PARENTING BEHAVIOR DURING EMERGING ADULTHOOD: ASSOCIATIONS

WITH EMERGING ADULT RELATIONSHIPS AND RISK BEHAVIORS

by

SARA MICHELLE RABINOVITCH

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Student: Sara Michelle Rabinovitch

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This dissertation has been accepted and approved in partial fulfillment of the requirements for Doctor of Philosophy degree in the Department of Counseling Psychology and Human Services by:

Elizabeth Stormshak, PhD	Chairperson, Advisor
Krista Chronister, PhD	Core Member
Atika Khurana, PhD	Core Member
Maureen Zalewski Regnier, PhD	Institutional Representative

and

Scott L. Pratt   Dean of the Graduate School

Original approval signatures are on file with the University of Oregon Graduate School.

Degree awarded June 2017

DISSERTATION ABSTRACT

Sara Michelle Rabinovitch

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Emerging adulthood is the developmental period between adolescence and adulthood spanning ages 18-25. A central task of emerging adulthood is autonomy development, including forming stable romantic partnerships and peer support networks that will facilitate autonomy from parents. While emerging adulthood is a time of exploration and growth, this period is also associated with risk behavior including most types of substance use, risky sexual behavior and reckless driving. Research has shown strong links between earlier parenting and emerging adults' peer and romantic relationships and problem behavior. A dearth of research has examined the impact of parenting during emerging adulthood on emerging adult outcomes. The present study drew from an ethnically and socioeconomically diverse sample of emerging adults (ages 19-20) and their parents ($n = 209$) from the Pacific Northwest region to examine how parenting behaviors during emerging adulthood impact low- and high-quality peer and romantic relationships, alcohol use and delinquent behavior. This study utilized observational and parent-report data to capture positive and negative parenting behaviors. Path modeling was conducted to examine associations between parenting predictors and relational and risk outcomes. Results indicated that observed parental hostility and criticism predicted emerging adult externalizing behaviors, and this relationship was

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partially mediated by affiliation with delinquent peers. Findings suggest that parenting

may significantly contribute to youth development beyond the childhood adolescent

years, and hostile and critical parenting during emerging adulthood may incur risk for

emerging adult engagement with delinquent peers and delinquent behavior. This study is

the first to observationally assess parenting during emerging adulthood with a population

of young adults that are drawn from a representative community sample.

CURRICULUM VITAE

NAME OF AUTHOR: Sara Michelle Rabinovitch

GRADUATE AND UNDERGRADUATE SCHOOLS ATTENDED:

University of Oregon, Eugene, OR
New York University, New York, NY

DEGREES AWARDED:

Doctor of Philosophy, Counseling Psychology, 2017, University of
Oregon
Master of Science, Counseling Psychology and Human Services, 2014, University
of Oregon
Bachelor of Arts, Psychology, 2007, New York University, College of Arts and
Sciences

AREAS OF SPECIAL INTEREST:

Mindfulness-based Interventions (MBIs)
Cultural Adaptations to Evidence-based Interventions
Parenting
Lifespan Development
Student-athlete Development
Veterans Services

PROFESSIONAL EXPERIENCE:

Doctoral Student Therapist, Eugene VA Behavioral Health Clinic, Eugene, OR,
2015-2016

Graduate Counselor, Services for Student Athletes, University of Oregon,
Eugene, OR, 2013-2016

Doctoral Student Therapist, Center for Community Counseling, Eugene, OR,
2012-2015

Doctoral Student Therapist, Child and Family Center, University of Oregon,
Eugene, OR, 2013-2015

Doctoral Student Therapist, Volunteers in Medicine Clinic, Eugene, OR, 2014-2015

University Supervisor, Family and Human Services, University of Oregon, Eugene, OR, 2011-2013

GRANTS, AWARDS, AND HONORS:

Graduate Teaching Fellowship, University of Oregon, 2011 to 2016

Gary E. Smith Summer Professional Development Award, University of Oregon, 2014

Boone Award for Research Travel, University of Oregon, 2015

Center for the Study of Women in Society Travel Grant, University of Oregon, 2014

University Athletic Association – All-Academic Recognition, New York University, 2004-2006

Founders Day Award for top percentile GPA, New York University, 2007

Dean's List, New York University, 2006-2007

PUBLICATIONS:

Rabinovitch, S.M., Kerr, D.C., Leve, L.D., Chamberlain P. (2014). Suicidal Behavior Outcomes of Childhood Sexual Abuse: Longitudinal Study of Adjudicated Girls. *Suicide and Life Threatening Behavior (2015).*

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CHAPTER I

INTRODUCTION

"Emerging adulthood" was first introduced by Arnett (2000) as the developmental period between adolescence and adulthood spanning ages 18-25. In recent years, this time span has been established as a defined developmental period with distinct characteristics, tasks, and challenges. Emerging adults are no longer as dependent on their parents as adolescents, but they have not yet assumed the enduring responsibilities that characterize adulthood. As such, emerging adulthood has been called the "in-between" years – a time of flux, exploration and growth.

Emerging adulthood is unique to Western developed societies, and has largely arisen out of dramatic demographic shifts that have transpired in the United States (Arnett, 2000). Delayed marriage and childbearing, and extended educational attainment have altered the trajectories of young people in their late teens and early 20s (Arnett & Taber, 1994). In 2014, the average age of marriage in the U.S. was 27 for women and 29 for men compared to 1960 when the average ages were 23 and 20 for women and men, respectively (U.S. Bureau of the Census, 2014). Today a substantially higher portion of young people are attending college, with approximately 60% entering after graduation from high school; and completion of a bachelor's degree takes 5-6 years on average (Mogelonsky, 1996). Individuals often wait until after attaining higher education to assume enduring adulthood roles such as marriage and childbearing. As such, the late teens and early 20s are no longer a time of settling down, but rather a period of frequent change and prolonged exploration (Arnett, 1998). Some have even argued that emerging adulthood is the most instable period of the life course (Arnett, 2005). Amidst the instability, emerging adults must navigate challenges and developmental tasks inherent to this period as they

transition into adulthood. The emerging adulthood literature has explored key developmental tasks in which emerging adults acquire knowledge and skill for transition into adulthood (Masten, Burt, Roisman, Obradovic, Long, & Tellegen, 2004; Arnett, 1997; 2000). Of particular importance and relevance to the current study are the relational tasks encountered by emerging adults, which are rooted in processes of identity and autonomy development (Ferrer-Wreder, Montgomery, & Lorente, 2003; Conger, Cui, Bryant, & Elder, 2000; Feldman, Gower, & Fischer, 1998.)

Autonomy development: emerging adulthood relational tasks

A key feature of emerging adulthood is identity exploration in relationships and worldviews (Arnett, 2000). Identity exploration involves investigating multiple possibilities and gradually making enduring decisions. These processes are fundamental to emerging adults' task of forging autonomy from parents. Arnett (2000) contends that active identity exploration typically begins in adolescence, but persists and qualitatively changes in emerging adulthood. Developmental research has shown that movement towards mature adult identity and development of mature relational intimacy are co-occurring processes and central developmental tasks of emerging adulthood (Seginer & Noyman, 2005).

The development of secure interpersonal relationships with peers and romantic partners are particularly critical tasks, which directly relate to successful individuation from parents (Conger et al., 1998; Fraley & Davis, 1997). A majority of emerging adults report having close friendships and romantic partners with whom considerable time is spent, and these relationships are central to emerging adults' social networks (Collins & Madsen, 2006; Collins & Laursen, 2004; Fraley & Davis, 1997). During adolescence, young people transition from their primary

attachments with caregivers to primary relationships with peers; and during young adulthood, the primary attachment often becomes a romantic partner, and involvement in an intimate relationship of trust and mutuality that supports functioning (Archer, 1994; Josselson, 1996). The ability to maintain high-quality intimate relationships is a major indicator of adult mental health and wellbeing (Noller, Feeney, & Peterson, 2001). However, the functions of romantic relationships and friendships change over time, and the quality of these relationships is associated with differential outcomes during emerging adulthood (Collins, 2003; Hartup, 1996; Lefkowitz, Boone, & Shearer, 2004; Collins & Madsen 2006).

Emerging Adult Romantic Relationships

In emerging adulthood, romantic relationships involve a deeper level of emotional and sexual intimacy than exists in adolescent relationships (Michael, Gagnon, Laumann, & Kolata, 1996). In adolescence, romantic relationships more closely reflect the functions of friendships (Collins, 2003). Peer networks support adolescent romantic relationships, which often take place within group socialization experiences; and involvement in romantic relationships in turn also fosters connections with other peers (Connolly, Furman, & Konarski, 2000). During emerging adulthood, the functions of romantic relationships shift to involve nurturing, caregiving, and caretaking behaviors that more closely reflect parent-child relationships (Collins, 2003; Furman & Wehner, 1994). The quality of these romantic ties bears impact on a host of emerging adulthood risk and adjustment outcomes.

Emerging adults experience greater emotional adjustment and stability as intimacy becomes more salient in romantic relationships (Meeus, 2007). Research shows that involvement in high-quality romantic relationships serves a positive function and can facilitate desistance

from problem behavior, particularly during important life transitions such as emerging adulthood (Laub & Sampson, 1993). Emerging adults' involvement with supportive romantic partners has been associated with declines in criminal behavior (Farrington, 1995; Farrington & West 1995). In contrast, involvement in low-quality romantic relationships is associated with myriad negative outcomes in emerging adulthood. Physical, psychological and relational aggression exhibited in romantic relationships has been associated with antisocial behavior, depression and low self-esteem (Kim & Capaldi, 2004; Capaldi & Crosby, 1997; Morales & Cullerton-Sen, 2000). Furthermore, much research has shown that problem behaviors are often reinforced within romantic partnerships, and there often exists high levels of similarity in antisocial behavior and drug use between romantic partners (Bender & Losel, 1997; Caspi & Herbener, 1990). It has been suggested that a romantic partner's own problem behavior may both promote the initiation and exacerbation of problem behavior in the other individual (Moffit, Caspi, Rutter, & Silva, 2001). A similar effect has been observed in peer relationships, where peers reinforce and perpetuate engagement in delinquent behavior in a process coined as "deviancy training" (Dishion, Spracklen, Andrews, & Patterson, 1997.) Taken together, this research supports a link between romantic and peer relationships, and suggests that involvement in poor-quality relationships in emerging adulthood incurs higher risk for externalizing behaviors and internalizing problems in emerging adults.

Emerging Adult Peer Relationships

In contrast to the functions of romantic relationships, friendships during emerging adulthood often fulfill the roles of social integration needs and self-worth (Furman & Buhrmster, 1992). During emerging adulthood, dyadic friendships that are characterized by closeness and

security become more prevalent, and emphasis on status within a peer group is minimized (Buhrmester, 1990). To maintain such positive peer relationships, social competency skills such as warmth, trust and reciprocity are needed (Harter & Messer, 1986.) Indeed, peer social competence has been associated with numerous indices of positive functioning including higher self-esteem, educational attainment, and lower psychological symptoms and delinquent behavior in emerging adults (Larson, Whitton, Hauser, & Allen, 2007).

Poor- and high-quality peer relationships have been differentially associated with adjustment and risk outcomes. Amongst college students, the quality of peer relationships has been associated with adjustment to college (Lapsley & Edgerton, 2002). Research has also shown that increased social support during the beginning of college predicts improved social, emotional and personal adjustment (Friedlander, Reid, Shupak, & Cribbie, 2007). Less research has examined positive peer relationships in non-college attending emerging adults. An extensive body of literature has documented that social skills deficits are associated with delinquency (Palmer & Hollin, 1999). Much research has also shown that affiliation with delinquent peers is associated with increases in substance use, delinquency, and violence in adulthood (Dishion, Capaldi, Spracklen, & Li, 1995; Dishion et al., 1997). Moreover, from a developmental perspective, evidence exists that clustering into deviant peer groups functions to foster autonomy development as young adults individuate from parents (Dishion, Poulin, Hunt, & Van Male, 1998).

Indeed the developmental tasks of forging secure, intimate and supportive peer and romantic relationships substantially overlap, and these processes unfold throughout adolescence and emerging adulthood (Arnett, 2000; Archer, 1994). While a preponderance of research has

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examined peer and romantic relationships in adolescence, far less research has been devoted to exploring relationships in emerging adulthood. Exploring factors that impact relational outcomes in emerging adulthood is important. Examining risk correlates of poor- and high-quality peer and romantic relationships is also relevant to this developmental period. Perhaps owing to the instability of emerging adulthood, changing social roles, and drastic decreases in parental monitoring as emerging adults develop independence, this time period is also associated with heightened risk behaviors (Harlow, Mitchell, Fitts, & Saxon, 1999; Bachman, 1996; Kypri, McCarthy, Coe, & Brown, 2004). Given that risk behaviors are often initiated and sustained within emerging adult relational dynamics, and that relationship development is inherent to autonomy, exploring emerging adult risk outcomes is crucial to understanding these related processes.

Risk behaviors in emerging adulthood

Contrary to assumptions that adolescence is the prime time for risk-taking, several types of risky behavior in fact peak in emerging adulthood. Such behaviors include unprotected sex, most types of substance use and risky driving behaviors (Arnett, 1992; Bachman, 1996). While much literature has documented adolescent risk behaviors, less empirical attention has investigated risk behaviors in emerging adults (Greene, Kremar, Walters, Rubin, & Hale, 2000; Jessor, 1991). In 2002, the National Survey on Drug Use and Health found that approximately 70% of 21-25 year-olds used alcohol in the past month, which was a higher percentage than any other age group. The survey also revealed that illicit drug use was highest amongst 18-20 year-olds, and second highest amongst 21-25 year-olds with 23% and 19% reporting use in the past month, respectively. Young people ages 18-25 had the highest prevalence rates of substance

dependence and abuse diagnoses.

Arnett (1996) found that in his older sample of 18-23 year-olds, 23% smoked marijuana five times in the past year and 5% had sex with someone they did not know well at least five times. In another study on risk and reckless behaviors in emerging adults, Bradley and Wildman (2002) found that over one-fourth of participants engaged in speed driving at least once per week. Marijuana use was also high, with one-fifth of the sample using at least once per week. Older participants (ages 20-25) reported more frequent involvement in reckless sex and substance use compared to younger participants (ages 18-19).

