measured using parental education and occupational status. In 2003, participants reported the highest level of education completed by their mother and father (1 = *did not finish high school*; 2 = *finished high school*; 3 = *completed vocational training, such as trade school*; 4 = *completed some college/university courses*; 5 = *finished college/university*). They also reported their parents' job titles. The Hollingshead Occupational Status Scale (Hollingshead, 1975; also see Bornstein, Hahn, Suwalsky, & Haynes, 2003) was used to assign job titles to one of 9 occupational status categories (see Appendix D). When 2003 job titles were missing, vague, or incomprehensible, 2005 job titles were used to assign occupational status categories.

Parental education and occupational status scores were standardized and summed to create a composite measure of SES, as direct data regarding parental income were not collected as part of the Victoria Healthy Youth Survey (Miller & Taylor, 2012; Noble, McCandliss, & Farah, 2007). For comparison purposes, two SES groups (*higher* and *lower* SES) were created based on average/above average and below average composite SES scores, respectively. SES was correlated with father PC at T1 ($r = -.12, p = .01$) and T3 ($r = -.09, p = .05$), but not with any other parental ES or PC variables. Parent SES was significantly correlated with type of educational enrolment ($r = .37, p = .01$), type of education completed ($r = .26, p = .01$), educational abilities ($r = .18, p = .01$), and financial problems ($r = -.13, p = .01$).

Parent divorce/separation. Research shows that the quality of parent-youth relationships may differ in divorced families, especially in terms of poorer quality relationships with fathers (Amato & Keith, 1991; Aquilino, 1994; Cooney, 1994; Levitt et al., 2007; Stone et al., 2002). Furthermore, divorce has been linked to various indicators of educational and occupational adjustment, as well as financial capital (see Amato, 2000; Biblarz & Raftery, 1999; Caspi, Wright, Moffitt, & Silva, 1998; Hetherington, 1999; Mulholland, Watt, Philpott, & Sarlin, 1991). Hence, I examined whether research question (1), regarding patterns of change in parent ES and PC, differed based on parent divorce/separation. Parent divorce/separation was used as a control variable in examining research questions (2) and (3).

Parent divorce/separation was assessed using youth reports of their living situation as a proxy (Leadbeater, Sukhawathanakul, & Yeung, *in press*). Specifically, participants who indicated that they lived with a) their mother only, b) their mother and a

step-father, boyfriend, partner, etc., c) their father only, d) their father and a step-mother, boyfriend, partner, etc., or d) back and forth between their mother's and father's home, were considered to come from families in which parents were separated or divorced. Parent divorce/separation (by T4) was correlated with father ES at each assessment (r s ranged from $-.11$ to $-.13$, $p = .01$), with father PC at T2 ($r = .12$, $p = .01$) and T4 ($r = .13$, $p = .01$), and with mother PC at T1 ($r = .12$, $p = .05$), T2 ($r = .14$, $p = .01$), and T4 ($r = .16$, $p = .01$). Of the adjustment variables, divorce/separation was also significantly correlated with type of educational enrolment ($r = -.16$, $p = .01$), type of education completed ($r = -.16$, $p = .01$), occupational problems ($r = .10$, $p = .04$), financial problems ($r = .14$, $p = .01$), and income ($r = .10$, $p = .05$).

Analysis Plan

Changes in parent variables over time. Multilevel modeling (MLM) was used to assess how individuals change over time (i.e., within-person change) and how these changes differ across sex and SES (i.e., between-person change; Raudenbush & Bryk, 2002; Singer & Willett, 2003). Using HLM 7 software (Raudenbush, Bryk, & Congdon, 2004), MLM was used to model patterns of change in mother and father ES and PC in the adolescent and young adult transition groups separately. MLM results provide estimates of two individual growth parameters: an initial level value or 'intercept', and a rate of change value or 'slope' (Singer & Willett, 2003). Full information maximum likelihood (FIML) estimation was used to reduce bias due to missing data. FIML provides highly probable estimates of missing data based on available data (Singer & Willett, 2003). Estimates of robust standard errors are also provided.

Separate models were used to assess changes in each of the four parenting

variables across time. In each model, the slope was estimated based on time-in-study, measured as years since the initial (T1) assessment for each individual. Participants were in the study for a mean of 1.96 years ($SD = 0.14$) by T2, for 4.75 years ($SD = .22$) by T3, and for 6.57 years ($SD = .20$) by T4. Four time-invariant covariates were entered at level-2 and tested as between-person predictors of the individual growth parameters: young adults' age at baseline (grand mean centered), sex (0 = *male*, 1 = *female*), parental divorce/separation (0 = *no*, 1 = *yes*) and SES (a continuous variable). Covariates were modeled simultaneously to assess the unique contributions of each variable while controlling for the influence of the others.

I also examined whether patterns of change in the parent variables differed based on young adults' student status, employment status, or residential status. Thus, three person-level time-varying covariates were simultaneously entered at level-1 and tested as within-person predictors of the slopes: student status (0 = *non-student*, 1 = *student*), employment status (0 = *not employed*, 1 = *employed*), and residential status (0 = *lives with parent figure*, 1 = *does not live with parent figure*). Participants' status as a student or employee did not show any significant effects, so these two variables were dropped from the models.

Direct & indirect effects of mother and father ES and PC on adjustment variables. To examine the effects of mother and father ES and PC on young adults' adjustment outcomes, I simultaneously tested whether initial levels and changes in mother and father ES and PC were associated with educational, occupational, and financial adjustment directly as well as indirectly through depressive and anxiety

symptoms (MacKinnon, 2008). Note that the dependent variables were primarily outcomes measured at the final assessment (T4).

Models investigating direct and indirect effects were conceptualized using a latent growth curve (LGC) mediation model framework (see Cheong, MacKinnon, & Khoo, 2003; Fritz & MacKinnon, 2012; Selig & Preacher, 2009). The *direct* paths flow directly from the intercepts and slopes of parental ES and PC to young adults' adjustment outcomes. The *indirect* paths of interest flow from the intercepts and slopes of parental ES and PC, to the slopes of depressive and anxiety symptoms, to young adults' adjustment outcomes. LGC mediation models simultaneously estimate direct paths because they capture any direct effects between the independent and dependent variables that remain after accounting for potential influences of the intervening variables (Hayes, 2009).

The LGC approach to modeling indirect effects has a number of advantages. It capitalizes on longitudinal data by examining how processes change over time. This is an important strength, as sufficient time is needed for intervening mechanisms to exert their influence (Selig & Preacher, 2009). For this reason, cross-sectional indirect paths from the independent variables' intercepts to the intervening variables' intercepts, and in turn to the dependent variables, are not of interest. However, they are accounted for in all models and provide a rigorous test of the co-varying changes in the independent and intervening variables over time. Compared to other longitudinal approaches that rely on rank order differences across individuals at each point of assessment (e.g., cross-lagged panel models), LGC models assess within-person changes over a continuous time span

(MacKinnon, 2008). Thus, LGC is less susceptible than other approaches to the impact of the specific time lags between assessment points (Selig & Preacher, 2009).

Modern approaches to evaluating indirect effects have departed from Baron and Kenny's (1986) approach towards directly quantifying indirect effects using the product of indirect path coefficients (Hayes, 2009; MacKinnon, Lockwood, Hoffman, West, & Sheets, 2002; Shrout & Bolger, 2002). Hence, the term 'indirect' effects is used to reflect this more contemporary approach (Hayes, 2009; MacKinnon et al., 2002). The indirect effects from the parent variables to the adjustment variables through mental health symptoms is estimated using the product of the two unstandardized regression coefficients linking: (1) the intercepts and slopes of mother and father ES and PC to the slopes of depressive and anxiety symptoms, and (2) the slopes of depressive and anxiety symptoms to the educational, occupational, and adjustment variables (Cheong et al., 2003; MacKinnon, 2008).

This study focuses on interpretation of statistically significant direct and indirect paths (Cummings, George, McCoy, & Davies, 2012; Rucker, Preacher, Tormala, & Petty, 2011). Bootstrap estimation is regarded as an "appropriate test of significance for indirect effects" (Little, 2013, p. 301) due to its production of robust parameter estimates (Hayes, 2009; MacKinnon, 2008). Thus, repeated resampling (i.e., bootstrapping) is used in the current study to obtain a robust distribution of coefficients. Specifically, 2,000 bootstrap samples were randomly drawn from the data (Byrne, 2010). Compared to the Sobel test, significance testing using bootstrap estimates has greater power because it does not share the assumption that the sampling distribution of effects is normally distributed, thus providing more reliable results (Hayes, 2009; MacKinnon et al., 2002).

Bootstrapping is also useful because it produces robust parameter estimates and fit indices (Stine, 1990; West, Finch, & Curran, 1995). Because bootstrapping requires complete data, regression imputation, in which variables with missing data are regressed on the model's other variables, was used to assign missing values (Howell, 2008; Widaman, 2006).

Additional follow-up analysis is sometimes conducted as a more conservative test of indirect effects. Specifically, 95% confidence intervals (CIs) for unstandardized indirect effects can be calculated to determine whether 0 falls within the confidence range, in which case the indirect effect could be zero (MacKinnon et al., 2002; Shrout & Bolger, 2002). Given the longitudinal rigour and complexity of this study's LGC models, as well as the use of bootstrap estimation, I focus on the interpretation of all significant pathways in light of the high potential for Type II error (see Cummings, George, McCoy, & Davies, 2012; Rucker et al., 2011). However, CIs are estimated for all models and are included in Table 9, for reference.

AMOS 21 software (Arbuckle, 2012) was used to test research questions (2) and (3). Mother and father ES and PC were included simultaneously in all models. Indirect effects through depressive and anxiety symptoms were also tested simultaneously. Separate models were used to examine educational, occupational, and financial adjustment in each transition group. In total, 6 models were tested. Multi-group analysis was used to examine sex and SES differences in all models (Byrne, 2010). This approach compares the fit of a fully unconstrained baseline model, which allows all model parameters to vary across groups, to a model that constrains the structural pathways representing the direct and indirect effects to be equal across groups. Statistically

significant changes in χ^2 fit ($\Delta\chi^2$) indicate group differences. Additional and post-hoc examinations were conducted by constraining each significant path, one by one, to pinpoint which paths varied by sex or SES.

Intercept and slope scores obtained from the initial multilevel models used to test changes in parent ES and PC [research question (1)], were saved and used as observed variables in the LGC models. Intercept and slope scores for depressive and anxiety symptoms were estimated and saved in an identical fashion. In addition to the direct and indirect paths of interest, each model accounts for indirect paths from the intercepts of parental ES and PC to the young adult outcomes through the intercepts of depressive and anxiety symptoms. Each model also includes correlations between (a) the intercepts and slopes of mother and father ES and PC, (b) the intercepts and slopes of depressive and anxiety symptoms, and (c) the educational, occupational, and financial adjustment variables. See Figure 1 for an example model. Finally, T1 age (to account for heterogeneity within each age group at baseline) was entered as a covariate (regressed on independent and dependent variables) along with parent divorce/separation in each model.

Following established guidelines (Byrne, 2010; Hu & Bentler, 1995; Kline, 2005; Little, 2013), model fit was evaluated using the following indices: χ^2 , Comparative-Fit Index (CFI), and Root Mean Square Error of Approximation (RMSEA). The χ^2 statistic provides an overall estimate of model fit; non-significant ($p < .05$) χ^2 values indicate good model fit. However, because results are greatly affected by sample size, χ^2 tends to be statistically significant for large samples even if a model provides a reasonable approximation to the data. Remaining fit indices take this consideration into

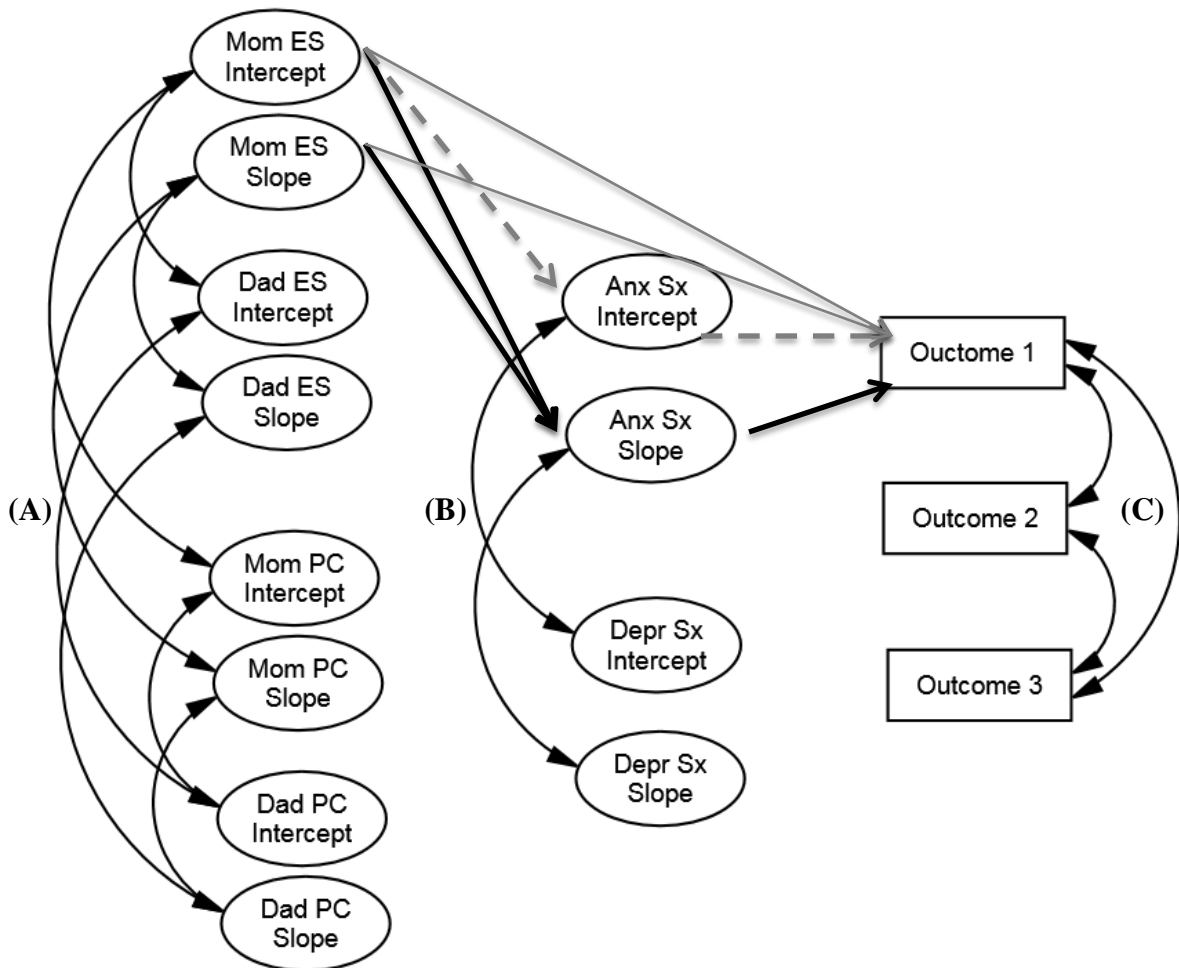


Figure 1. Example latent growth curve model assessing direct and indirect (through depressive and anxiety symptoms) effects of mother and father emotional support (ES) and psychological control (PC) on young adults' adjustment outcomes. For clarity, only pathways for direct and indirect effects (through anxiety symptoms) of mother ES on Outcome 1 are shown, as an example. Solid black (directional) arrows show indirect effects, and solid grey arrows show direct effects. Other important associations are of less interest, but are accounted for in all models. Dashed grey arrows account for indirect effects of the intercepts of parental ES and PC on the outcomes through the intercepts of depressive and anxiety symptoms. Additionally, the models account for correlations between (a) the intercepts and slopes of mother and father ES and PC, (b) the intercepts and slopes of depressive and anxiety symptoms, and (c) the outcome variables. Anx = anxiety; Depr = depressive; Sx = symptoms.

account. The CFI compares the obtained model fit to the fit of a null model that assumes independence among all variables in the model. CFI values $\geq .95$ indicate very good fit, values ranging from .90 to .95 indicate acceptable fit, values ranging from .85 to .90 indicate mediocre fit, and values $< .85$ indicate poor fit (Little, 2013). Lastly, RMSEA compares the obtained model fit to the fit of a saturated model that fits the data perfectly. It provides a fit index that is sensitive to model complexity. RMSEA Values $\leq .05$ indicate good model fit, whereas values ranging from .08 to .05 indicate acceptable fit, values ranging from .10 to .08 indicate mediocre fit, and values $> .10$ indicate poor fit (Little, 2013). A 90% confidence interval (CI) for RMSEA, which provides information about the precision of RMSEA estimates, is also reported.

Data Screening

Data were screened for non-normality and outliers in the adolescent and young adult transition groups separately. At each assessment, mother and father ES were negatively skewed, whereas mother and father PC and depressive symptoms were positively skewed. Of the dependent variables, educational problems, occupational problems, occupational stress/worry, income, debt, and money problems were positively skewed, whereas occupational satisfaction was negatively skewed. Educational abilities were positively skewed in the young adult transition group only. Skewness does not pose substantial challenges in large ($N > 100-200$) samples (Tabachnick & Fidell, 2007). Moreover, FIML (used for HLM analyses) and bootstrapping (used for AMOS analyses) account for non-normality by producing robust standard errors (Byrne, 2010). Thus, variable transformations were not performed.

Data were also examined for univariate outliers, or cases with standardized (z) scores in excess of ± 3.29 ($p < .001$, two-tailed; Tabachnick & Fidell, 2007). Outliers were found for the following variables: mother ES [$n = 28$ (20 adolescents, 8 young adults)], father ES [$n = 18$ (13 adolescents, 5 young adults)], mother PC [$n = 21$ (13 adolescents, 8 young adults)], father PC [$n = 27$ (13 adolescents, 14 young adults)], depressive symptoms [$n = 5$ (3 adolescents, 2 young adults)], educational abilities [$n = 2$ (1 adolescent, 1 young adult)], occupational satisfaction [$n = 4$ (2 adolescents, 2 young adults)], and income [$n = 4$ (2 adolescents, 2 young adults)]. To reduce their impact, outliers were assigned a raw score that was one unit above or below the next most extreme score in the distribution (Tabachnick & Fidell, 2007). Data were also examined for potential multivariate outliers using Mahalanobis distance. Probability estimates identified one multivariate outlier in the adolescent transition group ($p < .001$). Given its potential to distort results, this case was deleted (Tabachnick & Fidell, 2007).

In summary, data screening revealed some non-normality in the variables, as well as several univariate and one multivariate outlier(s). However, these potential concerns were adequately addressed by the statistical methods employed and by directly minimizing or eliminating the influence of outliers, thus making the data appropriate for subsequent analyses.

Chapter III: Results

This chapter provides the results of the statistical analyses conducted in the current study. I first give the descriptive statistics for and correlations among the study's variables, which provide important contextual information about the characteristics of and associations among the emotional quality of parental relationships, youth's mental health symptoms, and youth's adjustment in this sample. Next, I describe the longitudinal patterns of change in parental ES and PC and youth's depressive and anxiety symptoms. This is followed by presentation of the findings for the direct and indirect effects of parental ES and PC on youth's educational, occupational, and financial adjustment in the adolescent and young adult transition groups.

Descriptive Statistics

Means and standard deviations of the parent and mental health variables.

Means and standard deviations of mother and father ES, PC, and depressive and anxiety symptoms are presented in Table 3. Repeated measures analysis of variance (ANOVA) was used to examine mean differences in the variables across assessments. Mean ratings of mother ES did not differ across assessments in the adolescent ($p = .21$) or young adult ($p = .09$) transition groups. Ratings of father ES, mother ES, and father PC did not significantly differ across assessments in the adolescent group (all $p > .12$), but participants in the young adult transition group reported higher mean levels of father ES ($p = .02$) and lower levels of mother PC and father PC ($ps = .01$) across assessments. With respect to sex differences, females in the young adult transition group reported higher mean levels of mother ES at T2, T3, and T4 ($ps = .05$ and $.03$, respectively) and father ES at T4 ($p = .05$) compared to males.

Table 3

Means (and Standard Deviations) for the Parent and Mental Health Variables by Transition Group

Variable	T1		T2		T3		T4		Range
	AD	YA	AD	YA	AD	YA	AD	YA	
Mother ES	8.77 (1.67)	8.77 (1.63)	8.74 (1.73)	8.98 (1.37)	9.00 (1.45)	8.97 (1.48)	9.03 (1.52)	9.11 (1.21)	0-10
Father ES	7.76 (2.21)	7.66 (2.22)	7.97 (2.29)	7.72 (2.41)	7.94 (2.15)	7.89 (2.13)	8.02 (2.24)	8.10 (1.86)	0-10
Mother PC	2.38 (2.74)	2.98 (2.79)	2.44 (2.84)	2.64 (2.68)	2.23 (2.88)	2.31 (2.46)	2.13 (2.59)	2.31 (2.42)	0-16
Father PC	2.58 (2.81)	3.14 (2.99)	2.58 (2.84)	2.72 (2.90)	2.44 (2.75)	2.58 (2.81)	2.28 (2.63)	2.14 (2.42)	0-16
Depressive Sx	2.98 (2.49)	3.44 (2.55)	3.53 (2.73)	3.70 (2.59)	2.89 (2.59)	3.30 (2.68)	2.76 (2.45)	2.95 (2.63)	0-12
Anxiety Sx	6.07 (2.65)	6.42 (2.59)	6.31 (2.52)	6.32 (2.53)	6.00 (2.61)	5.97 (2.66)	5.64 (2.76)	5.60 (2.60)	0-12

Note. AD = adolescent transition group; YA = young adult transition group; ES = emotional support; PC = psychological control; Sx = symptoms.

Mean levels of depressive symptoms changed across assessments in the adolescent transition group. Specifically, pairwise comparisons revealed significantly higher depressive symptoms at T2 compared to T1 ($p = .03$), and significantly lower depressive symptoms at T3 compared to T2 ($p = .01$). However, depressive symptom ratings at T1 and T4 did not significantly differ ($p = .53$). Mean levels of depressive symptoms were significantly lower across assessments in the young adult transition group ($p = .01$). Mean levels of anxiety symptoms were significantly lower across assessments in both the adolescent and young adult transition groups ($ps = .01$). With respect to sex differences, females in the adolescent transition group reported higher mean levels of depressive symptoms at T1 ($p = .01$) and anxiety symptoms at T4 ($p = .03$) compared to males.

Paired samples t-tests were conducted to examine mean differences in ES and PC between mothers and fathers. For both transition groups, significantly higher levels of mother ES than father ES were reported at each assessment ($ps = .01$). Mean differences between mother and father PC were not significant. For both transition groups, anxiety symptom ratings were significantly higher than depressive symptoms ($ps = .01$).

Descriptive statistics for the adjustment variables. Descriptive information for the adjustment variables is presented in Table 4. For both transition groups, the majority of participants reported experiencing 0 or 1 educational problems. Approximately half of the adolescents enrolled in university education. Of the young adult transition group, approximately 44% completed their high school diploma and 36% completed a 4-year degree or more. On average, participants in both transition groups rated their educational abilities as very good.

