

Parent–child positivity and romantic relationships in emerging adulthood: Congruence, compensation, and the role of social skills

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Abstract

Romantic relationship quality in adolescence and early adulthood has often been linked to earlier parent–child relationship quality but it is possible that these links are nonlinear. Moreover, the role of social skills as mediator of associations between parent–child and romantic relations has been discussed but not rigorously tested. Using data from 2,230 participants of the longitudinal TRAILS (TRacking Adolescents' Individual Lives Survey) sample, this study examined whether parent–child positivity assessed at age 11 predicted romantic involvement, commitment and satisfaction in emerging adulthood. Moreover, indirect effects via cooperation, assertion and self-control were tested. Parent–child positivity did not predict romantic involvement as such. However, in those who were romantically involved, linear and, by trend, nonlinear associations between parent–child positivity and commitment were found, suggesting higher levels of commitment in those who had reported positive parent–child relationships but also in individuals with particularly low levels of parent–child positivity. Satisfaction was linearly linked to parent–child positivity. Little support was found for the assumption that the association between parent–child positivity and romantic relationship quality in emerging adulthood are partly explained by social skills. These results show that neither congruence nor compensation alone are sufficient to explain the associations between parent–child and romantic relationship quality.

Keywords

longitudinal study, relationship between parents and adolescents, romantic relationships

Theoretical background

The landscape of adolescents' and young adults' romantic involvement has changed over the past decades and lasting and committed relationships that ultimately lead to marriage are less normative than before (Cohen, Kasen, Chen, Hartmark, & Gordon, 2003; Meier & Allen, 2009; Shulman & Connolly, 2013). Notwithstanding societal trends, assumptions about explanatory factors for variability in romantic relationships continue to be informed by interpersonal theories that emphasize the longevity of the parent–child relationship including attachment (Bowlby, 1977), social learning (Bandura & McClelland, 1971), as well as social and ecological systems theories (Bronfenbrenner, 1997; Hartup, 1979).

Most empirical findings indicate that romantic relationships bear resemblance to parent–child relationships (De Goede, Branje, van Duin, VanderValk, & Meeus, 2012; Rauer, Pettit, Lansford, Bates, & Dodge, 2013; Seiffge-Krenke, Shulman, & Kiessinger, 2001; Weigel, Bennett, & Ballard-Reisch, 2003). However, greater variability in romantic involvement might mean that previous family relationships are less important predictors than individual or situational factors (e.g., Claxton & van Dulmen, 2013) and established theoretical assumptions and linear associations may not be as easily detected in contemporary samples. For instance, it is feasible that family relationships and romantic involvement are linked in nonlinear fashion where on the one hand, particularly positive experiences in parent–child relationships mean that involvement

with others is trusted and positively valued. On the other hand, romantic involvement in adolescence and early adulthood may be sought out to compensate for negative parent–child relationships (Ha, Overbeek, de Greef, Scholte, & Engels, 2010).

The first aim of this study was to explore linkage patterns, thus we tested whether pre-adolescent parent–child relationships predicted characteristics of emerging adults' romantic relationships and examined the shape of such associations. In detail, we tested whether parent–child relationship quality was associated—linearly or nonlinearly—with being in a romantic relationship in emerging adulthood, and whether levels of commitment to this boy/girlfriend and satisfaction in this relationship were predicted by earlier parent–child relationship quality.

In trying to understand how parent–child relationship quality and later romantic relationship characteristics are linked, some have argued that parent–child negativity impairs a young person's development of social competence (Rauer et al., 2013), something that

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can later be reflected in compromised relationships with romantic partners. The second main aim of this study was to establish empirical support for this hypothesis by testing whether associations between parent–child and romantic relationships were partly accounted for by social skills.

The role of parent–child relationship quality

Being one of the most proximal social environments, it is no surprise that family structure affects adolescents' and young adults' romantic involvement (Cavanagh, Crissey, & Raley, 2008; Ivanova, Mills, & Veenstra, 2014). How the family of origin shapes one's romantic relationships has also been studied with a view on qualitative aspects of the parent–child relationship and two mechanisms—congruence and compensation—can be distinguished.

In detail, higher romantic commitment, satisfaction, fewer conflicts, and less hostility in romantic relationships are more commonly reported by individuals who experienced more positive relationships with parents (Collins, Welsh, & Furman, 2009; De Goede et al., 2012; Johnson & Galambos, 2014; Seiffge-Krenke et al., 2001; Weigel et al., 2003). This mechanism refers to *congruence* among relationships and corresponds to relationship quality spill-over, attachment and social learning theories (Bandura & McClelland, 1971; Bowlby, 1977; Erel & Burman, 1995).

Relationship quality spill-over has been conceptualized in family systems theory (Erel & Burman, 1995; Minuchin, 1985, 1988) and usually refers to dyadic systems within the family, that is, marital, parent–child and sibling relationships, which affect each other through various mechanisms. For instance, an increased amount of stress experienced during conflict in one system may negatively affect the ability to function well in another system (Krishnakumar & Buehler, 2000; Stroud, Durbin, Wilson, & Mendelsohn, 2011) or behaviours and feelings that actually refer to one system may be acted out in another system. To date, many studies on spill-over have focused on the marital and parent–child relationship, that is, sought to understand how parents' marital couple interactions affect parent–child interactions (Krishnakumar & Buehler, 2000). Extending this to include offspring's romantic relationships is meaningful, because the spill-over perspective essentially suggests that the behaviours and emotions that emerging adults pick up in their relationships with parents will affect their romantic relationships as well. For instance, individuals who experienced harsh interpersonal environments when growing up may harbour resentment or feel hopeless and unlovable, negative emotions likely to affect the sense of self as a romantic partner. In addition, if parents are cold, unsupportive and negative, children and adolescents might expect the same from other relationships. Eventually, such expectations could take the course of self-fulfilling prophecies, resulting in interpersonal relationships that resemble characteristics of parent–child relationships.

In suggesting congruence among interpersonal relationships, family systems theory proposes the same pattern of association between parent–child and romantic relationships as other theories.

