

Important Non-parental Adults and Positive Youth Development Across Mid- to Late-Adolescence: The Moderating Effect of Parenting Profiles

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Abstract Both parents and important non-parental adults have influential roles in promoting positive youth development (PYD). Little research, however, has examined the simultaneous effects of both parents and important non-parental adults for PYD. We assessed the relationships among youth-reported parenting profiles and important non-parental adult relationships in predicting the Five Cs of PYD (competence, confidence, connection, character, and caring) in four cross-sectional waves of data from the 4-H Study of PYD (Grade 9: N = 975, 61.1 % female; Grade 10: N = 1,855, 63.4 % female; Grade 11: N = 983, 67.9 % female; Grade 12: N = 703, 69.3 % female). The results indicated the existence of latent profiles of youth-reported parenting styles based on maternal warmth, parental school involvement, and parental monitoring that were consistent with previously identified profiles (authoritative, authoritarian, permissive, and uninvolved) as well as reflecting several novel profiles (highly involved, integrative, school-focused, controlling). Parenting profile membership predicted mean differences in the Five Cs at each wave, and also moderated the relationships between the presence of an important non-parental adult and the Five Cs. In general, authoritative and highly involved parenting predicted higher levels of PYD and a higher likelihood of being connected to an important non-parental adult. We discuss the implications of these findings for future research on adult influences of youth development

and for programs that involve adults in attempts to promote PYD.

Keywords Parents · Non-parental adults · Positive youth development · Developmental systems · Latent profile analysis

Introduction

The contemporary perspectives about adolescence development are framed by relational developmental systems models (Lerner et al. 2013, in press; Overton 2013), which posit that development is defined by dynamic and mutually influential, bidirectional person ← → context relationships. Derived from relational developmental systems models, the Five Cs model of positive youth development (PYD) hypothesizes that when the strengths of youth are aligned with resources in their contexts (“developmental assets;” Benson et al. 2011), youth thriving (as defined by the Five Cs of competence, confidence, connection, character, and caring) is promoted. The developmental assets included in this model have been associated with several contexts (families, schools, out-of-school-time activities), but recent evidence suggests that relationships with committed, caring adults in adolescents’ lives within these contexts are the most important assets for predicting higher levels of PYD and lower levels of risk behaviors (Li and Julian 2012; Theokas and Lerner 2006).

Whereas parents and parent–youth relationships are important developmental assets in the positive development of youth (e.g., Flouri and Buchanan 2004; Laursen and Collins 2009; Lewin-Bizan et al. 2010), support from *important non-parental adults*, such as extended family, teachers, mentors, coaches, and neighbors also enhances

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PYD levels (Bowers et al. 2012; Erickson et al. 2009; Kogan and Brody 2010; Rhodes and Lowe 2009). However, most studies examining the influence of the adult milieu on youth development have focused on the impact of parents and parent–youth relationships and have not considered the potential effects of important non-parental adults.

This emphasis is not unexpected, as parents represent the developmental asset that accounts for the most variance in PYD-related outcomes (Bowers et al. 2011b; Theokas and Lerner 2006). Moreover, the common indicators of parent–adolescent relationship quality, such as perceived maternal warmth, parental monitoring, and parental school involvement are related to many youth outcomes (e.g., Baumrind 1991; Bowers et al. 2011a; Dishion and McMahon 1998; Flouri and Buchanan 2002; Smetana et al. 2006). However, relational developmental systems-derived models, such as the Five Cs model of PYD (Lerner et al. 2013, in press), emphasize that development is embodied within an ecological system involving cross-context relationships. Therefore, it is important to consider the non-parental factors that can influence youth development.

Important non-parental adults are often the instructors, advocates, and role models in contexts salient to youth, such as sports, hobbies, and other out-of-school-time activities; therefore, youth relationships with such adults may serve as “developmental assets” that promote PYD outcomes (Benson et al. 2006; Bowers et al. 2012). Indeed, the presence and characteristics of youth relationships with important non-parental adults have been linked to a range of psychological, socioemotional, and behavioral outcomes across adolescence (e.g., Bowers et al. 2012; Dubois and Silverthorn 2005a, b; Greenberger et al. 1998; Zimmerman et al. 2002). The influence of these important non-parental adults may be especially salient in adolescence, as youth build identities outside the home (Côté 2009; Marcia 1980).

Little research, however, has appraised the simultaneous effects of resources within both familial and non-familial relationships for indices of healthy and positive development in adolescence. Accordingly, this study examined individual thriving (as indexed by the Five Cs of PYD) across mid- to late-adolescence, as it may be moderated by youth relationships with parents (as indexed by school involvement, warmth, and monitoring) and important non-parental adults.

Youth Relationships with Parents and PYD

Across more than a half century, the history of theory and research about parenting parallels the classic debate in the study of personality about traits versus types (Nesselroade 1988) in many ways and, as well, the more recent interest

in variable-centered versus person-centered approaches to data analysis (Bergmann and Magnusson 1997). For instance, reflecting a trait-type and variable centered approach, Sears et al. (1957) discussed the social learning-based behaviors that created variable clusters, or patterns, of child rearing. In turn, reflecting a typological and person-centered approach, Baumrind (1978) described three types of parenting: authoritative, authoritarian, and permissive. Steinberg et al. (1991) expanded this typology by differentiating between permissiveness that reflected indulgent parenting versus permissiveness that reflected negligent parenting.

Today, however, using the lens of relational developmental systems conceptions (e.g., Overton 2013; Overton and Müller 2013), both the trait-like and the type-like approaches to parenting may be argued to fall short of being maximally useful. The extant trait-like concepts fail to integrate the behavioral, cognitive, and emotional components of the engagement that parents have with their children and, as well, fail to appreciate the plasticity across ontogeny of these attributes of parenting (Lerner and Benson 2013). In turn, typologies also fall short in regard to the plasticity of human behavior (cognition or emotion). Scholars using either the Baumrind (1978) or the Steinberg et al. (1991) formulations pay little heed to the idea that the sets of characteristics associated with any typology are unlikely to characterize parents' functioning across time (e.g., consider the demands on a parent by unruly, disobedient behaviors from a 2-year old vs from a 14-year old) and across place (consider a child's loud and disruptive behaviors in the family living room vs a service in a place of worship).

Therefore, research derived from relational developmental models should include measures of parenting that index youth–parent relationships across several key contexts such as family, peers, and school and at different time points. Indeed, the measures of youth–parent relationship quality in each of these contexts, such as perceived parental warmth (behaviors indicating a parent's acceptance, nurturance, and support), parental monitoring or knowledge (the extent to which parents keep track of their child's behavior and acquaintances), and parental school involvement (the extent to which parents take an active role in their child's education) are related to many youth outcomes (e.g., Baumrind 1991; Bowers et al. 2011a; Dishion and McMahon 1998; Flouri and Buchanan 2004; Lewin-Bizan et al. 2010), and their influence may differ based on youth age (Eccles and Harold 1996; McElhaney et al. 2009) and socioeconomic and cultural background (e.g., Brody and Flor 1998). However, few studies have considered these measures jointly in indexing parenting or in predicting youth outcomes across several years.