Substance use and antisocial behavior are highly related and often co-occur (Huang et al., 2001). Antisocial behavior is known to increases risk for substance use, and substance use, in turn, increases risk for engagement in aggressive and delinquent behavior (Hussong et al., 2004). Antisocial behavior and substance use problems are both highly prevalent during young adulthood and constitute a major societal burden (American Psychiatric Association, APA, 2000; Substance Abuse and Mental Health Services Administration, SAMHSA, 2004; Romeo, Knapp, & Scott, 2006; Rehm, Mathers, Popova, Thavorncharoensap, Teerawattananon, & Patra, 2009). As such, these risk behavior outcomes are particularly worthy of empirical inquiry during emerging adulthood. Understanding factors that contribute to emerging adult risk behaviors is imperative.

The current study will seek to understand factors that impact peer and romantic relationship quality and risk behaviors in emerging adults. Specifically, this study will examine the role of parenting during emerging adulthood. Parents undeniably still play prominent roles in their children's lives during emerging adulthood (Arnett, 2000.) While a substantial body of

research has documented associations between parenting during childhood and adolescence and outcomes relating to relationship quality and risk behavior, few studies have examined the impact of parenting *during* emerging adulthood on these outcomes. Given that earlier parenting has been shown to influence subsequent relationships and engagement in risk behaviors, examining parenting factors during emerging adulthood would greatly expand upon the emerging adult and parenting literature (Tubman & Lerner, 1994, Brown, Mounts, Lamborn & Steinberg, 1993). This study will draw upon the substantial parenting literature in childhood and adolescence in addition to the broader emerging adulthood developmental research to inform study variables that will contribute to this underdeveloped line of research. Unique to this study, observational measures of parenting behaviors will be used to investigate parenting during emerging adulthood.

Parenting and romantic relational outcomes

Well-established links exist between earlier parenting practices and quality of emerging adult romantic relationships. Specific positive and negative parenting behaviors during childhood and adolescence have been shown to predict both emerging adult social competency behaviors and quality of romantic relationships. Using a longitudinal study design, Conger, Cui, Bryant, & Elder (2000) found that nurturant and involved parenting during adolescence later predicted warm, supportive and low hostility behaviors exhibited by emerging adults towards romantic partners. These interpersonally competent behaviors were positively associated with romantic relationship quality for emerging adult couples, and mediated the association between parenting behaviors and emerging adult romantic relationship quality. In this study, the authors also found that parent education level was associated with romantic relationship outcomes, underscoring a

need to account for contextual factors in studying emerging adult romantic relationships (Conger, Rueter, & Elder, 1999). In a similar vein, Tubman and Lerner (1994) found that parental involvement, warmth, support and acceptance in adolescence were associated with emerging adults' individuation, psychological adjustment and healthy relationships.

Earlier negative parenting has been shown to predict low-quality romantic relationships in emerging adulthood. Research has supported a theory of intergenerational transmission of aggressive behaviors in romantic relationships, wherein negative parental behavioral interactions lead to interpersonal skills deficits and poor romantic relationship quality in young adults (Capaldi & Clark, 1998; Simons, Lin, & Gordon, 1998). Two longitudinal studies, which followed males from early adolescence to young adulthood found support for this parental socialization hypothesis (Capaldi & Clark, 1998; Simons et al., 1998). According to the socialization hypothesis, negative parenting behaviors (e.g., poor monitoring of child behavior, harsh and inconsistent discipline) increase risk for antisocial behavior in general, which in turn, increases risk for aggression towards a romantic partner in particular. Capaldi & Clark (1998) reported significant pathways between negative parenting behaviors during fourth grade and intimate partner aggression during young adulthood, mediated by male antisocial behaviors during adolescence. The research suggests that negative and positive parenting behaviors implemented during adolescence differentially impact the behaviors that emerging adults exhibit in romantic relationships and the quality of these relationships. Sparse research has been conducted on parenting behaviors implemented during emerging adulthood and their impact on emerging adults' romantic relationship quality.

Parenting and peer relationships

Parenting research has shown that specific parenting behaviors exhibited in childhood and adolescence are uniquely related to low- and high-quality peer relationships. One long-term follow-up study showed that father's expression of hostility towards their young adults (age 18) and observed undermining of young adult autonomy predicted young adults' levels of hostility exhibited in emerging adult friendships (peer-rated) 9 years later (Allen, Hauser, O'Connor, & Bell, 2002). Research by Dishion and colleagues has shown that low levels of parental monitoring during middle childhood has been shown to significantly predict children's movement into deviant peer networks during adolescence, even after controlling for peer rejection and youth antisocial behavior (Dishion, Patterson, Stoolmiller, & Skinner, 1991). Additionally, harsh parenting, low maternal nurturance, lax discipline and parental low educational and career attainment are each associated with deviant peer affiliation in adolescence (Blanton, Gibbons, Gerrard, Conger, & Smith, 1997; Brody & Forehand, 1993; Dishion et al., 1991). Affiliation with delinquent peers is important to examine as delinquent peer affiliation serves as a direct link to problem behaviors and compromised academic achievement, both of which undermine successful adulthood transitions (Tildesley, Hops, & Andrews, 1993; Hawkins, Catalano, & Miller, 1992). Contextual factors such as parental socioeconomic status and neighborhood disadvantage are also important to examine as such factors have been shown to incur higher risk for delinquent peer affiliation in children (Brody, Conger, Gibbons, Ge, McBride Murry, Gerrard, & Simons, 2001). Much of the literature on parenting and affiliation with delinquent peers has focused on parenting during childhood and adolescence on adolescent outcomes. Quite limited research has examined the impact of parenting during emerging adulthood on emerging adult affiliation with delinquent peers.

Some research has shown that parenting also impacts positive peer affiliation. In a study of European-American and Latino 5th and 6th graders, father's acceptance, involvement and open communication with their male children was positively associated with level of intimacy in adolescent friendships for European American youth only. For girls of both ethnic groups, acceptance by mother and father was significantly associated with adolescent friendship intimacy levels (Updegraff, Madden-Derdich, Estrada, Sales, & Leonard, 2002). A paucity of research has explored how parenting during emerging adulthood impacts emerging adult healthy and supportive peer relationships.

Parenting and risk behaviors

Research also lacks a refined understanding of how parenting during emerging adulthood impacts emerging adults' involvement in risky behaviors. Given the ongoing and active involvement assumed by parents during this period, and the known heightened risks amongst emerging adults, considering the impact of parenting on emerging adult risk outcomes is critical. A substantial body of literature has documented associations between parenting behaviors and adolescent engagement in risky behaviors. Parent joint decision-making with adolescents is associated with less affiliation with drug-using peers in adolescence (Brown et al., 1993). Parental monitoring in adolescence is associated with less sexual risk-taking in male and female adolescents (Rodgers, 1999). Research has found low parental monitoring, and hostility and rejection during adolescence to be the strongest predictors of adolescent criminal behavior (Cottle, Lee & Heilbrun, 2001; Gendreau, Little & Goggin, 1996; Hoeve, Dubas, Gerris, van der Laan & Smeenk, 2011). Some research suggests that males may be more vulnerable to parenting risk factors for delinquency than females, highlighting the importance of examining gender

differences (Moffitt, 2001).

Some research has also examined the impact of parenting behaviors during adolescence on emerging adult risk behavior outcomes. Parent support during adolescence is associated with decreased alcohol and drug use in emerging adults (Locke & Newcomb, 2004; King & Chassin, 2004). Additionally, neglectful and permissive parenting style during adolescence was shown to predict delinquency five years later in male and female emerging adults ages 19-27 (Hoeve et al., 2011). This research underscores the importance of examining the influences of both positive and negative dimensions of parenting.

Quite limited research has investigated the impact of parenting behaviors during emerging adulthood on emerging adult risk behavior outcomes. One study found that parent knowledge during emerging adulthood was associated with decreases in emerging adult risky sexual behaviors (Padilla-Walker, Nelson, Madsen & Barry, 2008). Another study found that warm and responsive parenting was associated with less negative drinking behaviors in emerging adults (Nelson, Padilla-Walker, Christensen, Evans & Carroll, 2011). Given the paucity of research on the relationship between parenting during emerging adulthood and emerging adult risk behaviors, another aim of the current study will be to examine this relationship.

Limitations to research on parenting during emerging adulthood

Several gaps in the literature on parenting during emerging adulthood exist. First, almost all studies have focused on parenting styles versus parenting practices. Parenting practices are qualitatively different from parenting styles. Parenting practices are the specific behaviors that parents utilize to socialize children including monitoring, limit-setting, and positive reinforcement (Dishion, Stormshak & Kavanagh, 2012). Parenting practices are known to be

robust predictors of adolescent achievement. In contrast, parenting styles characterize an emotional *climate* in which parents raise children. Baumrind's (1991) typology is the most accepted model of parenting styles. In this framework, parenting is characterized across two dimensions of demandingness and responsiveness, and four general parenting styles can be derived: authoritative, authoritarian, permissive and neglecting. Indeed authoritative parenting has been associated with many positive outcomes in children and adolescents (e.g., Holmbeck, 1996; Maccoby & Martin, 1983). However, a serious critique to purely operationalizing parenting dimensionally is that parenting styles are not predictive of positive outcomes across cultures or socioeconomic statuses (Baumrind, 1991; Darling & Steinberg, 1993). As such, investigating parenting practices is more suitable and culturally competent for research with racially and socioeconomically diverse samples.

Other limitations include an over-focus on how earlier parenting impacts emerging adults versus investigations of how parenting during emerging adulthood affects their current functioning. Also, most studies do not include multi-informant data, but rather rely on emerging adult-report only. Additionally, studies utilize parenting measures that were originally designed to assess parenting during adolescence, despite evidence that parenting in emerging adulthood is qualitatively different. The extant research has also largely oversampled from White college student populations, which precludes an understanding of parenting across racially heterogeneous cultures and within non-college-attending populations. As a methodological critique, many studies use samples with ages that overlap with emerging adult years (e.g., older adolescents) but do not distinctly capture the emerging adult developmental period (ages 18-25). Finally, no studies have utilized observational data to capture the behaviors that parents

implement during emerging adulthood.

The current study will seek to address gaps in the literature in several ways. This study will utilize a racially, ethnically, and socioeconomically diverse sample of emerging adults and their caregivers, which will also include non-college-attending individuals. To measure parenting behaviors, this study will utilize observational data based on theoretically established parenting behavior constructs tailored to the emerging adult developmental period. The use of observational data is perhaps the greatest strength of this study. This study will also utilize parent-report data on parenting behaviors to examine convergent validity of the observational parenting behavior measure. To assess emerging adult relationship quality and risk behavior, this study will use measures designed for use with emerging adults, which have been included in prior studies (Stormshak, Caruthers, Chronister & Rabinovitch, 2015).

Study Purpose and Aims

The present study will draw from a diverse sample of emerging adults and their parents to examine how parenting behaviors during emerging adulthood impact emerging adult peer and romantic relationships and risk behavior outcomes.

Aim 1: To examine convergence between positive and negative dimensions of parent-report and observed parenting behavior constructs.

Aim 2: To examine pathways between observed parenting behaviors, including both positive and negative parenting during emerging adulthood, as predictors of emerging adult romantic relationship quality.

Aim 3: To examine pathways between observed parenting behaviors, including both positive and negative parenting during emerging adulthood, as predictors of emerging adult affiliation with delinquent peers.

Aim 4a: To examine pathways between observed negative parenting behavior as a predictor of emerging adult delinquent behavior and alcohol use.

Aim 4b: To examine pathways between observed negative parenting behavior and emerging adult delinquent behavior and alcohol use as mediated by delinquent peer relationships.

The research questions pertaining to these aims are the following:

Research Question 1: Are there associations between the parent-report parenting variables of emotional and instrumental support and autonomy-promoting behaviors, and the observed parenting variables of emotional support, autonomy-promoting behaviors and hostility and criticism?

I hypothesize that parent-reported emotional and instrumental support and autonomy-promoting behaviors will be positively associated with observed emotional support and autonomy promoting behaviors and negatively associated with observed hostility and criticism.

Research Question 2: Is observed emotional support, autonomy-promoting behaviors and hostility and criticism associated with emerging adult reported positive and negative romantic relationship quality?

I hypothesize that observed emotional support and autonomy-promoting behaviors will be positively associated with emerging adult positive romantic relationship quality, and negatively associated with negative romantic relationship quality. I further hypothesize that

observed hostility and criticism will be positively associated with negative romantic relationship quality and negatively associated with positive romantic relationship quality.

Research Question 3: Is observed emotional support, autonomy-promoting behaviors and hostility and criticism associated with emerging adult reported positive peer relationships and affiliation with delinquent peers?

I hypothesize that observed emotional support and autonomy-promoting behaviors will be positively associated with positive peer relationships and negatively associated with affiliation with delinquent peers. I further hypothesize that hostility and criticism will be positively associated with affiliation with delinquent peers and negatively associated with positive peer relationships.

Research Question 4: Is hostility and criticism associated with emerging adult reported delinquency as measured by the total externalizing behaviors scale of the Young Adult Behavior Checklist (YABCL) and emerging adult reported alcohol use?

I hypothesize that hostility and criticism will be positively associated with emerging adult delinquency and alcohol use.

Research Question 5: Will associations between observed hostility and criticism and emerging adult reported delinquent behavior and alcohol use be mediated by emerging adult reported affiliation with delinquent peers?

I hypothesize that hostility and criticism will predict externalizing behavior and alcohol use via direct pathways and that affiliation with delinquent peers will mediate these relationships.

CHAPTER II

METHODS

The current study utilized existing data from Project Alliance 2 ([PAL2]; HD 075150), a large-scale family-centered longitudinal intervention trial. PAL2 was designed and implemented to prevent the development of youth problem behaviors by providing family support during the transition from childhood to adolescence. PAL2 recruited families residing in urban neighborhoods in the Pacific Northwest region of the United States. Families were recruited from three ethnically and socioeconomically diverse public middle schools. Participating families were followed longitudinally into emerging adulthood. Families were initially enrolled when adolescents were in the 6th grade (mean age 11.87) and baseline data was collected at this time. Data was collected at four time points in middle school and high school, and the 6th wave of data was collected during emerging adulthood (ages 18-22). Wave 5 data was only collected on part of the sample, and is therefore not considered a full data collection point. Wave 6 follow-up assessments focused on parenting behaviors and emerging adult risk and adjustment outcomes. Emerging adults and caregivers each completed self-report questionnaires. Additionally, participants engaged in a series of video recorded family interaction tasks, which were subsequently coded. The current study will utilize Wave 6 data collected from the subsample of emerging adults and caregivers who completed the observational tasks.