Attachment theory argues that particularly positive parent–child experiences provide us with mental representations of relationships and templates on how to interact with and interpret other people's behaviour. Having experienced high levels of positivity in parent–child relationships thus means that involvement with others is likely to be evaluated as very positive and sought out (Bowlby, 1977; Doyle, Lawford, & Markiewicz, 2009; Engels, Finkenauer, Meeus,

& Deković, 2001). The social learning perspective (Bandura & McClelland, 1971) would argue that parents teach adolescents ways of communicating and cooperating in interpersonal relationships and strategies for conflict solution through providing models of behaviour that adolescents observe as well as praise or punishment for desirable and unwanted interaction behaviours. High levels of positivity in parent–child relationships feasibly provide more positive interpersonal situations from which adolescents can learn than relationships in which positivity is low or absent.

Regardless of the exact mechanisms, what can be observed according to these theoretical perspectives is generally that, warm and supportive parent–child relationships foster the development of a prosocial and caring attitude towards others (Eisenberg, Van Schyndel, & Hofer, 2015), creating similarity—congruence—among the different relationships an individual is involved in. Informed by these theories, it is reasonable to expect that parent–child relationship quality predicts romantic relationship quality in emerging adulthood and that the shape of this association should be positive and linear, that is, the more positive parent–child relationships were, the more positive should romantic relationship be (De Goede et al., 2012; Johnson & Galambos, 2014; Seiffge-Krenke et al., 2001; Weigel et al., 2003). In turn, the more negativity between parents and offspring, the more negative the offspring's romantic relationship.

However, contrasting the congruence perspective, problematic parent–child experiences might also elicit a desire to *compensate* for lack of warmth and support that romantic partners are expected to meet. Ha et al. (2010) found a positive association between parent–child negativity and romantic commitment in adolescents, albeit only for the non-indigenous subgroup of the Dutch study sample. Thus, some individuals may commit early to romantic partners in order to fulfil needs for belongingness and companionship that parents neglect. In a similar fashion, it is feasible that individuals engage in non-satisfactory relationships in order to “not be alone”, hoping that any romantic relationship, almost regardless of its quality, may compensate for negative parent–child experiences (Shulman, Scharf, Livne, & Barr, 2013). Similar compensation mechanisms have been tested but not consistently found in studies on siblings and peers (Derkman, Engels, Kuntsche, van der Vorst, & Scholte, 2011; Jenkins, 1992; Milevsky & Levitt, 2005; Seginer, 1998; Van Beest & Baerveldt, 1998).

It is possible that both congruence and compensation drive associations between parent–child and later romantic relationship quality, potentially resulting in partly opposite effects. Although studies have not yet tested such patterns systematically, we note a study in which Roisman, Booth-LaForce, Cauffman, and Spieker (2009) examined associations between parent–child relationship quality and adolescent's involvement in and quality of romantic relationship and found that individuals were more likely to date if they experienced less positive relationships with their parents—which is in line with compensation—but they were more likely to report better relationship quality if they had also experienced positive parent–child interactions—which is indicative of congruence.

To understand these patterns in more detail, we examined linear as well as nonlinear associations between parent–child relationship quality and emerging adults' commitment and satisfaction in those who were romantically involved. Linear positive associations would provide support for a congruence pattern whereas linear negative associations could be indicative of compensatory mechanisms. Nonlinear associations may support our view that different

mechanisms drive the association at different levels of parent–child relationship quality.

The role of social skills

Researchers agree that parent–child experiences explain variation in emerging adults' romantic relationships and intermediate variables that partially account for this association such as mental health (Johnson & Galambos, 2014), temperament (e.g., emotional reactivity and emotion regulation, Ávila, Cabral, & Matos, 2011; Cook, Buehler, & Fletcher, 2012; Kim, Pears, Capaldi, & Owen, 2009), and interpersonal and social skills have been suggested (Conger, Cui, Bryant, & Elder, 2000; Rauer et al., 2013). Social skills such as cooperation, assertion, and self-control are “building blocks of social competence” (Ogden, 2003, p. 64), thus determine the extent to which an individual is able to act competently in social interactions. Presumably, harsh and unsupportive parent–child relationships impair social skill development, which, in turn, negatively affects emerging adults' romantic involvement.

The first part of this association—parent–child relationship quality predicting social skills—has been supported by a number of studies (Engels et al., 2001; Hillaker, Brophy-Herb, Villarruel, & Haas, 2008). Less attention has been devoted to the second part, that social skills are associated with characteristics of romantic relationships (but see Hebert, Fales, Nangle, Papadakis, & Grover, 2013), and only very few studies formally tested the full indirect path. Conger et al. (2000) showed that nurturing-involved parenting in adolescence was predictive of interactional qualities measured through coded discussion and conflict tasks, which in turn predicted romantic relationship quality. Crockett and Randall (2006) examined the interplay of family relationships, conflict tactics, and young adults' romantic relationships and found that constructive approaches to solve conflicts mediated associations between parent–child relationship quality and romantic relationship characteristics. Both studies assessed social skills relatively late in development and only with respect to romantic partners. That is, Conger et al. (2000) observed participants in discussion and conflict tasks with partners, and Crockett and Randall (2006) referred to participants' romantic partners in their conflict tactics measure. Thus, it is possible that the social skills measured in both studies are specific to the romantic relationship. Extending this work, we examined social skills more generally and explored indirect paths from parent–child relationship quality to romantic involvement, commitment, and satisfaction via social skills.

Romantic relationships in emerging adulthood

Our study focused on romantic relationships in emerging adulthood, a time of exploration and change in romantic involvement, residence, and work from the late teens through mid- to late twenties (Arnett, 2000). This distinct period has been proposed as theoretical framework that responds to societal changes and takes into account the prolonged phase between adolescence and early adulthood in which “nothing is normative” (Arnett, 2000, p. 471). A number of studies on emerging adults' romantic relationships have been published: Manning and colleagues used data from the Toledo Adolescent Relationships Study to shed light on adolescents and emerging adults' views on cohabitation and marriage (Manning, Longmore, & Giordano, 2007) and the interplay between romantic relationships and engagement in risk behaviour (Giordano,

Longmore, & Manning, 2008) and academic and career trajectories (Manning, Giordano, Longmore, & Hocevar, 2009). Individuals in the Toledo sample had high expectations to marry in the future despite shifts in societal norms. Other studies on the Toledo sample demonstrated that romantic partners affected emerging adult's engagement in risk behaviour (Giordano et al., 2008) and academic and employment trajectories (Manning et al., 2009). This clarifies the central role of romantic relationships in emerging adulthood although individual patterns of engagement in romantic relationships vary as a function of gender (Taylor, Giordano, Longmore, & Manning, 2008), age (Seiffge-Krenke, 2003; Zimmer-Gembeck & Petherick, 2006), structure of family of origin (Cavanagh et al., 2008; Ivanova et al., 2014; Valle & Tillman, 2014), social class (Meier & Allen, 2008), and race or ethnicity (Collins et al., 2009; Meier & Allen, 2008). In addition to these demographic factors, it is likely that parent–child relationship experiences affect emerging adults' romantic relationships, given the associations between parent–child and other interpersonal experiences proposed by family systems, attachment, and social learning theories. Empirical evidence, however, is scarce. Framed by interpersonal theories reviewed above, we therefore examined patterns of congruence and compensation in a sample of emerging adults.