The majority of empirical work that has linked youth–parent relationship quality to adolescent outcomes has

focused on *parenting style* (typologies based on parental warmth and control or analogous dimensions of parenting) as a key predictor of positive adolescent adjustment (Baumrind 1978). The studies of parenting style consistently report that “authoritative parenting,” which is marked by parental rule induction, firmness, and support, is related to indices of PYD (Baumrind 1978, 1991). The combination of parental responsiveness and demandingness is consistently related to adolescent adjustment, school performance, and psychosocial maturity (Steinberg 2001). In addition, disaggregating the dimensions of parenting style, Gray and Steinberg (1999) also found that warmth predicted higher academic competence, lower levels of behavior problems, and better psychosocial development.

However, as noted, youth socioeconomic status (SES) or culture and, as well, ethnic/racial background, may moderate the effect of parenting on youth outcomes. For youth of color or youth from low SES backgrounds, authoritarian parenting may not be as harmful, and may actually be beneficial (Brody and Flor 1998; Furstenberg et al. 1999; Hill et al. 2003). For example, traditional Mexican–American mothers living from disadvantaged areas who employed warm, yet strict and sometimes harsh control, had children with fewer conduct problems (Hill et al. 2003). Similarly, when African-American families live in poverty stricken, high crime neighborhoods with little community support, strict control has been linked to less antisocial behavior, better self-regulation, and less chance of victimization (Brody and Flor 1998). Therefore, research on parenting and youth outcomes should consider the potential moderating effect of youth and family demographics.

Parental monitoring or knowledge is also regarded as a crucial intra-familial process affecting adolescent behavior across multiple domains (Crouter et al. 1990; Kerr and Stattin 2000; Kerr et al. 2010; Maccoby and Martin 1983). Research has linked the presence of parental monitoring with the absence of adolescent antisocial and delinquent behaviors (Crouter and Head 2002; Kerr and Stattin, 2000). However, some studies have found that extreme vigilance in tracking and surveillance may be linked to various forms of poor adjustment (Peterson et al. 1988; Rodin 1990; Syme 1990). This research suggests that high levels of parental monitoring may impede adolescents’ personal control, sense of self-efficacy, and independence. In addition, the relationship between parental monitoring and youth outcomes may be moderated by youth age, as younger adolescents are more likely to disclose more information to their parents (and are expected to disclose more) than older adolescents (Finkenauer et al. 2002). As youth develop autonomy over adolescence, parents are less vigilant in monitoring their activities (McElhaney et al. 2009). Nevertheless, studies that have examined specific

monitoring behaviors have generally supported the notion that appropriate rules and supervision are related to lower problem behaviors (Hayes et al. 2004).

Finally, it has been suggested that the influence of parental school involvement wanes as adolescence commences, and parents become less involved as school subjects become more difficult and youth seek autonomy (Eccles and Harold 1996). However, across adolescence increased parental school involvement is related to increased intentional self regulation (Bowers et al. 2011a), future aspirations (Hill et al. 2004), academic competence (Li et al. 2010), and student achievement (Hill et al. 2004; Hill and Tyson 2009). Therefore, more research across several years of adolescence is needed to clarify these findings.

Research on parental warmth, monitoring, and involvement is limited when viewed through the perspective of contemporary relational developmental systems models of adolescent development. First, as noted above, few studies include indices of parenting across several contexts: family (warmth), peers (monitoring), and school (school involvement) and across several years of youth development. Second, relational development systems models stress dynamic cross-contextual influences on human development. A majority of the studies on youth–parent relationships examine adolescent development within the immediate family sphere, with few assessing resources provided by extra-familial relationships. Recent work, however, has indicated that there is a substantial influence of non-parental adults on adolescent development (e.g., Dubois and Silverthorn 2005a, b). Therefore, the present study used latent profile analysis to explore patterns of parenting characteristics (regarding warmth, monitoring, and school involvement), and to examine how these parenting profiles may moderate the relationships among important non-parental adult relationships and PYD in 4 years of adolescence.

Youth Relationships with Important Non-parental Adults and PYD

Relationships with important non-parental adults have also been shown to help enhance positive development among youth (Bowers et al. 2012; Dubois and Silverthorn 2005a, b; Greenberger et al. 1998; Haddad et al. 2011; Zimmerman et al. 2002). Important non-parental adult relationships can occur in a variety of forms, from relationships with teachers, coaches and community members, to relationships with older siblings, aunts, uncles, and other family members. These adults have been labeled in the literature as natural mentors (e.g., Dubois and Silverthorn 2005a, b; Hurd et al. 2013), informal mentors (Kogan and Brody 2010), or as very important nonparental adults (VIPs; e.g.,

Greenberger et al. 1998). Whatever their label, youth reports of important non-parental adults in their lives have been linked to adolescent outcomes, such as educational accomplishments, lower risk and problem behaviors, and lower depressive symptoms (Dubois and Silverthorn 2005a; Greenberger et al. 1998; Zimmerman et al. 2002). In addition, specific characteristics of these relationships, including warmth, acceptance, and closeness, have been related to these youth outcomes (Bowers et al. 2012; DuBois and Silverthorn 2005b; Haddad et al. 2011; Kogan et al. 2011; Rhodes et al. 1992).

For example, using the Add Health data set, Dubois and Silverthorn (2005a) found that youth that reported having natural mentors were more likely to complete high school and attend college, were more likely to report higher levels of self-esteem, and were more likely to be physically active. In addition, these youth with natural mentors were less likely to be part of negative outcomes, such as being involved in gangs and risk taking behaviors. Similar findings have been seen in studies that focus on rural African-American youth (Kogan and Brody 2010), urban African-American youth (Hurd et al. 2011), and European-American youth (Bowers et al. 2012).

These types of relationships with important non-parental adults appear to have protective qualities for youth, and they may also help enhance developmental outcomes, but, as noted, they have not been studied extensively. As such, it may be that these reported positive effects of important non-parental adult relationships only hold for young people with poor relationships with their parents; that is, important non-parental adults serve as “compensatory resources” (Erickson et al. 2009). On the other hand important non-parental adult relationships may only promote PYD when youth also have good familial relationships; that is they serve as “complementary resources” (Erickson et al. 2009). By examining youth relationships with both parents and non-parental adults, the present study aims to address such issues by extending prior work on the integrative influence of parents and important non-parental adults on adolescent development.

The Integrative Influence of Youth Relationships with Parents and Important Non-parental Adults for PYD

Although there has been a long-standing interest within developmental science in the ecology of human development as involving variables linked to intraindividual change trajectories (Bronfenbrenner 1979; Bronfenbrenner and Morris 2006), most research studying youth ← → adult relationships has nevertheless focused on within-context influences (e.g., parents *or* teachers *or* mentors) on individual development. However, consistent with Bronfenbrenner’s

(1979; Bronfenbrenner and Morris 2006) ideas, relational developmental systems models (Overton 2013) emphasize that development within a context is embodied within a system involving cross-context relationships (e.g., parents *and* teachers *and* mentors). There are, however, only a few studies that have assessed the relationships among parents, important non-parental adults, and youth development from an embodied approach (e.g., Erickson et al. 2009; Hurd et al. 2013; Kogan and Brody 2010). These studies provide some indications of what relationships we might expect when examining the integrative effects of adults on youth.

Erickson et al. (2009) used data from the Add Health and Add Health Academic Achievement studies (AHAA) to examine the role of informal mentors in predicting educational outcomes within the broader ecological context. In particular they examined whether the presence of resources within the family, school, and peer contexts influenced (1) the probability of having an informal mentoring relationship and (2) the effectiveness of that informal mentoring relationship for youth educational outcomes. The findings indicated that, while youth with many contextual resources are also more likely to report having an informal mentor, the effect of having an informal mentor (especially if that informal mentor was a teacher) was actually greater for youth with few contextual resources.