Participants

The present study sample is derived from 209 of the 593 emerging adults (mean age 19.68) and their caregivers (mean age 48.64) who originally participated in the baseline assessment of PAL2. Of the full sample of families recruited into the study, 80% elected to participate. Participant retention across all six waves of PAL2 was 74%. Based on the subsample that completed family interaction tasks during Wave 6, 51.7% of emerging adult participants

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identified as male and 47.8% as female. One participant identified as "other". The ethnic composition of the emerging adult sample was as follows: 42.1% European American ($n = 88$), 23.4% multiethnic ($n = 49$), 18.7% African American/Black ($n = 39$), 10% Hispanic/Latino ($n = 21$), 1.9% Asian/Asian American ($n = 4$), 1.9% Native American/Alaska Native ($n = 4$), 1% Pacific Islander ($n = 2$), and 1% "other" ($n = 2$). Of this sample, 90.4% of primary caregivers identified as female ($n = 189$) and 9.6% as male ($n = 20$). A total of 88% of primary caregivers were biological parents ($n = 184$), 4.8% were adoptive parents ($n = 10$), 3.3% were grandparents ($n = 7$), 1% were "another relative" (n = 2), and the remaining 2.9% of caregivers were step parents, foster parents or identified as "other" ($n = 6$). Caregivers endorsed a broad range of education levels: 24% attended partial college or specialized training ($n = 51$), 17.8% received graduate professional training or a graduates degree ($n = 37$), 17.3% received standard college or university training ($n = 36$), 17.3% graduated from high school/GED ($n = 36$), 8.1% attended junior college or received an associates degree ($n = 17$), 5.3% attended partial high school ($n = 11$), and the remaining 9.6% completed junior high school or less ($n = 20$). Caregiver reported yearly income was the following: 23.1% earned $90,000 or more ($n = 48$), 16.3% earned between $60,000-90,000 ($n = 34$), 25.7% between $30,000-60,000 ($n = 54$), 18.2 % between $10,000-30,000 ($n = 38$), and 16.2% earned $10,000 or less ($n = 34$).

Procedures

During the years of 2006-2010, children and caregivers who were enrolled in the study completed baseline self-report questionnaires and engaged in a series of video recorded family interaction tasks during spring of the academic year. Child- and parent-reported questionnaires were administered at four additional time points throughout middle school and the first year of

high school. Participants were re-contacted at age 19 and invited to participate in a 6th wave of data collection capturing family interactions and emerging adult autonomy and risk behavior outcomes during the emerging adult years. Emerging adults and their caregivers completed self-report questionnaires and participated in a series of video recorded family interaction tasks. Some families completed questionnaires but opted not to participate in the family interaction tasks (52%). Caregivers were compensated $50 and emerging adults were compensated $100 for completing the questionnaires because the emerging adult questionnaire was substantially longer. Families who participated in the interaction tasks were compensated an additional $100 ($50 for caregivers and $50 for emerging adults). Only families who participated in the family interaction tasks were included in this study ($n = 209$). Families opted out of participating in the family interaction tasks for several reasons. First, families living outside of the metro area in which the family interaction tasks were being conducted were ineligible to participate. Additionally, some emerging adults were no long in touch with their caregivers or no longer had caregivers. Some families also cited concerns about privacy and discomfort associated with being video recorded. Participation was completely voluntary.

Measures

Self-report questionnaires and observational coder impressions forms including all parenting behavior items are found in Appendix A. For all measures, internal consistency was tested using Cronbach's alpha, where $a > .70$ is considered to be acceptable and $a > .80$ is considered to be good (Zimmerman, Zumbo, & Lalonde, 1993). Reliability analyses were conducted using SPSS version 22.0 for Mac (IBM Corp, 2013).

Demographic variables. On the self-report questionnaire, emerging adults and their primary caregivers provided demographic information for age, gender, and ethnicity. Primary caregivers also responded to questions regarding highest education level and yearly income. Gender was treated as a dichotomous variable where a zero was assigned to males and a one to females. Ethnicity was coded categorically, where 1 = African American/Black, 2 = Native American/Alaskan Native, 3 = Asian/Asian American, 4 = Hispanic/Latino, 5 = Pacific Islander, 6 = Caucasian/White, 7 = "other", and 8 = multiethnic. For caregiver education level, participants selected a category that best matched their highest level of education. Responses ranged from 1 (*no formal schooling*) to 9 (*graduate professional training/graduate degree*). Caregivers also responded to one item regarding yearly income by selecting the option which best reflected their earnings. Responses ranged from 1 (*$4,900 or less*) to 13 (*$90,000 or more*).

Observed parenting behaviors.

Coder impressions measure. Emerging adults and their caregivers completed a series of videotaped family discussion tasks and data was subsequently coded using a 126-item coder impressions measure (COIMP) developed to capture key parenting behavior constructs, general family interactional patterns and emerging adult behavior (Stormshak, Caruthers, & Dishion, 2014). Emerging adults and their caregivers were provided with six brief prompts and given 5-8 minutes to discuss each topic. The topics were the following: 1. Plans and goals, 2. Living situation, 3. Romantic relationships, 4. Substance use, 5. Family problem-solving, and 6. Strengths and goals.

The COIMP was completed for each task. Coders were extensively trained by the coding supervisor and required to demonstrate 80% response reliability. Inter-rater reliability was

achieved for all coders. Coders met as a group on a bi-weekly basis with the coding supervisor to discuss and resolve coding discrepancies. The COIMP consists of specific questions pertaining to each task, and coders must indicate on a 9-point Likert scale (9 = *Very much* – 1 = *Not at All*) how true each statement is for the emerging adult (TC), primary caregiver (PC) and alternate caregiver (AC) if an alternate is present. In all cases where an alternate caregiver was present, the mother was identified as the PC. Given the small portion of alternate caregivers (*n* = 34) who participated, only emerging adult- and PC-report data was used in this study.

In addition to completing specific questions pertinent to each of the six discussion tasks, the COIMP also includes items that prompt coders to report on general family interactions. The purpose of these questions is to capture more global measures of behaviors that may be present across tasks. Coders rate how often behaviors occur for each dyad. Some questions prompt responses to how much participants display behaviors in general (e.g., "*How much warmth is evident in each participant's discussion*?") Other questions elicit responses to how much participants display behaviors towards particular family members.

Only a subset of the task-specific and global COIMP items were used to capture parenting behavior constructs. These items tapped into a broad array of positive parenting behaviors that have been associated with positive outcomes in adolescents and emerging adults in addition to negative parenting behaviors previously associated with deleterious outcomes. For the purposes of this study, one negative observational parenting construct capturing parental hostility and criticism was created. Two positive observational parenting constructs were created including parental emotional support and parental autonomy-promoting behaviors. Only COIMP items containing clear behaviors implemented by parents towards emerging adults were

included in developing these observational parenting variables. While interactions are always

reciprocal, the intent was to capture distinct positive and negative parenting practices versus less

concrete facets of parenting style and family relationship dynamics. Items hypothesized to tap

into each of these constructs were selected. Exploratory factor analysis (EFA) was utilized to

simplify the data structure of the COIMP and derive separate underlying parenting behavior

latent variables including emotional support, autonomy-promoting behaviors, and hostility and

criticism. Mean scores were calculated for each factor. Higher mean scores indicated higher

levels of parenting behaviors exhibited within each scale. Refer to the results section for a

description of parenting construct development. Following is a description of items comprising

each of the variables. For each item included in the three scales, coders responded to how much

each behavior was exhibited from the caregiver towards the emerging adult using a 9-point

Likert scale (1 = *Not At All*– 9 = *A lot*). For a detailed explanation of construct development

using EFA, refer to the results section.

Observational emotional support. A total of 3 COIMP items reflecting parental

emotional support were included in this parenting behavior construct. Sample items included:

"*How much does parent actively listen?*" "*How much warmth is evident by parent*?" and "*How

much nonverbal engagement was evident by parent*?" A mean score was derived from these

items, with higher scores indicating greater displaying of emotional support and lower scores

indicating lower levels of these behaviors (M = 6.48, SD = 1.46). Reliability of this scale was

good, a = .80 (see Table 1).

Observational hostility and criticism. A total of 6 COIMP items reflecting parental

hostility and criticism were included in this parenting behavior construct. Sample items included:

"Any attempt to control feelings?" and *"Any anger or irritability evident?"* A mean score was taken of these items with higher scores indicating greater displays of parental hostility and criticism and lower scores indicating lower levels of these behaviors (*M* = 1.64, *SD* = 0.98). Reliability of the scale was good, *a* = .87 (see Table 1).

Observational autonomy-promoting behaviors. A total of 7 COIMP items reflecting parental autonomy-promoting behaviors were included in this parenting behavior construct. Sample items included: *"Does caregiver communicate confidence that emerging adult can be successful?"* and *"Does caregiver discuss ways that the emerging adult's strengths relate to his/her goals?"* A mean score was taken of these items with higher scores indicating greater displays of parental autonomy-promoting behaviors and lower scores indicating lower levels of these behaviors (*M* = 6.04, *SD* = 1.45). Reliability of the scale was good, *a* = .86 (see Table 1).

Self-report parenting behaviors.

Parent questionnaire. Parent-reported parenting behavior constructs were created using the parent self-report questionnaire data. Two parenting variables mapping onto the positive observed parenting variables were developed: emotional and instrumental support and autonomy-promoting behaviors. Parents were only prompted to respond to positive parenting behaviors in the questionnaire, thus self-report data on negative parenting behaviors was unavailable. For a detailed explanation of construct development using EFA, refer to the results section.

Parent emotional and instrumental support. A total of 12 items reflecting self-reported parent emotional and instrumental support were included in this parenting behavior construct. Parents responded using a 5-point Likert Scale (1 = *Never*- 5 = *Very Often*) to items regarding

whether or not they provided emotional or instrumental support to emerging adults in the past 3 months. Sample items included: "*helped him/her handle discouragement,*" and "*helped him/her look for a car or a place to live.*" A mean score was taken of these items with higher scores indicating greater displays of parental emotional and instrumental support and lower scores indicating lower levels of these behaviors ($M = 2.79$, $SD = 1.51$). Reliability of the scale was good, $a = .82$ (see Table 1).

Autonomy-promoting behaviors. A total of 4 items reflecting self-reported autonomy-promoting behaviors were included in this parenting behavior construct. Parents responded to questions regarding how often they engaged in behaviors that supported the autonomy of their emerging adults in the past 3 months using a 5-point Likert scale ($1 = Never – 5 = Very Often$). Sample items included: "*I complimented my child for something he/she was trying to do*" and "*I asked questions that helped my son/daughter think through decisions.*" A mean score was derived from these items with higher scores indicating greater displays of parental autonomy-promoting behaviors and lower scores indicating lower levels of these behaviors ($M = 2.93$, $SD = .77$). Reliability of the scale was good, $a = .78$ (see Table 1).

Young adult questionnaire.

Positive romantic relationships. Emerging adults responded to 14 items regarding healthy, supportive and reciprocal behaviors in which they or their partners engaged within the context of their relationship. This scale was only answered by emerging adults who reported involvement in a current romantic relationship. If participants were not in a current romantic relationship, they were instructed to skip these questions. Emerging adults in a romantic relationship reported how often these positive behaviors occurred within the entire time of being

with their partner using a 5-point Likert-scale (1 = *Never* – 5 = *Very Frequently*). Sample items included: "*My romantic partner treats me with respect and kindness*" and "*I have an enjoyable time, have fun, or laugh with my romantic partner.*" A mean score was derived from these items with higher scores indicating greater displays of positive behaviors in romantic relationships and lower scores indicating lower levels of these behaviors (*M* = 3.53, *SD* = .70). Reliability of this scale was excellent, Cronbach's alpha = .97 (see Table 1).

  Negative romantic relationships. Emerging adults responded to 8 items regarding negative, coercive and abusive behaviors in which they or their partners engaged within the context of their relationship. This scale was only answered by emerging adults who reported involvement in a current romantic relationship. If participants were not in a current romantic relationship, they were instructed to skip these questions. Emerging adults in a romantic relationship reported how often these negative behaviors occurred within the entire time of being with their partner using a 5-point Likert-scale (1 = *Never* – 5 = *Very Frequently*). Sample items included: "*I put down my romantic partner, insult, or verbally threaten him/her*" and "*My partner makes me do things that I don't want to do.*" A mean score was derived from these items with higher scores indicating greater displays of negative behaviors in romantic relationships and lower scores indicating lower levels of these behaviors (*M* = .27, *SD* = .44). Reliability for this scale was good, *a* = .82 (see Table 1).

  Peer support. Emerging adults responded to 7 items regarding the quality and perceived supportiveness of their peer relationships using a 5-point Likert-scale (1 = *Not at all* – 5 = *A lot*). Sample items included: "*To what extent would you seek or accept guidance from your peers*?" and "*Do your peers pay attention to what you are doing, care about your activities, ask questions*

about your life and monitor how you are doing?" A mean score was derived from these items with higher scores indicating higher levels of perceived peer support and lower scores indicating lower levels of peer support (M = 3.92, SD = .87). Reliability for this scale was excellent, a = .92 (see Table 1).

Delinquent peer affiliation. Emerging adults answered 12 questions regarding how many of their peers engaged in delinquent behaviors in the past 3 months using a 5-point Likert scale (1 = *None of them* – 5 = *All of them*). Sample items included: "*How many of your friends have ruined or damaged something that did not belong to them on purpose*?" and "*How many of your friends have used medicine when they weren't sick*?" A mean score was derived from these items with higher scores indicating greater affiliation with delinquent peers and lower scores indicating lower levels of delinquent peer affiliation (M = .61, SD = .60). Reliability for this scale was excellent, a = .90 (see Table 1).

Alcohol use. Emerging adult alcohol use was measured using 3 items capturing different facets of alcohol use. Emerging adults responded to the question, "*How often did you drink alcohol in the last 3 months*?" using an 8-point Likert scale (0 = *Never* – 8 = *2-3 times a day or more*). They also responded to the following two items rated on 5-point Likert scales (0 = *Never* – 5 = *More than 10 times*): "*How many times did you have five or more drinks in a row*?" and "*During the past 2 weeks how many times have you had 10 or more drinks in a row*?" A mean score was derived from these items and higher scores represented higher usage of alcohol (M = 1.35, SD = 1.27). Reliability of these items was acceptable, a = .69 (see Table 1).