The present study

The literature reviewed above points at a scarcity of studies that account for the possibility of nonlinear patterns and comprehensively link parent–child relationships, social skills, and romantic relationships. We therefore examined the following questions: To what extent is parent–child relationship quality predictive of involvement in, commitment and satisfaction in romantic relationships in emerging adulthood? Are these associations linear or nonlinear? Do possible association between parent–child and romantic relationships run via social skills? As such, this study contributes not only to the body of literature on antecedents of emerging adults' romantic relationships, we also connect concepts and take a developmental look at pathways between social and individual factors.

Informed by prior research, we expected nonlinear associations between parent–child relationships (conceptualized as parent–child positivity) and engagement, commitment and satisfaction in emerging adults' romantic relationships. In detail, we expected greater involvement, commitment and satisfaction among those individuals with particularly positive parent–child relationships, indicating congruence, but tentatively also those individuals whose parent–child experiences were very low in positivity, indicating compensation. Moreover, we examined whether associations are partly accounted for by social skills but given the lack of studies on parent–child and romantic relationships and general social skills, these analyses were of exploratory nature.

We present analyses in which we adjusted for a range of covariates suspected to affect relationship commitment and satisfaction. In detail, prior studies suggested associations between age and romantic relationship satisfaction (Zimmer-Gembeck & Petherick, 2006) and age trends with regard to romantic relationship quality were also reported by Seiffge-Krenke (2003). Findings varied, whereas Zimmer-Gembeck and Petherick (2006) showed that older adolescents were less satisfied in their relationships, quality increased steadily across adolescence and then levelled off in Seiffge-Krenke's (2003) study.

We also controlled for relationship duration given its association with relationship satisfaction (Zimmer-Gembeck & Petherick, 2006) and for ethnicity because American studies reported stable associations between race and romantic relationship involvement (Meier & Allen, 2009) and Ha and colleagues (2010) found that the negative association between parent–child and romantic relationship quality was only established for adolescents whose parents were born in countries other than the Netherlands.

Moreover, social class played an important role in previous studies on romantic relationships in emerging adulthood (Meier & Allen, 2008), we thus adjusted for parental SES. Finally, we included an indicator of single parenthood in our analyses given studies on effects of family structure on offsprings' romantic relationships (Cavanagh et al., 2008; Ivanova et al., 2014; Valle & Tillman, 2014).

Importantly, gender differences in motivation for and patterns of romantic involvement and perceptions of quality have been found (Kindelberger & Tsao, 2014; Taylor et al., 2008; Zimmer-Gembeck & Petherick, 2006), which may suggest different pathways to romantic involvement and quality in girls and boys. Indeed, gender differences have also been observed with respect to parent–child relationships, which are usually perceived as more positive by girls, at least in early adolescence (McGue, Elkins, Walden, & Iacono, 2005), and social skills, which tend to be rated higher in girls than in boys (Nilsen, Karevold, Røysamb, Gustavson, & Mathiesen, 2013). Studies provided evidence for greater interpersonal sensitivity in girls compared to boys (Leadbeater, Kuperminc, Blatt, & Hertzog, 1999; Pettit, Laird, Dodge, Bates, & Criss, 2001) and there is some evidence that parents set more rules for their daughter's dating than for their son's (Madsen, 2008). Given the possible gender specificity in means of and associations among the central variables in this study, we examined whether patterns of associations between parent–child positivity, social skills, and romantic commitment and satisfaction differed between boys and girls.

Method

Participants

The present study included data from the first and fifth waves of the TRacking Adolescents' Individual Lives Survey (TRAILS), a prospective cohort study of Dutch adolescents, with bi- or triennial follow-up assessments. Data collection at the first wave (T1) took place in 2001 and 2002 when participants were between 10 and 12 years old (average age 11.1 years). The fifth wave (T5) was conducted in 2012 and 2013 when participants were between 21 and 24 years old (average age 22.3 years).

The TRAILS sample was obtained in five municipalities in the north of the Netherlands, including both urban and rural areas. Initially, 135 primary schools were approached, of which 122 agreed to participate. Both parents and children were asked to provide informed consent for participation. Ethical approval for the study was obtained from the Dutch national ethics committee Centrale Commissie Mensgebonden Onderzoek. Details about the study have been published in several reports (de Winter et al., 2005; Huisman et al., 2008; Nederhof et al., 2012; Oldehinkel et al., 2014). In brief, a total of 2,935 children were invited to participate, of whom 2,230 (51% female) did so at T1. Initial participation was more likely when children were female, from higher SES background, and with better school performance. Retention was excellent

with 96% at T2, 81% at T3, 84% at T4, and 80% at T5. Individuals lost to attrition were more often male, of non-Western ethnicity, with divorced parents, low SES, low IQ and academic achievement, poor physical health and externalizing problems as well as low peer status (Nederhof et al., 2012; Ormel et al., 2012).

In this specific study, participation at T5 was more likely for girls ($OR = 0.61$, 95% CI = .49, .77), for individuals from higher SES backgrounds ($OR = 1.77$, 95% CI = 1.53, 2.04), where both parents were Dutch ($OR = 1.92$, 95% CI = 1.44, 2.56), and who were rated as more cooperative by their teachers at T1 ($OR = 2.03$, 95% CI = 1.46, 2.83). Parental positivity was not associated with study participation at T5. Thus, attrition was not random but largely not affected by the main variables of interest.

Measures

Parent–child positivity (T1). Adolescents reported on maternal and paternal positivity using the Social Wellbeing subscale of the Social Productions Functions Questionnaire (Ormel, Lindenberg, Steverink, & Vonkoff, 1997), which consists of 11 items including “My mum/dad is considerate of my feelings” and “My mum/dad likes me the way I am”. Internal consistency was good for both parents: mother $\alpha = .88$ and father $\alpha = .93$. Reports about mothers and fathers overlapped considerably ($r = .71$), we thus decided to use a composite of both reports in our analyses.