Similarly, Kogan and Brody (2010) studied individual and contextual correlates of depressive symptoms among a sample of rural African-American youth. They found that support from informal mentors had a greater impact on youth hope, perceived life chances, and self regulation for youth in familial contexts in which parents practiced less autonomy-promotive parenting behaviors. Whereas higher autonomy-promoting parenting in general predicted greater self-regulation and lower levels of depressive symptoms, higher levels of supportive mentoring buffered the negative effect of low autonomy-promoting parenting on youth self-regulation.

Finally, Hurd et al. (2013) investigated the relationships among involved-vigilant parenting, natural mentoring relationships, youth social skills, and psychological well-being among a sample of socioeconomically diverse, African-American youth. Hurd and colleagues found that mentoring was a complementary resource as youth with natural mentoring relationships reported greater levels of involved-vigilant parenting than youth without natural mentors. Youth with more connected natural mentoring relationships had higher social skills and psychological well-being than youth with less connected or no natural mentoring relationships. The type of natural mentoring relationship youth had also moderated the effect of involved-vigilant parenting on youth outcomes. Whereas involved-vigilant parenting was related positively to youth

social skills and psychological well-being among the entire sample of youth, the strength of these relationships was weaker for youth with more connected natural mentoring relationships. Hurd and colleagues suggested that this finding may indicate that parents and natural mentors share socializing responsibilities for young people, whereas those youth with less connected, or with no non-parental, relationships may be more strongly influenced by their parents.

In general, these studies suggest that parenting may moderate the influence of important non-parental adult relationships on youth PYD. The nature of these interactions may depend on the outcome of interest (e.g., competence vs character) as well as on the profiles of parental relationships that are identified. Nevertheless, despite past findings regarding cross-contextual influences on adolescent development, more research is needed about such influences in order to elucidate the importance for adolescent development of broadly, ecologically embodied, mutually-influential individual-context relationships more fully (Overton 2013). These prior studies have either examined the role of youth–adult relationships in specific samples of youth (African-American urban or African-American rural youth) or relied on retrospective reports of important non-parental adult relationships (Add Health). Using data from the 4-H Study of PYD (Lerner et al. 2005, 2009, 2010, 2011), the present study extends this work by examining the role of both parental and non-parental adult relationships to predict youth development in adolescence.

Study Aims and Hypotheses

This study examined how the characteristics of youth relationships with both parents and important non-parental adults integratively influenced the Five Cs of PYD across mid- to late-adolescence. Using data from youth in Waves 5 through 8 (approximately Grades 9–12) of the 4-H Study of PYD (Lerner et al. 2005, 2009, 2010, 2011), we first investigated whether latent profiles based on participants' perceived relationships with parents existed (regarding monitoring, school involvement, and warmth). We also tested whether the Five Cs of PYD differed according to parenting profile membership. Next, we investigated whether profile membership was related to participants' reports of relationships with important non-parental adults. Finally, we examined whether parenting profile membership moderated the relationship between participants' reported important non-parental adult relationships and the Five Cs of PYD.

The plasticity of individual functioning constitutes a strength of the person, enabling adjustment of behavior (cognitions or emotions) to fit the adaptive demands of time and place, including demands placed on the person by

the behavior of others (Lerner 1984). As such, because it would afford the maximum probability for plasticity and hence adaptability across grades, we expected that the predominant latent class involved in perceived parenting would correspond to a grouping showing at least moderate levels of functioning in regard to all three assessed characteristics. We term this predicted latent class “integrative parenting,” and predicted that at all four grade levels we assessed, integrative parenting should be the most frequently observed latent class and the profile linked to the highest levels of PYD and the lowest levels of risk behaviors.

Although we would not dispute that there may be latent classes of parenting that correspond to those configurations discussed by Baumrind (1978) or Steinberg, et al. (1991), that is, authoritative, authoritarian, and permissive parenting styles, we do not think that such groupings should be as large, ubiquitous across grade levels, or linked consistently with indicators of PYD as the “integrative group.” Because such groups would reflect a less plastic repertoire of parenting attributes, these latent classes would involve levels of parenting characteristics neither affording the most adaptive parent functioning or the most positive linkage with youth behaviors. We hypothesized that these latent class profiles would be differentially related to the Five Cs of PYD. For example, authoritative parenting would be associated with higher levels of the Cs, whereas authoritarian parenting would be associated with lower levels of the Cs. Prior research has indicated that the relationship between parenting and youth outcomes may vary according to SES, ethnicity/race, and other demographics (e.g., Furstenberg et al. 1999; Hill et al. 2003); however, as we discuss more in the Discussion, we were not able to examine these differences due to the complexity of the models needed to test our primary hypotheses.

We also expected these parenting profiles would be differentially related to the probability of youth reporting whether they had an important non-parental adult. Based on prior work (Erickson et al. 2009; Hurd et al. 2013), we expected that integrative parenting would be most likely to be linked to the presence of important non-parental adults in the lives of youth. Because integrative parents are more likely to be engaged with adaptive developmental regulations (Brandtstädter 1998) than would be the case with other latent classes of parenting, such individuals would be most likely to model for their children (and to be supportive of) engagement by their children with the positive-development supportive features of their context.

Finally, we did not hypothesize the direction of the moderating effect of parenting profile membership on the relationship between important non-parental adult relationships and the Five Cs of PYD. Prior findings have been mixed in regard to these questions. These parent-important

non-parental adult interactions may have either a compensatory or a complementary effect on youth outcomes (Erickson et al. 2009; Hurd et al. 2013). These effects could be due to the outcome of interest (which C of PYD), the parenting profile, or the age of the youth.

Method

Full details of the 4-H Study of PYD have been presented elsewhere (Lerner et al. 2005, 2009, 2010, 2011). Therefore, we present here only the features of the methods relevant to the present research, which includes data from Waves 5 through 8. A discussion of the overall method of the 4-H Study is provided in the introductory article of this special issue (Bowers et al., in press).

Participants

Participants for the present study were gathered from Waves 5 through 8 (Grades 9 through 12) of the 4-H Study of PYD. While there are a large proportion of longitudinal participants across these waves of the 4-H Study, we treated each wave as a separate cross-sectional sample. This decision was due to a large proportion of participants missing from wave to wave, and the complexity of the final models that were selected to test our hypotheses.

The Wave 5 sample was comprised of 975 ninth grade youth (61.1 % female; mean age = 14.93, $SD = 1.10$). The majority of youth reported their ethnicity as European American (59.5 %), but African-American (8.2 %), Latino American (9.3 %), and Asian American (2.8 %) youth were also represented, among others. In Wave 5, 4.9 % of participants' mothers reported maternal education of less than 12 years, 13.1 % reported 12 years, 26.9 % reported between 13 and 14 years, 10.7 % reported 16 years, 7.7 % reported more than 16 years of education, and 36.6 % did not report their level of education.

The Wave 6 sample was comprised of 1855 tenth grade youth (63.4 % female; mean age = 15.71, $SD = 1.37$). The majority of youth reported their ethnicity as European American (75.9 %), but African-American (5.6 %), Latino American (6.5 %), and Asian American (1.6 %) youth were also represented. In Wave 6, 1.2 % of participants' mothers reported maternal education of less than 12 years, 5.9 % reported 12 years, 12.8 % reported between 13 and 14 years, 10.6 % reported 16 years, 5.0 % reported more than 16 years of education, and 64.7 % did not report their level of education.