Emerging adult delinquent behavior. Emerging adult engagement in law-breaking behavior was measured using the Achenbach (1997) Young Adult Self-Report (YASR). The

YASR includes 123 items and assesses emotional and behavioral problems amongst individuals ages 18-30. Emerging adults responded to items regarding how true each description was for them in the past 6 months using a 3-point Likert scale (0 = *Not true as far as you know* – 3 = *Very true or often true*). The YASR is scored on eight syndromes including Anxious/Depressed, Withdrawn, Somatic Complaints, Thought Problems, Attention Problems, Intrusive Behavior, Delinquent Behavior, and Aggressive Behavior. The YASR also includes broad-band scores: Internalizing, which is comprised of the Anxious/Depressed and Withdrawn syndrome scales and Externalizing, which is comprised of Intrusive Behavior, Delinquent Behavior and Aggressive Behavior. For the purposes of this study, the Total Externalizing Problems score was utilized as a measure of emerging adult delinquent behavior. This total score was derived by summing scores on individual items comprising Intrusive, Delinquent, and Aggressive Behavior subscales (M = 51.76, SD = 10.90). Achenbach (1997) has reported good reliability and validity for the YASR. Chronbach's alpha for this sample was excellent, a = .91 (see Table 1).

Data analytic method

Preliminary data analysis was conducted using SPSS version 22.0 for Mac (IBM Corp, 2013). All data was screened for patterns of missing data. Little's Missing Completely at Random (MCAR) test was utilized to assess whether missing data was random or if systematic patterns existed. Cook's D was used to screen for influential outliers. To minimize Type I error, alpha was set at .05. Given the sample size, there is sufficient power to detect significant effects.

As a preliminary step, two parent-reported and three observational parenting variables were created using EFA. Analyses were estimated using principal axis factoring (PAF) with a Varimax orthogonal rotation. Varimax rotation was used for ease of interpretation. EFA was

conducted to examine the underlying structure of items hypothesized to load onto each distinct parenting construct. Factors were extracted using Kaiser's rule (eignevalues > .6). Items with communalities below .30 were dropped from analyses. Reliability analyses were conducted with retained items using Cronbach alpha as an indicator of internal consistency with an alpha greater than or equal to 0.70 considered acceptable and 0.80 considered good (Zimmerman et al., 1993). Mean scores were derived from items that loaded onto each parenting factor and were used to represent each parenting variable.

Means, standard deviations, skew and kurtosis index and reliability of each scale were calculated; tenability of assumptions was examined. Bivariate correlations were conducted to examine relationships between all study variables, and to inform which variables to include in path modeling. Table 1 depicts descriptive and reliability statistics. Table 2 presents bivariate correlations.

Path analysis was used to examine the associations between observed parenting behaviors and emerging adult social functioning. Standard errors were adjusted in all models to account for the dependence among parents' and emerging adults' scores by using maximum likelihood estimation with robust standard errors (MLR) which is calculated with a sandwich estimator comparable to the Yuan-Bentler T2* statistic (Muthén & Satorra, 1995). In the first two path models observed parenting for emotional support, autonomy promoting, and hostility/criticism were simultaneously estimated with emerging adult social outcomes including romantic relationship quality and peer functioning. In the third and final series of path models, the association of observed parenting behaviors with emerging adult externalizing and alcohol use behaviors were examined. Delinquent peer association was examined as a mediator. Gender

differences were examined using multigroup path modeling. All path models were analyzed using Mplus version 7.4 (Muthén & Muthén, 1998-2015).

CHAPTER III

RESULTS

Parenting behavior variable construction

      Observational parental emotional support. A total of 8 items from the COIMP were used to develop the construct of observational emotional support. A variable representing this construct was created using EFA. Results provided general support for the a priori organization of items. Several items were dropped from analyses due to low communalities (< .30). Kaiser-Meyer-Olkin Measure of Sampling Adequacy was adequate at .70, which is above the recommended cut-off value of .60. Bartlett's test of sphericity was significant at .00 ($p < .05$). Using Kaiser's rule (eignevalues > .6), the analysis originally extracted two factors accounting for 38.25% and 18.02% of the variance of the 8 items, respectively. Five items with communalities below 0.30 were considered to be in the low range and omitted from further analyses. The final EFA produced a one-factor solution of observational emotional support, retaining 3 of the 8 original items with moderate communalities. Inspection of the pattern matrix revealed moderate loadings for these items on the single factor. Communalities are presented in Table 3.

      The pattern of factor loadings suggested that only 1 of 3 of the originally extracted factors were uniquely defined. Visual inspection of the scree plot also confirmed that a one-factor solution was appropriate. The single factor, containing 3 items, explained 72.05% of the pre-rotation variance. Items loading onto this factor represented aspects of observed emotional

support. Chronbach's alpha for observed emotional support was good, $a = .80$. A mean score for observed emotional support was created based on the 3 items.

Observational parental hostility and criticism. A total of 11 items from the COIMP were used to measure the construct of observational negative parenting, originally reflecting three dimensions: hostility, criticism and control. A variable representing this construct was created using EFA. Results provided general support for the a priori organization of items. Several items were dropped from analyses due to low communalities ($< .30$). Items reflecting the control dimension of negative parenting were dropped, thus this variable only represents parental hostility and criticism. Kaiser-Meyer-Olkin Measure of Sampling Adequacy was adequate at .86, which is above the recommended cut-off value of .60. Bartlett's test of sphericity was significant at .00 ($p < .05$). Using Kaiser's rule (eignevalues $>.6$), the analysis originally extracted three factors accounting for 21.4%, 16.65% and 15.01% of the variance of the 11 items, respectively. Five items with communalities below 0.30 were considered to be in the low range and omitted from further analyses. The final EFA produced a one-factor solution of hostility and criticism, retaining 6 of the 11 original items with moderate to high communalities. Inspection of the pattern matrix revealed moderate to high loadings for these items on the single factor. Communalities are presented in Table 4.

The pattern of factor loadings suggested that only 1 of 3 of the originally extracted factors were uniquely defined. Visual inspection of the scree plot also confirmed that a one-factor solution was appropriate. The single factor, containing 6 items, explained 62.24% of the pre-rotation variance. Items loading onto this factor represented aspects of observed parental hostility and criticism.

Chronbach's alpha for parental hostility and criticism was good, $a = .87$. A mean score for observed hostility and criticism was created based on the 6 items.

Observational autonomy-promoting behaviors. A total of 10 items from the COIMP were used to assess the construct of observational autonomy-promoting behaviors. A variable representing this construct was created using EFA. Results provided general support for the a priori organization of items. Several items were dropped from analyses due to low communalities ($< .30$). Kaiser-Meyer-Olkin Measure of Sampling Adequacy was adequate at .82, which is above the recommended cut-off value of .60. Bartlett's test of sphericity was significant at .00, $p < .05$. Using Kaiser's rule (eignevalues $> .6$), the analysis originally extracted 3 factors accounting for 42.76%, 16.00% and 10.16% of the variance of the 10 items, respectively. Three items with communalities below 0.30 were considered to be in the low range and omitted from further analyses. The final EFA produced a two-factor solution of observational autonomy-promoting behavior, retaining 7 of the 10 original items with moderate to high communalities. Inspection of the pattern matrix revealed moderate to high loadings for these items on each factor. Communalities are presented in Table 5.

The pattern of factor loadings suggested that only 2 of 3 of the originally extracted factors were uniquely defined. Visual inspection of the scree plot also suggested that a two-factor solution was appropriate. Factor 1, containing 5 items, explained 56.31% of the pre-rotation variance. Factor 2, containing 2 items, explained 17.35% of the pre-rotation variance. Given that the two factors did not seem to reflect conceptually distinct facets of autonomy-promoting parenting, and that only two items loaded onto Factor 2, separate subscales were not utilized in the development of the autonomy-promoting variable. The items were constrained to one factor.

Chronbach's alpha for parental autonomy-promoting behavior was good, $a = .86$. A mean score for observed autonomy-promoting behavior was created based on the 7 items.

Parent-reported emotional and instrumental support. A total of 15 items from the parent-report questionnaire were used to measure the construct of parent-reported emotional and instrumental support. A variable representing this construct was created using exploratory factor analysis (EFA). Results provided general support for the a priori organization of items. Several items were dropped from analyses due to low communalities (< .30). Kaiser-Meyer-Olkin Measure of Sampling Adequacy was adequate at .75, which is above the recommended cut-off value of .60. Bartlett's test of sphericity was significant at .00 ($p < .05$). Using Kaiser's rule (eignevalues > .6), the analysis originally extracted five factors accounting for 30.05%, 13.03%, 9.90%, 8.34%, and 7.58% of the variance of the 15 items, respectively. Three items with communalities below 0.30 were considered to be in the low range and omitted from further analyses. The final EFA produced a 4-factor solution of parent-reported emotional and instrumental support, retaining 12 of the 15 original items with moderate to high communalities. Inspection of the pattern matrix revealed moderate to high loadings for these items on the single factor. Communalities are presented in Table 6.

The pattern of factor loadings suggested that only 4 of 5 of the originally extracted factors were uniquely defined. Visual inspection of the scree plot also confirmed that a 4-factor solution was appropriate. Factor 1, containing 3 items, explained 35.22% of the pre-rotation variance. Items loading onto this factor represented support for finding resources and making decisions for basic needs (e.g., housing, transportation and medical care). Factor 2, containing 3 items, explained 14.60% of the pre-rotation variance. Items loading onto this factor represented

parental support of coping skills. Factor 3, containing 3 items, explained 11.30% of the variance and reflected aspects of parental career support. Factor 4, containing 3 items, explained 10.25% of the variance, and reflected parental money management support.

Reliability analyses were conducted for each factor using Chronbach's alpha to measure internal consistency of items. For Factor 1, $a = .89$, Factor 2, $a = .77$, Factor 3, $a = .74$, and Factor 4, $a = .68$. Reliability analyses were also conducted for all items together, $a = 82$. Given that the internal consistency for items loading onto Factors 2, 3 and 4 were in the low to acceptable range, separate subscales were not used. Items were constrained to one factor. Reliability for all items was considered to be good ($a = 82$). A mean score representing parent-reported emotional and instrumental support was created based on the 12 items.

Parent-report autonomy-promoting behaviors. A total of 16 items from the COIMP tapped into the construct of parental autonomy-promoting behaviors. A variable representing this construct was created using EFA. Results provided general support for the a priori organization of items. Several items were dropped from analyses due to low communalities ($< .30$). Kaiser-Meyer-Olkin Measure of Sampling Adequacy was adequate at .67, which is above the recommended cut-off value of .60. Bartlett's test of sphericity was significant at .00 ($p < .05$). Using Kaiser's rule (eignevalues $> .6$), the analysis originally extracted 5 factors accounting for 27.0%, 12.1%, 9.6%, 7.5% and 6.3% of the variance of the 16 items, respectively. Twelve items with communalities below 0.30 were considered to be in the low range and omitted from further analyses. The final EFA produced a one-factor solution of parent-reported autonomy-promoting behaviors, retaining 4 of the 16 original items with moderate communalities. Inspection of the

pattern matrix revealed moderate loadings for these items on the single factor. Communalities are presented in Table 7.

The pattern of factor loadings suggested that only 1 of 5 of the originally extracted factors were uniquely defined. Visual inspection of the scree plot also confirmed that a one-factor solution was appropriate. The single factor, containing 4 items, explained 60.92% of the pre-rotation variance. Items loading onto this factor represented aspects of parent-reported autonomy-promoting behaviors. Reliability of parent-reported autonomy-promoting behaviors was good, $a = .78$. A mean score representing parent-reported autonomy-promoting behaviors was created based on the 4 items.

Figure 4 presents a list of the self-reported and observed parenting behavior items derived through EFA.

Preliminary analyses

Descriptive statistics. Missing data analyses were conducted using Little's missing completely at random (MCAR) test. Little's MCAR test indicated that missing items were missing completely at random for the variables observed emotional support, autonomy-promoting behaviors and hostility and criticism, X2 (10) = 8.12, $p = .62$. For alcohol use, 17% of the data were missing, and the pattern of missing data appeared to be systematic. Emerging adults with missing data were more likely to report positive family and romantic relationships, externalizing behaviors within normal limits, and a high school education and/or some college. Plausibly, emerging adults with missing alcohol use data did not respond because they were not drinkers. The sample of 209 families who completed the wave 6 family interaction tasks were compared to the full sample ($n = 441$) on all study variables to explore potential differences

between those who completed the observational tasks and those who did not. Emerging adults who completed the family interaction tasks were significantly younger and reported significantly more peer support compared to emerging adults who did not complete the observational tasks. The two groups did not significantly differ on any other outcome.

Means, standard deviations, skew and kurtosis index, and reliability of each scale were calculated and are presented in Table 1. Examination of skewness and kurtosis statistics (using a cutoff value of +/-1.00) in addition to visual inspection of histograms suggested that distributions for several study variables approximated normal: parent-reported emotional and instrumental support, observed emotional support, parent-reported autonomy-promoting behaviors, observed autonomy-promoting behaviors, emerging adult externalizing behaviors, emerging adult alcohol use, and caregiver yearly income. The distribution of data for several study variables was positively skewed: affiliation with delinquent peers (1.16) and negative romantic relationships (2.34). The data for two other variables was negatively skewed: peer support (-1.03), and positive romantic relationships (-2.75). However, based on Kline's (1998) identified threshold values for skew (+/-3.00) and kurtosis (+/-10.00), the data for these variables does not substantially depart from normality so as to pose problems for structural equation modeling (SEM) analyses. Path models are also known to be robust to violation of normality in samples larger than 100 (Tabachnick & Fidell, 2001).

Correlations. Bivariate correlations were conducted to examine associations between self-reported and observational parenting variables ($p < .05$), and between all study variables (see Table 2).

Parent-reported and observed parenting variables. Correlations between observed and parent-reported parenting variables were conducted to examine convergence between these two distinct forms of measurement. Observed parental emotional support was positively significantly associated with parent-reported autonomy-promoting behaviors ($r = .16$). Observed hostility and criticism was negatively significantly associated with self-reported autonomy-promoting behaviors ($r = -.14$). Observed and self-reported autonomy-promoting behaviors were positively significantly correlated ($r = .13$).