Table 4

Descriptive Information for the Adjustment Variables by Transition Group

Variable	Adolescent Transition Group	Young Adult Transition Group	Range
Educational adjustment			
Educational problems	30% <i>0 problems</i> 29% <i>1 problem</i> 17% <i>2 problems</i> 24% <i>3 or more problems</i>	55% <i>0 problems</i> 26% <i>1 problem</i> 12% <i>2 problems</i> 7% <i>3 or more problems</i>	0-3
Type of educational enrolment (AD) or Type of education completed (YA)	9% <i>less than high school</i> 9% <i>high school</i> 23% <i>some college</i> 50% <i>some university</i>	6% <i>less than high school</i> 44% <i>high school diploma</i> 14% <i>2-year degree, diploma, or certificate</i> 36% <i>4-year degree or greater</i>	0-3
Educational abilities	$M = 16.17 (SD = 3.39)$	$M = 16.88 (SD = 3.49)$	0-24
Occupational adjustment			
Occupational problems	38% <i>0 problems</i> 32% <i>1 problem</i> 20% <i>2 problems</i> 10% <i>3 or more problems</i>	41% <i>0 problems</i> 26% <i>1 problem</i> 21% <i>2 problems</i> 12% <i>3 or more problems</i>	0-3
Occupational status	13% <i>not employed</i> 19% <i>employed part-time</i> 68% <i>employed full-time</i>	13% <i>not employed</i> 8% <i>employed part-time</i> 80% <i>employed full-time</i>	0-2
Occupational satisfaction	35% <i>very satisfied</i> 54% <i>satisfied</i> 10% <i>dissatisfied</i>	33% <i>very satisfied</i> 57% <i>satisfied</i> 10% <i>dissatisfied</i>	0-2

Occupational stress/worry	$M = 2.28$ ($SD = 1.52$)	$M = 2.58$ ($SD = 1.55$)	0-6
Financial adjustment			
Income	$M = \$17,121.84$ ($SD = \$13,167.20$)	$M = \$32,477.71$ ($SD = \$23,611.02$)	--
Consumer debt	66% <i>no debt</i> 15% <i>\$1 to \$4,999</i> 6% <i>\$5,00 to \$9,999</i> 5% <i>\$10,000 to \$14,999</i> 8% <i>\$15,000 or more</i>	51% <i>no debt</i> 17% <i>\$1 to \$4,999</i> 10% <i>\$5,00 to \$9,999</i> 7% <i>\$10,000 to \$14,999</i> 17% <i>\$15,000 or more</i>	0-4
Financial strain	44% <i>0 problems</i> 32% <i>1 problem</i> 19% <i>2 problems</i> 6% <i>3 problems</i>	40% <i>0 problems</i> 28% <i>1 problem</i> 18% <i>2 problems</i> 14% <i>3 problems</i>	0-3
Financial stress/worry	$M = 3.28$ ($SD = 1.59$)	$M = 3.41$ ($SD = 1.84$)	0-6

The majority of participants reported experiencing 0 or 1 occupational problems. Approximately 13% of participants in each transition group were unemployed at the final assessment in 2011. Of those who were employed, 78% in the adolescent group and 91% in the young adult transition group worked full-time, or greater than 30 hours per week. For each transition group, approximately one-third of employed participants were very satisfied with their current job(s). Mean ratings of occupational stress/worry revealed some (but not frequent or significant) stress/worry.

With respect to finances, the average annual personal income in the adolescent transition group was approximately \$17,000. Participants in the young adult group earned significantly more, with an average of about \$32,500 ($p < .01$). In addition, significantly more participants (almost 50%) in the young adult group had consumer debt, compared to 34% in the adolescent transition group ($p < .01$). Of those with debt, mean amounts did not significantly differ by transition group ($M = \$10,253$ in the adolescent group and $M = \$13,941$ in the young adult transition group). The most common sources of debt in the adolescent transition group included major credit cards (41% of participants), car loans (24%), line of credit (18%), and store credit cards and bank loans (6% each). For the young adult transition group, the most common sources of debt included major credit cards (40% of participants), line of credit (26%), car loans (23%), and store credit cards and bank loans (8% each). Approximately 56% of individuals in the adolescent transition group and 60% in the young adult group experienced some form of financial strain across T3 and T4. Specifically, 31% and 34%, respectively, had trouble paying for necessities. Significantly more ($p = .04$) participants in the young adult transition group (47%) delayed health care, compared to 35% in the

adolescent transition group. The most common types of care delayed included dentist visits (11% for the adolescent group vs. 28% for the young adult group), filling prescriptions (9% for both groups), therapy (6% vs. 9%, respectively), and doctor visits (5% vs. 4%, respectively). Finally, mean ratings of financial stress/worry revealed some significant stress/worry in both age groups.

Correlations among parent variables, mental health symptoms, and sex.

Pearson's correlations for the parent variables, mental health variables, and sex are presented in Table 5. For both transition groups, reports of mother ES were significantly correlated across assessment points ($r_s = .29$ to $.61$), as were reports of father ES ($r_s = .39$ to $.73$), mother PC ($r_s = .50$ to $.72$), and father PC ($r_s = .45$ to $.76$). Mother ES and mother PC were negatively correlated both concurrently and across assessment points, with only one exception in the young adult transition group. Father ES and father PC were also negatively correlated concurrently and across assessment points, with just two exceptions in the adolescent transition group. Mother ES and father ES were correlated concurrently in the adolescent transition group ($r_s = .14$ to $.29$), but there was variability in the statistical significance and strength of correlations across assessment points. In the young adult transition group, mother ES and father ES were correlated concurrently at T2, T3, and T4 ($r_s = .14$ to $.29$), but not at T1 ($r = .05$). Across assessment points, T1 father ES was significantly correlated with mother ES ($r_s = .15$ to $.35$), but no additional longitudinal correlations between mother ES and father ES were significant. Mother PC and father PC were correlated concurrently for both transition groups. Longitudinal correlations between mother PC and father PC were also significant in the adolescent

dummy coded as 1 and 2, respectively. Mo = mother; Fa = father; ES = emotional support; PC = psychological control; Dep = depressive; Anx = anxiety; Sx = symptoms.

transition group ($r_s = .21$ to $.40$), but the significance and strength of longitudinal correlations in the young adult transition group were mixed ($r_s = .07$ to $.34$).

With respect to the mental health variables, depressive symptoms were significantly correlated both concurrently and across assessment points for the adolescent ($r_s = .21$ to $.59$) and young adult ($r_s = .42$ to $.58$) transition groups. Similarly, anxiety symptoms were consistently correlated both concurrently and across assessment points in both groups ($r_s = .41$ to $.63$ and $.47$ to $.62$, respectively). The concurrent and longitudinal correlations between depressive and anxiety symptoms were consistently positive for both the adolescent ($r_s = .26$ to $.56$) and young adult ($r_s = .22$ to $.61$) transition groups.

Correlations between the parent variables and mental health variables were also examined. In the *adolescent transition group*, depressive symptoms were concurrently correlated with mother PC ($r_s = .18$ to $.38$) and father PC ($r_s = .19$ to $.35$), and with father ES ($r_s = -.17$ to $-.25$) and mother ES at T1, T2, and T4 ($r_s = -.14$ to $-.30$). Longitudinal correlations between depressive symptoms and mother PC, father PC, and father ES were also mainly (80%) significant in the same direction in the adolescent transition group, whereas longitudinal correlations with mother ES were mixed. In the *young adult transition group*, depressive symptoms were concurrently correlated with mother ES ($r_s = -.19$ to $-.27$) and mother PC ($r_s = .26$ to $.38$), but with father ES at T3 only ($r = -.15$) and with father PC at T1 and T4 only ($r_s = .20$). Depressive symptoms were consistently correlated with mother PC across assessments ($r_s = .18$ to $.38$), and longitudinal correlations between depressive symptoms and mother ES were also mainly significant ($r_s = -.16$ to $-.24$), with two exceptions. In contrast, there were few longitudinal

correlations between depressive symptoms and father PC, and no longitudinal correlations between depressive symptoms and father ES.

In the *adolescent transition group*, anxiety symptoms were concurrently correlated with mother ES at T1 and T4 (both $r_s = -.15$), with father ES at T3 ($r = -.26$) and T4 ($r = -.16$), and consistently correlated with mother PC ($r_s = .18$ to $.34$) and father PC ($r_s = .17$ to $.36$). There were no significant longitudinal correlations between anxiety symptoms and mother ES, but several longitudinal correlations with father ES were significant ($r_s = -.12$ to $-.26$). Anxiety symptoms and father PC were consistently correlated across assessment points ($r_s = .17$ to $.35$), and correlations between anxiety symptoms and mother PC were also significant ($r_s = .15$ to $.24$), with just one exception. In the *young adult transition group*, anxiety symptoms were concurrently correlated with mother ES at T1, T2, and T3 ($r_s = -.14$), with father ES at T3 only ($r = -.16$), and with both mother PC ($r_s = .22$ to $.34$) and father PC ($r_s = .18$ to $.23$). There were some significant longitudinal correlations between anxiety symptoms and mother ES, but none with father ES. Longitudinal correlations between anxiety symptoms and mother PC were significant ($r_s = .15$ to $.35$), with just one exception, whereas longitudinal correlations between anxiety symptoms and father PC were mixed.

Lastly, sex was not correlated with any of the parent or mental health variables in the adolescent transition group with the exception of T1 depressive symptoms ($r = .15$), indicating that females reported more depressive symptoms than males. In the young adult transition group, sex was significantly correlated with mother ES at T1, T2, and T3 ($r_s = .15$ to $.18$), and with father ES at T4 ($r = .14$), indicating that females reported higher levels of mother and father ES than males.

Correlations among educational, occupational, and financial adjustment

variables. Table 6 provides Pearson's correlations for the educational, occupational, and financial adjustment variables and sex. All of the educational adjustment variables were correlated in expected directions in the adolescent transition group, but only educational abilities and education type completed were correlated ($r = .32$) in the young adult group.

With respect to the occupational adjustment variables, lower occupational status and greater occupational problems were correlated with higher levels of occupational stress/worry ($r_s = -.32$ and $.16$, respectively) for the adolescent transition group. In the young adult group, lower occupational status and lower occupational satisfaction were both correlated with higher levels of occupational stress/worry ($r_s = -.20$ and $-.36$). In addition, greater occupational problems were significantly correlated with lower occupational satisfaction ($r = -.17$).

Correlations among the financial adjustment variables were mainly significant in the adolescent transition group ($r_s = -.16$ to $.42$). Correlations were also mainly significant in the young adult transition group, except debt was not significantly correlated with financial strain ($r = -.17$) or financial stress/worry ($r = -.09$). For both transition groups, greater income was associated with more consumer debt ($r_s = .24$ and $.33$) but less financial strain ($r_s = -.16$ and $-.35$) and stress/worry ($r_s = -.22$ and $-.31$). Financial strain and financial stress/worry were highly correlated in both groups ($r_s = .42$ and $.44$). Sex was positively correlated with occupational satisfaction ($r = .14$), financial strain ($r = .29$), and financial stress/worry ($r = .14$) in the adolescent transition group, indicating that females experienced higher levels of these. In contrast, sex was significantly and negatively correlated with income ($r = -.17$), indicating that females

Table 6

Pearson's Correlations for the Adjustment Variables and Sex by Transition Group

Variable	1	2	3	4	5	6	7	8	9	10	11	12
1. Ed problems	-	-.01	.08	.15	-.02	-.04	.23	-.07	.02	.20	.21	-.06
2. Ed type	-.33	-	.32	-.22	.08	-.13	.11	.14	.23	-.24	-.16	.14
3. Ed abilities	-.22	.33	-	-.18	.12	.12	-.10	.22	-.01	-.20	-.16	-.02
4. Occ problems	.42	-.25	-.08	-	.12	-.17	.14	.05	-.13	.10	.21	-.01
5. Occ status	-.04	-.07	.05	.04	-	.14	-.20	.37	-.09	-.29	-.22	-.15
6. Occ satisfaction	-.02	.06	.02	-.07	.01	-	-.36	.08	.05	-.14	-.20	-.17
7. Occ stress/worry	.01	-.12	-.07	.16	-.23	-.06	-	-.25	.02	.24	.36	.17
8. Income	-.01	-.15	.01	.04	.26	-.20	-.10	-	.33	-.35	-.31	-.19
9. Consumer debt	.26	.18	.18	-.31	.16	.07	-.16	.24	-	-.17	-.09	-.13
10. Fin strain	.25	-.23	-.13	.26	-.07	-.05	.21	-.16	-.30	-	.44	.20
11. Fin stress/worry	.26	-.18	-.14	.29	-.10	-.08	.46	-.22	-.21	.42	-	.14
12. Sex	-.04	.05	.06	.12	.02	.14	.04	-.17	.07	.29	.14	-

Note. Correlations for the adolescent transition group are presented in the lower left quadrant of the table, and correlations for the young adult transition group appear in the upper right quadrant. Significant correlations ($p < .05$) are in boldface. Males and females were dummy coded as 1 and 2, respectively. Ed = educational; Occ = occupational; Fin = financial.

reported lower income than males. In the young adult age group, sex was significantly and positively correlated with type of education completed ($r = .14$), occupational stress/worry ($r = .17$), and financial strain ($r = .20$), with females experiencing higher levels of these. In contrast, sex was negatively correlated with income ($r = -.19$) and occupational satisfaction ($r = -.17$), indicating that females earned less income and were less satisfied with their current or most recent job than males.

Looking across adjustment types, there were many significant correlations among the educational, occupational, and financial adjustment variables, indicating that cross-domain adjustment indices are frequently, but not consistently, correlated. For example, occupational and educational problems were positively correlated for both transition groups, and occupational problems were negatively correlated with type of educational enrolment ($r = -.25$) and type of education completed ($r = -.22$). There were relatively more significant correlations between occupational and education adjustment in the young adult transition group. Correlations between the educational and financial adjustment variables were similar across the transition groups. The occupational and financial adjustment variables were also frequently correlated in expected directions.

Correlations between the adjustment variables and the parent and mental health variables. Pearson's correlations between the adjustment variables, the parent variables, and the mental health variables are presented in Table 7. There were several statistically significant correlations between the adjustment variables and the parent variables. In the adolescent transition group, educational problems were consistently correlated with mother PC ($r_s = .15$ to $.26$) and father PC ($r_s = .13$ to $.25$) at each time point, and negatively correlated with mother ES at T1, T2, and T3 ($r_s = -.13$ to $-.18$).

Table 7

Pearson's Correlations between the Adjustment Variables and the Parent and Mental Health Variables by Transition Group

Variable	Ed Problems		Ed Type		Ed Abilities		Occ Problems		Occ Status		Occ Satisf		Occ Strs/Worr		Income		Consum Debt		Fin Strain		Fin Strs/Worr	
	AD	YA	AD	YA	AD	YA	AD	YA	AD	YA	AD	YA	AD	YA	AD	YA	AD	YA	AD	YA	AD	YA
Mo ES																						
T1	-.13	-.03	.16	.12	.06	.12	-.14	.02	-.01	-.06	.16	-.01	-.02	-.09	-.02	.03	.21	-.04	-.18	.06	.10	-.05
T2	-.18	-.13	.16	.09	.07	-.04	-.16	-.02	-.07	-.01	.12	-.01	.07	-.07	-.04	-.06	.15	-.06	-.06	.02	.12	-.02
T3	-.16	-.14	.12	.10	-.01	.08	-.06	-.21	-.11	-.08	.09	.03	-.07	-.10	.06	-.12	.02	-.12	-.11	-.09	-.19	-.13
T4	-.11	-.14	.13	.05	.09	.12	.01	-.12	-.09	.02	.05	.05	-.07	-.01	.10	-.05	.11	-.10	-.08	-.03	-.21	-.05
Fa ES																						
T1	-.14	.01	.20	-.01	.16	.06	-.25	.02	-.09	-.04	.20	-.05	-.11	-.07	.04	.10	.20	.04	-.22	-.09	-.21	-.10
T2	-.11	-.09	.13	.09	.10	.04	-.26	-.07	-.06	.08	.11	-.02	-.02	-.07	.05	.05	.23	-.06	-.17	-.11	-.12	-.14
T3	-.13	-.12	.21	.15	.13	.03	-.18	-.06	.01	.03	.10	-.05	-.07	-.24	.02	.04	.21	-.17	-.13	-.11	-.14	-.13
T4	-.01	-.15	.10	.16	.07	.07	-.11	-.09	.05	.01	.19	.01	-.08	-.07	.08	-.01	.10	-.04	-.04	-.13	-.13	-.08
Mo PC																						
T1	.15	.08	-.27	-.10	-.05	-.07	.15	.11	.01	.03	-.02	.01	-.01	.13	.02	-.01	-.18	-.19	.20	.04	.06	.18
T2	.26	.09	-.25	.04	-.11	-.11	.27	.08	.01	-.04	-.04	-.07	-.05	.15	-.06	-.07	-.12	-.09	.19	-.01	.15	.11
T3	.24	.17	-.19	-.09	-.01	-.11	.20	.27	.04	-.13	-.01	-.06	.08	.16	-.14	-.01	-.07	.01	.15	.18	.20	.29
T4	.16	.11	-.25	-.04	-.08	-.19	.15	.21	-.01	-.12	-.12	-.11	.03	.10	-.07	-.01	-.13	-.09	.17	.20	.19	.22
Fa PC																						
T1	.21	.07	-.24	-.02	-.07	-.10	.24	.03	.13	.10	-.04	.03	.14	-.02	-.02	-.04	-.01	-.10	.27	.11	.15	.13
T2	.25	.09	-.19	-.11	-.08	-.17	.28	.04	.01	.06	-.14	.01	.09	.10	-.01	-.06	-.14	-.01	.22	.15	.13	.17
T3	.18	.12	-.10	-.18	-.09	-.09	.23	.03	-.09	-.10	-.10	-.03	.17	.17	-.08	-.12	-.21	.07	.18	.18	.17	.24
T4	.13	.07	-.14	-.14	-.15	-.19	.10	.11	.07	-.03	-.21	-.07	.11	.15	-.06	-.06	-.18	.06	.15	.23	.14	.24
Dep Sx																						
T1	.24	.05	-.20	-.14	-.04	-.06	.23	.16	.06	-.02	-.01	-.05	.13	.23	-.10	-.18	-.15	-.28	.20	.23	.22	.20
T2	.19	.11	-.23	-.10	-.24	-.16	.18	.17	.04	-.09	.03	-.11	.18	.20	-.03	-.14	-.16	-.33	.18	.24	.26	.28
T3	.25	.10	-.20	-.23	-.30	-.24	.16	.21	-.06	-.23	-.07	-.17	.22	.30	-.02	-.21	-.18	-.17	.18	.37	.24	.34
T4	.18	.18	-.17	-.02	-.33	-.23	.16	.17	-.17	-.18	-.05	-.26	.34	.29	-.06	-.20	-.17	-.11	.24	.26	.30	.40
Anx Sx																						
T1	.19	.18	-.02	.06	-.10	-.07	.26	.03	.02	.01	-.03	.04	.12	.19	-.03	-.09	.06	.09	.12	.10	.12	.19

T2	.17	.09	-.10	-.03	-.20	-.14	.19	.09	.12	-.06	-.06	-.10	.18	.23	-.04	-.14	.01	-.12	.09	.14	.13	.29
T3	.21	.20	-.09	.01	-.21	-.10	.24	.13	-.05	-.09	-.05	-.12	.28	.36	-.13	-.03	.02	-.11	.23	.10	.24	.32
T4	.16	.14	-.09	.01	-.19	-.19	.18	.11	-.01	-.12	-.09	-.15	.32	.45	-.10	-.19	.07	-.06	.25	.22	.36	.43

Note. Significant correlations ($p < .05$) are in boldface. Ed = educational; Occ = occupational; Satisf = satisfaction; Strs/Worr = stress/worry; Consum = consumer; Fin = financial; AD = adolescent transition group; YA = young adult transition group; Mo = mother; Fa = father; ES = emotional support; PC = psychological control; Dep = depressive; Anx = anxiety; Sx = symptoms.

Type of educational enrolment was significantly correlated with parent ES and PC at most assessment points, with more parental ES associated with higher enrolment type ($r_s = .13$ to $.21$) and more parental PC associated with lower enrolment type ($r_s = -.14$ to $-.27$). In the young adult transition group, greater father ES at T3 and T4 was significantly correlated with higher education type completed ($r_s = .15$ and $.16$, respectively). Conversely, greater father ES at T2 and T4 was correlated with lower perceived educational abilities ($r_s = -.17$ and $-.19$).

With respect to the occupational variables, higher mother ES at T1 and T2 was correlated with fewer occupational problems in the adolescent transition group ($r_s = -.14$ and $-.16$). Father ES at T1 and T4 was correlated with higher occupational satisfaction ($r_s = .20$ and $.19$), whereas higher father PC at T2 and T4 was correlated with lower occupational satisfaction ($r_s = -.14$ and $-.21$). Higher father PC at T1, T2, and T3 was correlated with more occupational problems in the adolescent transition group ($r_s = .23$ to $.28$). Higher father PC at T1 and T3 was associated with greater occupational stress/worry ($r_s = .14$ and $.17$). Finally, higher mother PC was consistently correlated with more occupational problems ($r_s = .15$ to $.27$), and with more occupational problems at T3 and T4 ($r_s = .27$ and $.21$). In the young adult transition group, mother ES at T3 and T4 was correlated with fewer occupational problems ($r_s = -.21$ and $-.12$), as was father ES at T1, T2, and T3 ($r_s = -.18$ to $-.26$). Higher father PC at T3 and T4 was associated with greater occupational stress/worry ($r_s = .17$ and $.15$), as was mother PC at T2 and T3 ($r_s = .15$ and $.16$).

For the financial variables, financial strain was consistently correlated with mother PC ($r_s = .15$ to $.20$) and father PC ($r_s = .15$ to $.27$), and with father ES at T1 and

T2 ($r_s = -.22$ and $-.17$, respectively) in the adolescent transition group. For the young adult group, financial strain was associated with greater mother PC at T3 and T4 ($r_s = .18$ and $.20$) and with greater father PC at T1, T2, and T3 ($r_s = .15$ to $.23$). Finally, financial stress/worry was significantly correlated with mother PC ($r_s = .15$ to $.20$), father PC ($r_s = .14$ to $.17$), and father ES ($r_s = -.13$ to $-.21$) at most assessment points, and with mother ES at T3 and T4 ($r_s = -.19$ and $-.21$, respectively) for both transition groups. Financial stress/worry was significantly correlated with mother PC ($r_s = .18$ to $.29$) and father PC ($r_s = .17$ to $.24$) at most assessment points for both groups.

There were many significant correlations between the adjustment variables and the mental health variables. In the adolescent transition group, depressive symptoms were consistently correlated with educational problems ($r_s = .18$ to $.25$) and type of educational enrolment ($r_s = -.17$ to $-.23$), and with educational abilities at T2, T3, and T4 ($r_s = -.24$ to $-.33$). Similarly, depressive symptoms were correlated with educational abilities at T2, T3, and T4 ($r_s = -.16$ to $-.24$) in the young adult group, and with educational problems at T4 ($r = .18$) and education type completed at T3 ($r = -.23$). Anxiety symptoms were also consistently correlated with educational problems in the adolescent transition group ($r_s = .16$ to $.21$) and with educational abilities at T1, T2, and T3 ($r_s = -.19$ to $-.21$), but not with type of educational enrolment. In the young adult transition group, anxiety symptoms were significantly correlated with educational problems at T1 and T3 ($r_s = -.18$ and $.20$, respectively) and with educational abilities at T4 ($r = -.19$).

Of the occupational adjustment variables, occupational problems were consistently correlated with depressive symptoms in both transition groups.

Occupational stress/worry was correlated with depressive symptoms at T2, T3, and T4 in the adolescent group ($r_s = .18$ to $.34$). In the young adult transition group, however, depressive symptoms were correlated with occupational status ($r_s = -.18$ and $.20$) and occupational satisfaction ($r_s = -.17$ and $-.26$) at T3 and T4, and with occupational stress/worry at each assessment point ($r_s = .20$ to $.30$). Anxiety symptoms were consistently correlated with occupational problems in the adolescent transition group only ($r_s = .18$ to $.26$). Anxiety symptoms were also positively correlated with occupational stress/worry at most assessment points ($r_s = .18$ to $.32$) in the adolescent group. In the young adult transition group, anxiety symptoms were consistently correlated with occupational stress/worry ($r_s = -.20$ to $.30$), and with occupational satisfaction at T4 ($r = -.15$).

With respect to the financial adjustment variables, depressive symptoms were consistently correlated with financial strain ($r_s = .18$ to $.24$) and financial stress/worry ($r_s = .22$ to $.30$) in the adolescent transition group. Depressive symptoms were also consistently correlated with financial strain ($r_s = .23$ to $.37$) and financial stress/worry ($r_s = .20$ to $.40$) in the young adult group, but also with income at T1, T3, and T4 ($r_s = -.18$ to $-.21$) and with consumer debt at T1 and T2 ($r_s = -.28$ and $-.33$, respectively). Anxiety symptoms were correlated with financial strain at T3 and T4 ($r_s = .23$ and $.25$) and financial stress/worry at T2, T3, and T4 ($r_s = .13$ to $.36$) in the adolescent transition group. In the young adult group, anxiety symptoms were significantly correlated with financial stress/worry at T2, T3, and T4 ($r_s = .29$ to $.43$), with financial strain at T2 and T4 ($r_s = .14$ and $.22$), and with income at T4 ($r = -.19$).

Changes in Parent Variables over Time

Results are reported for each transition group separately.

Adolescent transition group. Results from the univariate models of change in reports of mother and father ES and PC for the adolescent transition group are provided in Table 8 and depicted graphically in Figure 2. On average, ES from both mothers ($b = .04, p = .02$) and fathers ($b = .05, p = .04$) increased over time. Father PC decreased on average ($b = -.05, p = .05$), but changes in mother PC were not significant ($b = -.02, p = .37$). Variance components revealed significant between-person variability in initial levels and slopes for all variables.