Social skills (T1). Using the Social Skills Rating System (Gresham & Elliott, 1990), teachers reported on adolescents' cooperation, assertion, and self-control. Cooperation consists of 10 items including “This student follows instructions” and “This student completes schoolwork within the defined time frame”, and showed good internal consistency of $\alpha = .90$. Assertion consists of 10 items such as “This student initiates conversations with classmates” and “This student offers help to others”, and was reliable, $\alpha = .88$. Self-control also consists of 10 items including “This student stays calm during arguments with classmates” and “This student is able to compromise in group work activities”, $\alpha = .91$. Teachers completed the social skills assessment for $n = 1,928$ TRAILS participants.

Romantic involvement, commitment, and satisfaction (T5). Whether or not participants were involvement in romantic relationships was assessed by asking “Do you have a boyfriend/girlfriend at the moment?” to which $n = 831$ responded positively. Relationship duration ranged from 0.25 to 102 months ($M = 10.6$ months, $SD = 20.1$ months).

Those who indicated to be in a relationship further completed the Investment Model Scale (Rusbult, Martz, & Agnew, 1998), from which we used the commitment and satisfaction subscales. Commitment consists of three items (“I want our relationship to last for a very long time”, “I am oriented toward the long-term future of my relationship”, and “I want our relationship to last forever”) and showed good internal consistency of $\alpha = .92$. Satisfaction also consists of three items (“I feel satisfied with our relationship”, “My relationship is much better than others' relationships”, and “My relationship does a good job of fulfilling my needs for intimacy and friendship”) and internal consistency was acceptable at $\alpha = .69$.

Covariates. Age was assessed at each TRAILS wave; we used T5 information in respective models. Gender was self-reported at T1.

Table 1. Descriptive statistics of study measures and gender comparisons.

	Full sample		Boys		Girls		Boys vs. girls t statistic; Cohen's d
	M	SD	M	SD	M	SD	
Parent-child relationship							
Mother-child positivity	4.28	0.55	4.22	0.59	4.33	0.50	4.76, $p < .001$; .20
Father-child positivity	4.22	0.66	4.19	0.69	4.25	0.62	2.00, $p = .05$; .09
Romantic relationship							
Commitment T5	6.27	1.16	6.02	1.24	6.41	1.09	4.71, $p < .001$; .33
Satisfaction T5	5.87	0.95	5.84	0.90	5.89	0.98	0.62, $p = .55$; .04
Social skills							
Cooperation	2.51	0.46	2.38	0.45	2.64	0.36	14.16, $p < .001$; .64
Assertion	2.23	0.43	2.15	0.43	2.30	0.43	7.43, $p < .001$; .34
Self-control	2.32	0.46	2.19	0.48	2.44	0.41	12.09, $p < .001$; .55

Note. Descriptive statistics are based on number of respondents per measure: Mother-child positivity (measurement range: 1-5): $n = 2,168$; Father-child positivity (measurement range: 1-5): $n = 2,115$; Commitment (measurement range: 1-7): $n = 824$; Satisfaction (measurement range: 1-7): $n = 823$; Cooperation (measurement range: 1-3): $n = 1,928$; Assertion (measurement range: 1-3): $n = 1,928$; Self-control (measurement range: 1-3): $n = 1,928$.

Information on both mothers' and fathers' educational and occupational levels were used as well as a combined indicator of family income to establish the socioeconomic status (SES) of the family (T1). Educational level of parents was categorized in five categories. Occupational level was based on the International Standard Classification of Occupations (Ganzeboom & Treiman, 1996). Low family income was defined as a monthly net family income of less than €1,135 per month, which approximately amounts to a welfare payment. SES was measured as the average of the five items (standardized) ($\alpha = .84$). As an indicator of ethnicity, we used parents' reports on their country of birth and assigned a score of 1 to everyone whose parents were born in the Netherlands and a score of 0 to those who had one or both parents born outside of the Netherlands. Finally, parents reported on their marital status, we assigned a score of 1 to participants who lived in a one-parent household at T1 and a score of 2 to participants who lived in a two-parent household at T1. Moreover, we controlled for relationship duration using information provided by TRAILS participants on the duration of their current relationship in years, months and days.

Analytic strategy

Two methodological issues are pertinent to this study and their handling warrants a detailed explanation. To begin with, we used longitudinal data spanning over 10 years; attrition in such studies is practically unavoidable. To not restrict our analyses to complete cases, we dealt with missing data using Stata's *sem* command and the maximum likelihood with missing values (MLMV) estimation method. This procedure borrows information from present data to fill in missing information and is comparable to full information maximum likelihood estimation, thus not based on prior imputation and more flexible. That is, software limitations make it difficult to estimate complex models with various variable interdependencies using prior imputed data but no such problems occur when using MLMV.

Another issue with regard to our analyses is the non-normal distribution of our outcome variables. Both commitment and satisfaction were skewed towards the positive end of the scale, necessitating the use of regression estimation with robust standard errors. This was accomplished using the robust variance estimator option *vce(robust)*. This procedure can be used in conjunction with MLMV. In short, all analyses account for non-normality of outcome variables,

those with relationship involvement as outcome variable are based on participants for whom at least one data point was available ($n = 2,230$), and those with relationship commitment or satisfaction as outcome are based on those participants who were involved in romantic relationships ($n = 831$).

Following the order of our research questions, we first explored to what extent parent-child positivity, measured in pre-adolescence, predicted whether or not the emerging adults in our study were involved in romantic relationships using logistic regressions. Second, focusing on those respondents who indicated to have a romantic partner, we examined whether parent-child positivity was predictive of romantic relationship commitment and satisfaction. We expected nonlinear patterns, thus added a quadratic term to the regression models. To avoid multicollinearity issues, we mean-centred both the linear and quadratic term.

Third, we added social skills to the models to elucidate whether these functioned as carriers of the effect of parent-child positivity on commitment and satisfaction. To establish whether parent-child positivity predicted romantic relationship quality via social skills, we examined the statistical significance of the indirect pathway from parent-child positivity to social skill to romantic relationship measure.

Moderation by gender was explored by a) adding an interaction term to the logistic regression model and b) using the multiple group comparison option within Stata's structural equation environment that was used for all analyses involving commitment and satisfaction. The multiple group comparison option models coefficients separately for each gender and the Wald-statistic indicates whether parameters can be constrained to be equal across groups and which parameters need to vary across groups to not negatively affect the fit of the model. Models were adjusted for age, relationship duration, parental SES, number of parents in the home and parental ethnicity.