Parenting variables and emerging adult relationship and risk outcomes. Observed hostility and criticism was weakly and positively associated with affiliation with delinquent peers ($r = .17$) and moderately and negatively associated with positive romantic relationships ($r = -.30$). Observed autonomy-promoting behaviors was positively associated with positive romantic relationships ($r = .21$) and negatively associated with negative romantic relationships ($r = -.22$). Externalizing behavior was negatively associated with observed emotional support ($r = -.17$), and positively associated with observed autonomy-promoting behaviors ($r = -.14$); and observed hostility and criticism ($r = .36$).

Gender and caregiver SES. Emerging adult gender was associated with parent-reported autonomy-promoting behaviors ($r = .21$), affiliation with delinquent peers ($r = -.20$) and emerging adult alcohol use ($r = -.19$), with males showing greater affiliation with delinquent peers and greater alcohol use, and females showing more autonomy-promoting behaviors. Caregiver SES was associated with observed autonomy-promoting behaviors ($r = .24$), parent-reported autonomy-promoting behaviors ($r = -.20$), and emerging adult alcohol use ($r = .24$).

Path modeling

The correlations revealed that observed parenting variables (emotional support, autonomy-promoting behaviors, and hostility and criticism) yielded weak to moderate correlations with the emerging adult relational and risk outcomes. None of the parent-reported parenting variables were associated with emerging adult risk behaviors or relational outcomes. Furthermore, only minimal correlations existed between the observed and parent-reported parenting variables. As such, only observed parenting variables were used in the path analyses. Caregiver SES was not included as a covariate in path analyses due to its weak correlations with parenting and outcome variables. Results of all path models are depicted in Figures 1 through 3.

Model 1: Associations of observed parenting with emerging adult romantic relationship quality. Results of this model indicated that all three observed parenting variables significantly covaried (see Figure 1). Specifically, there was a positive covariance between emotional support and autonomy-promoting behaviors ($r= 0.50$, *SE*=0.07, $p < .05$). A negative covariance was observed between emotional support and hostility/criticism ($r= -0.29$, *SE*=0.07, $p < .05$) and between autonomy-promoting behaviors and hostility/criticism ($r= -0.20$, *SE*=0.11, $p < .05$). Positive and negative romantic relationships significantly negatively covaried ($r= -0.28$, *SE*=0.11, $p < .05$). However, no observed parenting behaviors were significantly associated with emerging adult romantic relationships and the model did not account for a significant proportion of variance in the outcome variables. Given that only half of the emerging adult sample currently reported being in a romantic relationship the model was tested with this subset (*n*=110), but the model results did not change.

It was postulated that meaningful differences might exist between emerging adults who reported current involvement in a romantic relationship compared to those who reported not

being in a romantic relationship. As such, a one-way analysis of variance (ANOVA) was calculated on participants' report of romantic relationship status to all observed parenting behaviors, and emerging adult externalizing behavior and alcohol use. No significant differences were observed on any parenting or risk variables between the two romantic relationship status groups.

Gender differences were examined using multigroup path modeling. In the multigroup model for both females and males the covariance between COIMP parenting indicators were comparable to the model without gender. However, in the multigroup models the covariance between positive and negative romantic relationships was no longer significant. While a significant path from autonomy-promoting behaviors to negative romantic relationships emerged for both females and males, this finding is not interpreted as trustworthy for two reasons. First, it is not trustworthy potentially due to low power (i.e., approximately 100 participants per group), but secondly this multigroup model did not explain a significant proportion of variance in either positive or negative romantic relationship outcomes for females or males.

Model 2: Associations of observed parenting with emerging adult peer relationships. In this model, all three observed parenting variables significantly correlated with one another. Emerging adult peer support and delinquent peer association were not significantly correlated. The association between observed parental hostility/criticism and emerging adult delinquent peer association approached significance (β=0.15, *SE*=0.08, *p*=0.06), but no other pathway in the model was statistically significant (see Figure 2). The pathways to peer support were dropped to free variance and the model was run a second time. However, the pathway between observed hostility/criticism and emerging adult delinquent peer association still remained statistically non-

significant, β=0.15, SE=0.08, p=0.06. When the model was tested for gender differences, no gender differences emerged and the path estimates did not statistically differ from the model without gender.

Model 3: Associations of observed parenting with emerging adult problem behaviors. Results of this model indicated that all three observed parenting variables significantly covaried, a finding that was consistent with Model 1 (see Figure 3a). Emerging adult externalizing behaviors and alcohol use had a positive and significant covariance, r= 0.20, SE=0.08, $p < .05$. In this model, no parenting variables were significantly associated with alcohol use while a significant association was observed from hostility/criticism to externalizing behaviors, β=0.33, SE=0.07, $p < .05$.

A third model, examining associations between all three observed parenting variables and emerging adult externalizing behaviors and alcohol use revealed a significant pathway between hostility and criticism and externalizing behaviors; no other pathways were significant. This model did not explain a significant proportion of variance for alcohol use, but it explained a significant proportion of externalizing behaviors, R^2 =0.13, $p < .05$.

Multigroup modeling to test for gender differences indicated gender differences were present. While the magnitude of covariance among COIMP predictors was comparable to the single group model, the outcome variables of externalizing and alcohol use significantly covaried for females ($r = 0.29$, SE=0.11, $p < .05$), but not males. This finding may not be trustworthy as the model did not account for a significant proportion of variance in either outcome variable for females, but it predicted a significant proportion of variance of externalizing behaviors for males (R^2 =0.16, $p < .05$), but not alcohol use.

To further examine the association between hostility/criticism and problem behaviors, non-significant pathways were omitted from the model and delinquent peer association was included to examine mediation (see Figure 3b). In this model, externalizing behaviors and alcohol use no longer significantly covaried. Hostility/criticism was significantly associated with externalizing behaviors, β=0.29, *SE*=0.07, *p* < .05, and delinquent peer association, β=0.17, *SE*=0.08, *p* < .05. There was a positive association between delinquent peer association and externalizing behaviors, β=0.37, *SE*=0.07, *p* < .05, and alcohol use, β=0.35, *SE*=0.08, *p* < .05. This model explained a significant proportion of variance in externalizing (R^2=0.26, *p* < .05) and alcohol use behaviors (R^2=0.12, *p* < .05), but not delinquent peer affiliation. An analysis of indirect effects was conducted. Only direct pathways were shown to be statistically significant suggesting that delinquent peer association only partially mediates hostility/criticism, externalizing behaviors, and alcohol use and an interpretation of full mediation was not supported.

Multigroup modeling indicated some gender differences were present. Specifically, the path for females from parental hostility/criticism was a much smaller magnitude than the path for males. Inspection of the 95% confidence interval indicated the path in the model for females was not trustworthy as the estimate spanned zero (β=0.09, *SE*=0.10, 95% CI -0.11 to 0.26), while the path in the model for males was statistically significant and trustworthy (β=0.21, *SE*=0.11, 95% CI 0.01 to 0.40). The multigroup models explained similar and significant proportions of externalizing behaviors for both females (R^2=0.29, *p* < .05) and males (R^2=0.25, *p* < .05), but not alcohol use.

Summary

Bivariate correlations revealed that associations between observed and parent-reported parenting behaviors were minimal and suggest that observed parenting skills at this age does not relate to parent's own report of their behavior. Furthermore, no self-reported parenting variables were significantly related to any of the emerging adult relational or risk outcomes. As such, only observed parenting variables were used in the series of path analyses investigating the impact of parenting during emerging adulthood on emerging adult peer and romantic relationships and risk behavior outcomes. The first path model, which examined associations between observed parenting variables (emotional support, autonomy-promoting behaviors and hostility and criticism) and positive and negative romantic relationship quality, revealed no significant pathways between the parenting predictors and outcomes. No significant gender differences were observed. In the second path model, examining the association between observed hostility and criticism and emerging adult delinquent peer association, the pathway approached significance but remained non-significant. No significant gender differences were observed. A final model, which examined the predictive impact of hostility and criticism on risk behaviors as mediated by delinquent peer association, yielded a direct and significant pathway from hostility and criticism to externalizing behaviors, and this relationship was partially mediated by affiliation with delinquent peers. Results revealed that while some gender differences were observed, the model for females was not trustworthy, thus limiting inferences about meaningful differences in predictive impact of parental hostility and criticism for males and female emerging adults.

CHAPTER IV

DISCUSSION

The present study sought to expand upon the parenting and emerging adult

developmental literature in several ways. A paucity of empirical attention has been devoted to exploring the impact of parenting during emerging adulthood on emerging adult quality of relationships and engagement in risk behavior. Given that emerging adulthood is a time of exploration and change with postponement of enduring adulthood roles, parents are indeed "parenting" for longer (Arnett, 2000). Developing high-quality interpersonal relationships with peers and romantic partners is inherent to autonomy development during emerging adulthood (Conger et al., 1998; Fraley & Davis, 1997). While developmental theories suggest that parenting during emerging adulthood may still play an integral role in this processes, very little is known about which parenting behaviors may be influential. The present study utilized observational and self-report data from a diverse sample of emerging adults and their caregivers to pursue several related aims.

Convergence between observational and self-reported parenting constructs

The first aim was to examine convergence between parent-report and observed parenting constructs. Correlations between parent-reported (emotional and instrumental support and autonomy-promoting behaviors) and observed (emotional support, autonomy-promoting behaviors and hostility and criticism) parenting variables indicated very minimal association between these two forms of report. These results were somewhat unsurprising in light of findings from past studies on convergence between observational and self-report measures of parenting constructs that have found modest or low levels of convergence (Patterson, Reid, & Dishion, 1992; Deater-Deckard, Dodge, Bates, & Pettit, 1996). Relevant to the present study, the items that loaded onto self-report versus observed parenting constructs appeared to tap into qualitatively different facets of these constructs. For example, in the current study, the observed

emotional support construct included items such as nonverbal engagement and warmth, which are affective qualities of moment-to-moment behavior. In contrast, the self-report emotional and instrumental support construct measured instrumental supportive behaviors such as talking about the future with young adults, helping young adults handle discouragement and giving advice. Minimal correlations between observed and self-report parenting variables may suggest that these affective and instrumental behaviors postulated to comprise emotional support are distinct and do not converge.

The finding that observed parenting constructs were correlated with emerging adult relational and risk outcomes, whereas self-report parenting constructs were not associated with any of these outcomes may point to unique benefits to using observational parenting data. Indeed the use of observational data in measuring parenting constructs is a major advantage of the current study. Observational techniques allow for the consistent and reliable assessment of behaviors compared to self-report techniques, which have been shown to be affected by systematic personal biases related to factors such as social desirability, prior expectations and low mood (Eddy, Dishion & Stoolmiller, 1998; Richters, 1992). Observational data also allows investigators to directly view overt and often automatic behaviors that unfold within social interactions, and such nuanced details would be difficult for individuals to access through self-report (Gardner, 2000). Furthermore, observational data is known to provide data based on rates and proportions that reflect stable propensities in parents such as overt aggression and harsh discipline practices (Gardner, 2000). A robust body of literature supports reliability, construct validity and predictive validity of specific traits such as parental negative discipline style that are assessed in this systemic manner (Capaldi, Chamberlain & Patterson, 1997; Patterson et al.,

1992). It should also be noted that self-report parenting data also has unique advantages including comparing reports across multiple participants and capturing valuable subjective impressions that enable a deeper understanding of individuals' belief systems, perceptions, and how these relate to behavior. Future research should consider comparing the relative merits of using observational and self-report measures of parenting using constructs that more closely map onto one another.

Pathways between parenting and emerging adult romantic relationships

The second aim of this study was to examine pathways between observed positive and negative parenting behaviors during emerging adulthood (emotional support, autonomy-promoting behaviors and hostility and criticism) as predictors of emerging adult romantic relationship quality. It was hypothesized that observed emotional support and autonomy-promoting behaviors would be positively related to positive romantic relationship quality and negatively related to negative romantic relationship quality, and that inverse relationships would be observed for hostility and criticism. These hypotheses were not supported. Path model results indicated no significant pathways between any of the observed parenting variables and negative or positive romantic relationship quality. Past research reporting associations between parenting and emerging adult romantic relationship quality has typically measured parenting during childhood and adolescence rather than parenting during emerging adulthood (Capaldi & Clark, 1998; Conger et al., 2000). As indicators of positive romantic relationship quality, some studies have measured subjective levels of happiness, satisfaction and commitment in romantic relationships rather than self-reported prosocial behaviors implemented within relationships (Conger et al., 2000). Several studies on the intergenerational transmission of aggression

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(negative romantic relationship quality) have examined male aggression towards a female partner in young adulthood using high-risk samples (e.g., Capaldi & Clark, 1998).

The present study examined the impact of parenting behaviors implemented during emerging adulthood on emerging adult romantic relationship quality using a normative sample. One explanation for the non-significant pathways between parenting and negative romantic relationship quality observed in the present study is that the study sample was not a high risk sample, and thus the data for negative romantic relationship quality were positively skewed. Additionally, in the current study, the positive romantic relationship quality construct reflected prosocial behavioral indices of the relationship quality versus positive feelings and opinions about the romantic relationship. The null findings observed for associations between parenting and positive romantic relationship quality may suggest that relationship quality is best captured using affective rather than behavioral indices. A final plausible explanation is that parenting during this time period has a negligible impact on emerging adults' romantic relationship quality. Future studies should explore both behavioral and affective qualities of relationships in both high-risk and normative emerging adult samples.

Pathways between parenting and emerging adult peer relationships

A third aim of this study was to examine the pathways between negative and positive observed parenting behaviors (emotional support, autonomy-promoting behaviors and hostility and criticism) as predictors of emerging adult delinquent peer relationships. It was hypothesized that observed emotional support and autonomy-promoting behaviors would be negatively associated with delinquent peer affiliation and that hostility and criticism would be positively associated with delinquent peer affiliation. Path model results indicated that the pathway

between observed hostility and criticism and emerging adult delinquent peer affiliation approached significance but remained non-significant. No other pathways were significant.