The Wave 7 sample was comprised of 983 eleventh grade youth (67.9 % female; mean age = 16.50, $SD = 1.45$). The majority of youth reported their ethnicity as European American (78.5 %), but African-American

(5.2 %), Latino American (2.3 %), and Asian American (2.4 %) youth were also represented. In Wave 7, 1.2 % of participants' mothers reported maternal education of less than 12 years, 6.5 % reported 12 years, 18.0 % reported between 13 and 14 years, 13.1 % reported 16 years, 6.8 % reported more than 16 years of education, and 54.4 % did not report their level of education.

The Wave 8 sample was comprised of 703 twelfth grade youth (69.3 % female; mean age = 17.61, $SD = 1.51$). The majority of youth reported their ethnicity as European American (75.2 %), but African-American (3.7 %), Latino American (4.8 %), and Asian American (3.7 %) youth were also represented. In Wave 8, 2.3 % of participants' mothers reported maternal education of less than 12 years, 7.7 % reported 12 years, 17.0 % reported between 13 and 14 years, 15.0 % reported 16 years, 7.9 % reported more than 16 years of education, and 50.1 % did not report their level of education.

Measures

Maternal Warmth

The eight-item maternal warmth subscale of the Child's Report of Parenting Behaviors Inventory (CRPBI; Schludermann and Schludermann 1970) was used to assess maternal warmth. The CRPBI is a widely used self-report measure of children's assessment of parenting practices. Maternal warmth was conceptualized as behaviors that indicate acceptance, nurturance, support, and a feeling of being loved and wanted by the parent (Gray and Steinberg 1999). Examples of maternal warmth items include "My mother speaks to me in a warm and friendly way" and "My mother cheers me up when I am upset." The response format ranges from 0 = *almost never* to 4 = *almost always*. Higher scores indicate higher warmth and nurturance. Overall, the CRPBI has good reliability (Cronbach's alpha = .80; Schludermann and Schludermann 1970). In regard to validity, factor analyses have indicated that Warmth is a replicable factor (Schwarz et al. 1985). There is evidence for adequate convergent and discriminant validity, for example, correlations between ratings by siblings were $r = .50$ ($p < .01$) for maternal warmth; correlations between adolescents and parents for warmth were in the .4 range (Schwarz et al. 1985). In the present data set, the Cronbach's alphas for the maternal warmth measure were .96 at Grades 9 through 12.

Parental School Involvement

We used three items from the Search Institute's Profiles of Student Life—Attitudes and Behaviors (PSL-AB) questionnaire (Leffert et al. 1998) to create the parental school

involvement scale (Theokas et al. 2005). An example item is “How often does one of your parents ask about your homework?” Each item is measured using a five point Likert-type scale ranging from 0 = *never* to 4 = *very often* with a higher score reflecting greater parental involvement. The scale is computed by taking the mean of at least three of the four items. Cronbach’s alphas for this scale were 0.84 for Grade 9; 0.80 for Grades 10 and 11, and 0.81 for Grade 12.

Parental Monitoring

We used the eight-item Parental Monitoring Scale (PMS; Small and Kerns 1993) to measure parental monitoring. This self-report instrument assesses the adolescent’s perception of parental monitoring or the extent to which their parents keep track of their behavior and acquaintances. Example items are “My parent(s) know where I am after school,” and “My parent(s) know who my friends are.” The response format ranges from 1 = *never* to 5 = *always*, with higher scores indicating higher parental monitoring. The scale is scored by calculating the mean of all the items. The PMS scale was developed for a Small and Kerns (1993) study, based on interview research of Patterson and Stouthamer-Loeber (1984). The PMS scale has been reported to have reliability (Cronbach’s alpha = .87) and predictive validity (Small and Kerns 1993). Cronbach’s alpha was 0.92 for Grades 9–11; and 0.93 for Grade 12.

Important Non-parental Adult Relationships

To index the presence of an important non-parental adult, we used one item derived from the Monitoring the Future (MTF 2000) study that asks participants the following question, “Other than your parents, is there at least one other adult you would feel able to talk to if you were having problems in your life?” The response options are 1 = *yes, for most or all problems*, 2 = *yes, for at least some of my problems*, and 3 = *no*. We did not ask the youth to identify (name) this adult.

Positive Youth Development

The approach to PYD used by Lerner et al. (2005) employed several measures to index PYD, which is operationalized through the assessment of the Five Cs—competence, confidence, character, connection, and caring. Each “C” comprises a number of well-validated scales designed to assess the essential elements of the definition of the construct. General information regarding the measurement of each of the Cs is presented below. Full details about these measures, their construction, and validity and reliability can be found in Lerner et al. (2005) and Bowers et al. (2010).

The Five Cs comprising the PYD construct are operationalized as follows:

Competence is a positive view of one’s action in domain-specific areas including the social and academic domains (11 items for Grades 9–12). Cronbach’s alpha was 0.83 for Grades 9, 11, and 12, and 0.84 for Grade 10.

Confidence is an internal sense of overall positive self-worth, identity, and feelings about one’s physical appearance (16 items for Grades 9–12). Cronbach’s alpha was 0.92 for Grades 9–12.

Character involves respect for societal and cultural rules, possession of standards for correct behaviors, a sense of right and wrong, and integrity (20 items for Grades 9–12). Cronbach’s alpha was 0.89 for Grades 9 and 11, and 0.90 for Grades 10 and 12.

Connection involves a positive bond with people and institutions that are reflected in healthy, bidirectional exchanges between the individual and peers, family, school, and community in which both parties contribute to the relationship (22 items for Grades 9–12). Cronbach’s alpha was 0.90 for Grades 9 and 12, and 0.89 for Grades 10 and 11.

Caring is the degree of sympathy and empathy, that is, the degree to which participants feel sorry for the distress of others (9 items for Waves 5–8). Cronbach’s alpha was 0.84 for Grades 9 and 10, 0.82 for Grade 11, and 0.83 for Grade 12.

Procedure

In Waves 1 through 3 (Grades 5 through 7) of the 4-H Study, data collection from youth was conducted by trained study staff or, at more distant locations, hired assistants. A detailed protocol was used to ensure that data collection was administered uniformly and to ensure the return of all study materials. After Wave 1, youth who were absent on the day of the survey or were from schools or programs that did not allow on-site testing were contacted by e-mail, mail, or phone, and were asked to complete and return the survey to us. Beginning in Wave 5 (Grade 9), youth completed the survey online unless they requested a paper survey. Parents completed online or paper surveys. Paper surveys were delivered to their homes by their children or through the mail (in the latter case, return postage was provided).

Data Analysis Plan

Data analysis involved two major steps. First, we undertook analyses to identify profiles. Second, we conducted analyses relating profiles to both the Five Cs and to important non-parental adults.

Identifying Profiles

To investigate our initial question regarding the existence of profiles of participants' perceived relationships with parents, we conducted latent profile analyses (LPA) at each wave. LPA is a mixture modeling technique analogous to latent class analysis (LCA; Collins and Lanza 2010), except the indicators of the latent profiles are continuous in LPA rather than categorical as in LCA. As with LCA, the aim of an LPA is to identify subgroups of individuals who are similar to each other on a specific group of variables (i.e., indicators of perceived parenting) and different from individuals in other subgroups (Muthén and Muthén 2000). These subgroups are not directly observable but must be inferred from relationships among the observed variables (i.e., participants' responses to survey items about their relationships with their parents). In the current study, we used maternal warmth, parental school involvement, and parental monitoring as indicators of the latent profile variable.