Results

Descriptive statistics of the main study parameters are depicted in Table 1 and bivariate correlations are presented in Table 2. Boys and girls differed on all measures except romantic satisfaction in that girls scored higher on parent-child positivity measures, social skills, as well as romantic commitment. Pearson correlations were computed for continuous measures and Spearman correlations were

Table 2. Bivariate correlations between study variables separately for boys and girls.

	1	2	3	4	5	6	7	8	9	10	11	12
1. Parent positivity		.08	.06	.09**	.09**	.07*	.01	-.04	-.01	.03	-.03	.01
2. Commitment	.10*		.69***	-.11	-.18**	-.17**	-	.01	.06	.03	-.02	.07
3. Satisfaction	.06	.69***		.01	-.12	-.07	-	.04	.01	-.09	.01	.11
4. Cooperation	.04	-.05	-.01		.44***	.64***	.01	-.08	-.01	.29***	.03	.16***
5. Assertion	.02	.01	.05	.43***		.66***	.08	-.08	.04	.27***	.05	.09**
6. Self-control	-.01	-.02	.04	.64***	.62***		.05	-.07	.05	.28***	.02	.12**
7. Involvement	.04	-	-	-.03	-.03	-.06		.01	-	.01	-.04	.05
8. Age	-.01	.03	-.01	-.09*	-.01	-.02	.01		.21***	-.02	-.08*	-.07
9. Duration	.04	.18***	.04	-.01	.02	.02	-	.23***		-.01	.12*	-.04
10. SES T1	.04	-.06	.07	.26***	.23***	.23***	-.12**	-.12**	-.08		.12***	.23***
11. Ethnicity	-.04	-.08	-.08	.11**	.05	.04	.01	-.06	.05	.11**		.09**
12. Number of parents	-.01	-.05	.02	.10**	.12***	.10**	.01	-.13**	-.01	.22***	.08*	

Note. Coefficients above the diagonal are based on boys, coefficients below the diagonal are based on girls. Spearman coefficients are indicated in italics. Some cells are empty because some measures were only relevant for individuals involved in romantic relationships. Correlations are based on existing data, thus *n*'s range from 723 (correlation between self-control and satisfaction) to 2,195 (correlation between parent ethnicity and number of parents).
 ****p* < .001; ***p* < .01; **p* < .05.

Table 3. Regression models predicting romantic commitment and satisfaction.

	Commitment				Satisfaction			
	<i>β</i>	95% CI	<i>p</i>	<i>R</i> ²	<i>β</i>	95% CI	<i>p</i>	<i>R</i> ²
Covariates								
Age at T5	-.02	-.09, .05	.49		.01	-.07, .08	.85	
SES	-.17	-.25, -.10	< .001		-.002	-.08, .07	.95	
Number of parents	.06	-.01, .14	.11		.05	-.02, .13	.15	
Ethnicity	-.05	-.11, .01	.09		-.07	-.13, -.01	.03	
Relationship duration	.15	.09, .21	< .001		.04	-.03, .10	.30	
Parent-child positivity								
linear	.15	.08, .22	< .001		.09	.004, .17	.04	
quadratic	.08	.002, .16	.05	.07	.06	-.03, .15	.18	.01

Note. Regression models are based on maximum likelihood with robust standard error estimation and a sample size of *n* = 831 (all adolescents in romantic relationships at T5). Ethnicity refers to both parents being Dutch (coded 1) versus non-Dutch (coded 0). Single parent refers to one (1) versus two (2) parents in the home at T1.

computed for categorical measures. Parent positivity was associated with all three social skills in boys and romantic commitment in girls. Correlations between social skills and romantic relationship indicators were modest and only found for boys. Relationship duration was associated with commitment in girls and no other covariate was associated with relationship quality in these bivariate analyses split by gender.

Parent-child positivity and romantic involvement, commitment and satisfaction

When estimating logistic regression models with relationship involvement as outcome for the complete sample, parent-child positivity did not affect the odds of relationship involvement, neither linearly nor nonlinearly. Thus, whether or not an adolescent had reported high, average, or low levels of parent-child positivity did not increase or decrease their likelihood to have a romantic partner in emerging adulthood. Parental SES was the only significant predictor with individuals from lower SES background showing increased likelihood to engage in romantic relationships. We found a significant interaction effect (nonlinear × gender, *OR* = 0.72, 95% CI = .53, .99), and thus estimated the model separately for

boys and girls. This association was not significant for either gender.

Next, we examined linear and nonlinear associations between parent-child positivity and commitment and satisfaction. Standardized regression coefficients are depicted in Table 3 and suggest that, in line with our expectation, parent-child positivity was partly predictive of romantic relationship quality. In detail, we found a positive linear association between parent-child positivity and commitment, indicating that those adolescents who had reported greater parent-child positivity were more committed to their romantic partners. We also detected trend-level (*p* = .046) nonlinear effects: adolescents who had reported particularly low or high levels of parent-child positivity in early adolescence reported the highest levels of relationship commitment. In addition to central associations, emerging adults from lower SES backgrounds as well as those in longer relationships were more committed to their romantic partners. Parent-child positivity linear and ethnicity predicted romantic satisfaction with those whose parents were born in the Netherlands and who had experienced greater positivity in early adolescence being more satisfied with their romantic relationships.

We next computed regressions separately for boys and girls which largely mirrored central patterns found for the full sample