To identify between-person differences in the initial levels and patterns of change, baseline age, sex, parent divorce, and SES were included as level-2 variables. Findings revealed that higher age at T1 was associated with a slightly steeper increase in father ES ($b = .004, p = .03$). Parent divorce was associated with lower initial levels of mother (but not father) ES ($b = -.39, p = .04$) and higher initial levels of mother (but not father) PC ($b = .85, p = .01$). Higher SES was associated with lower initial levels of PC for mothers ($b = -.14, p = .01$) and fathers ($b = -.16, p = .01$). Residential status did not influence the intercepts or slopes for any of the parent variables in the adolescent transition group.

Young adult transition group. Results from the univariate models for the young adult transition group are also provided in Table 8 and shown graphically in Figure 2. On average, ES from mothers ($b = .05, p = .01$) and fathers ($b = .06, p = .01$) increased over time, whereas mother PC ($b = -.10, p = .01$) and father PC ($b = -.13, p = .01$) decreased over time. Between-person variability in initial levels and slopes was significant for all four of the parent variables. Level-2 variables revealed that females had higher initial

Table 8

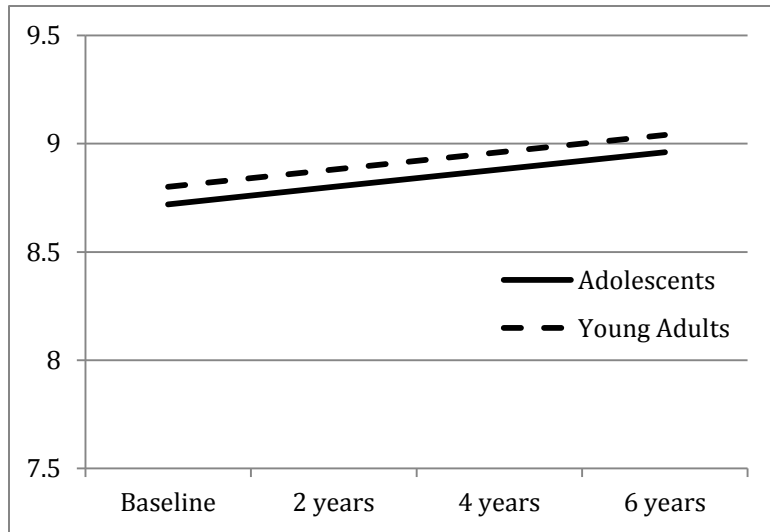
Fixed Effects Estimates (Top) and Variance-Covariance Estimates (Bottom) for Univariate Models of Change in Parenting Variables over Time by Transition Group

Parameter	Mom ES	Dad ES	Mom PC	Dad PC
Fixed effects				
Adolescent transition group				
Intercept (π_{0i})	8.72 (0.09)**	7.79 (0.13)**	2.44 (0.15)**	2.63 (0.15)**
Slope (π_{1i})	0.04 (0.02)*	0.05 (0.02)*	-0.02 (0.03)	-0.05 (0.03)*
Young adult transition group				
Intercept (π_{0i})	8.80 (0.10)**	7.59 (0.14)**	2.93 (0.17)	3.15 (0.19)**
Slope (π_{1i})	0.04 (0.02)**	0.06 (0.02)**	-0.10 (0.03)**	-0.13 (0.03)**
Random effects				
Adolescent transition group				
Intercept (r_0)	1.71 (1.31)**	3.63 (1.90)**	2.30 (5.27)**	4.91 (2.22)**
Slope (r_1)	0.03 (0.17)**	0.08 (0.28)**	0.26 (0.07)**	0.05 (0.23)**
Residual (ϵ)	1.18 (1.09)	1.57 (1.25)	1.70 (2.87)	2.84 (1.69)
Young adult transition group				
Intercept (r_0)	1.55 (1.25)**	3.55 (1.89)**	5.76 (2.40)**	6.98 (2.64)**
Slope (r_1)	0.01 (0.11)**	0.01 (0.11)**	0.05 (0.22)**	0.08 (0.28)**
Residual (ϵ)	0.92 (0.96)	1.79 (1.34)	2.03 (1.43)	2.34 (1.53)

Note. Standard errors are in parentheses. ES = emotional support; PC = psychological control.

* $p < .05$. ** $p = .01$.

Mother ES



Father ES

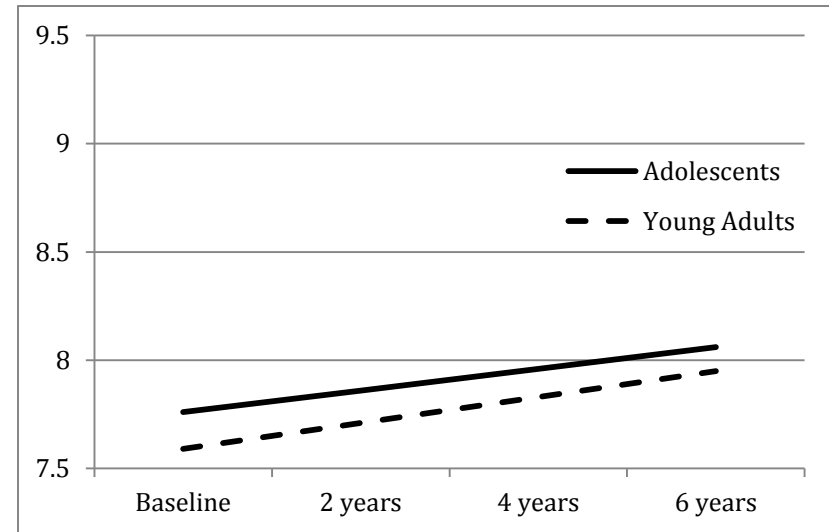
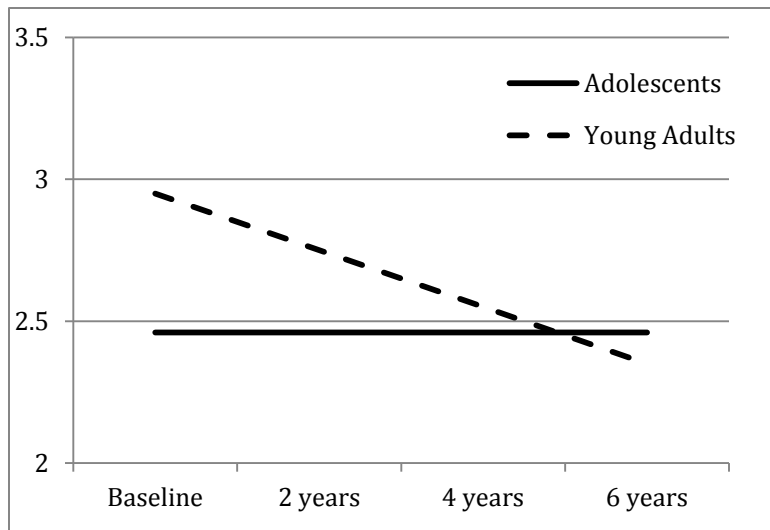
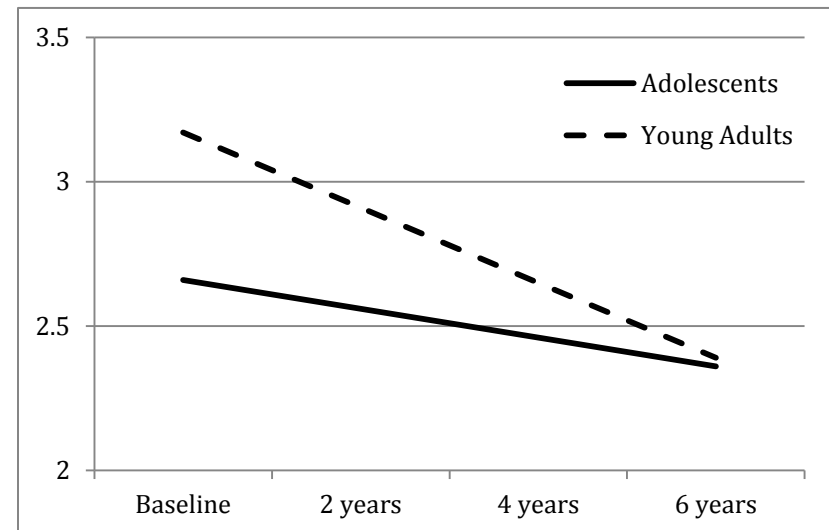
Mother PC^aFather PC^a

Figure 2. Univariate models of change over time in mother and father emotional support (ES) and psychological control (PC) for both transition groups. All slopes are significant, except mother PC for the adolescent group.

^aIntercepts and slopes differ by transition group.

levels of mother ES ($b = .48, p = .01$) than males. In addition, females had greater increases in father ES than males ($b = .08, p = .05$). However, the overall decrease in mother PC was attenuated for females ($b = .10, p = .04$). Parent divorce was associated with lower initial levels of father ES ($b = -.74, p = .01$). The decrease in father PC was attenuated for young adults who lived with their fathers ($b = .10, p = .04$).

Transition group differences. Additional time-based models using combined data from the adolescent and young adult transition groups were tested to identify whether initial levels and patterns of change differed significantly between the two groups. Transition group (0 = *adolescent*, 1 = *young adult*) was entered as a level-2 predictor of the time-in-study-based models. Results indicated that there were no significant differences between the adolescent and young adult age groups for the intercept or slope of mother ES and father ES, showing that the initial levels and patterns of change in ES were generally consistent across transition groups. However, the intercepts for mother PC and father PC were significantly higher in the young adult age group compared to the adolescent age group (both $ps = .04$). In addition, the slopes for both mother PC ($b = -.08, p = .03$) and father PC ($b = -.08, p = .05$) showed a greater decline for participants in the young adult compared to the adolescent transition group.

Changes in Depressive and Anxiety Symptoms over Time

Adolescent transition group. On average, depressive symptoms did not change significantly over time ($b = -.04, p = .16$), whereas anxiety symptoms decreased significantly over time ($b = -.08, p = .01$). Variance components revealed significant between-person variability in initial levels and slopes for both depressive and anxiety symptoms.

Inclusion of level-2 variables (sex, parent divorce, and SES) revealed that females had higher initial levels of depressive symptoms ($b = 0.61, p = .03$) and they showed greater decreases in depressive symptoms over time ($b = -.19, p = .01$) compared to males. Parent divorce status and SES did not influence initial levels or changes in depressive symptoms. None of the level-2 variables were associated with anxiety symptoms.

Young adult transition group. On average, there was a trend of decreasing depressive symptoms over time for the young adult age group ($b = -.06, p = .06$). Anxiety symptoms decreased significantly over time ($b = -.12, p = .01$). Variance components revealed significant between-person variability in initial levels and slopes for both depressive and anxiety symptoms. Parent divorce attenuated the decrease in anxiety symptoms ($b = .11, p = .05$). Other level-2 variables were not significant for depressive or anxiety symptoms.

Transition group differences. Additional time-based models using combined data from the adolescent and young adult transition groups were conducted to identify whether initial levels and patterns of change in depressive and anxiety symptoms differed between the two age groups. However, no significant differences were observed.

Educational Adjustment: Direct and Indirect Effects of Parent Emotional Support and Psychological Control

Adolescent transition group. The estimated model examining the direct and indirect effects of mother and father ES and PC on educational adjustment in the adolescent transition group is presented in Figure 3. Comparison of fully unconstrained and constrained models showed that the pathways did not significantly differ by sex, $\Delta\chi^2$

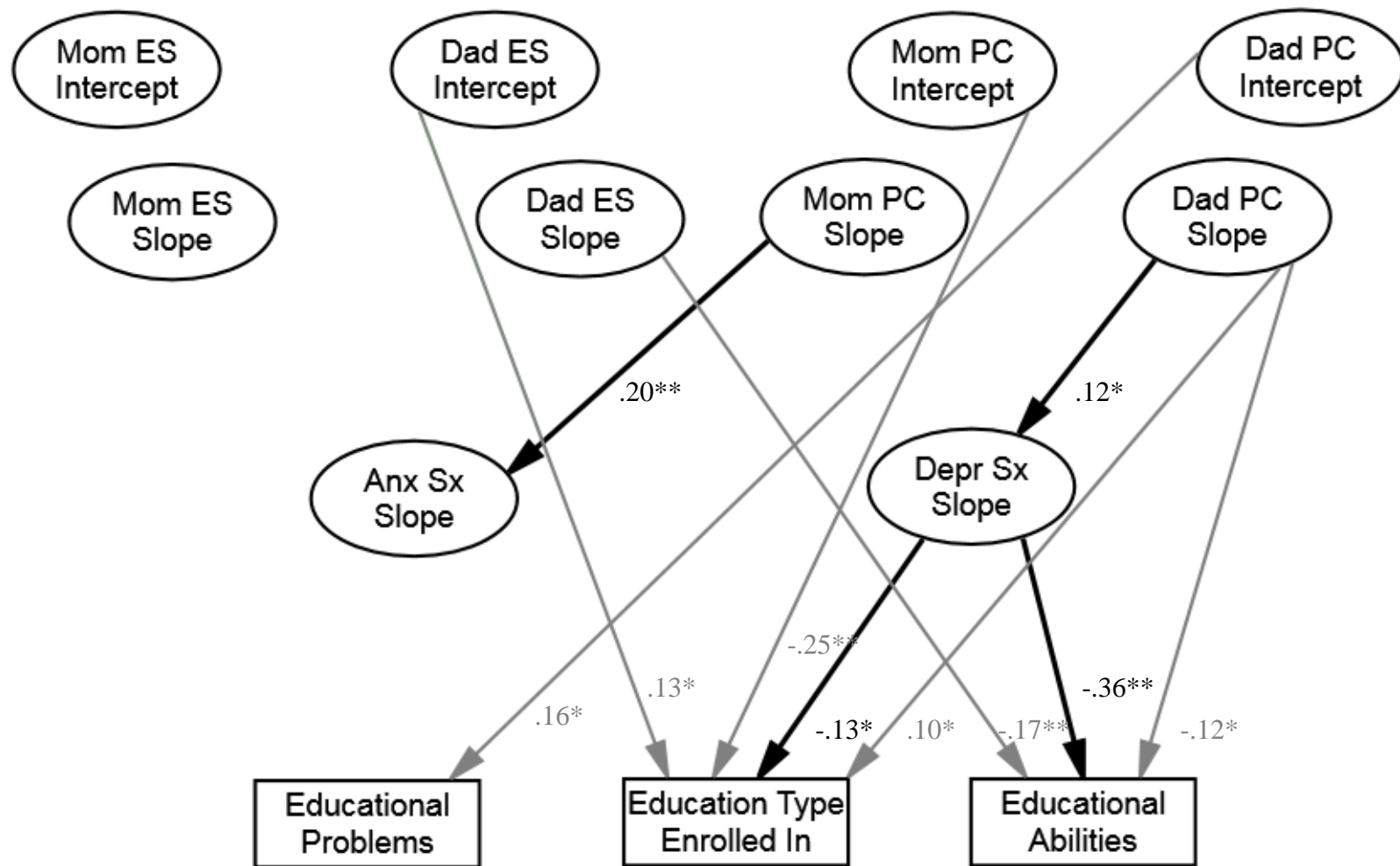


Figure 3. Educational adjustment: Direct and indirect effects in the adolescent transition group. Heavy black arrows show indirect effects, and thin grey arrows show direct effects. Standardized coefficients appear to the right of paths. Results are based on

combined data from males and females. For clarity, non-significant paths and depressive/anxiety symptom intercept variables are not shown. ES = emotional support; PC = psychological control; Anx = anxiety, Depr = depressive; Sx = symptoms.
* $p < .05$. ** $p = .01$.

(Δdf) = 61.72 (46), $p = .06$. Thus, the final model was estimated using combined data from males and females. This model provided an excellent fit to the data, $\chi^2 (df) = 26.82$ (22), $p = .22$, CFI = 1.00, RMSEA [CI] = .03 [.00, .06].

Indirect effects. Increases in mother PC were associated with increases in anxiety symptoms ($b = .20$, $p = .01$). However, changes in anxiety symptoms were not associated with any of the educational adjustment variables.

Increases in father PC were associated with increases in depressive symptoms ($b = .12$, $p = .03$). In turn, increases in depressive symptoms were negatively associated with type of educational enrolment ($b = -.13$, $p = .02$) and with perceived educational abilities ($b = -.36$, $p = .01$). Thus, two indirect effects were observed. First, increases in father PC were associated with lower type of educational enrolment (e.g., pursuing no post-secondary education, or a briefer post-secondary program, compared to a 4-year degree or greater) through depressive symptoms ($b = -.02$). Second, increases in father PC were associated with lower perceptions of educational abilities through depressive symptoms ($b = -.04$). As previously noted, 95% confidence intervals for all indirect effects are presented in Table 9, for reference.

Direct effects. Accounting for indirect pathways, there were several statistically significant direct effects from the parenting variables to the educational adjustment variables. Higher initial levels of father PC were associated with more educational problems ($b = .16$, $p = .02$). Higher initial levels of father ES were associated with higher educational enrolment ($b = .13$, $p = .04$). Unexpectedly, increases in father PC were also associated with higher educational enrolment ($b = .10$, $p = .05$). In contrast, higher initial levels of mother PC were associated with lower educational enrolment ($b = -.25$, $p = .01$).

Table 9

Significant Unstandardized Effects and Confidence Intervals for all Indirect Effects of Parent Emotional Support and Psychological Control on Adjustment Variables Through Mental Health Symptoms by Transition Group

Outcome	IV(s)	<i>b</i> [95% CI] ^a
Educational Adjustment Variables		
<u>Adolescent Transition Group</u>		
Education Enrol Type	Father PC slope	-.13 [-.42, .01]
Educational Abilities	Father PC slope	-1.13 [-2.72, .05]
<u>Young Adult Transition Group – Males Only</u>		
Educational Abilities	Mother ES intercept	.34 [.01, .94]*
	Mother ES slope	6.07 [1.10, 15.59]*
	Mother PC intercept	-.19 [-.47, -.03]*
	Mother PC slope	-2.94 [-7.45, -.30]*
Occupational Adjustment Variables		
<u>Adolescent Transition Group</u>		
Occupational Status	Father PC slope	-.18 [-.45, .01]
Occupational	Mother PC slope	.46 [.16, 1.90]*
Stress/worry	Father PC slope	.18 [-.01, .67]
<u>Young Adult Transition Group</u>		
Occupational Status	Mother PC intercept	-.01 [-.03, -.01]*
	Mother PC slope	-.27 [-.67, -.04]*
Occupational Satisfaction	Mother PC intercept	-.01 [-.03, -.01]*
	Mother PC slope	-.25 [-.67, -.05]*
Occupational Stress/worry	Father PC slope	.40 [.01, 1.12]*
Financial Adjustment Variables		
<u>Adolescent Transition Group</u>		
Income	Mother PC slope	-2386 [-6257, -295]*
	Father PC slope	1535 [-110, 5326]
Consumer Debt	Mother PC slope	.20 [-.01, .62]

	Father PC slope		-.24 [-.67, -.01]*
Financial Strain	Mother PC slope		.18 [.02, .49]*
Financial Stress/worry	Mother PC slope		.50 [.17, 1.07]*
<u>Young Adult Transition Group – Females Only</u>			
Financial Strain	Mother PC slope		.04 [-.41, .56]
	Father PC slope		-.07 [-.80, .31]
<u>Young Adult Transition Group – Males Only</u>			
Income	Mother ES intercept		1777 [-27, 6065]
	Mother ES slope		31594 [2193, 98453]*
	Mother PC intercept		-983 [-2874, -122]*
	Mother PC slope		-15222 [-43595, -1736]*
Financial Stress/worry	Mother ES intercept		-.16 [-.43, .01]
	Mother ES slope		-2.83 [-7.52, -.34]*
	Mother PC intercept		.09 [.02, .20]*
	Mother PC slope		1.36 [.25, 3.47]*

Note. When zero falls within the confidence range, the indirect effect *could* be zero (MacKinnon et al., 2002; Shrout & Bolger, 2002). IV = independent variable; CI = confidence interval; PC = psychological control; ES = emotional support.

^a CIs are available for unstandardized estimates only.

* $p < .05$ that zero falls within the CI.

Lastly, increases in both father ES and father PC were associated with lower perceived educational abilities ($b = -.17$ and $b = -.12$, $p = .01$, respectively). A summary of significant direct and indirect effects of parent ES and PC on all outcomes for the adolescent transition group is provided in Table 10.

Young adult transition group. The estimated model examining the direct and indirect effects of mother and father ES and PC on educational adjustment variables in the young adult transition group is presented in Figure 4. The fully unconstrained baseline model showed that the hypothesized model provided an excellent fit to the data for males and females, $\chi^2 (df) = 60.33 (44)$, $p = .05$, CFI = .99, RMSEA [CI] = .04 [.00, .06]. The constrained model, in which pathways were held equal across sexes, provided a poorer fit, $\Delta\chi^2 (\Delta df) = 68.74 (46)$, $p = .02$. Thus, results for males and females are presented separately and Figure 4 indicates paths that differ significantly by sex.

Indirect effects. *For females*, increases in father PC were associated with increases in anxiety symptoms ($b = .30$, $p = .03$). However, changes in anxiety symptoms were not associated with any of the educational adjustment variables. Increases in both mother PC and father PC were associated with increases in depressive symptoms ($b = .33$ and $b = .34$, $p = .01$, respectively). However, changes in depressive symptoms were also not associated with the educational adjustment variables. Thus, no indirect effects occurred for females in the young adult transition group.

For males, four of the parent variables were associated with changes in depressive symptoms. Specifically, higher initial levels and increases in mother ES were associated with fewer depressive symptoms ($b = -.36$, $p = .04$ and $b = -.43$, $p = .01$, respectively). In contrast, higher initial levels and increases in mother PC were associated with greater

Table 10

Summary of Direct and Indirect Effects (Standardized Estimates) of Parent Emotional Support and Psychological Control on Adjustment Outcomes for the Adolescent Transition Group

Parent variable	Direct effects (β)	Indirect effects (β)
Mother ES		
Intercept	Occupational status (.20)	--
	Occupational satisfaction (.18)	--
	Consumer debt (.15)	--
Slope	Occupational problems (.16)	--
	Occupational status (.21)	--
	Occupational satisfaction (-.15)	--
Father ES		
Intercept	Type of educational enrolment (.13)	--
	Occupational problems (-.17)	--
Slope	Educational abilities (-.17)	--
	Occupational status (.12)	--
	Consumer debt (-.18)	--
Mother PC		
Intercept	Type of educational enrolment (-.25)	--
	Occupational problems (.15)	--
	Occupational satisfaction (.19)	--
	Occupational stress/worry (-.24)	--
Slope	Occupational problems (.11)	--

	Occupational status (.17)	--	
	--	--	Occupational stress/worry <i>through</i> anx sx slope (.05)
	--	--	Income <i>through</i> anx sx slope (-.03)
	--	--	Consumer debt <i>through</i> anx sx slope (.03)
	--	--	Financial strain <i>through</i> anx sx slope (.03)
	--	--	Financial stress/worry <i>through</i> anx sx slope (.05)
Father PC			
Intercept	Educational problems (.16)	--	
	Occupational satisfaction (-.16)	--	
	Occupational stress/worry (.16)	--	
Slope	Type of educational enrolment (.10)		Type of educational enrolment <i>through</i> depr sx slope (-.02)
	Educational abilities (-.12)		Educational abilities <i>through</i> depr sx slope (-.04)
	--		Occupational status <i>through</i> depr sx slope (-.04)
	Occupational stress/worry (-.16)		Occupational stress/worry <i>through</i> depr sx slope (.02)
	--		Income <i>through</i> depr sx slope (.02)
	Consumer debt (-.13)		Consumer debt <i>through</i> depr sx slope (-.03)

Note. Depr = depressive, anx = anxiety, sx = symptoms.