A primary consideration in specifying LPAs is whether to uphold the assumption of conditional (or local) independence. In conventional LCA models, conditional independence means that variables must be uncorrelated within class or profile (Collins and Lanza 2010). Another way of stating this assumption is correlations between observed variables are assumed to exist because of the underlying latent classes/profiles, and once the classes/profiles are modeled these associations should no longer be necessary. This assumption, however, is often less realistic for latent profile models (i.e., those with continuous indicators), and it is recommended that continuous indicators be allowed to correlate within profiles (i.e., a multivariate normal mixture model, McLachlan and Peel 2000). We tested models both with and without conditional independence. In all cases, the multivariate normal mixture models provided a better fit to the data, so we report only those results.

The procedure for conducting LPA involves testing models with varying numbers of profiles and comparing fit indices, as well as theoretical interpretability, to decide on the number of profiles that provide the best fit to the data. In terms of statistical model fit indices, the most commonly used indices include information criteria [e.g., the Bayesian Information Criterion (BIC); Schwarz 1978], the bootstrap likelihood ratio test (BLRT; McLachlan and Peel 2000), and the Lo–Mendell–Rubin likelihood test (LMR; Lo et al. 2001). We examined all of these indices but gave special weight to the BIC and BLRT because in prior simulation work (Nylund et al. 2007), these two tests were the most accurate in suggesting the appropriate number of classes. We also examined the interpretability of each model, including the prevalence of the profiles, the response patterns of each profile, and the profile's correspondence with theoretical expectations.

Relating the Parenting Profiles to the Five Cs of PYD and Relationships with Important Non-parental Adults

To investigate the relationship between the latent profiles of perceived parenting and the auxiliary observed variables of the Five Cs of PYD and participants' reports of relationships with important non-parental adults, we used the three-step procedure available in MPlus (Asparouhov and Muthén 2013). This procedure, newly available in Version 7, allows researchers to examine the relationship between the latent profile variable and the other variables of interest independently (i.e., without including these variables in the estimation of the latent profile model itself) while still incorporating the classification uncertainty (i.e., measurement error) associated with latent profile models. We used an extension of this procedure to test whether profiles of perceived parenting moderated the relationship between the Five Cs of PYD and participants' reported relationships with important non-parental adults. In this procedure, individuals' most likely latent class membership was used as a latent class indicator variable with uncertainty rates (i.e., measurement error) prefixed at the class membership probabilities obtained in the original latent profile analysis. We then specified the regression model of interest and tested whether the relationships in that model differed within the various latent profiles (i.e., we tested whether latent profile membership was a moderator). This analysis enabled us to test a separate regression model while retaining uncertainty in profile membership.

Results

Profiles of Perceived Parenting

Table 1 shows model fit statistics at each wave for models of perceived parenting with two through five, six, or seven profiles. For each wave, we decided which number of profiles to choose based on several criteria. First, the profiles with the lowest values for AIC and BIC, along with the highest entropy, were preferred. In addition, the *p* value of the LMR and BLRT tests showed whether a certain number of profiles (e.g., three) provided a significant improvement in model fit over a model with one fewer profile (e.g., two). In many cases, however, the AIC and BIC continued to decrease, and the BLRT test did not produce a non-significant *p* value (in other words, adding profiles continued to improve model fit, as judged by those criteria, up to six or even seven profiles). This effect commonly happens in latent profile analyses, however, and does not guarantee that the largest number of profiles always provides the most theoretically meaningful or substantively interpretable solution. In such situations, we

Table 1 Fit statistics for latent profile analyses for Grades 9 through 10

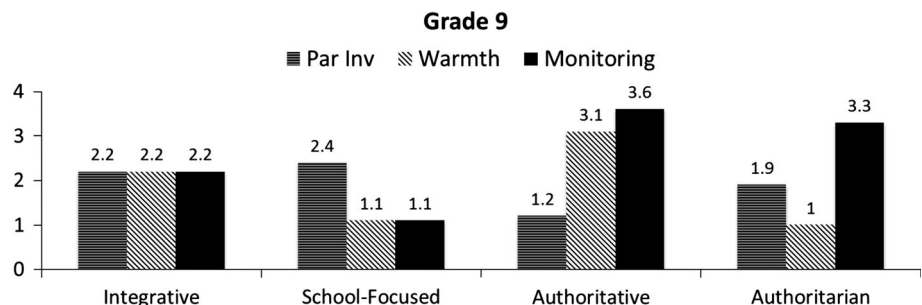
Grade	Number of profiles	BIC	AIC	Entropy	LMR <i>p</i> value	BLRT <i>p</i> value
9	2	6,961		.78	.000	.000
	3	6,912		.83	.000	.000
	4	6,884		.80	.1369	.000
	5	6,860		.82	.3960	.000
10	2	12,871		.85	.000	.000
	3	12,705		.85	.000	.000
	4	12,570		.85	.001	.000
	5	12,516		.84	.002	.000
	6	12,474		.86	.021	.000
11	2	6,772		.79	.064	.000
	3	6,690		.82	.002	.000
	4	6,629		.85	.104	.000
	5	6,615		.84	.269	.000
	6	6,592		.87	.009	.000
12	2	4,952		.82	.024	.000
	3	4,904		.83	.003	.000
	4	4,870		.86	.004	.000
	5	4,853		.84	.533	.000
	6	4,842		.82	.254	.000
	7	4,843		.81	.098	.000

Bold values indicate profile solution selected at each Grade

evaluated the point at which the additional profiles were either too small to be meaningful (e.g., a profile with one member) or were very similar to existing profiles.

We chose a four-profile solution at Grade 9, a five-profile solution at Grade 10, a five-profile solution at Grade 11, and a six-profile solution at Grade 12. Figures 1, 2, 3, 4 show profile-specific means on the three parenting indicators for the chosen solutions. As described above, the model fit indices suggested which number of profiles would fit best. It is important to note that the profiles may not all differ from each other in regard to statistical significance involving the item response probabilities and means of each of the included variables. We holistically evaluated the profiles to identify patterns of responses rather than to note specific areas of difference.

Fig. 1 Four-profile model of youth-reported parenting at Grade 9 of the 4-H Study of PYD. *Note* Integrative (*n* = 214); School-focused (*n* = 45); Authoritative (*n* = 582); and Authoritarian (*n* = 60)



Grade 9

We identified four profiles of perceived parenting at Grade 9. The first profile, which we termed Integrative, comprised 26 % of the sample (*n* = 214) and was characterized by relatively moderate and similar levels of all three predictors; however, it was not the largest parenting profile as we expected. The second profile, which we labeled School-Focused, was made up of 4.9 % of the sample (*n* = 45). This profile was characterized by lower levels of warmth and monitoring but moderate levels of involvement in school. The third profile, 62.7 % of participants (*n* = 582), we termed Authoritative because it was characterized by higher levels of warmth and monitoring but lower levels of involvement (Since this sample is mostly ninth graders, high levels of parental school involvement may not be expected from authoritative parents). The final profile, 6.5 % of the sample (*n* = 60), we labeled Authoritarian; this profile was characterized by relatively moderate levels of involvement, lower levels of warmth, and higher levels of monitoring (Fig. 1).

Grade 10

At Grade 10, we identified five profiles of perceived parenting. Three profiles had been previously identified at Grade 9: Integrative (*n* = 240, 13.5 %), which contrary to our prediction was not the largest profile; Authoritative profile (*n* = 524, 29.5 %), and Authoritarian (*n* = 52, 3.0 %). We also identified two new profiles. The Uninvolved profile comprised 3.8 % of the sample (*n* = 68) and was characterized by relatively lower levels of all three parenting indicators, whereas the Highly Involved profile consisted of half of the sample (*n* = 895) and was characterized by higher levels of monitoring, warmth, and involvement (Fig. 2).