Research on parenting and peer relationships has largely explored how parenting during childhood and adolescence relates to delinquent peer affiliation (low-quality) or level of friendship intimacy (high-quality) in adolescence (Dishion et al., 1991; Updegraff et al., 2002). Low parental monitoring and harsh discipline have each been shown to predict delinquent peer affiliation in adolescence (Dishion et al., 1991; Blanton et al., 1997). Additionally, one study found that father's acceptance, involvement and open communication with their male children was positively associated with level of intimacy in adolescent friendships. In a study of parenting during emerging adulthood, the authors found that father's hostility towards young adults at age 18 predicted their level of hostility (peer-rated) exhibited in emerging adult friendships 9 years later (Allen et al., 2002).

In the current study, parenting constructs that have been previously associated with peer outcomes in the adolescent literature (e.g., monitoring, harsh discipline, open communication) were not examined. Parental hostility was explored, and while the pathway between hostility and affiliation with delinquent peers was just shy of significance, this finding is still noteworthy. A vast majority of parents in this present study were biological mothers, thus one explanation for the non-significant pathway is that father's hostility may be more impactful to emerging adult peer relationships. In fact, research has suggested that fathers may have a particularly important parenting role in processes of youth autonomy and social development, as associations have been documented between fathers' parenting and youth externalizing behavior and aggression (Bjoerkqvist & Oesterman, 1992; Phares & Compas, 1992). Another feasible explanation for the

null findings observed in the present study is that parenting during emerging adulthood does not have as strong of an impact on emerging adults' peer relationships as it does during childhood and adolescence, although the study by Allen and colleagues (2002) would suggest otherwise.

Future studies should examine the impact of fathers' and mothers' parenting behaviors during emerging adulthood on emerging adults' peer relationships. More empirical attention should also be devoted to better understanding whether parental monitoring, involvement and harsh discipline exhibited during emerging adulthood impact emerging adult peer relationship quality.

Pathways between hostility and criticism and emerging adult risk behaviors

A fourth aim was to examine pathways between observed hostility and criticism as a predictor of emerging adult externalizing behaviors and alcohol use. It was hypothesized that hostility and criticism would be positively related to both externalizing behaviors and alcohol use. It was further hypothesized that delinquent peer affiliation would mediate the relationships between hostility and criticism and alcohol use and externalizing behaviors. Significant pathways between hostility and criticism and emerging adult externalizing behaviors and delinquent peer affiliation were observed. Positive associations between delinquent peer association and externalizing behaviors and alcohol use were also observed. Results from the meditational model indicated that delinquent peer affiliation partially mediated the relationship between hostility and criticism and externalizing behaviors and alcohol use.

In this model, parental hostility and criticism during emerging adulthood clearly contributed to both emerging adult delinquent behaviors and affiliation with delinquent peers. This finding is quite consistent with past literature, which has identified deleterious youth

outcomes associated with hostile and critical parenting. A particularly strong connection has

been documented between hostility and criticism and youth delinquency. In a meta-analysis of

161 studies on the relationship between parenting and delinquency, the authors found the

strongest effect sizes for the negative parenting behaviors of neglect, hostility and rejection

(Hoeve, Dubas, Eichelsheim, Van der Laan, Smeenk, & Gerris, 2009). In this meta-analysis, the

authors found that 67% of youth with parents who demonstrated a rejecting and hostile attitude

versus 33% of youth with parents who did not display high levels of these negative parenting

behaviors scored high on delinquency.

Most of the studies included in this meta-analysis examined the impact of parenting

during childhood and adolescence on delinquency during adolescence and young adulthood. It

has been suggested that the link between parenting and delinquency may weaken as children

mature and experience greater influence exerted by peers and other formative life occurrences

(Hoeve et al., 2007, 2008). However, findings from the present study indicate that hostile and

critical parenting still has a direct link to engagement in delinquent behavior, and that this

relationship is partially accounted for by involvement with delinquent peers. Many earlier

theories have posited that childhood parenting plays an integral role in the etiology of

delinquency by initiating the development of a stable propensity towards delinquency in youth

(Gottfredson & Hirschi 1990; Moffitt 1993). Alongside these theories, dynamic models of

delinquency suggest that correlates of delinquency may shift throughout the lifespan regardless

of earlier parenting (Sampson & Laub, 1993, 2005). Taken together, this research suggests that

while earlier parenting may first initiate delinquent tendencies in youth, other factors, notably,

involvement with delinquent peers can facilitate a continued trajectory of delinquency into young

adulthood. The childhood and adolescence parenting literature has shown that hostile and critical parenting increases risk for both engagement in delinquent behavior and affiliation with delinquent peers (Hoeve et al., 2011; Blanton et al. (1997). Affiliation with delinquent peers also strongly influences delinquency and violence in adulthood (Dishion, Capaldi, Spracklen, & Li, 1995; Dishion et al., 1997). A similar pattern regarding parenting, peers and delinquency appears to be present in emerging adulthood. Research examining sex differences in how family factors, including parenting, impact youth engagement in delinquent behaviors has revealed mixed findings. Some studies have found that parenting has a stronger impact on male delinquency and other studies have found few gender differences (Hay, 2003; Hubbard & Pratt 2002; Loeber & Stouthamer-Loeber, 1986). In the current study, true differences in the link between parental hostility and criticism and emerging adult delinquency could not be examined because the separate model for females was not trustworthy, thus limiting an ability to compare effects between males and females. In the multigroup models, similar and significant proportions of externalizing behaviors were explained for both males and females.

The question arises as to why parental hostility and criticism are such potent contributors to engagement in problem behaviors. Some researchers have posited that when individuals experience hostile rejection by parents, they are at risk for developing negatively distorted mental representations of themselves and their environment, which is directly associated with later aggression and other risk factors for delinquency. Rohner and colleagues have shown that these effects of parental hostility are robust across ethnic cultures and genders (Rohner, 1975, 1986; Khaleque & Rohner, 2002). Future research should examine other specific mechanisms by which hostile and critical parenting during emerging adulthood exerts influence on delinquency

and affiliation with delinquent peers.

Limitations and future directions

It is important to note a couple limitations to the present study. First, childhood and adolescent levels of parental hostility, youth delinquency and youth affiliation with delinquent peers were not included in analyses. As parenting is shown to be stable over time (Loeber et al. 2000; Steinberg et al. 1994), it is likely that parents who demonstrated high levels of hostility and criticism during emerging adulthood also demonstrated high levels of these behaviors during childhood and adolescence. It may be that the current findings that parent hostility and criticism during emerging adulthood impact emerging adult delinquency and affiliation with delinquent peers reflects stability from a pattern that originated in childhood or adolescence. Future research should consider analyzing multiple time points (childhood, adolescence, emerging adulthood) to examine contributions of hostile and critical parenting over time.

Another limitation is that analyses did not account for the bi-directional nature of the parent-emerging adult relationship. For example, research has shown that most parents change their discipline practices when it comes to their attention that their child has committed a delinquent act (Kerr & Stattin, 2003). As this study was cross-sectional, parenting behaviors were not examined as preceding events to delinquency, nor were contributions of emerging adults' behavior to the dynamic assessed. Therefore, it seems highly possible that the link between parenting and delinquency may be due in part to the impact of emerging adult delinquency on parenting. Future research should pursue these questions of directionality and reciprocal influence of parent and emerging adult behaviors.

Summary and conclusions

The present study examined associations between parenting during emerging adulthood and emerging adult relationship and risk outcomes. The present study contributes to the parenting and emerging adult developmental literature in several ways. This study is the first to utilize observational measures of theoretically derived parenting behavior constructs to assess parenting during emerging adulthood. The present study is also one of few to utilize a racially and socioeconomically diverse sample of emerging adults, including non-college-attending populations. Results revealed that hostile and critical parenting during emerging adulthood influences both emerging adult affiliation with delinquent peers and delinquent behavior. These findings underscore the importance of studying parenting during emerging adulthood as parenting still plays a significant role in emerging adult adjustment at this critical developmental period.

Project Alliance 2 Wave 6 Coder Impressions (COIMP)

FAMILY ID PA__ __ __ __   CODER ID __ __   Today's Date __ __ / __ __ / __ __

Family Members Present:

TC: ☐ Female ☐ PC _____

☐ Male ☐ AC _____

TASK 1: PLANS & GOALS

1.   What plans and/or goals are mentioned?

_____

2.   Do participants clearly articulate goals and plans?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

3.   Do participants specify a plan for making goal progress?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

4.   Does the TC discuss ways the caregivers could encourage and/or support progress toward goals?

	Very Much	Somewhat	Not at All

| TC: | 9 | 8 | 7 | 6 | 5 | 4 | 3 | 2 | 1 |

5. How effective is the caregiver at obtaining information from the TC?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

6. Does the caregiver provide structure, scaffolding, instruction, advice, and/or coaching toward stated goal?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

7. Does the caregiver engage in behaviors that support the TC's goals (emotionally, financially, or instrumentally)?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

8. Does the caregiver criticize, dismiss, or devalue TC's goals?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

9. Does the caregiver support and/or encourage TC's autonomy?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

10. Do participants communicate confidence that the TC can be successful?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

11. Does the caregiver praise the TC?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

12. What percentage of time does the family discuss plans and goals?

Whole time			Some of the time				None	
9	8	7	6	5	4	3	2	1

13. Who does most of the talking during this task?

TC			Equal				Caregiver(s)	
9	8	7	6	5	4	3	2	1

TASK 2: LIVING SITUATION

14. Does it seem that the TC lives in the same home as the caregiver(s)?

Full Time			Part Time				Not at All	
9	8	7	6	5	4	3	2	1

15. Do participants indicate the caregiver provides financial support to the TC?

	All/Most			Some				None	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

TC:		9	8	7	6	5	4	3	2	1

16. Do participants indicate the caregiver offers social and/or emotional support to the TC?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

17. Do participants indicate the caregiver offers instrumental support to the TC? (Examples include: cooking food, help finding scholarships, help with job-hunting, storing items, caring for a pet, helping move, etc.)

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

18. Who seems to be maintaining the most control over the TC's life?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

19. Does it seem that the caregiver is engaged in the TC's life?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

20. Does it seem that the caregiver is aware of TC's activities outside the home?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

21. Does the caregiver encourage TC independence?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

22. Does the TC seem to be working toward autonomy (looking for work, saving money for own place, using own money to pay bills or purchase necessities, making plans to live away from parents, enrolled in school, etc.)?

	Very Much			Somewhat				Not at All	
TC:	9	8	7	6	5	4	3	2	1

23. Do participants seem satisfied with the current living situation? (How well is the current situation working for the TC and caregiver(s)?)

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

24. Do participants seem comfortable discussing the TC's living situation?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

25. What percentage of time does the family talk about the TC's living situation?

	Whole time				Some of the time				None
	9	8	7	6	5	4	3	2	1

TASK 3: RELATIONSHIPS

26. Does the caregiver explain the importance of employing relationship skills with a partner (e.g. communication, problem solving), how partners should treat one another (e.g. respect, boundaries), or how to be in a healthy relationship?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

27. Does the caregiver explain the risks of sexual activity (e.g. STDs, pregnancy)?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

28. Does the caregiver explain and/or clarify negative aspects of relationships (such as feeling pressured to do things that you are not ready for, being hurt by a partner, or losing friends or opportunities)?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

29. Do participants seem to agree on the importance of relationships in early adulthood?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

30. Do participants volunteer information about dating activities/experiences/partners and/or feelings/opinions about relationships?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

31. Does the TC ask the caregiver for any relationship advice?

	Very Much			Somewhat				Not at All	
TC:	9	8	7	6	5	4	3	2	1

32. Does the caregiver seem to know about the TC's current and past dating partners and activities?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

33. If participants indicate that TC is in a relationship, does the caregiver seem to like TC's romantic partner?

CHECK HERE IF N/A because no current ☐ relationship indicated:

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

34. Does the caregiver seem intrusive when it comes to asking for information from the TC?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

35. Do participants openly discuss sexual behavior?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

TASK 4: SUBSTANCE USE

36. Do the beliefs of the TC and caregiver(s) seem to be similar or closely matched ?

Very similar   Neither similar nor different   Very Different

9   8   7   6   5   4   3   2   1

37. How specific or vague is the TC about amount and/or frequency of substance use?

Specific   Neither specific nor vague   Vague

9   8   7   6   5   4   3   2   1

38. Does the caregiver gather information using open-ended, non-judgmental questions?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

39. Does the caregiver make any assumptions regarding the TC's substance use behavior, or ask presumptive questions (closed, yes-or-no questions)?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

40. Does the caregiver talk about substance use in a way that gives mixed messages regarding the TC's use?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

Does the participant communicate expectations about the TC's use of the following substances (in the caregiver's home and/or in other settings)?

41.   Tobacco?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

42.   Alcohol?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

43.   Marijuana?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

44.   Pharmaceutical drugs?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

TC: 9   8   7   6   5   4   3   2   1

45. Other drugs?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

46. Do participants provide a strong rationale for not using substances (e.g., benefits of sobriety, health, spiritual, etc.)?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

47. Does the participant mention examples of how drug or alcohol use has interfered with or negatively impacted aspects of the TC's life (or others' lives), such as employment, health, school, relationships, family, etc.?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

48. Is there any indication that the TC has been involved in risky or dangerous situations (such as using substances while driving or binge drinking)?