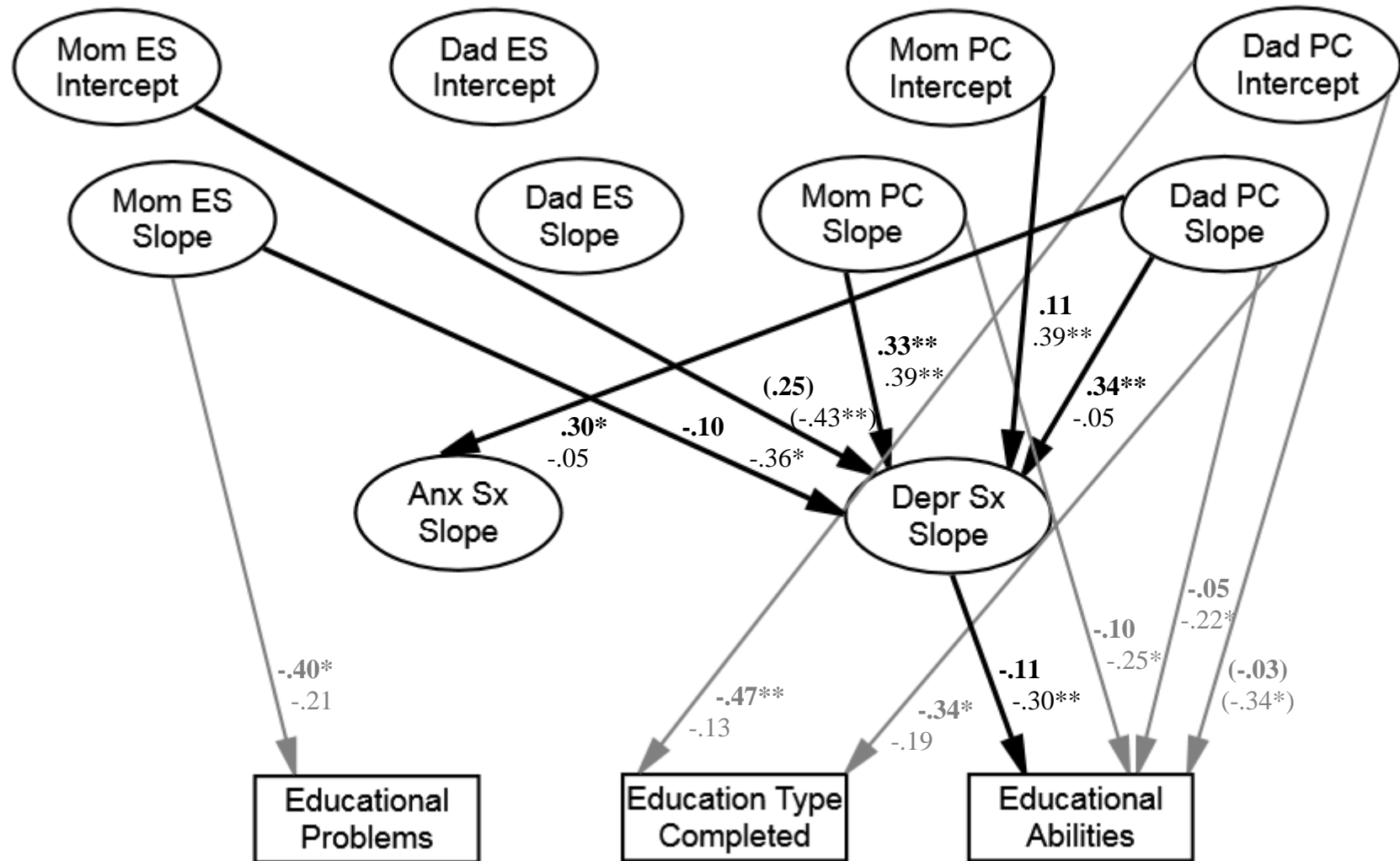


Figure 4. Educational adjustment: Direct and indirect effects in the young adult transition group. Heavy black arrows show indirect effects, and thin grey arrows show direct effects. Results for females are in boldface. Standardized coefficients appear to the right of

paths. Coefficients in parentheses indicate significant differences by sex for a given path. For clarity, non-significant paths and depressive/anxiety symptom intercept variables are not shown. Anx = anxiety, Depr = depressive, Sx = symptoms.
* $p < .05$. ** $p = .01$.

depressive symptoms ($bs = .39, p = .01$). In turn, increases in depressive symptoms were associated with lower perceptions of educational abilities ($b = -.30, p = .01$). Thus, four indirect effects occurred for males. First, higher initial levels of mother ES were associated with higher educational abilities through depressive symptoms ($b = .11$). Second, increases in mother ES were associated with higher educational abilities through depressive symptoms ($b = .13$). Third, higher initial levels of mother PC were associated with lower educational abilities through depressive symptoms ($b = -.12$). Lastly, increases in mother PC were associated with lower educational abilities through depressive symptoms ($b = -.12$).

Note that none of the parent variables were associated with changes in anxiety symptoms, nor were anxiety symptoms associated with any of the educational adjustment variables for males.

Direct effects. Accounting for indirect pathways, there were six statistically significant direct effects from the parent variables to the educational adjustment variables. *For females*, increases in mother ES were associated with fewer educational problems ($b = -.40, p = .05$). Higher initial levels and increases in father PC were associated with lower education type completed ($b = -.47$ and $b = -.34, p = .01$, respectively). *For males*, increases in mother PC were associated with lower perceived educational abilities ($b = -.25, p = .05$). In addition, higher initial levels and increases in father PC were associated with lower perceived educational abilities ($b = -.34, p = .01$ and $b = -.22, p = .05$, respectively). A summary of significant direct and indirect effects of parent ES and PC on all outcomes for the young adult transition group is provided in Table 11.

Table 11

Summary of Direct and Indirect Effects (Standardized Estimates) of Parent Emotional Support and Psychological Control on Adjustment Outcomes for the Young Adult Transition Group

Parent variable	Direct effects (β)	Indirect effects (β)
Mother ES		
Intercept	--	Educational abilities <i>through</i> depr sx slope (.11) *M
	Occupational status (-.29)	--
	Income (-.40) *M	Income <i>through</i> depr sx slope (.08) *M
	Consumer debt (.43) *F	--
	Financial stress/worry (.34) *L SES	Financial stress/worry <i>through</i> depr sx slope (-.10) *M
Slope	Educational problems (-.40) *F	--
	--	Educational abilities <i>through</i> depr sx slope (.13) *M
	--	Income <i>through</i> depr sx slope (.09) *M
	Consumer debt (.49) *F	--
	--	Financial stress/worry <i>through</i> depr sx slope (-.12) *M
Father ES		
Intercept	Income (-.41) *F	--
	Consumer debt (-.49) *F	--
	Consumer debt (-.42) *L SES	--
	--	Financial stress/worry <i>through</i> depr sx slope (.10) *L SES
	--	--
Slope	Income (-.54) *F	--
	Consumer debt (-.56) *F	--
	Consumer debt (-.48) *L SES	Financial stress/worry <i>through</i> depr sx slope (.12) *L SES
	--	--
Mother PC	--	--

Intercept	--	Educational abilities <i>through</i> depr sx slope (-.12) *M
	Occupational problems (.23)	--
	--	Occupational status <i>through</i> depr sx slope (-.04)
	--	Occupational satisfaction <i>through</i> depr sx slope (-.04)
	--	Income <i>through</i> depr sx slope (-.09) *M
	--	Financial stress/worry <i>through</i> depr sx slope (.11) *M
Slope	Educational abilities (-.25) *M	Educational abilities <i>through</i> depr sx slope (-.12) *M
	Occupational problems (.21)	--
	--	Occupational status <i>through</i> depr sx slope (-.06)
	--	Occupational satisfaction <i>through</i> depr sx slope (-.06)
	--	Income <i>through</i> depr sx slope (-.09) *M & (-.06) *H SES
	--	Consumer debt <i>through</i> anx sx slope (-.07) *L SES
	--	Financial strain <i>through</i> depr sx slope (.06) *F & (.05) *H SES
	--	Financial stress/worry <i>through</i> depr sx slope (.11) *M & (.06) *L SES
Father PC		
Intercept	Educational type completed (-.47) *F	--
	Educational abilities (-.34) *M	--
	Occupational status (.22)	--
	Consumer debt (.31) *F	--
	Financial stress/worry (.25) *H SES	--
Slope	Education type completed (-.34) *F	--
	Educational abilities (-.22) *M	--
	Occupational stress/worry (.20)	Occupational stress/worry <i>through</i> anx sx slope (.05)
	Income (-.35) *F	--
	--	Financial strain <i>through</i> depr sx slope (.06) *F
	--	Financial stress/worry <i>through</i> anx sx slope (.08) *H SES

Note. **F* indicates that effect is significant for females only; **M* indicates that effect is significant for males only; **L* SES indicates that effect is significant for lower SES group only; **H* SES indicates that effect is significant for higher SES group only. Depr = depressive, anx = anxiety, sx = symptoms.

Occupational Adjustment: Direct and Indirect Effects of Parent Emotional Support and Psychological Control

Adolescent transition group. The estimated model examining the direct and indirect effects of mother and father ES and PC on occupational adjustment in the adolescent age group is presented in Figure 5. Comparison of fully unconstrained and constrained models showed that the pathways did not significantly differ by sex, $\Delta\chi^2(\Delta df) = 67.29(56), p = .14$. Thus, the final model was estimated using combined data from males and females. This model provided an excellent fit to the data, $\chi^2(df) = 28.02(23), p = .22, CFI = 1.00, RMSEA [CI] = .03 [.00, .06]$.

Indirect effects. Increases in mother PC were associated with increases in adolescents' anxiety symptoms ($b = .20, p = .01$). In turn, increases in anxiety symptoms were associated with greater levels of occupational stress/worry ($b = .24, p = .01$). Thus, increases in mother PC were indirectly associated with more occupational stress/worry through anxiety symptoms ($b = .05$). Increases in father PC were associated with increases in depressive symptoms ($b = .12, p = .03$). In turn, increases in depressive symptoms were associated with lower occupational status ($b = -.36, p = .01$) and with greater occupational stress/worry ($b = .13, p = .04$). Thus, increases in father PC were indirectly associated with lower occupational status through depressive symptoms ($b = -.04$). In addition, increases in father PC were indirectly associated with greater occupational stress/worry through depressive symptoms ($b = .02$).

Direct effects. Accounting for indirect pathways, there were several statistically significant direct effects from the parenting variables to the occupational adjustment variables. Increases in mother ES were associated with more occupational problems ($b =$

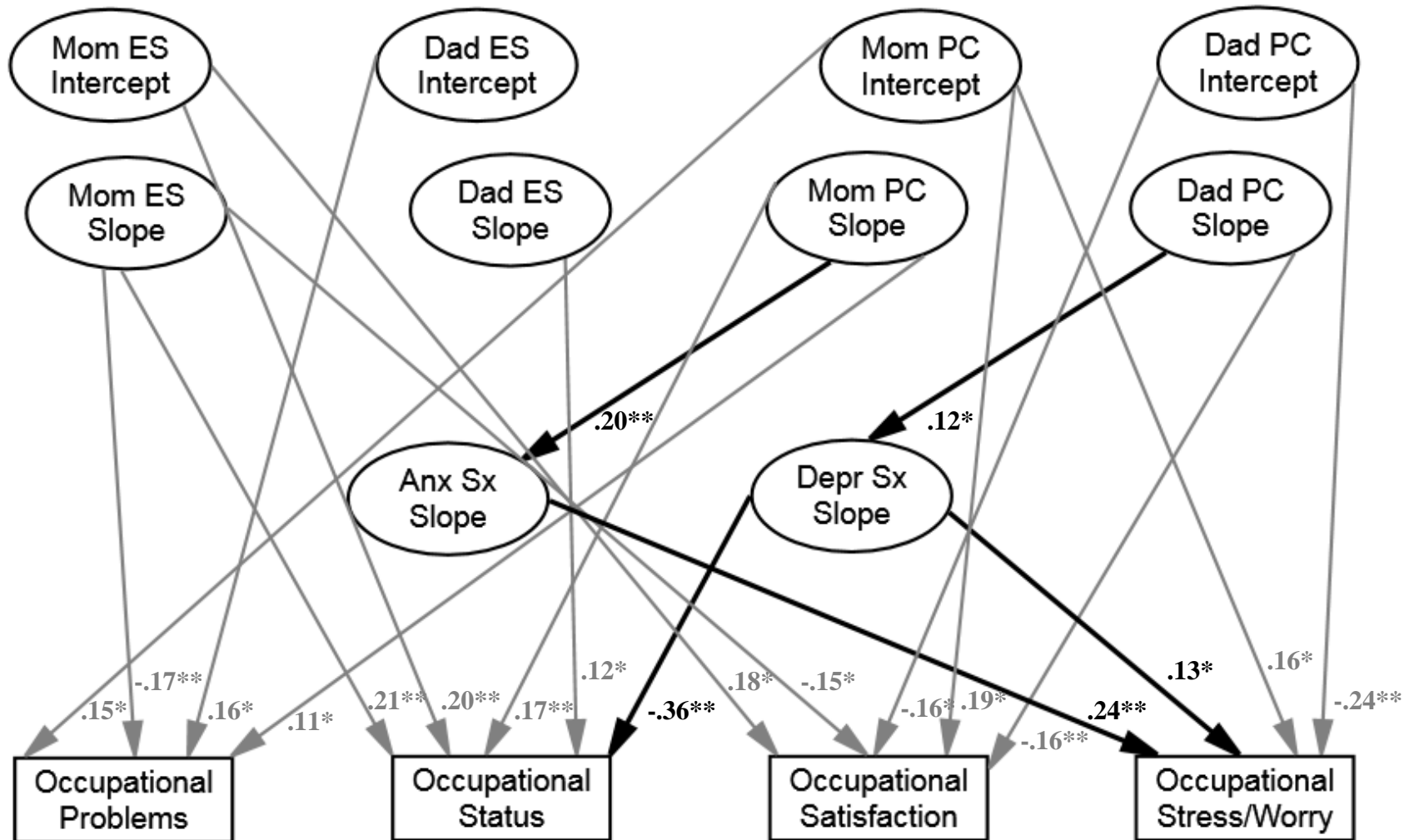


Figure 5. Occupational adjustment: Direct and indirect effects in the adolescent transition group. Heavy black arrows show indirect effects, and thin grey arrows show direct effects. Standardized coefficients appear to the right of paths. Results are based on

combined data from males and females. For clarity, non-significant paths and depressive/anxiety symptom intercept variables are not shown. ES = emotional support; PC = psychological control; Anx = anxiety, Depr = depressive, Sx = symptoms.

* $p < .05$. ** $p = .01$.

.16, $p = .02$). Similarly, higher initial levels ($b = .15, p = .01$) and increases ($b = .11, p = .02$) in mother PC were also associated with more occupational problems. In contrast, higher initial levels of father ES were associated with fewer occupational problems ($b = -.17, p = .01$).

Both higher initial levels ($b = .20, p = .01$) and increases ($b = .21, p = .01$) in mother ES were associated with higher occupational status. Increases in father ES were also associated with higher occupational status ($b = .12, p = .05$). Unexpectedly, increases in mother PC were associated with higher occupational status ($b = .17, p = .01$).

With respect to occupational satisfaction, higher initial levels of mother ES were associated with greater satisfaction ($b = .18, p = .02$), whereas increases in mother ES were associated with lower satisfaction ($b = -.15, p = .04$). Higher initial levels of mother PC were also associated with greater occupational satisfaction ($b = .19, p = .02$). In contrast, both initial levels ($b = -.16, p = .03$) and increases ($b = -.16, p = .01$) in father PC were associated with lower occupational satisfaction.

Higher initial levels of mother PC were associated with lower levels of occupational stress/worry ($b = -.24, p = .01$), whereas higher initial levels of father PC were associated with greater occupational stress/worry ($b = .16, p = .02$).

Young adult transition group. The estimated model examining the direct and indirect effects of mother and father ES and PC on occupational adjustment in the young adult age group is presented in Figure 6. Comparison of fully unconstrained and constrained models showed that the pathways did not significantly differ by sex, $\Delta\chi^2 (\Delta df) = 69.26 (56), p = .11$. Thus, the final model was estimated using combined data from

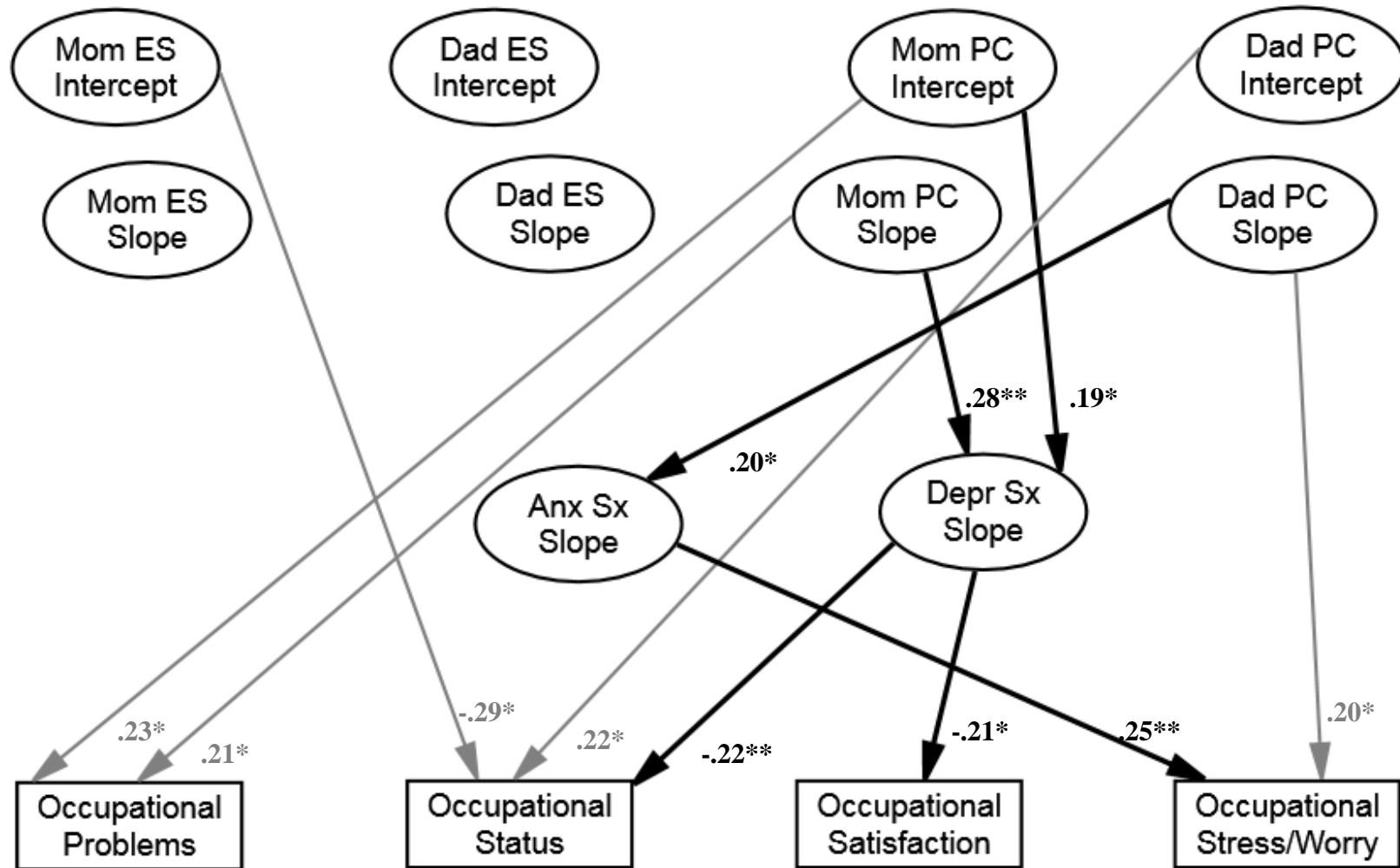


Figure 6. Occupational adjustment: Direct and indirect effects in the young adult transition group. Heavy black arrows show indirect effects, and thin grey arrows show direct effects. Standardized coefficients appear to the right of paths. Results are based on

combined data from males and females. For clarity, non-significant paths and depressive/anxiety symptom intercept variables are not shown. ES = emotional support; PC = psychological control; Anx = anxiety, Depr = depressive, Sx = symptoms.

* $p < .05$. ** $p = .01$.

males and females, and it provided an excellent fit to the data, $\chi^2(df) = 28.73(23)$, $p = .19$, CFI = 1.00, RMSEA [CI] = .03 [.00, .06].

Indirect effects. Higher initial levels and increases in mother PC were associated with increases in young adults' depressive symptoms ($b = .19$, $p = .04$ and $b = .28$, $p = .01$). In turn, increases in depressive symptoms were associated with lower occupational status ($b = -.22$, $p = .01$) and lower occupational satisfaction ($b = -.21$, $p = .01$). Thus, higher initial levels ($b = -.04$) and increases ($b = -.06$) in mother PC were indirectly associated with lower occupational status through depressive symptoms. In addition, higher initial levels ($b = -.04$) and increases ($b = -.06$) in mother PC were indirectly associated with lower occupational satisfaction through depressive symptoms. Increases in father PC were associated with increases in anxiety symptoms ($b = .20$, $p = .04$). In turn, increases in anxiety symptoms were associated with greater occupational stress/worry ($b = .25$, $p = .01$). Thus, increases in father PC were indirectly associated with greater occupational stress/worry through anxiety symptoms ($b = .05$).

Direct effects. Accounting for indirect pathways, there were five statistically significant direct effects from the parenting variables to the occupational adjustment variables. Both higher initial levels and increases in mother PC were associated with more occupational problems ($b = .23$, $p = .02$ and $b = .21$, $p = .03$). Higher initial levels of mother ES were associated with lower occupational status ($b = -.29$, $p = .03$). In contrast, higher initial levels of father PC were associated with higher occupational status ($b = .22$, $p = .02$). Lastly, increases in father PC were associated with greater occupational stress/worry ($b = .20$, $p = .01$).

Financial Adjustment: Direct and Indirect Effects of Parent Emotional Support and Psychological Control

Adolescent transition group. The estimated model examining the direct and indirect effects of mother and father ES and PC on financial adjustment variables in the adolescent age group is presented in Figure 7. Comparison of fully unconstrained and constrained models showed that the pathways did not significantly differ by sex, $\Delta\chi^2 (\Delta df) = 47.00 (56), p = .80$. Thus, the final model was estimated using combined data from males and females. This model provided an excellent fit to the data, $\chi^2 (df) = 32.61 (23), p = .09, CFI = 0.99, RMSEA [CI] = .04 [.00, .06]$.

Indirect effects. Increases in mother PC were associated with increases in anxiety symptoms ($b = .20, p = .01$). In turn, increases in anxiety symptoms were associated with lower income ($b = -.14, p = .02$), greater financial strain ($b = .15, p = .02$), greater consumer debt ($b = .13, p = .04$), and greater financial stress/worry ($b = .24, p = .01$). Increases in father PC were associated with increases in depressive symptoms ($b = .12, p = .03$). In turn, increases in depressive symptoms were associated with lower consumer debt ($b = -.21, p = .01$) and with greater income ($b = .13, p = .05$).

Thus, six indirect effects occurred in the adolescent transition group. Increases in mother PC were associated with lower income ($b = -.03$), greater consumer debt ($b = .03$), greater financial strain ($b = .03$), and greater financial stress/worry ($b = .05$) through anxiety symptoms. In contrast, increases in father PC were associated with lower consumer debt ($b = -.03$) and greater income ($b = .02$) through depressive symptoms.