Grade 11

We also identified five profiles at Grade 11, four of which were similar to those identified in Grade 10. The Uninvolved profile (*n* = 18, 1.9 %) was again characterized by

Fig. 2 Five-profile model of youth-reported parenting at Grade 10 of the 4-H Study of PYD. *Note* Integrative ($n = 240$); Authoritarian ($n = 52$); Highly-involved ($n = 895$); Authoritative ($n = 524$); and Uninvolved ($n = 68$)

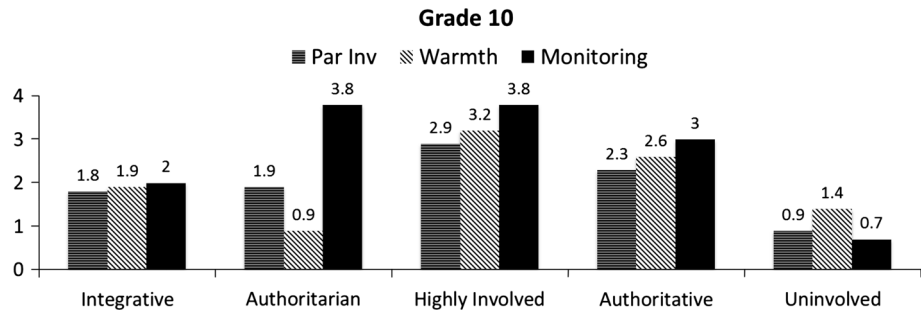


Fig. 3 Five-profile model of youth-reported parenting at Grade 11 of the 4-H Study of PYD. *Note* Uninvolved ($n = 18$); Permissive ($n = 16$); Integrative ($n = 284$); Highly-Involved ($n = 593$); and Authoritarian ($n = 55$)

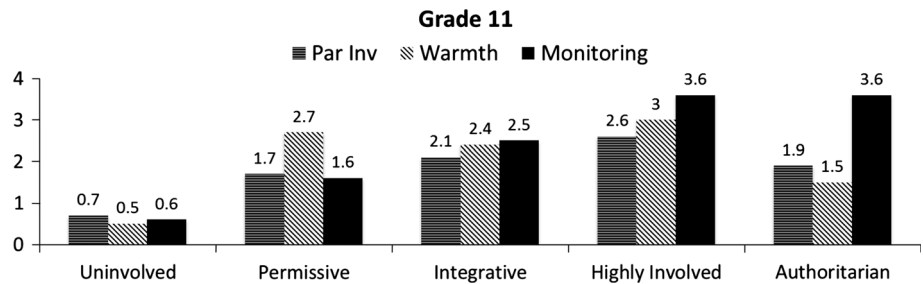
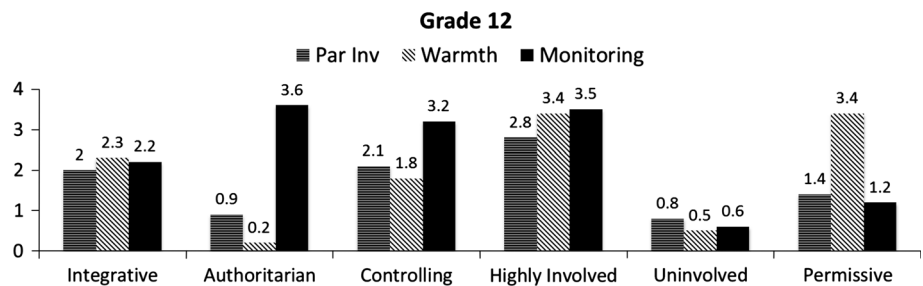


Fig. 4 Six-profile model of youth-reported parenting at Grade 12 of the 4-H Study of PYD. *Note* Integrative ($n = 130$); Authoritarian ($n = 9$); Controlling ($n = 97$); Highly Involved ($n = 413$); Uninvolved ($n = 14$); and Permissive ($n = 18$)



lower levels of all three parenting indicators, the Integrative profile ($n = 284$, 29.4 %) was, again counter to prediction, not the largest profile; a Highly Involved profile ($n = 593$, 61.4 %) was marked by higher warmth and monitoring with relatively moderate involvement; and an Authoritarian profile ($n = 55$, 5.7 %) was characterized by higher monitoring, relatively moderate involvement, and lower warmth. The Permissive profile, ($n = 16$, 1.6 %) newly identified at this wave, was characterized by a pattern opposite of the Authoritarian profile. This profile was marked by relatively higher warmth and relatively low-to-moderate involvement and monitoring (Fig. 3).

Grade 12

At Grade 12, we identified six profiles, five of which were similar to those identified in prior waves: Integrative ($n = 130$, 19.1 %), which once more was not the largest profile; Authoritarian ($n = 9$, 1.3 %); Highly Involved ($n = 413$, 60.1 %); Uninvolved ($n = 14$, 2.1 %); and Permissive ($n = 18$, 2.6 %). The sixth profile, Controlling, ($n = 97$, 14.2 %) was marked by relatively lower maternal

warmth but relatively higher parental school involvement and parental monitoring (Fig. 4).

Mean Differences on the Five Cs Across Profiles

We next tested for mean differences in the Five Cs according to profile membership using the 3-step procedure implemented in MPlus. In order to account for the multiple comparisons conducted at each wave, we applied a Bonferroni correction to control for a family wise error rate of $\alpha = .10$; therefore corrected α s ranged from $\alpha = 0.016$ at Grade 9 to $\alpha = 0.006$ at Grade 12. Table 2 shows the results of these analyses.

At Grade 9, participants classified into the Authoritative Parenting profile had significantly higher mean scores on all Five of the Cs compared to participants in the other three profiles of perceived parenting (all p 's < .016). Participants in the School-Focused parenting profile showed consistently low scores on the Five Cs, particularly connection. Participants in the School-Focused profile reported significantly lower connection that youth in the Authoritarian, and Integrative profile as well. There were

Table 2 Mean scores on the Five Cs of PYD by latent profile of perceived parenting