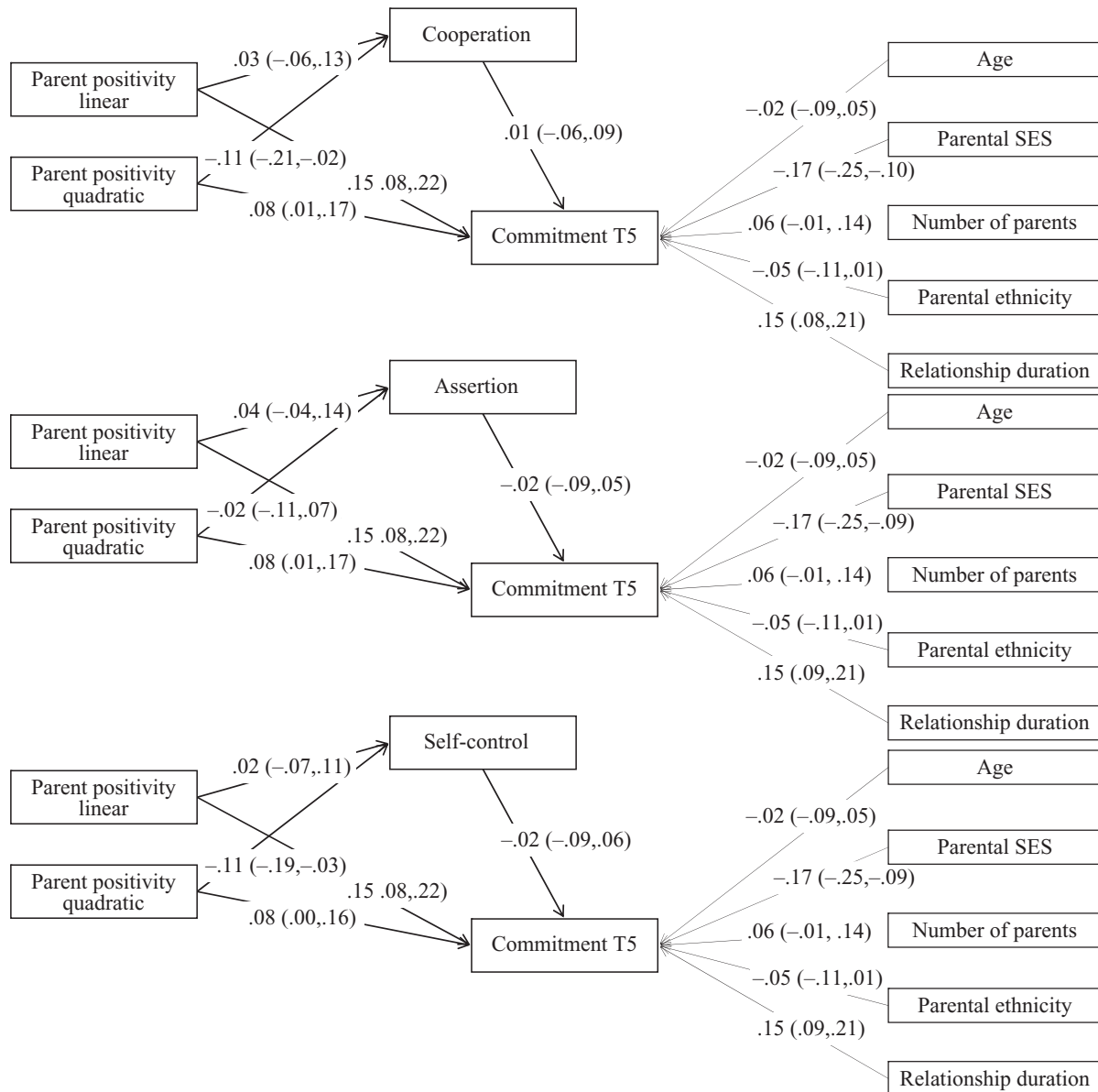


Figure 1. Prediction of commitment by parent-child positivity and social skills ($n = 831$).

(Table S1). That is, linear associations between parent-child positivity and commitment emerged for both genders, whereas satisfaction was linearly linked to parent-child positivity only in boys. SES and number of parents were related to boys' but not girls' commitment and satisfaction, respectively, as well as ethnicity, which negatively predicted girls' but not boys' commitment and satisfaction. While the Wald-statistic confirmed a significant gender difference for SES, $\chi^2(1) = 14.33$, none of the other associations was significantly different between boys and girls.

Social skills as mediator

Figures 1 and 2 present standardized coefficients for the full sample obtained from path models in which we simultaneously modelled the linear and nonlinear prediction of commitment and satisfaction in romantic relationships by parent-child positivity

and social skills and adjusted for age, parental SES, number of parents in the home, parental ethnicity, and relationship duration. Similar to results obtained from models where social skills were not included, commitment was linearly and nonlinearly predicted by parent-child positivity whereas only the linear link was found for satisfaction. Parent-child positivity predicted cooperation and self-control in nonlinear fashion, but no association was found between any of the social skills and commitment or satisfaction. Parental SES and relationship duration remained significant predictors of commitment whereas parental ethnicity predicted satisfaction.

Again, we computed path models separately by gender (Figures S1 to S4). For girls and boys, linear associations between parent-child positivity and commitment were retained as were significant negative nonlinear links between parent-child positivity and cooperation and self-control, though these were significant only for girls (Figures S1 and S2). Satisfaction was linearly