Direct effects. Accounting for indirect pathways, there were three significant direct effects from the parenting variables to consumer debt only. Higher initial levels of

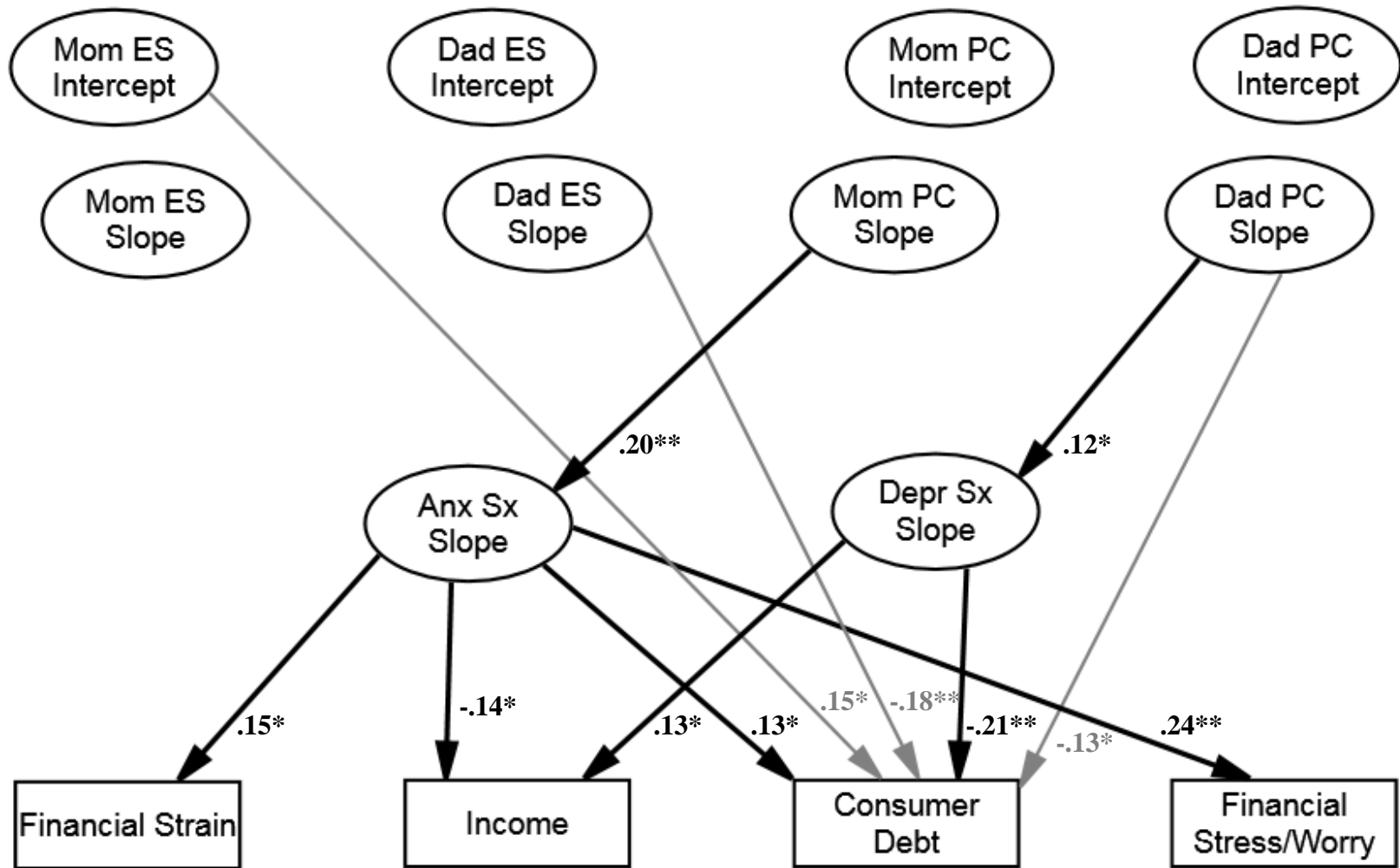


Figure 7. Financial adjustment: Direct and indirect effects in the adolescent transition group. Heavy black arrows show indirect effects, and thin grey arrows show direct effects. Standardized (β) coefficients appear to the right of paths. Results are based on

combined data from males and females. For clarity, non-significant paths and depressive/anxiety symptom intercept variables are not shown. ES = emotional support; PC = psychological control; Anx = anxiety, Depr = depressive, Sx = symptoms.

* $p < .05$. ** $p = .01$.

mother ES ($b = .15, p = .05$) were associated with greater debt. In contrast, increases in both father ES ($b = -.18, p = .01$) and father PC ($b = -.13, p = .04$) were associated with less consumer debt.

Young adult transition group. The estimated model examining the direct and indirect effects of the parenting variables on financial adjustment variables in the young adult age group is presented in Figure 8. The fully unconstrained baseline model showed that the hypothesized model provided an excellent fit to the data for males and females, $\chi^2 (df) = 61.78 (44), p = .06, CFI = .99, RMSEA [CI] = .04 [.00, .06]$. The constrained model, in which pathways were held equal across sexes, provided a poorer fit, $\Delta\chi^2 (\Delta df) = 88.54 (56), p = .01$. Thus, results for males and females are presented separately and Figure 8 indicates which paths differ significantly by sex.

Indirect effects. For females, increases in father PC were associated with increases in anxiety symptoms ($b = .30, p = .03$). However, changes in anxiety symptoms were not associated with any of the financial adjustment variables. In addition, increases in both mother PC ($b = .33, p = .01$) and father PC ($b = .34, p = .03$) were positively associated with changes in depressive symptoms in females. In turn, increases in depressive symptoms were associated with greater financial strain ($b = .19, p = .01$). Thus, two indirect effects occurred for females: Increases in both mother PC ($b = .06$) and father PC ($b = .06$) were associated with greater financial strain through depressive symptoms.

For males, higher initial levels ($b = -.36, p = .04$) and increases ($b = -.43, p = .01$) in mother ES were associated with decreases in depressive symptoms. Conversely,

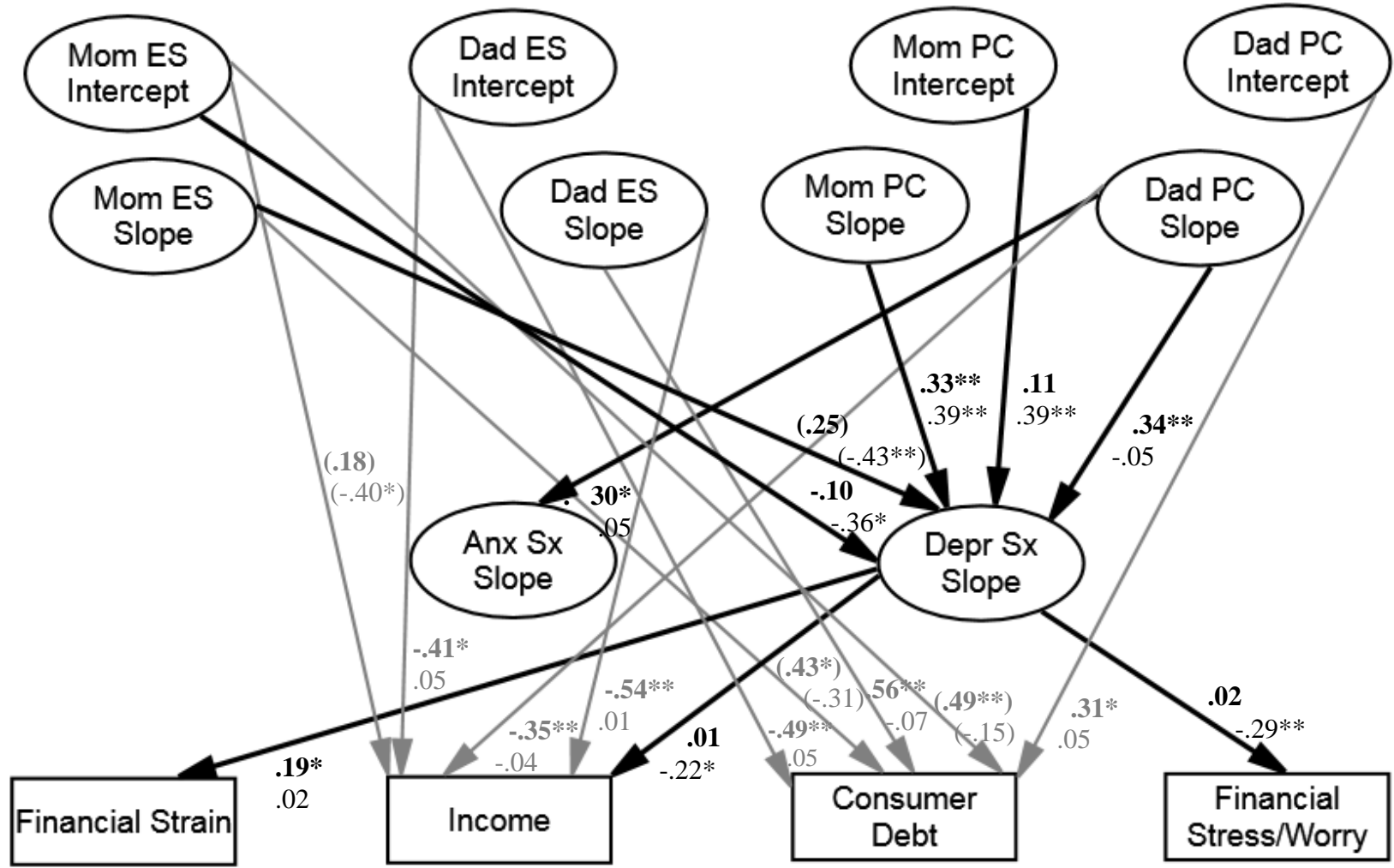


Figure 8. Financial adjustment: Direct and indirect effects in the young adult transition group. Heavy black arrows show indirect effects, and thin grey arrows show direct effects. Standardized coefficients appear to the right of paths. Results for females are in

boldface. Coefficients in parentheses indicate significant differences by sex for a given path. For clarity, non-significant paths and depressive/anxiety symptom intercept variables are not shown. ES = emotional support; PC = psychological control; Anx = anxiety, Depr = depressive, Sx = symptoms.

* $p < .05$. ** $p = .01$.

higher initial levels and increases (both $b = .39, p = .01$) in mother PC were associated with increases in depressive symptoms. In turn, increases in depressive symptoms were associated with lower income ($b = -.22, p = .02$) and greater financial stress/worry ($b = .29, p = .01$). Note that none of the parent variables were associated with changes in anxiety symptoms, nor were anxiety symptoms associated with any of the educational adjustment variables for males in the young adult transition group.

Thus, eight indirect effects occurred for males. Higher initial levels and increases in mother ES were associated with higher income ($bs = .08$ and $.09$, respectively) and lower financial stress/worry ($bs = -.10$ and $-.12$, respectively) through depressive symptoms. In addition, higher initial levels and increases in mother PC were each associated with lower income ($bs = -.09$) and greater financial stress/worry ($bs = .11$) through depressive symptoms.

Direct effects. For females, there were several significant direct effects from the parent variables to income and consumer debt. Higher initial levels of father ES ($b = -.41, p = .03$), increases in father ES ($b = -.54, p = .01$), and increases in father PC ($b = -.35, p = .01$) were all associated with lower income. In addition, higher initial levels of mother ES ($b = .43, p = .04$), increases in mother ES ($b = .49, p = .01$), and higher initial levels of father PC ($b = .31, p = .03$) were all associated with greater consumer debt. In contrast, higher initial levels of father ES ($b = -.49, p = .01$) and increases in father ES ($b = -.56, p = .01$) were associated with less consumer debt.

For males, there was only one statistically significant direct effect: Higher initial levels of mother ES were associated with lower income ($b = -.40, p = .02$).

Effects of SES

All models were examined separately by SES group. Comparison of fully unconstrained and constrained models revealed that the pathways did not significantly differ by SES, with the exception of just one model. Specifically, the financial adjustment model for the young adult transition group significantly differed by SES group. The constrained model, in which pathways were held equal across SES groups, provided a poorer fit compared to the fully unconstrained model, $\Delta\chi^2 (\Delta df) = 91.31 (56)$, $p = .01$. The fully unconstrained baseline model provided an excellent fit to the data, $\chi^2 (df) = 44.65 (36)$, $p = .15$, CFI = 1.00, RMSEA [CI] = .03 [.00, .06].

Indirect effects. *For the lower SES group*, initial levels ($b = .47$, $p = .02$) and increases ($b = .59$, $p = .01$) in father ES were associated with increases in depressive symptoms. Additionally, increases in mother PC were associated with increases in depressive symptoms ($b = .28$, $p = .04$). In turn, depression symptoms were positively associated with greater financial stress/worry ($b = .21$, $p = .02$). Finally, increases in mother PC were associated with increases in anxiety symptoms ($b = .28$, $p = .05$). In turn, increases in anxiety symptoms were associated with lower consumer debt ($b = -.25$, $p = .01$).

Thus, four indirect effects occurred for the lower SES group. Higher initial levels and increases in father ES were each associated with greater financial stress/worry through depressive symptoms ($bs = .10$ and $.12$, respectively). Increases in mother PC were also associated with greater financial stress/worry through depressive symptoms ($b = .06$). Lastly, increases in mother PC were associated with lower consumer debt through anxiety symptoms ($b = -.07$).

For the higher SES group, increases in mother PC were associated with increases in depressive symptoms ($b = .30, p = .02$). In turn, depression symptoms were associated with lower income ($b = -.20, p = .04$) and greater financial strain ($b = .18, p = .05$). Additionally, increases in father PC were associated with increases in anxiety symptoms ($b = .44, p = .01$). In turn, anxiety symptoms were associated with greater financial stress/worry ($b = .18, p = .04$). Thus, three indirect effects occurred for the higher SES group. Increases in mother PC were associated with lower income ($b = -.06$) and greater financial strain ($b = .05$) through depressive symptoms. Increases in father PC were associated with greater financial stress/worry through anxiety symptoms ($b = .08$).

Direct effects. *For the lower SES group, higher initial levels of mother ES were associated with greater financial worry/stress ($b = .34, p = .01$). Increases in father ES were associated with lower consumer debt ($b = -.48, p = .01$).*

For the higher SES group, higher initial levels of father ES were associated with lower consumer debt ($b = -.42, p = .03$). Higher initial levels of father PC were associated with more financial stress/worry ($b = .25, p = .05$).

Chapter IV: Discussion

In this chapter, I review the primary objectives of the current study and discuss the findings presented in Chapter III in the larger context of the transition to adulthood literature. Specifically, I summarize how youth in this study are doing with respect to mental health symptoms and adjustment outcomes, and compare these results to findings from previous research. Next, I characterize the changes that take place in parent-youth relationships during the transition to adulthood, followed by a discussion of how these relationship changes can affect young adult's real-world adjustment directly and indirectly through youth's depressive and anxiety symptoms. I also highlight the strengths and limitations of the current study, recommend avenues for future research, and conclude by discussing the study's main findings and their implications.

The goals of the current study were to investigate changes in the emotional quality of parent-youth relationships during the transition to adulthood, and to examine whether such changes were associated with young adults' subsequent real-world adjustment. The indirect effects of parenting behaviours on youth's adjustment outcomes *through* mental health symptoms were also examined. Specifically, I tested whether changes in parental emotional support and psychological control predicted young adults' educational, occupational, and financial outcomes directly and indirectly through changes in depressive and anxiety symptoms. The community-based sample is representative of the geographical area in which data were collected. Despite some variability, participants were primarily Caucasian, not facing serious poverty, and the majority had stable parental figures in their lives. Longitudinal data from two developmental transition groups, an *adolescent transition group* (initially ages 14 to 17) and a *young adulthood transition*

group (initially ages 18 to 21), were examined separately in order to assess patterns of change and adjustment outcomes of younger versus older youth during the broad transition to adulthood period. In addition, sex and SES group differences were examined in all analyses. Findings revealed significant changes in parent-youth relationships during the transition to adulthood, and highlight the enduring importance of parents in understanding young adults' adjustment in several age-salient domains.

Adjustment Outcomes and Mental Health: How Are Young Adults Doing?

It was commonplace for youth (73%) in this study to undertake post-secondary education in order to meet the demand for more education in today's job market. This is similar to other figures using Canadian data (approximately 80%; Shaienks & Gluszynski, 2007), but slightly lower rates in this study may reflect the tendency for about half of youth to delay entering post-secondary education for some period of time (Hango, 2011). Post-secondary completion rates (50%) were also somewhat lower than previous reports (59%; Shaienks & Gluszynski, 2009). This could be due to slight differences in the age groups studied (i.e., 24 to 27 vs. 26 to 28 years, respectively), but it may also be an artifact of the economic downturn. For example, youth may pursue lengthier academic programs (e.g., 4-year degree programs vs. 2-year college diplomas) in order to increase their competitiveness in the job market. Consistent with this possibility, 36% of young adults in the current study completed a 4-year degree or more by 2011, compared to only 25% in 2005 according to Canadian national data (Chung, 2006). Others may extend their degree completion while waiting for the economic climate to improve. Consistent with national trends few youth failed to complete high school, which would be severely limiting in today's job market (Galarneau, Morissette, &

Usalcas, 2013). Overall, reports of few problems at school and positive evaluations of academic competencies suggest mainly favourable adjustment in the educational domain.

The youth unemployment rate (13%) reported here matches national statistics for Canada and further supports the conclusion that youth employment has not improved much since the economic downturn (Bernard, 2013; LaRochelle- Côté, 2013; LaRochelle- Côté & Gilmore, 2009). It is increasingly difficult for youth to secure employment after completing their education. This is a real concern, as early career unemployment is likely to have long-lasting effects on labour market outcomes. For example, periods of unemployment may contribute to skill erosion, debt accumulation, and delayed saving and investments. Young adults were not excessively worried about their job prospects or security, but mild worry suggested they were aware of these issues. Such positive coping in the face of the challenging economic climate is likely to facilitate healthy adjustment, whereas too much worry or anxiety could actually contribute to difficulties. Also promising is that the overwhelming majority of young adults who were employed by ages 24 to 27 worked full-time, likely providing greater income and/or benefits compared to part-time positions. However, it is unknown whether these were career-track jobs and/or congruent with young adults' education levels.

Young adults enjoyed higher average incomes compared to national figures, although there was significant variability in individual earnings (Luong & Hébert, 2009). Despite this, well over half were limited in some important way(s) by their financial means. Having trouble paying for essential food, clothing, and/or rent, or failing to obtain needed health care could have serious and enduring consequences for health and well-being. The need to repay consumer debt (and likely school loans, which were not

assessed in this study) probably contributed to this financial strain. The most common type of consumer debt held was credit card debt, which often carries high interest rates and compounds quickly. Thus, many young adults are digging themselves into a hole of increased debt that is difficult to resolve. Together, these indicators suggest that a sizeable number of young adults are struggling as they attempt to establish themselves financially. This reality is not lost on youth, who reported greater stress and worry about their financial independence and monetary stress compared to occupational concerns.

With respect to mental health problems, general trends revealed that anxiety symptoms significantly decreased across assessments, which is consistent with some previous findings (Galambos et al., 2004). On average, there were no significant changes in young adults' depressive symptoms. However, there was considerable variability in both depressive and anxiety symptoms, suggesting that patterns of change in youth's mental health are diverse. For some young adults, the stresses that come along with the transition to young adulthood may spur or exacerbate mental health symptoms, whereas others may navigate this period with relative psychological health. Correlations between depressive (and to a lesser extent, anxiety) symptoms and the adjustment outcomes support previous findings that greater mental health symptoms are linked to poorer adjustment in age-salient domains (Eisenberg et al., 2007; Howard et al., 2010; Keogh et al., 2004; Salmela-Aro et al., 2008; Wickrama et al., 2012).

Parental Emotional Support and Psychological Control: Changes During the Transition to Adulthood

Emotional support. Youth reported receiving greater ES from mothers compared to fathers, consistent with past research reporting higher levels of maternal

emotional support (e.g., Colarossi & Eccles, 2003; Thornton et al., 1995). Previous studies have found adolescents and young adults report greater involvement with and disclosure to mothers, and view their mothers as more warm, open, accepting, understanding than fathers (Collins & Laursen, 2004; Nelson et al., 2011; Williams & Kelly, 2005; Youniss, & Smollar, 1985). This finding also highlights the importance of assessing maternal and paternal constructs separately during the transition to adulthood period. Nevertheless, average ratings of both maternal and paternal ES were high overall.

Despite differences in the absolute levels of mother versus father ES, youth reported increasing levels of ES from both parents over time, as hypothesized. The rate of increase in ES was similar for mothers and fathers. This mirrors the increase in parental ES during the transition to adulthood that has been reported in other studies (Aseltine & Gore, 1993; Fingerman, et al., 2009; Thornton et al., 1995) and supports the view that parent-youth relationships are characterized by increasing closeness and emotional support during this period (e.g., Arnett, 2004; Aquilino, 2006; Shulman & Ben-Artzi, 2003). According to attachment theory, important attachment figures offer a secure base from which children explore their world and to which they return for support in strange or stressful situations (Ainsworth, 1973). The transition to adulthood is often characterized as a period of flux, especially in today's economic climate. While young adults may be less likely to access parents' secure base through physical closeness, seeking emotional support may serve a similar function (Arnett, 2004; Laursen & Collins, 2009). Thus, one possibility is that young adults actually seek out greater emotional support from parents as they navigate the exciting but unsettled transition to adulthood.

The intergenerational similarity theory also explains the increase in mother and father emotional support on the basis of progressively similar life experiences and mutuality (Bengtson & Black, 1973, cited in Aquilino, 1997). As young adults take on similar occupational, financial, marital, and/or parental roles as their parents, greater commonality and understanding facilitates closer parent-youth relationships. Similarly, Arnett (2004) proposes that young adults come to see their parents as “persons and not merely as parents,” and parents experience a similar shift in their perception of young adults (p. 47). As a result, closer and more equitable relationships are gradually fostered (Arnett, 2004). It is likely that both processes (i.e., support seeking and increasing mutuality) play a role in explaining the increase in parental ES during the transition to adulthood. At the same time, it is also possible that parents themselves offer more ES to young adults as they see them navigating the unstable and potentially stressful transition to adulthood. Likewise, greater mutuality may increase young adults’ receptiveness to such support compared to adolescents.

This pattern of increasing parental ES was observed in both adolescent and young adult transition groups, showing that the process of increasing support begins before youth reach age 18. However, the youngest participants in this study did not exhibit as robust increases in parental ES, thus providing further support for the distinct increase in parent ES that occurs around the transition to adulthood period. Young women showed greater increases in father ES compared to young men. Previous research has found that adolescent girls report less ES from fathers than boys do (Colarossi & Eccles, 2003), so it is possible that the emotional quality of father-daughter relationships ‘catches up’ during young adulthood. As some authors have suggested, fathers may play key roles in more

objective (e.g., school-related matters) versus personal or relational domains (Steinberg & Silk, 2012; Yeung & Leadbeater, 2010). Perhaps daughters become more receptive to father's provision of practical support and advice as they face important educational, occupational, and financial decisions in young adulthood (Desjardins & Leadbeater, 2011; Steinberg & Silk, 2012). Findings also showed that initial ratings of mother and father ES were lower for young adults whose parents were divorced, which is consistent with national survey data showing that divorce is associated with temporarily disrupted parental relationships (Aquilino, 1994; Hetherington, 1999). Nevertheless, the longitudinal patterns of change in ES did not differ for youth from divorced families. Overall, it is clear that both mothers and fathers provide increasing levels of emotional support during the transition to adulthood, and it is important to understand the significance of such support for young adults' adjustment.

Psychological control. Of the limited past research on parent PC during the transition to adulthood, little has addressed whether there are differences between mother and father PC (e.g., Leondari & Kiosseoglou, 2002; Luyckx et al., 2007). In this study, average reports of PC did not differ for mothers and fathers and were low overall. As expected, both mother and father PC declined over time in the young adult transition group. This matches the normative developmental patterns of increasing autonomy and independence and reduced parental monitoring that begins during adolescence and continues through the transition to adulthood (Arnett, 2000; see Boykin, Allen, Stephenson, & Hare, 2009 for a review). Theoretically, decreasing parent PC also aligns with the general pattern of increasing parent ES observed in this and other studies. Furthermore, this finding extends the developmental trend for older children to

experience less parental PC than younger children into the transition to adulthood period (Barber et al., 2002). That is, participants in the young adult transition group experienced greater declines in parental PC than the adolescent transition group.

However, average decreases in mother PC were attenuated for women in the young adult transition group. This contrasts with previous cross-sectional findings that sex was unrelated to levels of parental PC in young adulthood (Leondari & Kiosseoglou, 2002). It is not clear why mother PC was stable for females in the adolescent transition group, and less rapidly declining for young women compared to young men in the young adult transition group. However, the results point to a distinctive pattern of PC in mother-daughter relationships. Research with adolescents has found that mother-daughter relationships can be uniquely intimate but also conflictual (e.g., Buchanan et al., 1990; Smetana, Metzger, Gettman, & Campione-Barr, 2006), and it is possible that when PC occurs, it is more robust in this context. Another possibility is that females may continue to be monitored more closely than males during the transition to adulthood, and greater awareness of daughters' activities may provide mothers with more opportunities to use psychologically controlling strategies (Pettit et al., 2011). Some research has also highlighted the unique role of co-rumination in mother-daughter relationships in adolescence and young adulthood, which refers to the tendency to repetitively and passively focus on symptoms or problems with another person (Calmes & Roberts, 2008; Nolen-Hoeksema, 2006; Waller & Rose, 2010). Potential associations between PC and co-rumination are currently unknown, but another possibility is that these unhelpful processes may co-occur in some mother-daughter relationships.

Interestingly, initial levels of both mother and father PC were higher for young adults compared to adolescents. This could reflect older youth's greater perceptions of parental control. That is, in the midst of the growing independence that characterizes these years, young adults may be more sensitive to perceived efforts by parents to influence their behavior, thus viewing their parents as more controlling compared to adolescents. As suggested earlier, such ratings could also reflect a true albeit temporary upsurge in parental PC at the brink of young adulthood. For example, educational, occupational, financial and other choices in these years are critical in setting the stage for young adults' futures (e.g., Chung, 2006; Shaienks & Gluszynski, 2009), so parents may amplify their attempts to influence young adults' major life decisions. Overall, however, longitudinal patterns reveal linear decreases in parental PC, with just some exceptions.