	Very Much			Somewhat				Not at All	
	9	8	7	6	5	4	3	2	1

Do the participants refer to using particular substances in a favorable or positive way (can include statements minimizing the dangers of using substances)?
    49. Tobacco?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

50. Alcohol?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

51. Marijuana?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

52. Pharmaceutical drugs?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

53. Other drugs?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

TC:	9	8	7	6	5	4	3	2	1

54. What percentage of time does the family discuss substance use?

Whole time				Some of the time				None
9	8	7	6	5	4	3	2	1

TASK 5: FAMILY PROBLEM SOLVING

55. What problem is discussed? -

_____

If a second problem is mentioned, please fill it in:

_____

56. How clearly is/are the problem(s) defined by the participants?

Very Much			Somewhat				Not at All	
9	8	7	6	5	4	3	2	1

57. Does it seem as though participants have discussed this problem before?

Very Much			Somewhat				Not at All	
9	8	7	6	5	4	3	2	1

58. Do family members discuss topics in a positive tone?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

59. Do family members seem flexible and open to trying new ways to solve a problem?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1

AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

60. Does any one family member dominate the problem solving discussion?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

61. Does the caregiver consider and include the TC's interests and concerns in the discussion?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

62. Does the caregiver provide emotional support or encouragement during the discussion?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

63. Do family members propose clear and specific solutions?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

64. Are family members actively involved in problem solving?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1

AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

65. Are multiple solutions discussed by the family?

Very Much				Somewhat			Not at All	
9	8	7	6	5	4	3	2	1

66. Did the family reach at least one solution?

Very Much				Somewhat			Not at All	
9	8	7	6	5	4	3	2	1

67. How well did family members agree on any solution(s)?

Very Much				Somewhat			Not at All	
9	8	7	6	5	4	3	2	1

68. How skillful is each participant at problem solving?

	Very Much				Somewhat			Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

69. What percentage of time does the family discuss the problem?

Whole time				Some of the time			None	
9	8	7	6	5	4	3	2	1

TASK 6: STRENGTHS & GOALS

70. What strength(s) is/are specified?

_____

71. Do participants discuss ways that the TC's strengths relate to his/her goals?

	Very Much			Somewhat				Not at All	
a. PC:	9	8	7	6	5	4	3	2	1
b. AC:	9	8	7	6	5	4	3	2	1
c. TC:	9	8	7	6	5	4	3	2	1

72. Does the caregiver effectively use praise and/or encouragement with the TC?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

73. Does the caregiver mention or describe the TC's positive traits (i.e., kindness, intelligence, strength, etc)?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

74. Does the caregiver mention or describe the TC's positive behaviors (i.e., doing well in school, making dinner for the family, cleaning up the house, working, etc)?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

75. Does the caregiver seem to support the TC's goals?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

76. Do participants use an optimistic tone?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

77. Do participants talk about hope for the TC's future?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

78. Do participants seem to have difficulty with recognizing the TC's strengths?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

79. What percentage of time do the family members discuss the TC's strengths and goals?

Whole time			Some of the time				None	
9	8	7	6	5	4	3	2	1

GENERAL FAMILY INTERACTION

Rate for each pair how often the following occurred. Note: For TC-PC, rate how much TC did each behavior toward the PC. For PC-TC, rate how much PC did each behavior toward TC. If a family member does a behavior toward everyone else in the interaction, record that the behavior occurred to each person present.

80. Suggesting ideas

	A lot		Sometimes				Not at all	
TC-PC:	9	8	7	6	5	4	3	2
1								
PC-TC:	9	8	7	6	5	4	3	2
1								
TC-AC:	9	8	7	6	5	4	3	2
1								
AC-TC:	9	8	7	6	5	4	3	2
1								

81. Acknowledging or responding to ideas

	A lot		Sometimes				Not at all	
TC-PC:	9	8	7	6	5	4	3	2
1								
PC-TC:	9	8	7	6	5	4	3	2
1								
TC-AC:	9	8	7	6	5	4	3	2
1								
AC-TC:	9	8	7	6	5	4	3	2
1								

82. Non responsive or ignoring, stonewalling

	A lot		Sometimes				Not at all	
TC-PC:	9	8	7	6	5	4	3	2
1								
PC-TC:	9	8	7	6	5	4	3	2
1								
TC-AC:	9	8	7	6	5	4	3	2
1								
AC-TC:	9	8	7	6	5	4	3	2
1								

83. Nonverbal expression of engagements (smiles, leaning in, nodding, etc)

	A lot		Sometimes				Not at all	
TC-PC:	9	8	7	6	5	4	3	2
1								

PC-TC:	9	8	7	6	5	4	3	2
1								
TC-AC:	9	8	7	6	5	4	3	2
1								
AC-TC:	9	8	7	6	5	4	3	2
1								

84.　Nonverbal expressions of disengagement (frowns, looks of contempt, etc.)

	A lot			Sometimes			Not at all	
TC-PC:	9	8	7	6	5	4	3	2
1								
PC-TC:	9	8	7	6	5	4	3	2
1								
TC-AC:	9	8	7	6	5	4	3	2
1								
AC-TC:	9	8	7	6	5	4	3	2
1								

85.　Negative physical (hitting, kicking, pinching, slapping, throwing objects at others)

	A lot			Sometimes			Not at all	
TC-PC:	9	8	7	6	5	4	3	2
1								
PC-TC:	9	8	7	6	5	4	3	2
1								
TC-AC:	9	8	7	6	5	4	3	2
1								
AC-TC:	9	8	7	6	5	4	3	2
1								

86.　Positive physical (high-fives, hugs, pats on the back)

	A lot			Sometimes			Not at all	
TC-PC:	9	8	7	6	5	4	3	2
1								
PC-TC:	9	8	7	6	5	4	3	2
1								
TC-AC:	9	8	7	6	5	4	3	2
1								
AC-TC:	9	8	7	6	5	4	3	2
1								

87. Putdowns of SELF

	A lot		Sometimes				Not at all		
TC-PC:	9	8	7	6	5	4	3	2	1
PC-TC:	9	8	7	6	5	4	3	2	1
TC-AC:	9	8	7	6	5	4	3	2	1
AC-TC:	9	8	7	6	5	4	3	2	1

88. Negative humor or sarcasm

	A lot		Sometimes				Not at all		
TC-PC:	9	8	7	6	5	4	3	2	1
PC-TC:	9	8	7	6	5	4	3	2	1
TC-AC:	9	8	7	6	5	4	3	2	1
AC-TC:	9	8	7	6	5	4	3	2	1

89. Complaining

	A lot		Sometimes				Not at all		
TC-PC:	9	8	7	6	5	4	3	2	1
PC-TC:	9	8	7	6	5	4	3	2	1
TC-AC:	9	8	7	6	5	4	3	2	1
AC-TC:	9	8	7	6	5	4	3	2	1

90. Criticism or put downs of others

	A lot		Sometimes				Not at all		
TC-PC:	9	8	7	6	5	4	3	2	1

PC-TC:		9	8	7	6	5	4	3	2
1									
TC-AC:		9	8	7	6	5	4	3	2
1									
AC-TC:		9	8	7	6	5	4	3	2
1									

91. Positive humor

	A lot			Sometimes				Not at all	
TC-PC:		9	8	7	6	5	4	3	2
1									
PC-TC:		9	8	7	6	5	4	3	2
1									
TC-AC:		9	8	7	6	5	4	3	2
1									
AC-TC:		9	8	7	6	5	4	3	2
1									

92. Directing or giving commands

	A lot			Sometimes				Not at all	
TC-PC:		9	8	7	6	5	4	3	2
1									
PC-TC:		9	8	7	6	5	4	3	2
1									
TC-AC:		9	8	7	6	5	4	3	2
1									
AC-TC:		9	8	7	6	5	4	3	2
1									

93. Clear communication

	A lot			Sometimes				Not at all	
TC-PC:		9	8	7	6	5	4	3	2
1									
PC-TC:		9	8	7	6	5	4	3	2
1									
TC-AC:		9	8	7	6	5	4	3	2
1									
AC-TC:		9	8	7	6	5	4	3	2
1									

94. Interruptions

	A lot			Sometimes			Not at all		
TC-PC:	9	8	7	6	5	4	3	2	1
PC-TC:	9	8	7	6	5	4	3	2	1
TC-AC:	9	8	7	6	5	4	3	2	1
AC-TC:	9	8	7	6	5	4	3	2	1

95. Conflict or tension

	A lot			Sometimes			Not at all		
TC-PC:	9	8	7	6	5	4	3	2	1
PC-TC:	9	8	7	6	5	4	3	2	1
TC-AC:	9	8	7	6	5	4	3	2	1
AC-TC:	9	8	7	6	5	4	3	2	1

96. Anger or Irritability

	A lot			Sometimes			Not at all		
TC-PC:	9	8	7	6	5	4	3	2	1
PC-TC:	9	8	7	6	5	4	3	2	1
TC-AC:	9	8	7	6	5	4	3	2	1
AC-TC:	9	8	7	6	5	4	3	2	1

97. Defensiveness

	A lot			Sometimes			Not at all		
TC-PC:	9	8	7	6	5	4	3	2	1
PC-TC:	9	8	7	6	5	4	3	2

1
TC-AC: 9   8   7   6   5   4   3   2
1
AC-TC: 9   8   7   6   5   4   3   2
1

Rate how often the following occurred during the family assessment task for each person.

98. Any deviant or "rule-breaking" talk, mannerisms, gestures and/or nonverbal communications?

	A lot			Sometimes			Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

99. Any drug use talk, mannerisms, gestures and/or nonverbal communications?

	A lot			Sometimes			Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

100. Does the caregiver condone marijuana use?

	A lot			Sometimes			Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

101. Do participants refer to the legalization/decriminalization of marijuana in the state of Washington?

	A lot			Sometimes			Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

102. Do participants rationalize or justify their own use by referring to the new Washington state law?

	A lot			Sometimes			Not at all	
PC:	9	8	7	6	5	4	3	2	1

	A lot			Sometimes				Not at all	
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

103. Any positive school talk or indications of academic achievement values?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

104. Any positive career talk or plans discussed related to employment?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

105. Any supportive family talk or offers to cooperate and help with family members?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

106. Any use of guilt?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

107. Any use of mind readings?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

108. Any attempt to control feelings?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1

AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

109. Any empathy or understanding of others' feelings?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

110. Are participants distracted by phones and/or other objects in the room?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

111. How much do participants actively listen to each other?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

112. Do participants seem open to thoughts and ideas of conversation partner(s)?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

113. Do participants seem to share thoughts openly with each other?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

114. How much warmth is evident in each participant's discussion?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

115. Does the caregiver lecture or nag the TC?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

116. Does the caregiver use questions to gather important information from the TC?

	A lot			Sometimes				Not at all	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

117. Who seems to be in control or in the leadership position in this family?

	Parents				Equal Control			Young	
Adult TC	9	8	7	6	5	4	3	2	1

118. How mature does each participant seem?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

119. Does the caregiver provide rationale and/or instruction in a positive manner to support his/her viewpoints?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

120. Does the caregiver control his/her own reactions to allow the TC to finish talking?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1

121. Do family members seem to be overly concerned with looking good and masking problems or difficulties?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

122. Do family members seem so shy or inhibited that it is difficult to make ratings?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

123. Do family members seem negative reactive such as becoming angry, upset, or defiant?

	Very Much			Somewhat				Not at All	
PC:	9	8	7	6	5	4	3	2	1
AC:	9	8	7	6	5	4	3	2	1
TC:	9	8	7	6	5	4	3	2	1

124. How well does the TC's temperament match that of each caregiver?

	Very Much	Somewhat	Not at All

PC: 9   8   7   6   5   4   3   2   1

AC: 9   8   7   6   5   4   3   2   1

125. How likely is it that this family will have a loving (i.e., close and positive) interpersonal relationship five years following the filming of this session?

	Very Much			Somewhat			Not at All	
9	8	7	6	5	4	3	2	1

126. Comments on this family interaction?

APPENDIX B

Emerging Adult Self-report Questionnaire Items

Emerging Adult Affiliation with Delinquent Peers

1. How many of your friends have cheated on something at work or school?

2. How many of your friends have ruined or damaged something on purpose that did not belong to them?

3. How many of your friends have stolen something worth less than $50?

4. How many of your friends have hit or threatened to hit someone without any real reason?

5. How many of your friends have broken into someplace like a car or building to steal something?

6. How many of your friends have sold hard drugs such as heroin, cocaine, or acid?

7. How many of your friends have stolen something worth more than $50?

8. How many of your friends have suggested that you do something that was against the law?

9. How many of your friends have gotten drunk once in a while?

10. How many of your friends have used medicine when they weren't sick?

11. How many of your friends have sold alcohol to minors?

12. How many of your friends could have gotten into trouble with the police for some of the things they did?

Emerging Adult Positive Peer Relationships

1. How much would you miss your peers if you didn't see them for a while?

2. How much do you trust your peers to follow through with commitments and take your needs and future seriously regardless of their own problems or interests?

3. How much do you respect yours peers and care about what they think?

4. To what extent would you seek or accept advice or guidance from your peers?

5. Do your peers pay attention to what you are doing, care about your activities, ask questions about your life and monitor how you are doing?

6. Do you tell your peers the truth about your life and behavior, trusting what they do with the information and how they react?

7. Are your peers people that you enjoy being with and like to go places and do things with?

Emerging Adult Positive Romantic Relationships

1. My partner lifts my spirits when I'm feeling down.

2. I have an enjoyable time, have fun, or laugh with my romantic partner.

3. My romantic partner treats me with respect and kindness.

4. I feel safe with my romantic partner, even when we argue.

5. My romantic partner supports my ideas, dreams, and goals.

6. My romantic partner listens to me and respects my opinions.

7. I have a say in making decisions with my romantic partner.

8. My partner compliments me when I do things well.

9. I lift my partner's spirits when she/he is feeling down.

10. I treat my romantic partner with respect and kindness.

11. I support my partner's ideas, dreams, and goals.

12. I listen to my romantic partner and respect his/her opinions.

13. My romantic partner has a say in making decisions.

14. I compliment my partner when she/he does things well.

Emerging Adult Negative Romantic Relationships

1. My romantic partner puts me down, insults me, or verbally threatens me.

2. My romantic partner hurts me physically or threatens me physically.

3. My partner makes me do things that I don't want to do.

4. My partner yells or shouts at me.

5. I put down my romantic partner, insult, or verbally threaten him/her.

6. I hurt my romantic physically, or threaten him/her physically.

7. I make my partner do things she/he doesn't want to do.

8. I yell or shout at my partner.

Table 1.

Means, Standard Deviations, Reliability, and Skew of Study Variables

Variable	α	Sample	Skew	Kurtosis
OBS Hostility/Criticism	.87	1.64(.99)	-0.80(.17)	3.36(.34)
OBS Emotional Support	.80	6.48(1.46)	-0.78(.17)	0.60(.34)
PR Emotional Support	.82	2.79(1.51)	0.79(.17)	0.68(.34)
OBS Autonomy-promoting	.86	6.04(1.45)	-0.80(.17)	0.42(.34)
PR Autonomy-promoting	.78	2.93(.77)	-0.12(.17)	-0.41(.34)
Positive Romantic	.97	3.52(.70)	-2.75(.23)	9.34(.46)
Negative Romantic	.82	0.27(.44)	2.34(.23)	6.73(.48)
Delinquent Peers	.90	0.61(.60)	1.16(.17)	0.61(.34)
Peer Support	.92	3.92(.87)	-1.03(.17)	0.96(.34)
Alcohol Use	.69	1.35(.10)	0.78(.19)	-0.11(.37)
Rule-breaking	.91	51.76(10.89)	0.31(.17)	0.70(.34)

Note. OBS = Observational, PR = Parent-reported, α = Cronbach's α, Sample = total sample; Sample size = 209; Skew and Kurtosis Indices reported with standard errors; All means reported with standard deviations.