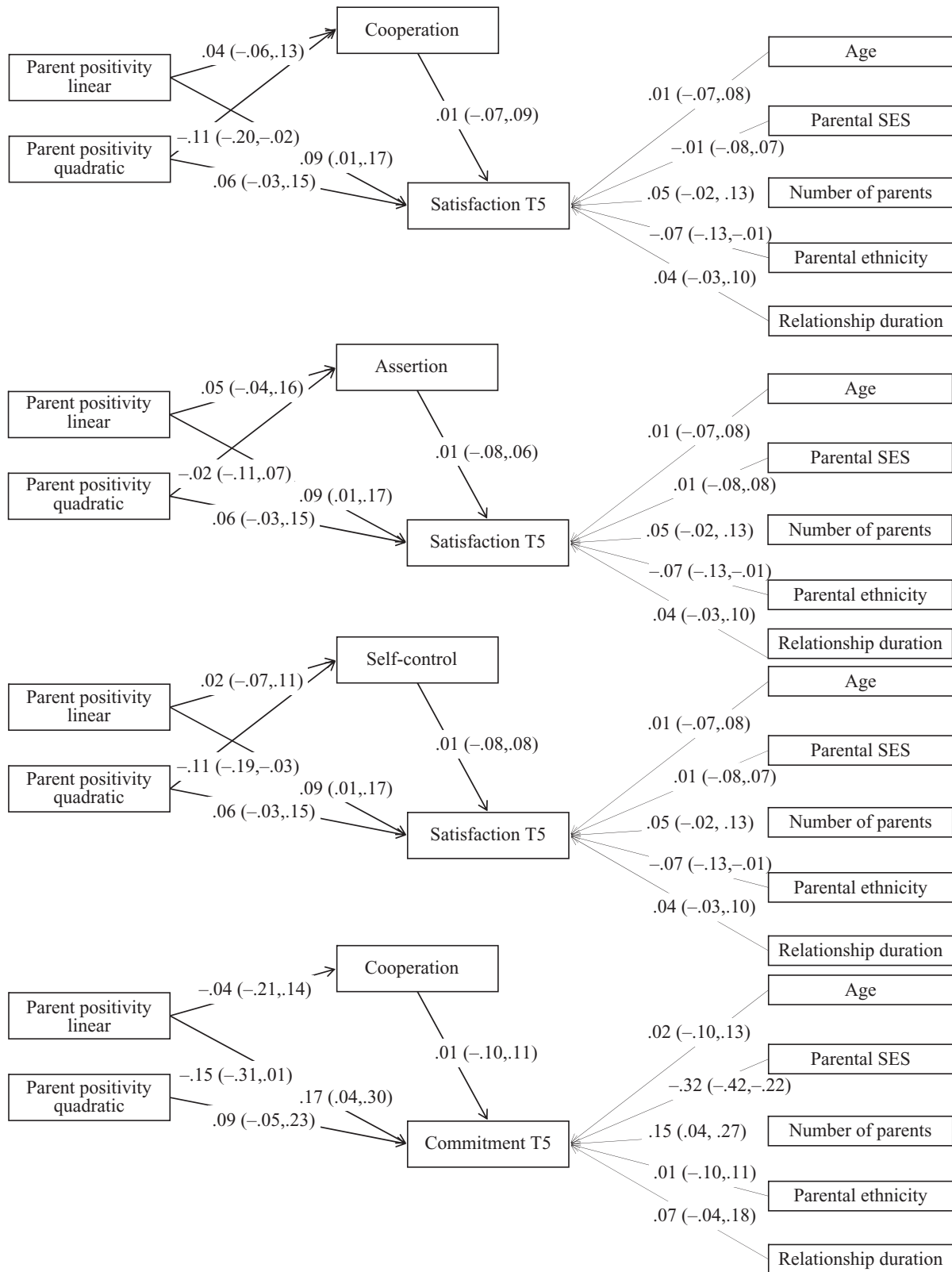


Figure 2. Prediction of satisfaction by parent–child positivity and social skills ($n = 831$).

predicted by parent–child positivity only for boys (Figures S3 and S4). Gender-specific links between covariates and commitment and satisfaction were stable, in that boys’ parental SES and number of

parents in the home and girls’ parental ethnicity and relationship duration predicted commitment and (partly) satisfaction. However, when formally compared using the Wald-statistic, again only the

effect of parental SES was moderated by gender, $\chi^2(1) = 4.50$ to 14.59, depending on model.

With regard to our assumption that social skills may carry the effect from parent–child positivity to romantic commitment and satisfaction, we note that associations between social skills and romantic relationship quality were not found, which means that an important condition for establishing indirect effects was not met. Thus, we refrained from formally testing indirect effects

Discussion

Utilizing longitudinal data spanning more than a decade, we tested associations between parent–child positivity and emerging adults' romantic relationships and explored the role of social skills as intermediate variables. Some of our findings, specifically those suggesting that parent–child positivity and romantic commitment were linked in linear but also nonlinear fashion, are in line with our expectations, but empirical support was not obtained for all hypotheses and associations between covariates and romantic relationship indicators were stronger and more stable than expected. Although patterns differed to some extent between boys and girls, these differences were not supported by formal comparisons. It is possible that differences are subtle and that an even larger sample than ours would be necessary to detect them. Consequently, we interpret the findings obtained when examining the complete sample.

We first tested whether parent–child positivity in pre-adolescence was predictive of romantic relationship involvement, commitment, and satisfaction at age 22. Whereas parent–child positivity did not affect romantic involvement as such, consistent associations with commitment were found. Recall the findings from De Goede and colleagues (2012), where romantically committed adolescents had experienced particularly positive parent–child relationships, but also Ha and colleagues' (2010) study that showed that adolescents with negative parent–child experiences were more strongly committed to their romantic partners. Both studies studied linear linkages—positively thus suggestive of congruence in De Goede and colleagues (2012) and negatively thus possibly indicating compensation in Ha and colleagues (2010).

Given that both mechanisms are theoretically meaningful, we expanded on previous research by also estimating associations in nonlinear models. Our results suggest a weak positive linear trend overall with deviations at both ends of the continuum as indicated by nonlinear associations. Thus, congruence was generally supported and those young people whose parent–child experiences were more positive were also more likely to report higher levels of commitment and satisfaction in romantic relationships. The nonlinear effect suggests that, despite this overall trend, individuals who had experienced particularly high or low levels of positivity, were somewhat more committed, the latter possibly reflecting compensation.

Congruence is in line with attachment, social learning and socialization theories, which suggest that positive parent–child experiences provide us with templates on how to interact with others, teach us constructive interpersonal communication and cooperation, foster caring attitudes towards others, and the belief that others care about us. Naturally, the parent–partner link also embraces the other end of the spectrum, suggesting that particularly negative parent–child experiences should be associated with negative romantic relationships. Such similarity of interpersonal experiences seems intuitive; young people who experienced warmth, support, and have

been equipped with constructive communication and conflict resolution tactics will be better able to establish meaningful romantic relationships because they are more likely to trust others, solve conflicts, and fulfil their partner's relationship needs. Conversely, those with negative parent–child experiences may distrust others' motives and be ill-equipped to handle conflict, thus experience difficulties in establishing and maintaining romantic relationships.

From a compensation perspective, it is questionable whether this mechanism always applies. We argued that some individuals may commit early and more strongly to romantic partners in order to establish belongingness and companionship to compensate for the absence thereof during early adolescence. While this argument seems intuitive for commitment and was empirically supported by Ha and colleagues (2010), it is difficult to explain why individuals with negative parent–child relationship experiences should be happier in their romantic relationships. Indeed, we did not find any compensation effect for the association between parent–child positivity and satisfaction. Thus, romantic commitment might provide a sense of belonging and interpersonal closeness, regardless of the quality of the connection.

It is important to keep in mind that the nonlinear effect we found was small and only trend-level significant, thus linear effects seem more dominant. Nonetheless, our findings might serve as a reminder that the shape of associations between constructs is not always straightforward. More extreme relationship experiences than tested here—both positive and negative—can be more strongly linked to adjustment difficulties than average experiences. Theoretic perspectives have rarely systematically accounted for this possibility and empirical findings are scarce. It is important to adjust methodological approaches in order to accumulate information and bring forward scientific knowledge on interpersonal experiences.