Additionally, the average decline in father PC was attenuated for young adults who lived with their fathers, which is consistent with previous findings (Leondari & Kiosseoglou, 2002). Shared accommodations offer greater knowledge of young adults' activities—as well as more frequent opportunities to interact with them—thus allowing some fathers to maintain their use of psychological control with young adults. For other fathers, continued residential or financial dependency of young adults may increase their levels of stress, negatively impacting the quality of parent-young adult interactions (Stein et al., 2011). In a similar way, the added strains of single parenting for mothers, who are often primary custodial parents, may have contributed to higher initial levels of mother PC reported by adolescents from divorced families (Aquilino, 1994). The finding that youth from higher SES families perceived lower initial levels of mother and father PC is consistent with the possibility that parental stress, including economic pressure, may

impair the emotional quality of parent-youth relationships in the transition to adulthood period.

Effects of Parental Emotional Support on Young Adults' Adjustment Outcomes

It is clear that the emotional quality of parental relationships has an important influence on young adults' educational, occupational, and financial outcomes. While there is greater variability in overall findings for the adolescent transition group—which likely reflects the greater instability of outcomes in this earlier developmental period—results are more stable for the young adult transition group. Several findings are consistent with previous research, but other results reveal complexity in the associations between parental ES and PC and young adults' adjustment outcomes, highlighting the need for a more nuanced understanding of parent-young adult relational processes.

Direct effects of parental ES. Some findings provide support for the direct link between greater parental ES and better youth adjustment as reported in past research (e.g., Fass & Tubman, 2002; Murphy et al., 2010; Schultheiss et al., 2001). For young adult women, increases in mother ES protected against experiencing problems at school, and increases in father ES protected against increasing consumer debt. Young women who enjoy more emotionally supportive relationships with their parents may be less likely to engage in behaviours that lead to academic or financial difficulties. For example, they may be more likely to go to their parents for emotional support, reassurance, or practical advice when difficulties arise. In turn, high quality ES that is responsive to young women's needs may be helpful in guiding them to mitigate academic or financial problems. Conversely, those who perceive their parents as emotionally unsupportive are less likely to seek out parental assistance when struggling, possibly

contributing to cascading problems such as failing a course or compounding debt.

Though women may seek support from other sources (e.g., friends or romantic partners), parents' life experiences and intimate knowledge of their daughters may make parental ES especially salient. It is not clear why changes in mother and father ES during the transition to adulthood were directly linked to young women's (but not young men's) academic and financial outcomes. However, women generally have a greater relational orientation than men, which may drive daughters to maintain closer emotional ties to their families during young adulthood (Nolen-Hoeksema, 2006). As a consequence, young women may be more affected by the ES provided by mothers and fathers.

Other direct effects of emotional support were unexpected, however. In some instances, greater mother and father ES were associated with *poorer* young adult adjustment. Specifically, young adults with high levels of mother ES at the initial assessment had lower occupational status. Parental ES was also associated with young adults' financial outcomes: High initial mother ES was associated with lower income for young women (but not young men), whereas high initial father ES was associated with lower income for young women (but not young men). High initial levels and increases in mother and father ES were both associated with greater debt for women (but not men).

It is unclear why high levels and increases in parent ES would be directly associated with poorer adjustment, primarily in the financial domain. One possibility is that greater ES was elicited by—or offered to—youth who were struggling (Aquilino, 2006; Fingerman et al., 2009). That is, more parental ES may have been provided to youth who were already experiencing financial difficulties such as taking on debt.

However, ES appears to be an ineffective—and possibly troublesome—strategy for

mitigating young adults' financial problems. The provision of ES might not meet young adults' perceived needs for financial assistance. Rather, more direct financial advice or the provision of monetary support may be more critical in directly affecting young adults' financial outcomes. More generally, it is also possible that drawing upon increasing levels of parental ES during the transition to adulthood may be problematic under certain conditions. For example, young adults who seek out greater parental ES may be less likely to have or to seek out support from other sources. Furthermore, it is also possible that some young adults may view their receipt of high parental ES as non-normative, and thus consider themselves as more dependent and less competent than others their age (Fingerman et al., 2012). Finally, there were unique (negative) effects of mother and father ES on young men's and women's incomes, respectively. These sex differences could reflect patterns whereby (1) young women experience steeper increases in father ES than young men (possibly making father ES more salient for females' adjustment outcomes), and (2) young men report more emotionally close relationships with mothers compared to fathers (Collins & Laursen, 2004; Williams & Kelly, 2005; Youniss, & Smollar, 1985).

Together, results suggest that the nature and function of ES may vary in important ways. In the current study, perceptions of general ES were assessed, rather than ES provided in response to specific issues (e.g., finances) or experiences. Further, it is not known whether or how youth made use of the ES they received, and whether this differed based on the topic discussed. For example, in some instances the provision of ES may also involve unwanted or unhelpful problem-solving, or even aspects of co-rumination or excessive discussion and speculation about problems that focuses on negative feelings

(Calmes & Roberts, 2008; Waller & Rose, 2010). Future research that disentangles the complex forms and functions of ES during the transition to adulthood is needed.

Indirect effects of parental ES. In addition to these direct associations, parental ES was indirectly associated with some adjustment outcomes through young adults' depressive symptoms. However, there were no significant indirect effects of ES through mental health symptoms in the adolescent transition group, which emphasizes the salient role of individual differences in mental health symptoms in young adulthood. Findings are consistent with extensive research linking parental ES to depressive (but not anxiety) symptoms (Aseltine & Gore, 1993; Colarossi & Eccles, 2003; Hefner & Eisenberg, 2009; Levitt et al., 2007; Pettit et al., 2010). Emotional support makes youth feel understood, supported, and interpersonally connected, all of which are important ingredients in alleviating depressive symptoms. For example, one empirically-supported treatment for depressed youth addresses symptoms by improving relationships (i.e., interpersonal therapy; Mufson, Dorta, Moreau, & Weissman, 2011). Parental ES can be an important protective factor against depressive symptoms during the transition to adulthood, but it does not diminish anxiety symptoms for youth struggling with worries and/or fears.

Furthermore, the positive effects of ES are not ubiquitous: Only high initial levels and increases in *mother* ES were associated with fewer depressive symptoms for young *men*. As noted, males report greater emotional closeness with mothers compared to fathers; however, they also report less emotional closeness with mothers than females do (Collins & Laursen, 2004; Williams & Kelly, 2005; Youniss, & Smollar, 1985). While young men may have the potential to grow more distant from parents as they establish greater independence and adult roles, those who maintain close emotional ties to their

mothers and perceive them as emotionally supportive experience fewer depressive symptoms. Thus, when high levels and increases in maternal ES do occur for men, they appear to be uniquely protective. In turn, these young men enjoyed enhanced adjustment, including more positive evaluations of their abilities, less stress and worry about finances, and higher incomes. While the absence of depressive symptoms does not necessarily imply psychological well-being, having fewer depressive symptoms does appear to confer some psychological advantage, helping young men to hold healthier and more positive evaluations of themselves and their financial situations. Not being unduly burdened by depressive symptoms may have ultimately helped these males establish higher incomes.

The indirect effects of father ES were very different. In the context of low SES, male and female young adults with high or increasing father ES experienced increasing depressive symptoms, which in turn fuelled greater financial stress and worry. This could be due to several reasons. Perhaps emotional forms of support (e.g., vs. monetary assistance) are all these fathers can offer given limited financial means. However, youth may not view such support as responsive in the face of their own financial concerns. Moreover, low SES fathers may try to overcompensate for this deficit through the provision of greater ES, which could explain the pattern of increasing paternal ES in low SES families. Compared to mothers, fathers may be especially influenced and pressured by stereotypical expectations for them to provide financial resources for their families. Another possibility is that young adults and fathers struggle—and perhaps ruminate—about their financial concerns together as their life experiences and financial responsibilities become increasingly similar. Co-rumination as an explanation for the

sometimes detrimental effects of parental ES has been raised in past research (Desjardins & Leadbeater, 2011). That is, in some situations the provision of ES may incorporate unhelpful elements of excessive and repeated negative discussions, which could then fuel youth's depressive symptoms (Waller & Rose, 2010). Finally, young adults may not perceive ES from lower SES fathers as helpful, especially in the context of the economic downturn. For example, they may view them as unreliable sources of financial information, thus diminishing the perceived quality of the ES fathers provide and possibly contributing to feelings of helplessness, hopelessness, or other depressive symptoms. Through any of these avenues, high father ES may contribute to greater depressive symptoms in young adults from low SES families, in turn diminishing their ability to cope effectively and spurring more stress and uncertainty regarding their financial futures.

Effects of Parental Psychological Control on Young Adults' Adjustment Outcomes

Direct effects of parental PC. The effects of parental PC on adjustment outcomes in the young adult transition group were consistently negative, contributing to a growing literature showing that PC is associated with poor adjustment well into young adulthood (Leondari & Kiosseoglou, 2002; Luyckx et al., 2007). Psychological control is likely to be especially detrimental during the transition to young adulthood period, as the demand for youth to establish themselves in salient domains increases. Mother and father PC were negatively associated with a wide range of young adults' adjustment outcomes, including lower perceived abilities, lower educational and occupational attainment, more problems at work and more worries about work, lower income, and greater levels of debt. Psychologically controlling parents send a message to young adults that they are

incapable of making effective choices independently. Furthermore, any attempts to do so will have negative implications for their relationships with parents, such as parental withdrawal or hostility. As a result, young adults' own psychological needs and contributions are undermined, thus stifling their perceived competence, self-esteem, and autonomy development, and fostering overly negative self-perceptions (Barber & Harmon, 2002; Barber et al., 2002; Luyckx et al., 2007). Feeling inadequate, young adults are likely to have difficulty pushing forward to achieve salient developmental milestones, quickly falling behind peers who are not subjected to the same form of parental control. Thus, young adults with highly controlling parents are in a catch-22: They can submit to parents' psychological control at the expense of autonomy, mastery, and personal growth, or they can resist parental control, fueling feelings of guilt and risking the potential loss of their relationships with parents. Anecdotally, this is not an uncommon presenting problem in clinical settings such as university-based counseling centres. For example, I have worked with several young adults in clinical practice who have reported constantly feeling as though they are disappointing their overly controlling parents, which has contributed to overly negative self-perceptions and related academic and workplace difficulties. In more than one instance, these individuals are held back by fears of the ultimate withdrawal—that is, that their parents will 'disown' them should they choose to go against parents' demands.

There was only one exception to this pattern highlighting the harmful consequences of parental PC in the young adult transition group: High initial levels of father PC were associated with greater occupational status for young women and men. While this is only one of several findings, results from the adolescent transition group

revealed several similar instances in which initial levels and increases in mother and father PC were associated with *better* youth adjustment. It is possible that these results reflect relative instability of outcomes in the younger age group. However, they also raise the possibility that parental PC may sometimes guide youth's behavior in adaptive directions before becoming overwhelmingly detrimental in young adulthood.

Recent research has identified two unique expressions of PC: one that focuses on issues of interpersonal closeness, and one that focuses on issues of achievement and perfectionism (i.e., achievement-oriented psychological control; Soenens, Vansteenkiste, & Luyten, 2010). In the latter type of PC, the provision of parental love and acceptance are conditional upon meeting parents' standards for achievement, and research has linked parents' use of achievement-oriented PC to a perfectionistic and competence-focused orientation in their offspring (Elliot & Thrash, 2004; Kins & Beyers, 2012; Soenens et al., 2010). Thus, it is possible that some parents who use psychologically controlling strategies in general may also use achievement-oriented PC specifically. In turn, youth's competence-focused orientation may drive more achievement-oriented behaviour, thus explaining some of the links between greater PC and better educational, occupational, and financial adjustment in the younger transition group. That is, some adolescents or young adults may make choices—such as whether to complete high school or what type of post-secondary schooling to attend—to appease overly controlling and achievement-oriented parents. However, as demands for greater competence and personal autonomy increase in the broader ecological context, the negative effects of following parents' directives take a toll on young adults' sense of self and healthy development. Indeed, youth whose parents demonstrate more achievement-oriented PC have been found to be

more self-critical and to form less collaborative and close relationships with others (Kins & Beyers, 2012; Soenens et al., 2010). Ultimately, young adults experiencing high parental PC have greater difficulty adjusting in occupational and financial domains.

Indirect effects of parental PC. Depressive symptoms help explain some of the direct associations between parental PC and young adults' adjustment outcomes, and reveal even more significant indirect associations. That is, parental PC was also associated with several outcomes through young adults' depressive symptoms. High initial levels and increases in mother PC played a prominent role. Relative to fathers, mothers tend to be more involved with their children and tend to interact in more similar ways with their sons and daughters (Fagot, 1995; Laursen & Collins, 2009). Consistent with past research, mother PC was associated with greater depressive symptoms in male and female young adults (Pettit & Laird, 2002; Schleider et al., 2014). As previously discussed, parental PC places primary importance on parents' own needs and devalues young adults' thoughts and feelings. For example, having a mother who may be hostile or who threatens to withdraw love if her expectations are not met pressures young adults to overly focus on parental needs—to the neglect of their own. A mother who tries to change how her young adult child thinks or feel about things invalidates independent contributions. This pattern thus undermines young adults' thoughts and feelings, contributing to a cluster of depressive symptoms such as feeling unimportant, ineffective, and unhappy, as well as a diminished ability to derive pleasure, satisfaction, or mastery in life.

In turn, such symptoms were associated with a range of young adults' adjustment outcomes. Some of these were psychologically-based. For example, mother PC was

associated with young men's lower perceived educational abilities through depressive symptoms. This is consistent with evidence-based cognitive models showing that depressive symptoms are frequently accompanied by negative views about the self, such as feeling incompetent (Beck, 2011). Young adults who experience mother PC and feel increasingly depressed may magnify negative aspects of situations (e.g., 'An average grade proves I'm inadequate') and discount positive aspects or experiences (e.g., 'I only performed well because the test was easy and everyone did well'). Mother PC was associated with lower occupational satisfaction through depressive symptoms, which may also reflect negative cognitive biases associated with depression. For example, more depressed young adults may engage in all-or-nothing thinking (e.g., 'If work is not entirely positive, it is dissatisfying'), emotional reasoning (e.g., 'I feel depressed or down so work must not be satisfying), or they may discount positive aspects of their jobs (Beck, 2011). Finally, males who experienced greater mother PC and depressive symptoms reported greater financial stress/worry. Negative views about the self (e.g., 'I'm not capable'), about the world (e.g., 'It's impossible to get ahead'), and a tendency to catastrophize (e.g., 'I'll never be able to support myself') may fuel worries about the future.

Elevated depressive symptoms may result in true impairments in occupational and financial functioning (American Psychiatric Association, 1994). Indeed, increasing mother PC was also associated with several more behaviourally oriented outcomes through depressive symptoms, including lower occupational status, lower income, and greater financial strain. Symptoms such as fatigue, worthlessness, and hopelessness could contribute to difficulty performing at work, as well as to lower motivation or goals

for the future (Ruthig et al., 2009). In turn, such symptoms may lead to a greater likelihood of being unemployed or employed on a part-time (as opposed to full-time) basis. This finding is in line with research showing that depressive symptoms are associated with career path uncertainty, occupational instability, and negative cognitions about work and one's own competence at work (Rottinghaus et al., 2009; Schuafeli et al., 2002; Wickrama et al., 2012). Ultimately, increasing depressive symptoms may lead to lower income and more financial strain, which is consistent with past research (Salmela-Aro et al., 2008). Compared to adolescents, young adults are more likely to have higher expenses (e.g., rent, car payments), and it may not be until this level of financial involvement is reached that depressive symptoms take a toll on young adults' net worth, ability to meet financial responsibilities, and capacity to pay for medical care.

Other indirect effects of mother PC differed by SES. Even though mother PC was associated with increasing depressive symptoms in young adults from lower and higher SES, depressive symptoms were in turn linked to greater financial stress and worry in the context of lower SES only. Young adults from lower (vs. higher) SES families may have more reasons to be worried about their financial futures. They are like to have fewer familial or other resources (e.g., financial, residential, or material support; access to high quality mental health care) to buffer some of the effects of depressive symptoms, such as cognitive biases or impairments in functioning that can intensify financial stress and worry. On the other hand, increasing mother PC and depressive symptoms were in turn linked to lower income and more financial strain in the context of higher SES only. One possibility is that higher SES youth expect ongoing financial assistance from their parents. As young adults begin to make more autonomous decisions that may or may not

live up to mothers' standards or meet their needs, some well-off but psychologically controlling mothers could withhold financial support from young adults. Perhaps higher SES young adults are less prepared to become financially independent than those from lower SES. This could result in greater difficulty establishing themselves financially, especially in the current economic climate. Detrimental effects of mother PC through depressive symptoms are thus apparent in young adults from both higher and lower SES, but different adjustment outcomes are affected. It is interesting but somewhat fitting that SES was only relevant to understanding young adults' financial outcomes.

To a lesser extent, changes in father PC also influenced young adults' adjustment outcomes through mental health symptoms. Young women with increasing father PC experienced increasing depressive symptoms and greater financial strain. As noted previously, father-youth relationships are generally less emotionally close than mother-youth relationships, and some evidence shows this is especially pronounced in father-daughter dyads (Colarossi & Eccles, 2003; Larson & Richards, 1994; Youniss & Smollar, 1985). Despite a pattern of increasing father ES over time, young women reported significantly lower father ES than males at the final assessment ($F = 4.02, p = .05$). Furthermore, opportunities to engage in recreational and instrumental interactions—which are more characteristic of father compared to mother involvement—may decrease as females move into more adult-like work roles, relationships, and residential arrangements (Collins & Russell, 1991). Perhaps father PC is particularly harmful for young women within the context of less paternal ES and involvement to buffer its effects. Another possibility is that psychologically controlling fathers provide less financial or

other forms of support to their daughters, ultimately impairing these young women's financial functioning.

Father PC also contributed to greater occupational and financial stress/worry through anxiety symptoms. Little past research has linked PC to anxiety symptoms specifically. However, it is understandable how young adults who feel incompetent and insecure as a result of parental PC may experience symptoms of anxiety. For example, young adults who experience high levels of father PC may become overly fearful about their ability to do things competently, and to ultimately succeed. This could fuel heightened stress and worry about performing adequately at work, or about the ability to find or maintain successful employment. For higher SES youth, father PC was also associated with greater financial stress/worry through anxiety symptoms. Having a psychologically controlling father may make higher SES youth fearful of their parents' unwillingness to support them financially—and consequently their own ability to meet their financial needs.

It is worth noting that indirect effects of parental PC on young adults' adjustment outcomes through anxiety symptoms were more prominent in the adolescent transition group, with greater parental PC predicting greater financial strain, more financial stress/worry, more debt, and lower income. It may be that anxiety matters most in affecting early job prospects (e.g., anxious youth may delay seeking out employment, or anxiety may hinder the ability to obtain initial employment), but at later ages, depressive symptoms may play a relatively greater role in impairing occupational and financial functioning. Indeed, some research has shown that shy young adults have lower levels of self-esteem, career-related identities, and less developed career planning and exploration

attitudes compared to non-shy peers, which could in turn have negative financial implications (Barry, Nelson, & Christofferson, 2013; Hamer & Bruch, 1997; Nelson, Padilla-Walker, Badger, Barry, Carroll, & Madsen, 2008). Thus, while depressive symptoms are most salient at later ages, anxiety may play an important role earlier in the transition to young adulthood.

Limitations and Future Directions

It is important to recognize that this study focused on the experiences of primarily Caucasian youth during the transition to adulthood in Canada. There were not enough data to uniquely examine the experiences of Aboriginal, Asian, or other minority groups. Furthermore, the majority of youth had stable parental figures in their lives, did not face serious poverty, and generally thrived in terms of their educational, occupational, and financial outcomes. Thus, findings may not generalize to more diverse cultural, geographic, and socioeconomic groups. For example, characteristics of parent-youth relationships, as well as the meaning and/or influence of these, may differ across cultures. Furthermore, data were restricted to a specific historical time period. Canada experienced an economic downturn beginning in 2008 that likely exacerbated the difficulties young adults faced as they tried to establish themselves in occupational and financial domains. Rather than *choosing* to pursue a prolonged transition to adulthood, these young adults faced real social and economic conditions that made it more challenging to achieve adult independence (Côté & Bynner, 2008).

As noted, general perceptions of parent ES and PC were assessed, rather than support or control given in relation to educational, occupational, or financial domains specifically. Research into the ways parents and youth interact when discussing these

topics during the transition to adulthood is needed to identify strategies for maximizing the positive effects of ES and minimizing the negative effects of PC. Furthermore, more precise measurement of ES and PC constructs would likely clarify some of the unexpected findings whereby greater ES predicted *poorer* adjustment and greater PC predicted *better* adjustment in young adulthood. Specifically, future research differentiating between more relationally-based versus achievement-oriented PC, and the relative effects of these on adjustment outcomes, would be illuminating (Kins & Beyers, 2012; Soenens et al., 2010). Assessment of other types of parent support (e.g., instrumental, financial, informational) and how these interact with emotional support would also be informative, as little is known about the interrelations among the various types of support—and their relative effects on young adults’ adjustment (see Fingerman et al., 2009, for an exception). The mixed associations between parent ES and PC and young adults’ adjustment in the present study may also reflect other unmeasured aspects of the quality of parent-youth relationships. For example, factors such as parents’ own mental health symptoms may impact the quality of parenting. Note also that this study focused exclusively on the quality of relationships with parent figures. Future research could broaden the understanding of ES and PC by examining these processes in other key relationships during the transition to adulthood, such as romantic relationships (Arnett, 2000).

Many of the associations between parent ES and PC and young adults’ adjustment could not be fully or partially explained by youth’s mental health symptoms. Thus, there are likely other unexplored mechanisms that would help clarify the current findings, including cognitive, behavioural, and/or affective processes. For example, research with

children and adolescents has linked parent PC to externalizing problems, and it is possible that increases in PC during the transition to adulthood may also contribute to behaviours such as delinquency, aggression, and/or substance misuse, which in turn could have negative implications for young adults' adjustment (see Barber & Harmon, 2002, for a review). It is also possible that some of the outcome variables in the current study function as mechanisms by which the emotional quality of parent-youth relationships are related to other adjustment outcomes. For example, the identified links between increases in parent PC and lower perceived educational abilities may in turn affect young adult's educational attainment. Similarly, it is possible that the associations between increases in mother PC and greater problems in the workplace may in turn affect young adults' employment status (i.e., employed vs. unemployed; full- vs. part-time employment). Across domains, associations between parent ES and PC and youth's educational adjustment may in turn affect occupational and financial outcomes in young adulthood. However, it was not possible to examine such hypotheses longitudinally because the educational, occupational, and financial outcomes were only measured at the final assessment. Additionally, changes in educational, occupational, and financial adjustment were not assessed and thus pre-existing differences in these domains were unaccounted for. Difficulty adjusting in the educational, occupational, and financial domains may reflect continuity of earlier problems in these or other domains.

As suggested earlier, it is possible that youth with more mental health symptoms may elicit or seek out greater parental ES. Similarly, depressive or anxiety symptoms could elicit greater parental PC in some families. While this study focused on the analysis of directional pathways flowing from parent ES and PC to mental health

symptoms based on theory and the literature reviewed, it is also possible that depressive and anxiety symptoms could influence the emotional quality of parent-youth relationships (and, in turn, real-world outcomes). Thus, future research could examine the opposite direction (or bi-directionality) of these associations. Additionally, all data collected in this study were self-reports. As such, mono-method variance may have enhanced the associations between parent ES and PC, mental health symptoms, and educational, occupational, and financial outcomes. For example, perceptions of parental ES and PC may vary depending on the current relationship status with parents. Similarly, negative cognitive biases may lead those with elevated depressive symptoms to report lower parental ES or poorer adjustment in educational, occupational, or financial domains. Future research should consider using multi-informant approaches, such as incorporating both parent and youth perspectives on relationship quality.

Conclusions

Despite these limitations, this research contributes to the literature highlighting the continued importance of parent-youth relationships during the transition to adulthood. Longitudinal analysis provided a compelling depiction of the patterns of change in parental ES and PC, as well as their associations with changes in mental health symptoms and real-world outcomes in young adulthood. Examination of both adolescent and young adult transition groups further contributed to a comprehensive understanding of relationship changes and associations during these transitional years. This study has several additional strengths, including independent assessments of the quality of relationships with mothers and fathers, examination of traditionally positive and negative aspects of parent-youth relationships (i.e., ES and PC), assessment of depressive and

anxiety symptoms, and an analytic approach that permitted investigation of the simultaneous and thus relative influences of these. The inclusion of multiple indicators of educational, occupational, and financial adjustment also permitted a nuanced examination of young adults' adjustment outcomes in these domains. Finally, this study expands on previous research by uncovering some of the underlying mechanisms (i.e., depressive and anxiety symptoms) that link the quality of parent-youth relationships to young adults' real-world outcomes.