Table 2.

Bivariate Correlations of Observational and Self-report Parenting Behaviors, Emerging Adult Romantic and Peer Relationships, and Emerging Adult Alcohol Use and Rule-breaking Behavior

Variable	1.	2.	3.	4.	5.	6.	7.	8.	9.	10.	11.
1. OBS Hostility/Criticism	-	-.29**	-.20**	-.04	-.14*	-.30**	.18	.17*	-.08	.04	.36**
2. OBS Emotional Support		-	.50**	.03	.16*	.17	-.15	-.12	.09	.04	-.17*
3. OBS Autonomy-promoting			-	-.04	.13	.21*	-.22*	.07	.12	.06	-.14*
4. PR Emotional Support				-	.19**	-.11	-.05	-.03	-.04	-.04	-.07
5. PR Autonomy-promoting					-	-.02	-.08	-.04	.06	-.09	-.13
6. YA Positive Romantic						-	-.33*	-.19*	.58**	-.03	-.52**
7. YA Negative Romantic							-	.33**	-.23*	.12	.35**
8. YA Delinquent Peers								-	-.13	.35**	.41**
9. YA Peer Support									-	.19*	-.18**
10. YA Alcohol Use										-	.17*
11. YA Rule-breaking											-
N	209	209	209	209	208	110	110	206	209	172	208

Note. OBS = Observational, PR = Parent-reported, YA = Young Adult; * $p < .05$, ** $p < .01$, ** $p < .001$.

Table 3.

Summary of Exploratory Factor Analysis Results for Observed Emotional Support Using Principal Axis Factoring (N = 209)

Item	Item Communalities
Nonverbal engagement?	.38
How much does parent actively listen?	**.44**
How much warmth is evident by parent?	**.47**
Eigenvalues	2.16
% of variance	72.05

Note: Communalities over .40 appear in bold.

Table 4.

Summary of Exploratory Factor Analysis Results for Observed Parental Hostility and

Criticism Using Principal Axis Factoring (N = 209)

Item	Item Communalities
Any use of guilt from parent?	.38
Any attempt to control feelings by parent?	.32
Conflict or tension from parent to child?	**.72**
Anger or irritability from parent to child?	**.67**
Defensiveness from parent to child?	**.62**
Negative reactivity (angry, upset, defiant)?	**.64**
Eigenvalues	3.80
% of variance	62.24

Note: Communalities over .40 appear in bold.

Table 5.

Summary of Exploratory Factor Analysis Results for Observed Parental Autonomy-promoting Behaviors Using Principal Axis Factoring (N = 209)

Item	Item Communalities
Parents communicate confidence that child can be successful?	.39
Does parent praise child?	**.40**
Does parent discuss ways that child's strengths relate to goals?	**.58**
Does parent mention or describe child's positive traits?	**.70**
Does parent mention or describe child's positive behaviors?	**.49**
Does caregiver effectively use praise/encouragement with child?	**.73**
Does caregiver talk about hope for child's future?	**.54**
Eigenvalues	3.94
% of variance	56.31

Note: Communalities over .40 appear in bold.

Table 6.

Summary of Exploratory Factor Analysis Results for Parent-reported Emotional and

Instrumental Support Using Principal Axis Factoring (N = 209)

Item	Item Communalities
Talk about future job prospects?	**.55**
Talk about future hopes and dreams?	**.40**
Advice given for coping with challenges?	**.58**
Help him/her handle discouragement?	.39
Loan money to him/her?	.31
Discuss money management?	.39
Assist with money management?	**.41**
Help him/her look for car or place to live?	**.85**
Help him/her decide on which carMEA to buy or where to live?	**.85**
Help him/her make medical decisions?	**.49**
Eigenvalues	4.23
% of variance	35.22

Note: Communalities over .40 appear in bold.

Table 7.

Summary of Exploratory Factor Analysis Results for Parent-reported Autonomy-promoting Behaviors Using Principal Axis Factoring (N = 209)

Item	Item Communalities
Communicated trusted and confidence	**.45**
Asked questions to help child think through decisions	.36
Complimented child for something he/she was trying to do	**.56**
Complimented him/her for something he/she did well	**.47**
Eigenvalues	2.45
% of variance	60.92

Note: Communalities over .40 appear in bold.

Figure 1. Model predicting emerging adult positive and negative romantic relationships from observed emotional support, autonomy-promoting behaviors and hostility and criticism.
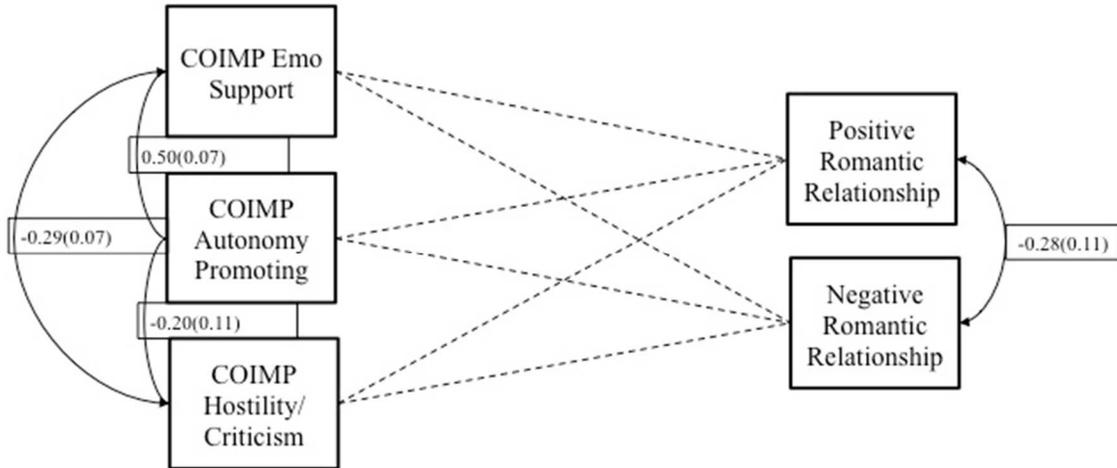
Note. Values reflect standardized parameter coefficients. Paths which failed to reach statistical significance are shown with dashed lines. COIMP = observational. Solid lines indicate significance ($p < .05$).

Figure 2. Model predicting emerging adult peer support and affiliation with delinquent peers from observed emotional support, autonomy-promoting behaviors and hostility and criticism.
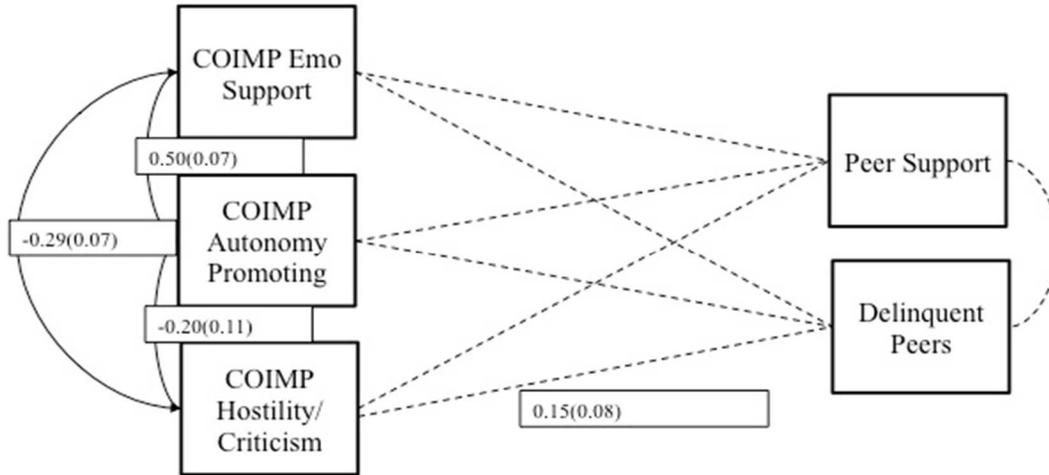
Note. Values reflect standardized parameter coefficients. Paths which failed to reach statistical significance are shown with dashed lines. COIMP = observational. Solid lines indicate significance ($p < .05$).

Figure 3a. Model predicting emerging adult externalizing behaviors and alcohol use from observed emotional support, autonomy-promoting behaviors and hostility and criticism.
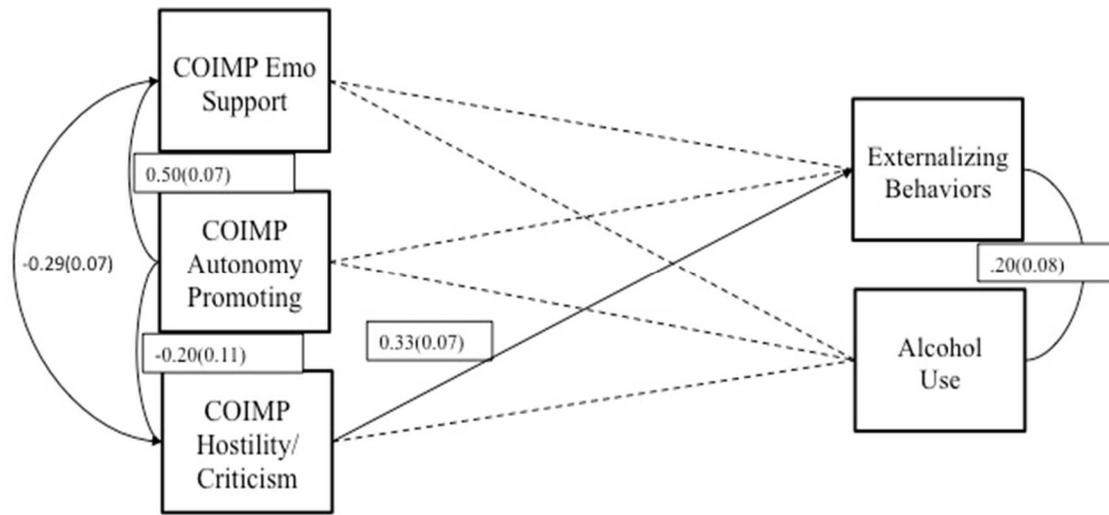
Note. Values reflect standardized parameter coefficients. Paths which failed to reach statistical significance are shown with
dashed lines. COIMP = observational. Solid lines indicate significance ($p < .05$).

Figure 3b. Model predicting emerging adult externalizing behaviors and alcohol use from observed hostility and criticism via delinquent peer association.
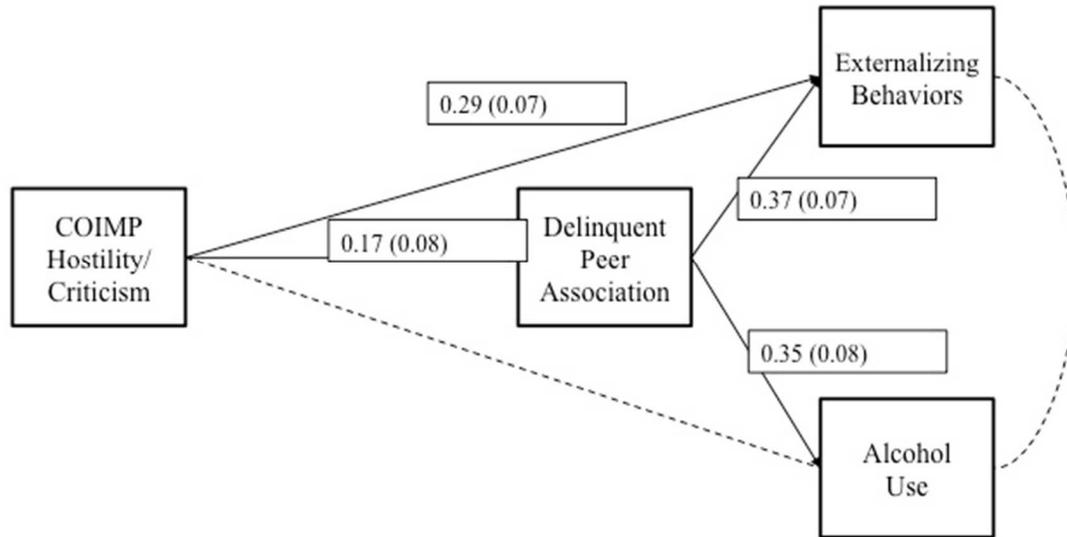
Note. Values reflect standardized parameter coefficients. Paths which failed to reach statistical significance are shown with dashed lines. COIMP = observational. Solid lines indicate significance (*p* < .05).

Figure 4. Observed and self-reported parenting behavior items established through EFA.

OBSERVED PARENTING

POSITIVE
Emotional Support
1. Nonverbal engagement?
2. How much does parent actively listen?
3. How much warmth is evident by parent?

Autonomy-promoting Behaviors
1. Communicate confidence that child can be successful?
2. Praise child?
3. Discuss ways that child's strengths relate to goals?
4. Mention or describe child's positive traits?
5. Mention or describe child's positive behaviors?
6. Effectively use praise/encouragement with child?
7. Talk about hope for child's future?

NEGATIVE
Hostility & Criticism
1. Any use of guilt from parent?
2. Any attempt to control feelings by parent?
3. Conflict or tension from parent to child?
4. Anger or irritability from parent to child?
5. Defensiveness from parent to child?
6. Negative reactivity (angry, upset, defiant)?

SELF-REPORT PARENTING

POSITIVE
Emotional & Instrumental Support
1. Talk about future job prospects?
2. Talk about future hopes and dreams?
3. Give advice for coping with challenges?
4. Help him/her handle discouragement?
5. Loan money to him/her?
6. Discuss money management?
7. Assist with money management?
8. Help him/her look for car or place to live?
9. Help him/her decide on which car to buy or where to live?
10. Help him/her make medical decisions?

Autonomy-promoting Behaviors
1. Communicate trust and confidence?
2. Ask questions to help child think through decisions?
3. Compliment child for something he/she was trying to do?
4. Compliment him/her for something he/she did well?

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