Grade	Profile	Confidence	Character	Caring	Connection	Competence
9	Integrative	60.71 ^c	59.51 ^c	60.57 ^c	55.55 ^{b,c}	63.32 ^c
	School-focused	53.74 ^c	53.85 ^c	54.66 ^c	36.74 ^{a,c,d}	56.58 ^c
	Authoritative	73.58 ^{a,b,d}	77.88 ^{a,b,d}	77.78 ^{a,b,d}	74.86 ^{a,b,d}	79.59 ^{a,b,d}
	Authoritarian	53.20 ^c	62.92 ^c	59.80 ^c	52.92 ^{b,c}	70.59 ^c
10	Integrative	57.85 ^{b,c,d}	60.67 ^{b,c,d}	65.16 ^{c,d}	55.10 ^{c,d,e}	61.44 ^{c,d}
	Authoritarian	40.90 ^{a,c,d,e}	49.21 ^{a,c,d}	48.11 ^{c,d}	47.91 ^{c,d}	52.53 ^{c,d}
	Highly involved	74.06 ^{a,b,d,e}	78.35 ^{a,b,d,e}	80.18 ^{a,b,d,e}	77.59 ^{a,b,d,e}	79.22 ^{a,b,d,e}
	Authoritative	62.59 ^{a,b,c}	70.46 ^{a,b,c,e}	73.29 ^{a,b,c,e}	66.45 ^{a,b,c,e}	70.96 ^{a,b,c,e}
	Uninvolved	59.14 ^{b,c}	59.32 ^{c,d}	59.78 ^{c,d}	45.50 ^{a,c,d}	61.08 ^{c,d}
11	Uninvolved	62.51	66.73	62.97 ^d	42.67 ^{b,c,d}	64.78 ^{b,d}
	Permissive	67.45	62.51 ^d	61.07	68.10 ^a	80.70 ^{a,e}
	Integrative	62.27 ^d	68.65 ^d	73.58 ^d	63.42 ^{a,d,e}	72.20 ^d
	Highly involved	72.09 ^{c,e}	78.16 ^{b,c}	80.12 ^{a,c}	75.91 ^{a,c,e}	79.22 ^{a,c,e}
	Authoritarian	57.62 ^d	71.26	71.04	55.14 ^{c,d}	66.05 ^{b,d}
12	Integrative	61.08 ^{d,e,f}	64.92 ^{d,f}	68.83 ^d	57.33 ^{d,e,f}	67.62 ^d
	Authoritarian	52.73	73.34	81.38	60.23	69.62
	Controlling	57.30 ^{d,f}	72.02 ^{d,f}	76.92	60.79 ^{d,e}	72.16 ^d
	Highly involved	74.83 ^{a,c,e}	80.92 ^{a,c}	81.47 ^a	77.33 ^{a,c,e}	81.18 ^{a,c}
	Uninvolved	49.06 ^{a,d,f}	61.85	63.78	43.97 ^{a,c,d,f}	54.97
	Permissive	77.04 ^{a,c,e}	80.45 ^{a,c}	77.75	70.03 ^{a,e}	79.65

Within the same wave and column, ^a different from Group 1; ^b different from Group 2; ^c different from Group 3; ^d different from Group 4; ^e different from Group 5; ^f different from Group 6. *p* < .016 at Grade 5; *p* < .01 at Grades 10 and 11; *p* < .006 at Grade 12

no other significant mean differences in confidence, character, caring and competence for youth in the Integrative, Authoritarian, or School-Focused profiles.

At Grade 10, youth who perceived their parents as Highly Involved had significantly higher mean scores in all five Cs than all other profiles (all *p*'s < .01). Those in the Authoritative profile had the next highest set of scores (with the exception of confidence for which they were similar to Integrative and Uninvolved parenting youth). Integrative and Uninvolved participants had similar scores on all 5 Cs with the exception of connection, on which Integrative participants had higher scores. Youth who perceived their parents as Authoritarian had consistently low scores on all Five Cs (aside from connection, in which youth with Uninvolved parents were lower), and their scores at Grade 10 were lower than those of youth in this profile at Grade 9.

At Grade 11, participants in the Highly Involved parenting profile again showed the highest levels of the Five Cs, with the exception of competence (for which their score was slightly lower than, but not different from, youth in the Permissive profile), but the advantage of Highly Involved parenting became less clear. Those youth with Highly Involved parents reported significantly higher means on all Cs as compared to the Integrative profile (all

p's < .01), but they were only significantly better than Authoritarian profile youth in confidence, connection, and competence; the Uninvolved parenting profile youth in caring, connection, and competence; and the Permissive parenting profile youth in character. Similar to Grade 10, the scores of participants in the Integrative and Uninvolved parenting profiles were similar on confidence, character, caring, and competence—those in the Integrative parenting profile reported higher scores for connection. Those in the Permissive parenting profile showed the lowest levels of character and caring, whereas those in the Uninvolved profile had the lowest score on connection.

At Grade 12, participants in the Highly Involved and Permissive parenting profiles generally had the pattern of highest scores on confidence, character, connection, and competence. Youth in the Authoritarian profile reported the second highest caring score, but no comparisons to the Authoritarian profile were significant due to the few youth in this profile (*n* = 9). Uninvolved participants again had the most problematic profiles as they reported significantly lower confidence and connection than youth in the Integrative, Highly Involved, and Permissive profiles (all *p*'s < .006). The newly identified group, youth with Controlling parenting, reported significantly lower levels of the Cs (except for caring) as compared to Highly Involved parenting.

Table 3 Proportion (%) of All youth responses to the question “other than your parents, is there at least one other adult you would feel able to talk to if you were having problems in your life?”

Grade 9	Latent profile of perceived parenting					
	Integrative	School-focused	Authoritative	Authoritarian		
No adult	5.1	1.8	5.9	1.8		
Some problems	12.9	2.1	33.1	3.0		
All problems	7.4	0.6	24.4	1.9		
Grade 10	Integrative	Authoritarian	Highly involved	Authoritative	Uninvolved	
No adult	3.6	0.5	3.5	2.5	1.2	
Some problems	6.2	1.5	21.8	16.0	1.4	
All problems	3.7	1.0	24.9	11.0	1.2	
Grade 11	Uninvolved	Permissive	Integrative	Highly involved	Authoritarian	
No adult	0.7	0.3	3.0	3.3	1.2	
Some problems	0.9	0.2	15.9	29.6	1.9	
All problems	0.2	0.9	10.3	28.8	2.7	
Grade 12	Integrative	Authoritarian	Controlling	Highly involved	Uninvolved	Permissive
No adult	2.1	0.0	1.7	2.3	0.8	0.2
Some problems	8.6	0.8	7.7	27.6	0.5	0.9
All problems	8.1	0.5	5.1	31.1	0.8	1.7

Percentages are based on youth who were placed in a parenting profile and responded to the item concerning their relationship to an important non-parental adult. Absolute numbers do not match the percentages of youth in each profile reported in the profiles of perceived parenting results

Profiles Differences in Participants' Reports of Relationships with Important Non-parental Adults

The third step in our analysis was to investigate whether participants were more or less likely to report parenting profiles based on their relationship with an important non-parental adult. Table 3 provides the proportion of youth who reported having an important non-parental adult to talk to about none, some, or all of their problems across the parenting profiles at each Grade. Table 4 shows the results of a set of multinomial logistic regressions predicting parenting profile membership from important non-parental adult relationship status. A specific parenting profile was chosen as a reference group for each multinomial regression equation, and the impact of important non-parental adult relationship status on parenting profile membership was computed. Each model tested whether youth reporting that they had a least one adult to talk to about all of their problems or some of their problems predicted parenting profile membership in comparison to a selected reference parenting profile. The multinomial logit model provides raw logistic regression coefficients which are the logs of the ratios of the two probabilities. These coefficients are often exponentiated and interpreted as odds ratios. Standard interpretation of the odds ratio is for a unit of change

in the predictor variable, the odds of being in a specific profile relative to the referent group are expected to change by a factor of the respective parameter estimate given the other variables in the model are held constant. An odds ratio greater (less) than 1 indicates an increase (decrease) in the odds of a youth belonging to a particular parenting profile as compared to the reference parenting profile. Table 4 presents the odds ratios for these comparisons based on youth relationships with an important non-parental adult.