Each educational, occupational, and financial outcome assessed in this study was associated with the emotional quality of parent relationships either directly or indirectly, demonstrating the power of parental influences. The direct effects of mother and father ES were mixed, with increasing parental ES associated with some positive but also several negative adjustment outcomes across domains for young women and men. Results suggest that young men may benefit from increasing levels of maternal ES during the transition to adulthood, which can contribute to fewer depressive symptoms and in turn better self-perceptions and financial outcomes. Thus, mothers should be aware of the potential benefits of their continued ES of their sons throughout young adulthood. Conversely, father ES contributed to greater depressive symptoms and more financial stress and worry in the context of lower SES families. More research is needed to determine whether general father ES—as opposed to ES provided in response to young adults' financial problems specifically—is truly detrimental. Further research could also clarify whether young adults who experience depressive symptoms may prompt greater paternal ES. Nevertheless, these and other results suggest that both mother and father ES may have some problematic qualities during the transition to young adulthood. Greater

ES may be provided to youth who are already struggling, but it is also possible that ES enables or exacerbates some young adults' mental health problems and real-world difficulties. Qualitative research is needed to disentangle the forms and functions of ES to inform appropriate interventions. However, parents should be aware that the provision high or increasing ES in young adulthood is not always helpful. Thus, caution is warranted.

Past research has primarily examined parent ES and PC independently (i.e., dimensional approach) or in an aggregated fashion (i.e., typological approach), whereas this study simultaneously modeled these constructs (Barber et al., 2005; Bean, Barber, & Crane, 2006). Considered together, results point to the salient—and overwhelmingly problematic—effects of parental PC during the transition to adulthood. Parental PC is consistently detrimental to young adults' mental health (promoting depressive and sometimes anxiety symptoms) and functioning in age-salient domains. These findings clearly advise against the use of psychologically controlling parenting strategies in young adulthood. Some parents may be overwhelmed by the critical decisions youth make during the transition to adulthood. While this study did not investigate parents' intentions in using PC, nor their possible use of more achievement-oriented PC, it is nevertheless evident that PC is harmful to young adults as they navigate the challenges and opportunities presented by the transition to adulthood period.

Evidence-based education is needed to encourage parents to refrain from using psychologically controlling strategies to prevent accumulating mental health and other problems in young adulthood. One potential avenue is the provision of education and/or training during parent orientation events when youth enter post-secondary schooling.

Training can caution mothers and fathers against the use of PC while emphasizing the importance of building young adults' self-esteem during this critical period. Similar interventions for parents in high school may help mitigate the detrimental effects of parental PC before adolescents transition to young adulthood (and may also reach a larger pool of parents). Furthermore, high school-based curricula could extend their focus beyond peer and romantic relationships to include teaching youth to recognize problematic parental relationships and to seek support from healthier sources, such as high-school or university-based counseling centres. Such supports can help alleviate youth's depressive and anxiety symptoms and build up their self-esteem. Research into how counselors and other mental health professionals can help young adults successfully negotiate problematic relationships with parents during the transition to adulthood would be valuable. It is also clear that young adults who experience elevated depressive or anxiety symptoms—regardless of the reasons why—are more likely than their peers to struggle in school, at work, and financially. Thus, campaigns and other efforts that aim to improve youth mental health can have extensive real-world consequences and should be supported.

References

- Ainsworth, M. D. S. (1982). Attachment: Retrospect and prospect. In C. M. Parkes & J. Stevenson-Hinde (Eds.), *The place of attachments in human behavior*. New York: Basic Books.
- Albrecht, A. K., Galambos, N. L., & Jansson, S. M. (2007). Adolescents' internalizing and aggressive behaviors and perceptions of parents' psychological control: A panel study examining direction of effects. *Journal of Youth and Adolescence*, *36*(5), 673-684.
- Amato, P. R. (2000). The consequences of divorce for adults and children. *Journal of Marriage and the Family*, *62*(4), 1269-1287.
- Amato, P. R., & Keith, B. (1991). Separation from a parent during childhood and adult socioeconomic attainment. *Social Forces*, *70*(1), 187-206.
- American Psychiatric Association (2000). *Diagnostic and statistical manual of mental disorders* (4th ed., text rev.). Washington, DC: Author.
- American Psychiatric Association (2008). Stress in America Survey. Retrieved from <http://www.apa.org/news/press/releases/2008/10/stress-in-america.pdf>
- Aquilino, W.S. (1994). Impact of childhood family disruption on young adults' relationships with parents. *Journal of Marriage and the Family*, *56*, 295-313.
- Aquilino, W. S. (1997). From adolescent to young adult: A prospective study of parent-child relations during the transition to adulthood. *Journal of Marriage and the Family*, *59*(3), 670-686. doi:10.2307/353953
- Aquilino, W. S. (2006). Family relationships and support systems in emerging adulthood. In J. J. Arnett, & J. L. Tanner (Eds.), *Emerging adults in America: Coming of age in the 21st century*. (pp. 193-217). Washington, DC US: American Psychological Association. doi:10.1037/11381-008
- Arbuckle, J. L. (2012). IBM® SPSS® AMOS™ 21 User's Guide. Chicago: SPSS. IBM Corp.
- Arnett, J. J. (1997). Young people's conceptions of the transition to adulthood. *Youth & Society*, *29*(1), 3-23. doi:10.1177/0044118X97029001001
- Arnett, J. J. (2000). Emerging adulthood: A theory of development from the late teens through the twenties. *American Psychologist*, *55*(5), 469-480. doi:10.1037/0003-066X.55.5.469

- Arnett, J. J. (2004). *Emerging adulthood: The winding road from the late teens through the twenties*. New York, NY US: Oxford University Press.
- Arnett, J. J. (2007). Emerging adulthood: What is it, and what is it good for? *Child Development Perspectives*, 1(2), 68-73. doi:10.1111/j.1750-8606.2007.00016.x
- Aseltine, R. H., & Gore, S. (1993). Mental health and social adaptation following the transition from high school. *Journal of Research on Adolescence*, 3(3), 247-270.
- Barber, B. K. (1996). Parental psychological control: Revisiting a neglected construct. *Child Development*, 67(6), 3296-3319. doi:10.2307/1131780
- Barber, B. K., Bean, R. L., & Erickson, L. D. (2002). Expanding the study and understanding of psychological control. In B. K. Barber (Ed.), *Intrusive parenting: How psychological control affects children and adolescents* (pp. 263-289). Washington, DC, US: American Psychological Association.
- Barber, B. K., & Harmon, E. L. (2002). Violating the self: Parental psychological control of children and adolescents. In B. K. Barber (Ed.), *Intrusive parenting: How psychological control affects children and adolescents*. (pp. 15-52). Washington, DC US: American Psychological Association. doi:10.1037/10422-002
- Barber, B. K., Stolz, H. E., Olsen, J. A., Collins, W. A., & Burchinal, M. (2005). Parental support, psychological control, and behavioral control: Assessing relevance across time, culture, and method. *Monographs of the Society for Research in Child Development*, 70(4), i-147.
- Baron, R. M., & Kenny, D. A. (1986). The moderator–mediator variable distinction in social psychological research: Conceptual, strategic, and statistical considerations. *Journal of Personality and Social Psychology*, 51(6), 1173-1182.
- Barry, C. M., Nelson, L. J., & Christofferson, J. L. (2013). *Asocial and afraid: An examination of shyness and anxiety in emerging adulthood*. Australia: eContent Management Pty Ltd.
- Bean, R. A., Barber, B. K., & Crane, D. R. (2006). Parental support, behavioral control, and psychological control among african american youth: The relationships to academic grades, delinquency, and depression. *Journal of Family Issues*, 27(10), 1335-1355.
- Beck, J. S. (2011). *Cognitive behavior therapy: Basics and beyond (2nd ed.)*. New York, NY, US: Guilford Press.
- Bell, K. L., Allen, J. P., Hauser, S. T., & O'Connor, T. G. (1996). Family factors and young adult transitions: Educational attainment and occupational prestige. In J. A.

- Graber, J. Brooks-Gunn & A. C. Petersen (Eds.), *Transitions through adolescence: Interpersonal domains and context*. (pp. 345-366). Hillsdale, NJ England: Lawrence Erlbaum Associates, Inc.
- Bernard, A. (2013). *Unemployment dynamics among Canada's youth*. Catalogue no. 11-626-X, no. 24. Ottawa, ON: Statistics Canada.
- Biblarz, T. J., & Raftery, A. E. (1999). Family structure, educational attainment, and socioeconomic success: Rethinking the 'pathology of patriarchy.'. *American Journal of Sociology*, *105*(2), 321-365.
- Blustein, D. L., Walbridge, M. M., Friedlander, M. L., & Palladino, D. E. (1991). Contributions of psychological separation and parental attachment to the career development process. *Journal of Counseling Psychology*, *38*(1), 39-50.
doi:10.1037/0022-0167.38.1.39
- Bornstein, M. H., Hahn, C., Suwalsky, J. T. D., & Haynes, O. M. (2003). Socioeconomic status, parenting, and child development: The hollingshead four-factor index of social status and the socioeconomic index of occupations. In M. H. Bornstein, & R. H. Bradley (Eds.), (pp. 29-82). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Bowlby, J. (1973). *Attachment and loss: Vol 2. Separation*. New York: Basic Books.
- Buchanan, C. M., Eccles, J. S., Flanagan, C., Midgley, C., Feldlaufer, H., & Harold, R. D. (1990). Parents' and teachers' beliefs about adolescents: Effects of sex and experience. *Journal of Youth and Adolescence*, *19*(4), 363-394.
- Burt, K. B., & Masten, A. S. (2010). Development in the transition to adulthood: Vulnerabilities and opportunities. In J. E. Grant, & M. N. Potenza (Eds.), (pp. 5-18). New York, NY, US: Oxford University Press.
- Byrne, B. M. (2010). *Structural equation modeling with AMOS: Basic concepts, applications, and programming* (2nd ed.). Mahwah, NJ: Lawrence Erlbaum Associates.
- Calmes, C. A., & Roberts, J. E. (2008). Rumination in interpersonal relationships: Does co-rumination explain gender differences in emotional distress and relationship satisfaction among college students? *Cognitive Therapy and Research*, *32*(4), 577-590.
- Campbell, R. (2007). *Helping your twenty-something get a life...and get it now: A guide for parents*. Nashville, TN: Thomas Nelson, Inc.

- Carbonell, D. M., Reinherz, H. Z., & Giaconia, R. M. (1998). Risk and resilience in late adolescence. *Child & Adolescent Social Work Journal, 15*(4), 251-272.
doi:10.1023/A:1025107827111
- Caspi, A., Wright, B. R. E., Moffitt, T. E., & Silva, P. A. (1998). Early failure in the labor market: Childhood and adolescent predictors of unemployment in the transition to adulthood. *American Sociological Review, 63*(3), 424-451.
- Cheong, J., MacKinnon, D. P., & Khoo, S. T. (2003). Investigation of mediational processes using parallel process latent growth curve modeling. *Structural Equation Modeling, 10*(2), 238-262.
- Chung, L. (2006, June). Education and earnings. *Perspectives*. Catalogue no. 75-001-XIE. Ottawa: Statistics Canada.
- Clark, W. (2009). Delayed transitions of young adults. *Statistics Canada*, catalogue no. 11-008. Retrieved from <http://www.statcan.gc.ca/pub/11-008-x/2007004/10311-eng.htm#a1>
- Cohen, S., & Wills, T. A. (1985). Stress, social support, and the buffering hypothesis. *Psychological Bulletin, 98*(2), 310-357. doi:10.1037/0033-2909.98.2.310
- Colarossi, L. G., & Eccles, J. S. (2003). Differential effects of support providers on adolescents' mental health. *Social Work Research, 27*(1), 19-30.
doi:10.1093/swr/27.1.19
- Collins, W. A., & Laursen, B. (2004). Changing relationships, changing youth: Interpersonal contexts of adolescent development. *The Journal of Early Adolescence, 24*(1), 55-62.
- Collins, W. A., & Russell, G. (1991). Mother-child and father-child relationships in middle childhood and adolescence: A developmental analysis. *Developmental Review, 11*(2), 99-136.
- Compas, B. E., Davis, G. E., Forsythe, C. J., & Wagner, B. M. (1987). Assessment of major and daily stressful events during adolescence: The adolescent perceived events scale. *Journal of Consulting and Clinical Psychology, 55*(4).
- Conger, K. J., Conger, R. D., & Scaramella, L. V. (1997). Parents, siblings, psychological control, and adolescent adjustment. *Journal of Adolescent Research, 12*(1), 113-138.
- Cooney, T. M. (1994). Young adults' relations with parents: The influence of recent parental divorce. *Journal of Marriage and the Family, 56*(1), 45-56.

- Costello, E., Copeland, W., & Angold, A. (2011). Trends in psychopathology across the adolescent years: What changes when children become adolescents, and when adolescents become adults? *Journal of Child Psychology and Psychiatry*, *52*, 1015-1025.
- Côté, J., & Allahaar, A. (2007). *Ivory tower blues: a university system in crisis*. Toronto: University of Toronto Press.
- Côté, J., & Bynner, J. M. (2008). Changes in the transition to adulthood in the UK and Canada: The role of structure and agency in emerging adulthood. *Journal of Youth Studies*, *11*(3), 251-268. doi:10.1080/13676260801946464
- Cronce, J. M., & Corbin, W. R. (2010). College and career. In J. E. Grant, & M. N. Potenza (Eds.), (pp. 80-95). New York, NY, US: Oxford University Press.
- Cummings, E. M., George, M. R. W., McCoy, K. P., & Davies, P. T. (2012). Interparental conflict in kindergarten and adolescent adjustment: Prospective investigation of emotional security as an explanatory mechanism. *Child Development*, *83*(5), 1703-1715.
- Cunningham, C. E., Boyle, M. H., Hong, S., Pettingill, P., & Bohaychuk, D. (2009). The brief child and family phone interview (BCFPI): 1. Rationale, development, and description of a computerized children's mental health intake and outcome assessment tool. *Journal of Child Psychology and Psychiatry*, *50*(4), 416-423.
- Cutrona, C. E., Cole, V., Colangelo, N., Assouline, S. G., & Russell, D. W. (1994). Perceived parental social support and academic achievement: An attachment theory perspective. *Journal of Personality and Social Psychology*, *66*(2), 369-378. doi:10.1037/0022-3514.66.2.369
- Cutrona, C. E., & Russell, D. W. (1990). Type of social support and specific stress: Toward a theory of optimal matching. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Social support: An interactional view*. Oxford England: John Wiley & Sons.
- Danziger, S., & Ratner, D. (2010). Labor market outcomes and the transition to adulthood. *The Future of Children*, *20*(1), 133-158. doi:10.1353/foc.0.0041
- Desjardins, T. L., & Leadbeater, B. J. (2011). Relational victimization and depressive symptoms in adolescence: Moderating effects of mother, father, and peer emotional support. *Journal of Youth and Adolescence*, *40*(5), 531-544. doi:10.1007/s10964-010-9562-1

- Dubas, J. S., & Petersen, A. C. (1996). Geographical distance from parents and adjustment during adolescence and young adulthood. In J. A. Graber, & J. S. Dubas (Eds.), *Leaving home: Understanding the transition to adulthood*. San Francisco, CA US: Jossey-Bass.
- Eisenberg, D., Gollust, S. E., Golberstein, E., & Hefner, J. L. (2007). Prevalence and correlates of depression, anxiety, and suicidality among university students. *American Journal of Orthopsychiatry*, 77(4), 534-542.
- Elliot, A. J., & Thrash, T. M. (2004). The intergenerational transmission of fear of failure. *Personality and Social Psychology Bulletin*, 30(8), 957-971.
- Fagot, B. I. (1995). Parenting boys and girls. In M. H. Bornstein (Ed.), (pp. 163-183). Hillsdale, NJ, England: Lawrence Erlbaum Associates, Inc.
- Faragher, E. B., Cass, M., & Cooper, C. L. (2005). The relationship between job satisfaction and health: a meta-analysis. *Occupational and Environmental Medicine*, 62, 105-112. doi: 10.1136/oem.2002.006734
- Fass, M. E., & Tubman, J. G. (2002). The influence of parental and peer attachment on college students' academic achievement. *Psychology in the Schools*, 39(5), 561-574. doi:10.1002/pits.10050
- Fingerman, K. L., Cheng, Y., Wesselmann, E. D., Zarit, S., Furstenberg, F., & Birditt, K. S. (2012). Helicopter parents and landing pad kids: Intense parental support of grown children. *Journal of Marriage and Family*, 74(4), 880-896.
- Fingerman, K., Miller, L., Birditt, K., & Zarit, S. (2009). Giving to the good and the needy: Parental support of grown children. *Journal of Marriage and Family*, 71(5), 1220-1233. doi:10.1111/j.1741-3737.2009.00665.x
- Fletcher, J. M. (2008). Adolescent depression: Diagnosis, treatment, and educational attainment. *Health Economics*, 17, 1215-1235. doi: 10.1002/hec.1319
- Frenette, M., & Morissette, R. (2014). Wages and full-time employment rates of young high school graduates and bachelor's degree holders, 1997 to 2012. *Statistics Canada*, catalogue no. 11F0019M. Retrieved from <http://www.statcan.gc.ca/pub/11f0019m/11f0019m2014360-eng.pdf>
- Fritz, M. S., & MacKinnon, D. P. (2012). Mediation models for developmental data. In B. Laursen, T. D. Little & N. A. Card (Eds.), (pp. 291-310). New York, NY, US: Guilford Press.

- Furstenberg, F. F. (2008). The intersections of social class and the transition to adulthood. In J. T. Mortimer (Ed.), *Social class and transitions to adulthood. New directions for Child and Adolescent Development*, 119, 1-10.
- Furstenberg, F. F. J., Rumbaut, R. C., & Settersten, R. A. J. (2005). On the frontier of adulthood: Emerging themes and new directions. In R. A. Settersten Jr., F. F. Furstenberg Jr. & R. G. Rumbaut (Eds.), *On the frontier of adulthood: Theory, research, and public policy*. (pp. 3-25). Chicago, IL US: University of Chicago Press.
- Galambos, N. L., Barker, E. T., & Krahn, H. J. (2006). Depression, self-esteem, and anger in emerging adulthood: Seven-year trajectories. *Developmental Psychology*, 42(2), 350-365. doi:10.1037/0012-1649.42.2.350
- Galambos, N. L., Leadbeater, B. J., & Barker, E. T. (2004). Gender differences in and risk factors for depression in adolescence: A 4-year longitudinal study. *International Journal of Behavioral Development*, 28(1), 16-25. doi:10.1080/01650250344000235
- Galarneau, D., Morissette, R., & Usalca, J. (2013). *What has changed for young people in Canada?* Catalogue no. 75-006-X. Ottawa, ON: Statistics Canada.
- Gitelson, I. B., & McDermott, D. (2006). Parents and their young adult children: Transitions to adulthood. *Child Welfare: Journal of Policy, Practice, and Program*, 85(5), 853-866.
- Goldscheider, F., & Goldscheider, C. (1999). *The changing transition to adulthood: Leaving and returning home*. Thousand Oaks, CA US: Sage Publications, Inc.
- Goldscheider, F. K., Thornton, A., & Yang, L. S. (2001). Helping out the kids: Expectations about parental support in young adulthood. *Journal of Marriage and the Family*, 63, 727-740.
- Grant, J.E., & Potenza, M.N. (2010). In Grant J. E., Potenza M. N. (Eds.), *Young adult mental health*. New York, NY, US: Oxford University Press.
- Hamer, R. J., & Bruch, M. A. (1997). Personality factors and inhibited career development: Testing the unique contribution of shyness. *Journal of Vocational Behavior*, 50(3), 382-400.
- Hamilton, S. F., & Hamilton, M. A. (2006). School, work, and emerging adulthood. In J. J. Arnett & J. L. Tanner (Eds.), *Emerging adults in America: Coming of age in the 21st century*. Washington, DC US: American Psychological Association.

- Hango, D. (2011). *Delaying postsecondary education: Who delays and for how long?* Catalogue no. 81-595-M — No. 090. Ottawa, ON: Statistics Canada.
- Hasin, D.S., Goodwin, R.D., Sinson, F.S., & Grant, B.F. (2005). Epidemiology of major depressive disorder: Results from the National Epidemiologic Survey on Alcoholism and Related Conditions. *Archives of General Psychiatry*, 62(10), 1097-1106.
- Hayes, A. F. (2009). Beyond baron and kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, 76(4), 408-420.
doi:10.1080/03637750903310360
- Hefner, J., & Eisenberg, D. (2009). Social support and mental health among college students. *American Journal of Orthopsychiatry*, 79(4), 491-499.
doi:10.1037/a0016918
- Helsen, M., Vollebergh, W., & Meeus, W. (2000). Social support from parents and friends and emotional problems in adolescence. *Journal of Youth and Adolescence*, 29(3), 319-335. doi:10.1023/A:1005147708827
- Hetherington, E. M. (1999). Social capital and the development of youth from nondivorced, divorced and remarried families. In W. A. Collins, & B. Laursen (Eds.), (pp. 177-209). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Hill, M. S., & Yeung, W. J. (1999). How Has the Changing Structure of Opportunities Affected Transitions to Adulthood? In A. Booth, A. C. Crouter, & M. J. Shanahan (Es.), *Transitions to Adulthood in a Changing Economy: No work, No family, No future?* Westport: Praeger.
- Hoffman, D. L., Dukes, E. M., & Wittchen, H. (2008). Human and economic burden of generalized anxiety disorder. *Depression and Anxiety*, 25(1), 72-90.
- Hogan, D. P., & Astone, N. M. (1986). The transition to adulthood. *Annual Review of Sociology*, 12, 109-130. doi:10.1146/annurev.so.12.080186.000545
- Holahan, C. J., Valentiner, D. P., & Moos, R. H. (1994). Parental support and psychological adjustment during the transition to young adulthood in a college sample. *Journal of Family Psychology*, 8(2), 215-223. doi:10.1037/0893-3200.8.2.215
- Hollingshead, A. B. (1975). *Four Factor Index of Social Status*. Unpublished manuscript. Yale University, New Haven CT. Retrieved from www.yale-university.com/sociology/faculty/docs/hollingshead_socStat4factor.pdf

- Howard, A. L., Galambos, N., & Krahn, H. J. (2010). Paths to success in young adulthood from mental health and life transitions in emerging adulthood. *International Journal of Behavioral Development, 34*(6), 538-546.
- Howell, D.C. (2008) The analysis of missing data. In Outhwaite, W. & Turner, S. *Handbook of Social Science Methodology*. London: Sage.
- Hu, L., & Bentler, P. M. (1995). Evaluating model fit. In R. H. Hoyle (Ed.), (pp. 76-99). Thousand Oaks, CA, US: Sage Publications, Inc.
- Johnson, M. K., & Benson, J. (2011). The Implications of Family Context for the Transition to Adulthood. In A. Booth, S. L. Brown, N. S. Landale, W. D. Manning, & S. M. McHale (Eds.), *Early Adulthood in a Family Context*. New York: Springer.
- Johnston, L.D., O'Malley, P.M., Bachman, J.G., & Schulenberg, J.E. (2004). *Monitoring the future national survey results on drug use, 1975-2003: Volume II, College students and adults ages 19-45* (NIH Publication No. 04-5508). Bethesda, MD: National Institute on Drug Abuse.
- Jonas, B.S., Brody, D., Roper, M., & Narrow, W.E. (2003). Prevalence of mood disorders in a national sample of young American adults. *Social Psychiatry and Psychiatric Epidemiology, 38*(11), 618-624.
- Kenny, M. E. (1990). College seniors' perceptions of parental attachments: The value and stability of family ties. *Journal of College Student Development, 31*, 39-46.
- Keogh, E., Bond, F. W., French, C. C., Richards, A., & Davis, R. E. (2004). Test anxiety, susceptibility to distraction and examination performance. *Anxiety, Stress & Coping: An International Journal, 17*(3), 241-252.
- Kins, E., Soenens, B., & Beyers, W. (2012). Parental psychological control and dysfunctional separation-individuation: A tale of two different dynamics. *Journal of Adolescence, 35*(5), 1099-1109.
- Kline, R. B. (2005). *Principles and practice of structural equation modeling (2nd ed.)*. NY: Guilford Press.
- Koerner, N., Dugas, M. J., Savard, P., Gaudet, A., Turcotte, J., & Marchand, A. (2004). The economic burden of anxiety disorders in Canada. *Canadian Psychology/Psychologie Canadienne, 45*(3), 191-201.
- LaRochelle-Côté, S. (2013). *Employment instability among younger workers*. Catalogue no. 75-004-M, no. 002. Ottawa, ON: Statistics Canada.