From a practical perspective, the long reach of parent–child relationship quality—our association span over 10 years and without controlling for important demographic covariates—is certainly notable. Parents make an important contribution to their offspring's development of interpersonal relationships but the nature of this contribution seems more complex than prior studies indicate. In other words, it is not necessarily the case that extremely positive parenting is reflected in particularly well-functioning romantic relationships as indicated by the nonlinear trend. The highest levels of commitment and satisfaction were observed in young people whose parent–child relationships were of average positivity. It may be that occasional conflict, antagonisms, and disapproval in parent–child relationships provide a more realistic perspective on relationships and thus prepare offspring better for romantic experiences.

Finally, we examined the role of social skills as partially accounting for the association between parent–child and romantic relationship. In doing so, we followed Rauer et al. (2013), who speculated that parent–child relationships might affect social skill development which in turn may compromise romantic relationships, and, by examining general social skills, went beyond prior studies that focused on relationship-related skills (Conger et al., 2000; Crockett & Randall, 2006). Cooperation and self-control were stably nonlinearly associated with parent–child positivity suggesting that not only low parent–child positivity is detrimental to cooperation and self-control; highly positive parenting–child relationship quality appears to be problematic for social skill development as well. Studies on narcissism (e.g., Horton, Bleau, & Drwecki, 2006) suggest that overly-positive evaluation and inflated/over-praising may result in unrealistic self-evaluations,

which are predictive of interpersonal difficulties (Colvin, Block, & Funder, 1995). Similar processes may be at work here.

A note of caution concerns the bias with which we interpret our findings and formulate implications. Implicit to our assumptions is the notion that romantic involvement, commitment, and satisfaction are desirable and indicative of healthy and well-adjusted development. But does this assumption reflect contemporary reality? For example, Shulman and Connolly (2013) reviewed research into emerging adults' coordination of romantic commitment and individual education and work plans. According to their review, individuals in this developmental phase tend to focus on individual life plans regarding career and education and only later turn to dyadic processes such as cohabiting. A similar observation can be made with regard to reproduction—emerging adults tend to try to combat career uncertainties before they decide to have children. Being (overly) committed to a romantic partner during this time may jeopardize one's educational or work career with potentially detrimental future effects. Delaying marriage and childbirth—two aspects of commitment to a romantic partner—thus actually demonstrates adaption to societal change.

In line, fewer than 20% of under-30-year-old Dutch emerging adults are married compared to over 50% in 1970 (Latten, 2004). On average, Dutch women postpone having children until the age of 29 with Dutch men being approximately 34 years old before they have their first child. In other words, only few emerging adults in the Netherlands demonstrate strong commitment through cohabitation, marriage, or parenthood already in their late teens or early twenties. Interestingly, early cohabitation and childbirth are more likely in Dutch emerging adults who are less well-educated and come from families where parents are divorced (de Graaf & van Gaalen, 2014; Harmsen, Wobma, & van Gaalen, 2013), which mirrors our finding of stronger commitment in low-SES boys.

If one considers the notion that emerging adult romantic commitment is not actually indicative of romantic competence, it is difficult to evaluate how relevant the association between parent-child positivity and romantic commitment is for future development of young adults. In fact, the amount of variance explained in commitment increased remarkably with gender, parental SES and relationship duration in the model, suggesting that individual and demographic factors may at least be as important as experiences in other interpersonal relationships. Taking these results and the literature on emerging adulthood into account, it will be fascinating to not only look at whether interaction patterns in the parent-child relationship are reflected in the offspring's couple relationship, but also examine how the parent-child relationship prepares the individual to make individually sensible decisions with regard to romantic involvement.

Study limitations and future directions

Notwithstanding the benefits of the large longitudinal dataset with information from different sources used in this study, our findings need to be interpreted with some limitations in mind. Firstly, in contrast to many other studies, we measured pre-adolescent parent-child positivity rather than parent-child attachment. It is likely that parent-child positivity taps into a different, although certainly overlapping, dimension, which affects comparability to other studies somewhat.

Secondly, social skills were measured at the same time as parent-child positivity. It is possible that social skills are not a

consequence of poor parent-child relationships but may precede them or that some individuals are socially incompetent regardless of interaction partner. Social skills would thus function as confounder that impairs both parent-child as well as romantic relationships. It is a task for future research to establish the actual roles and chronological order of concepts.

Thirdly, in this study we focused on parents but studies into adolescent romantic relationships have stressed the role of the peer network in romantic relationship development (Connolly, Furman, & Konarski, 2000; Furman, 1999). Given that interpersonal competencies are acquired in interactions with same- and other-sex peers and then applied in adolescent dating and romantic relationships, future studies should include detailed peer and early romantic relationship measures and examine their role. As with the parent-child relationship, it may again be more meaningful to search for predictors of competence to handle romantic relationships amidst education and work uncertainties rather than examine whether different interpersonal contexts align with regard to quality.

Fourthly, there is some support for the notion that relationships with mothers and fathers affect future social interactions differently (Doyle et al., 2009), and thus could be estimated as separate measures rather than in composite form. We attempted these analyses, but the strong correlations among the four parenting measures in each model (mother and father linear and nonlinear) led to less than acceptable multicollinearity (VIF ranging from 2.04 to 3.91, tolerance ranging from 0.26 to 0.49).

Finally, emerging adulthood is not a universal concept, and Arnett (2000) has outlined the economic and cultural conditions under which individuals are granted this period of nothing being normative. While these conditions should apply to most participants of TRAILS, which was constrained to ethnically and religiously quite homogenous regions in the north of the Netherlands, the current study might not be generalizable to culturally, religiously and ethnically more diverse populations of emerging adults. Moreover, factors that may impinge the extended period of exploration in change such as differences in ethnicity and cultural background but also differences in socioeconomic status also occur within, not only between societies.

Despite these shortcomings, our study contributes important and novel information to the literature on emerging adults' romantic relationships in showing that associations with parent-child relationship quality are not straightforwardly linear. This means that particularly strong romantic commitment and satisfaction in a period of exploration and change is observed especially amongst those whose parents showed very little or very much positivity. These links do not seem to operate through social skills in consistent manner and other social contexts may function as proxies between parents and partners instead. Identifying the roles of peers and romantic experiences earlier in development will not only further elucidate why parent-child experiences so persistently affect development, but also inform about malleable factors and interpersonal experiences that increase the risk for compromised romantic experiences in emerging adulthood.

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