- LaRochelle-Côté, S., & Gilmore, J. (2009). *Canada's unemployment downturn*. Catalogue no. 75-001-X. Ottawa, ON: Statistics Canada.
- Larson, R., & Richards, M. H. (1994). *Divergent realities: The emotional lives of mothers, fathers, and adolescents*. New York, NY, US: Basic Books.
- Laursen, B., & Collins, W. A. (2009). Parent-child relationships during adolescence. In R. M. Lerner, & L. Steinberg (Eds.), *Handbook of adolescent psychology, vol 2: Contextual influences on adolescent development (3rd ed.)*. Hoboken, NJ US: John Wiley & Sons Inc.
- Leadbeater, B. J., Blatt, S. J., & Quinlan, D. M. (1995). Gender-linked vulnerabilities to depressive symptoms, stress, and problem behaviors in adolescents. *Journal of Research on Adolescence, 5*(1), 1-29. doi:10.1207/s15327795jra0501_1
- Leadbeater, B. J., Kuperminc, G. P., Blatt, S. J., & Hertzog, C. (1999). A multivariate model of gender differences in adolescents' internalizing and externalizing problems. *Developmental Psychology, 35*(5), 1268-1282. doi:10.1037/0012-1649.35.5.1268
- Leadbeater, B., Thompson, K., & Gruppuso, V. (2012). Co-occurring trajectories of symptoms of anxiety, depression, and oppositional defiance from adolescence to young adulthood. *Journal of Clinical Child and Adolescent Psychology, 41*(6), 719-730.
- Lee, J. C., & Mortimer, J. T. (2009). Family socialization, economic self-efficacy, and the attainment of financial independence in early adulthood. *Longitudinal Life Course Studies, 1*, 45-62.
- Lefkowitz, E. S. (2005). 'Things have gotten better': Developmental changes among emerging adults after the transition to university. *Journal of Adolescent Research, 20*(1), 40-63. doi:10.1177/0743558404271236
- Leondari, A., & Kiosseoglou, G. (2002). Parental, psychological control and attachment in late adolescents and young adults. *Psychological Reports, 90*(3), 1015-1030. doi:10.2466/PR0.90.3.1015-1030
- Lepine, J. P. (2002). The epidemiology of anxiety disorders: Prevalence and societal cost. *Journal of Clinical Psychiatry, 63*(14), 4-8.
- Levitt, M. J., Silver, M. E., & Santos, J. D. (2007). Adolescents in transition to adulthood: Parental support, relationship satisfaction, and post-transition adjustment. *Journal of Adult Development, 14*(1-2), 53-63. doi:10.1007/s10804-007-9032-5

- Lewinsohn, P. M., Rohde, P., Seeley, J. R., Klein, D. N., & Gotlib, I. H. (2003). Psychosocial functioning of young adults who have experienced and recovered from major depressive disorder during adolescence. *Journal of Abnormal Psychology, 112*(3), 353-363. doi:10.1037/0021-843X.112.3.353
- Little, T. D. (2013). *Longitudinal structural equation modeling*. New York, NY, US: Guilford Press.
- Luong, M. (2010, January). The financial impact of student loans. *Perspectives*. Catalogue no. 75-001-X. Ottawa, ON: Statistics Canada.
- Luong, M., & Hébert, B. (2009, January). Age and earnings. *Perspectives*. Catalogue no. 75-001-X. Ottawa, ON: Statistics Canada.
- Luyckx, K., Soenens, B., Vansteenkiste, M., Goossens, L., & Berzonsky, M. D. (2007). Parental psychological control and dimensions of identity formation in emerging adulthood. *Journal of Family Psychology, 21*(3), 546-550. doi:10.1037/0893-3200.21.3.546
- MacKinnon, D. P. (2008). *Introduction to statistical mediation analysis*. New York, NY: Taylor & Francis Group/Lawrence Erlbaum Associates.
- MacKinnon, D. P., Lockwood, C. M., Hoffman, J. M., West, S. G., & Sheets, V. (2002). A comparison of methods to test mediation and other intervening variable effects. *Psychological Methods, 7*(1), 83-104. doi:10.1037/1082-989X.7.1.83
- Manzeske, D. P., & Stright, A. D. (2009). Parenting styles and emotion regulation: The role of behavioral and psychological control during young adulthood. *Journal of Adult Development, 16*(4), 223-229. doi:10.1007/s10804-009-9068-9
- Marantz-Henig, R. (2010, August 10). What is it about 20-somethings? *The New York Times*. Retrieved from <http://www.nytimes.com>
- Masche, J. G. (2008). Reciprocal influences between developmental transitions and parent-child relationships in young adulthood. *International Journal of Behavioral Development, 32*(5), 401-411. doi:10.1177/0165025408093658
- Masten, A. S., Burt, K. B., Roisman, G. I., Obradović, J., Long, J. D., & Tellegen, A. (2004). Resources and resilience in the transition to adulthood: Continuity and change. *Development and Psychopathology, 16*(4), 1071-1094. doi:10.1017/S0954579404040143

- McElhaney, K. B., Allen, J. P., Stephenson, J. C., & Hare, A. L. (2009). Attachment and autonomy during adolescence. In R. M. Lerner, & L. Steinberg (Eds.), (pp. 358-403). Hoboken, NJ, US: John Wiley & Sons Inc.
- Melby, J. N., Conger, R. D., Fang, S., Wickrama, K. A. S., & Conger, K. J. (2008). Adolescent family experiences and educational attainment during early adulthood. *Developmental Psychology, 44*(6), 1519-1536. doi:10.1037/a0013352
- Miller, B., & Taylor, J. (2012). Racial and socioeconomic status differences in depressive symptoms among black and white youth: An examination of the mediating effects of family structure, stress and support. *Journal of Youth and Adolescence, 41*, 426-437.
- Mortimer, J. T., & Staff, J. (2004). Early work as a source of developmental discontinuity during the transition to adulthood. *Development and Psychopathology, 16*(4), 1047-1070. doi:10.1017/S0954579404040131
- Mortimer, J. T., Staff, J., & Oesterle, S. (2003). Adolescent work and the early socioeconomic career. In J. T. Mortimer & M. J. Shanahan (Eds.), *Handbook of the Life Course* (pp. 437-459). New York: Kluwer Academic/Plenum Publishers.
- Mufson, L. Dorta, K., Morneau, D., & Weissman, M. W. (2011). *Interpersonal psychotherapy for depressed adolescents* (2nd ed.). New York: Guildford Press.
- Mulholland, D. J., Watt, N. F., Philpott, A., & Sarlin, N. (1991). Academic performance in children of divorce: Psychological resilience and vulnerability. *Psychiatry: Interpersonal and Biological Processes, 54*(3), 268-280.
- Murphy, K. A., Blustein, D. L., Bohlig, A. J., & Platt, M. G. (2010). The college-to-career transition: An exploration of emerging adulthood. *Journal of Counseling & Development, 88*(2), 174-181. doi:10.1002/j.1556-6678.2010.tb00006.x
- Nanda, M. M., Kotchick, B. A., & Grover, R. L. (2012). Parental psychological control and childhood anxiety: The mediating role of perceived lack of control. *Journal of Child and Family Studies, 21*(4), 637-645.
- National Center for Education Statistics. (2011). *Digest of Education Statistics, 2010* (NCES 2011-015). U.S. Department of Education. Retrieved from <http://nces.ed.gov/fastfacts/display.asp?id=76>.
- Nelson, L. J., Padilla-Walker, L., Badger, S., Barry, C. M., Carroll, J. S., & Madsen, S. D. (2008). Associations between shyness and internalizing behaviors, externalizing behaviors, and relationships during emerging adulthood. *Journal of Youth and Adolescence, 37*, 605-615.

- Nelson, L. J., Padilla-Walker, L., Christensen, K. J., Evans, C. A., & Carroll, J. S. (2011). Parenting in emerging adulthood: An examination of parenting clusters and correlates. *Journal of Youth and Adolescence, 40*(6), 730-743. doi:10.1007/s10964-010-9584-8
- Noble, K. G., McCandliss, B. D., & Farah, M. J. (2007). Socioeconomic gradients predict individual differences in neurocognitive abilities. *Developmental Science, 10*(4), 464-480.
- Nolen-Hoeksema, S. (2006). Gender differences in depression. In I. H. Gotlib & C. L. Hammen (Eds.), *Handbook of depression* (pp. 492–509). New York: The Guilford Press.
- Olino, T. M., Seeley, J. R., & Lewinsohn, P. M. (2010). Conduct disorder and psychosocial outcomes at age 30: Early adult psychopathology as a potential mediator. *Journal of Abnormal Child Psychology, 38*(8), 1139-1149. doi:10.1007/s10802-010-9427-9
- Osgood, D. W., Foster, E. M., & Courtney, M. E. (2010). Vulnerable populations and the transition to adulthood. *The Future of Children, 20*(1), 209-229.
- Pascarella, E., & Terenzini, P. (1991). *How college affects students*. San Francisco: Jossey-Bass.
- Pettit, G. S., & Laird, R. D. (2002). Psychological control and monitoring in early adolescence: The role of parental involvement and earlier child adjustment. In B. K. Barber (Ed.), *Intrusive parenting: How psychological control affects children and adolescents*. (pp. 97-123). Washington, DC US: American Psychological Association. doi:10.1037/10422-004
- Pettit, J. W., Roberts, R. E., Lewinsohn, P. M., Seeley, J. R., & Yaroslavsky, I. (2011). Developmental relations between perceived social support and depressive symptoms through emerging adulthood: Blood is thicker than water. *Journal of Family Psychology, 25*(1), 127-136.
- Phillips, S. D., & Bruch, M. A. (1988). Shyness and dysfunction in career development. *Journal of Counseling Psychology, 35*(2), 159-165.
- Public Agenda. 2010. *With Their Whole Lives Ahead of Them: Myths and Realities about Why So Many Student Fail to Finish College*. New York: Public Agenda. Retrieved from <http://www.publicagenda.org/theirwholelivesaheadofthem>
- Raudenbush, S. W., & Bryk, A. S. (2002). *Hierarchical linear models: Applications and data analysis methods (2nd ed.)*. Newbury Park, CA: Sage.

- Raudenbush, S.W., Bryk, A. S., & Congdon, R. (2004). HLM 6 [Computer software]. Skokie, IL: Scientific Software International, Inc.
- Roisman, G. I., Masten, A. S., Coatsworth, J. D., & Tellegen, A. (2004). Salient and emerging developmental tasks in the transition to adulthood. *Child Development*, 75(1), 123-133. doi:10.1111/j.1467-8624.2004.00658.x
- Rottinghaus, P. J., Jenkins, N., & Jantzer, A. M. (2009). Relation of depression and affectivity to career decision status and self-efficacy in college students. *Journal of Career Assessment*, 17(3), 271-285. doi:10.1177/1069072708330463
- Rucker, D. D., Preacher, K. J., Tormala, Z. L., & Petty, R. E. (2011). Mediation analysis in social psychology: Current practices and new recommendations. *Social and Personality Psychology Compass*, 5(6), 359-371.
- Ruthig, J. C., Haynes, T. L., Stupnisky, R. H., & Perry, R. P. (2009). Perceived academic control: Mediating the effects of optimism and social support on college students' psychological health. *Social Psychology of Education*, 12(2), 233-249. doi:10.1007/s11218-008-9079-6
- Sachs, B. (2010). *Emptying the nest: Launching your young adult towards success and self-reliance*. New York: Pallgrave Macmillan.
- Salmela-Aro, K., Aunola, K., & Nurmi, J. (2008). Trajectories of depressive symptoms during emerging adulthood: Antecedents and consequences. *European Journal of Developmental Psychology*, 5(4), 439-465. doi:10.1080/17405620600867014
- Sandefur, G. D., Eggerling-Boeck, J., & Park, H (2005). Off to a Good Start? Post-Secondary Education and The Early Transition to Adulthood. In R. A. Settersten, F. F. Furstenberg, & R. G. Rumbaut (Eds.), *On The Frontier of Adulthood: Theory, Research, and Public Policy*. Chicago: University of Chicago Press.
- Sarason, B. R., Pierce, G. R., & Sarason, I. G. (1990). Social support: The sense of acceptance and the role of relationships. In B. R. Sarason, I. G. Sarason, & G. R. Pierce (Eds.), *Social support: An interactional view*. New York: Wiley.
- Schaefer, E. S. (1965). Children's reports of parental behavior An inventory. *Child Development*, 36(2), 413-424. doi:10.2307/1126465
- Schaufeli, W. B., Martínez, I. M., Marques Pinto, A., Salanova, M., & Bakker, A. B. (2002). Burnout and engagement in university students: A cross-national study. *Journal of Cross-Cultural Psychology*, 33(5), 464-481. doi:10.1177/0022022102033005003

- Schleider, J. L., Vélez, C. E., Krause, E. D., & Gillham, J. (2014). Perceived psychological control and anxiety in early adolescents: The mediating role of attributional style. *Cognitive Therapy and Research*, 38(1), 71-81.
- Schoeni, R. F., & Ross, K. E. (2005). Material assistance from families during the transition to adulthood. In R. A. Settersten Jr., F. F. Furstenberg Jr. & R. G. Rumbaut (Eds.), *On the frontier of adulthood: Theory, research, and public policy*. (pp. 396-416). Chicago, IL US: University of Chicago Press.
- Schultheiss, D. E. P., Kress, H. M., Manzi, A. J., & Glasscock, J. M. J. (2001). Relational influences in career development: A qualitative inquiry. *The Counseling Psychologist*, 29(2), 214-239. doi:10.1177/0011000001292003
- Selig, J. P., & Preacher, K. J. (2009). Mediation models for longitudinal data in developmental research. *Research in Human Development*, 6(2-3), 144-164.
- Semyonov, M., & Lewin-Epstein, N. (2001). Impact of parental transfers on living standards of married children. *Social Indicators Research*, 54(2), 115-137. doi:10.1023/A:1011081529592
- Settersten, R.A. (2005). Social policy and the transition to adulthood: Toward stronger institutions and individual capacities. In R. A. Settersten, F. F. Furstenberg, & R. G. Rumbaut (Eds.), *On The Frontier of Adulthood: Theory, Research, and Public Policy*. Chicago: University of Chicago Press.
- Shaienks, D., & Gluszynski, T. (2007). *Participation in postsecondary education: Graduates, continuers and drop outs, results from YITS cycle 4*. Catalogue no. 81-595-MIE2007059. Ottawa, ON: Statistics Canada.
- Shaienks, D., & Gluszynski, T. (2009). *Education and labour market transitions in young adulthood*. Catalogue no. 81-595-M — No. 075. Ottawa, ON: Statistics Canada.
- Shaver, P., Furman, W., & Buhrmester, D. (1985). Transition to college: Network changes, social skills, and loneliness. In S. Duck, & D. Perlman (Eds.), *Understanding personal relationships: An interdisciplinary approach*. (pp. 193-219). Thousand Oaks, CA US: Sage Publications, Inc.
- Shim, S., Barber, B. L., Card, N. A., Xiao, J. J., & Serido, J. (2010). Financial socialization of first-year college students: The roles of parents, work, and education. *Journal of Youth and Adolescence*, 39(12), 1457-1470. doi:10.1007/s10964-009-9432-x

- Shrout, P. E., & Bolger, N. (2002). Mediation in experimental and nonexperimental studies: New procedures and recommendations. *Psychological Methods*, 7(4), 422-445. doi:10.1037/1082-989X.7.4.422
- Shulman, S., & Ben-Artzi, E. (2003). Age-related differences in the transition from adolescence to adulthood and links with family relationships. *Journal of Adult Development*, 10(4), 217-226. doi:10.1023/A:1026006025155
- Singer, J. D., & Willett, J. B. (2003). *Applied longitudinal data analysis: Modeling change and event occurrence*. New York, NY US: Oxford University Press.
- Slavin, L. A., & Rainer, K. L. (1990). Gender differences in emotional support and depressive symptoms among adolescents: A prospective analysis. *American Journal of Community Psychology*, 18(3), 407-421. doi:10.1007/BF00938115
- Smetana, J. G., Metzger, A., Gettman, D. C., & Campione-Barr, N. (2006). Disclosure and secrecy in adolescent-parent relationships. *Child Development*, 77(1), 201-217.
- Soenens, B., Vansteenkiste, M., & Luyten, P. (2010). Toward a domain-specific approach to the study of parental psychological control: Distinguishing between dependency-oriented and achievement-oriented psychological control. *Journal of Personality*, 78(1), 217-256.
- Statistics Canada (2007). Youth in Transition Survey—Cycle 4. Retrieved from http://www.statcan.gc.ca/imdb-bmdi/instrument/4435_Q2_V3-eng.pdf
- Statistics Canada (2011). National Household Survey. Catalogue no. 99-014-X2011036.
- Stein, C. H., Abraham, K. M., Bonar, E. E., Leith, J. E., Kraus, S. W., Hamill, A. C., . . . Fogo, W. R. (2011). Family ties in tough times: How young adults and their parents view the U.S. economic crisis. *Journal of Family Psychology*, 25(3), 449-454. doi:10.1037/a0023697
- Steinberg, L. (1990). Autonomy, conflict, and harmony in the family relationship. In S. S. Feldman, & G. R. Elliott (Eds.), *At the threshold: The developing adolescent*. (pp. 255-276). Cambridge, MA US: Harvard University Press.
- Steinberg, L., & Silk, J. S. (2002). Parenting adolescents. In M. H. Bornstein (Ed.), *Handbook of Parenting, Vol.1* (pp. 103-133). Mahwah, NJ, US: Lawrence Erlbaum Associates Publishers.
- Stice, E., Ragan, J., & Randall, P. (2004). Prospective relations between social support and depression: Differential direction of effects for parent and peer support? *Journal of Abnormal Psychology*, 113(1), 155-159. doi:10.1037/0021-843X.113.1.155

- Stine, R. A. (1990). An introduction to bootstrap methods: Examples and ideas. *Sociological Methods and Research*, 8, 243-291.
- Stone, G., Buehler, C., & Barber, B. K. (2002). Interparental conflict, parental psychological control, and youth problem behavior. In B. K. Barber (Ed.), *Intrusive parenting: How psychological control affects children and adolescents* (pp. 53-95). Washington, DC, US: American Psychological Association.
- Swartz, T. T. (2008). Family capital and the invisible transfer of privilege: Intergenerational support and social class in early adulthood. *New Directions for Child and Adolescent Development*, 119, 11-24. doi: 10.1002/cd.206
- Swartz, T. T., Kim, M., Uno, M., Mortimer, J., & O'Brien, K. B. (2011). Safety nets and scaffolds: Parental support in the transition to adulthood. *Journal of Marriage and Family*, 73(2), 414-429. doi:10.1111/j.1741-3737.2010.00815.x
- Tabachnick, B. G., & Fidell, L. S. (2007). *Using multivariate statistics (5th ed.)*. Boston, MA: Allyn & Bacon/Pearson Education.
- Thornton, A., Orbach, T. L., & Axinn, W. G. (1995). Parent-child relationships during the transition to adulthood. *Journal of Family Issues*, 16(5), 538-564. doi:10.1177/019251395016005003
- Urry, S. A., Nelson, L. J., & Padilla-Walker, L. (2011). Mother knows best: Psychological control, child disclosure, and maternal knowledge in emerging adulthood. *Journal of Family Studies*, 17(2), 157-173.
- U.S. Department of Education, National Centre for Education Statistics. *The Condition of Education in 2002*, NCES 2002-025. Washington, DC: U.S. Government Printing Office.
- Waller, E. M., & Rose, A. J. (2010). *Adjustment trade-offs of co-rumination in mother-adolescent relationships*. Netherlands: Elsevier Science.
- West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal variables: Problems and remedies. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues and applications* (pp. 56-75). Thousand Oaks, CA, US: Sage Publications, Inc.
- Whiston, S. C., & Keller, B. K. (2004). The influences of the family of origin on career development: A review and analysis. *The Counseling Psychologist*, 32(4), 493-568. doi:10.1177/0011000004265660
- Wickrama, K. A. S., Conger, R. D., Lorenz, F. O., & Jung, T. (2008). Family antecedents and consequences of trajectories of depressive symptoms from adolescence to young

- adulthood: A life course investigation. *Journal of Health and Social Behavior*, 49, 468-483.
- Wickrama, K. A. S., Conger, R. D., Lorenz, F. O., & Martin, M. (2012). Continuity and discontinuity of depressed mood from late adolescence to young adulthood: The mediating and stabilizing roles of young adults' socioeconomic attainment. *Journal of Adolescence*, 35(3), 648-658. doi:10.1016/j.adolescence.2011.08.014
- Widaman, K. F. (2006). Missing data: What to do with or without them. *Monographs of the Society for Research in Child Development*, 71(3), 42-64.
- Williams, S. K., & Kelly, F. D. (2005). Relationships among involvement, attachment, and behavioral problems in adolescence: Examining father's influence. *The Journal of Early Adolescence*, 25(2), 168-196.
- Wintre, M. G., & Yaffe, M. (2000). First-year students' adjustment to university life as a function of relationships with parents. *Journal of Adolescent Research*, 15(1), 9-37. doi:10.1177/0743558400151002
- Yeung, R., & Leadbearer, B. (2010). Adults make a difference: The protective effects of parent and teacher emotional support on emotional and behavioral problems of peer-victimized adolescents. *Journal of Community Psychology*, 38(1), 80-98.
- Youniss, J., & Smollar, J. (1985). *Adolescent relations with mothers, fathers, and friends*. Chicago, IL, US: University of Chicago Press.

Appendix A

Items assessing parental emotional support (Schaefer, 1965).

How much do you feel the following statements are like your “father/mother”? My “father/mother” is a person who...	Not like him/her	Somewhat like him/her	Like him/her
1) understands my problems and worries	0	1	2
2) is able to make me feel better when I am upset	0	1	2
3) enjoys talking things over with me	0	1	2
4) has a good time at home with me	0	1	2
5) enjoys doing things with me	0	1	2

Appendix B

Items assessing parental psychological control (Barber, 1996).

How much do you feel the following statements are like your “father/mother”? My “father/mother” is a person who...	Not like him/her	Somewhat like him/her	Like him/her
1) is always trying to change how I feel or think about things	0	1	2
2) changes the subject whenever I have something to say	0	1	2
3) often interrupts me	0	1	2
4) blames me for other family members’ problems	0	1	2
5) brings up past mistakes when he/she criticizes me	0	1	2
6) is less friendly with me if I do not see things his/her way	0	1	2
7) will avoid looking at me when I disappoint him/her	0	1	2
8) if I hurt his/her feelings, stops talking to me until I please him/her	0	1	2

Appendix C

Items assessing depressive and anxiety symptoms (Cunningham, Pettingill, & Boyle, 2001).

Do you notice that you...		Never	Sometimes	Often
	Depressive symptoms items			
1) have no interest in your usual activities?		0	1	2
2) get no pleasure from your usual activities?		0	1	2
3) have trouble enjoying yourself?		0	1	2
4) are not as happy as other people your age?		0	1	2
5) feel hopeless?		0	1	2
6) are unhappy, sad, or depressed?		0	1	2
	Anxiety symptoms items			
1) worry about doing better at things?		0	1	2
2) worry about your past behavior?		0	1	2
3) worry about doing the wrong thing?		0	1	2
4) worry about things in the future?		0	1	2
5) are afraid of making mistakes?		0	1	2
6) are overly anxious to please people?		0	1	2

Appendix D

Hollingshead Occupational Status Index (Hollingshead, 1975; also see Bornstein et al., 2003).

Value	Categories
1	Farm laborers Menial service workers
2	Unskilled workers
3	Machine operators Semiskilled workers
4	Smaller business owners (< \$25,000) Skilled manual workers Craftsmen Tenant farmers
5	Clerical workers Sales workers Small farm and business owners (\$25,000-\$50,000)
6	Technicians Semiprofessionals Small business owners (\$50,000-\$75,000)
7	Smaller business owners (\$75,000-\$100,000) Farm owners Managers Minor professionals
8	Administrators Lesser professionals Proprietors of medium-sized businesses (\$100,000-\$250,000)
9	Higher executives Proprietors of large businesses (> \$250,000) Major professionals