We found several significant differences in parenting profile membership based on important non-parental adult relationships in regard to whether the participant had an adult to talk to about none, some, or all of his or her problems. At Grade 9, youth of Authoritative parents were more likely to report having someone they could talk to about their problems compared to participants with Authoritarian, Integrative, or School-Focused parents. For example, youth who reported having an adult to talk to about *some* of their problems had 5.81 times larger odds than youth with no important non-parental adult to be in the Authoritative parenting profile as compared to the Authoritarian profile (33.1 vs 3.0 % of the sample), and youth who reported having an adult to talk to about *all* of their problems had 7.09 times larger odds than youth with

Table 4 Odds ratios from logistic regression predicting profile membership from relationships with important non-parental adults

Other than your parents, is there at least one other adult you would feel able to talk to if you were having problems in your life? (reference category = no)

Grade 9	Latent profile of perceived parenting					
	Integrative	School-focused	Authoritative	Authoritarian		
Some problems	2.25	.92	5.81**	Reference		
All problems	2.06	.29	7.09**	Reference		
Some problems	0.38**	0.15***	Reference			
All problems	0.29***	0.04**	Reference			
Some problems	2.45	Reference				
All problems	7.10*	Reference				
Grade 10	Integrative	Authoritarian	Highly involved	Authoritative	Uninvolved	
Some problems	1.45	2.27	5.64***	6.42**	Reference	
All problems	0.94	0.96	7.46***	4.62***	Reference	
Some problems	0.22***	0.35	0.87	Reference		
All problems	0.21***	0.21	1.61	Reference		
Some problems	0.25***	0.40	Reference			
All problems	0.04***	0.12*	Reference			
Some problems	0.63	Reference				
All problems	0.98	Reference				
Grade 11	Uninvolved	Permissive	Integrative	Highly involved	Authoritarian	
Some problems	1.31	0 ^a	5.21**	11.02***	Reference	
All problems	0.11	2.10	1.68	5.92***	Reference	
Some problems	0.12***	0 ^a	0.47*	Reference		
All problems	0 ^a	0.35	0.29**	Reference		
Some problems	0.25*	0 ^a	Reference			
All problems	0.06*	1.24	Reference			
Some problems	15.00 ^a	Reference				
All problems	0.05	Reference				
Grade 12	Integrative	Authoritarian	Controlling	Highly involved	Uninvolved	Permissive
Some problems	0.56	15.00 ^a	0.63	2.22	0.06	Reference
All problems	0.27	15.00 ^a	0.17	1.32	0.07	Reference
Some problems	8.75**	15.00 ^a	9.97*	15.00 ^a	Reference	
All problems	3.89	15.00 ^a	2.56	15.00 ^a	Reference	
Some problems	0.25*	15.00 ^a	0.28*	Reference		
All problems	0.20*	15.00 ^a	0.13**	Reference		
Some problems	0.85	15.00 ^a	Reference			
All problems	1.52	15.00 ^a	Reference			
Some problems	0 ^a	Reference				
All problems	0 ^a	Reference				

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

^a Indicates threshold set at extreme value (15 or 0) by Mplus during estimation

no important non-parental adult to be in the Authoritative parenting profile as compared to the Authoritarian profile (24.4 vs 1.9 % of the sample). Consistent with our prediction, however, youth who reported having someone to

talk to about *all* of their problems were more likely to be in the Integrative parenting profile (7.4 % of the sample) than in the School-Focused profile (0.6 % of the sample; 7.10 times larger odds).

Table 5 Beta coefficients for regression of Five Cs on relationships with important non-parental adults

Other than your parents, is there at least one other adult you would feel able to talk to if you were having problems in your life? (reference category = no; first line represents coefficient for “some of my problems” and second is coefficient for “all of my problems”)

Grade	Profile	Confidence	Character	Caring	Connection	Competence
9	Integrative	7.02	4.15	4.58	3.35	−0.55
		6.80	7.57	8.22	6.56*	6.35
	School-focused	−20.46*	15.09**	0.91	11.55	27.37
		−13.19	6.20	7.45	7.66	−13.58
	Authoritative	8.78*	1.83	0.97	5.44**	2.36
		15.66***	5.78**	4.06	10.33**	6.18
Authoritarian	12.32	16.01*	15.73*	20.55***	15.10*	
	7.23	15.78*	16.92	18.06**	14.23**	
10	Integrative	4.25	1.40	5.72	6.73	4.80
		7.61*	2.46	13.11*	15.92***	7.01
	Authoritarian	19.29*	29.13**	34.75	11.53	11.34
		14.05	33.39**	24.92	−1.00	2.30
	Highly involved	−0.55	5.92	5.10	3.19	2.78
		4.91	9.95**	9.53**	8.08**	6.34*
Authoritative	4.22	3.54	0.55	6.72**	8.24**	
	6.89	5.14	3.47	10.00***	9.04**	
Uninvolved	6.17	11.23	20.39	29.60	9.33	
	11.23	−0.06	14.54	16.30	11.36	
11	Uninvolved	−7.89	37.56***	38.21**	8.66	3.15
		−39.41*	12.11	34.76	4.21	−27.22***
	Permissive	−21.67	−35.14*	27.20**	−17.05	−4.23
		23.87	−0.28	7.06	−2.34	26.99***
	Integrative	3.29	2.03	−0.23	12.08***	1.91
		10.48	7.26	3.06	18.69***	4.90
Highly involved	9.50	5.64	3.06	6.85*	10.53**	
	13.71**	10.33**	5.61	13.02***	13.84***	
Authoritarian	−5.65	−3.40	5.73	0.78	−2.04	
	8.27	4.16	10.29	9.71	8.59	
12	Integrative	−1.64	4.53	0.83	10.99*	2.09
		1.76	4.74	12.10*	16.62**	8.86*
	Authoritarian	−22.54	18.91**	35.33***	8.52	9.73
		12.05	9.35**	24.58***	43.52***	27.36***
	Controlling	4.88	0.43	0.88	5.73	−0.97
		8.04	9.06*	8.01	13.93**	6.46
Highly involved	11.93*	5.48	4.47	7.82*	6.55	
	18.15***	11.14**	5.23	14.03***	9.88	
Uninvolved	−2.00	1.05	2.34	18.30*	21.01*	
	13.45	37.55***	37.77***	8.14	19.18**	
Permissive	−22.56**	−13.61***	−6.24	0.07	−12.20	
	−16.36**	−20.01***	−17.29**	10.05	−8.98*	

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

We found a similar pattern at Grade 10; participants with Highly Involved and Authoritative parents being much more likely to report having someone to talk about *some* or *all* their problems (46.7 and 27.0 %, respectively)

compared to participants with Uninvolved and Integrative parents (2.6 and 9.9 %, respectively). Youth with Highly Involved parents were also more likely to report having an important non-parental adult to talk to about *all* of their

problems than youth in the Authoritarian parenting profile (24.9 vs 1.0 %, respectively).

At Grade 11, participants with Uninvolved or Authoritarian parents were less likely to report having an important non-parental adult to talk to about *some* or *all* of their problems (1.1 and 4.6 %, respectively) than participants with either Integrative or Highly Involved parents (26.2 and 58.4 %, respectively). Participants with Integrative parents, in turn, were less likely to report having an important non-parental adult to talk about *some* or *all* problems with than were participants with Highly Involved parents (25.3 vs 58.4 %, respectively).

At Grade 12, a similar pattern emerged as youth with Uninvolved parents were again less likely to report having an important non-parental adult to talk about *some* of their problems with than youth with Integrative or Controlling parents (0.5 vs 8.6 and 7.7 %, respectively). In turn, youth in the Highly Involved parenting profile were more likely to report having an important non-parental adult to talk to about *some* or *all* of their problems (58.7 %) than youth in the Integrative (16.7 %) and Controlling (12.8) parenting profiles.

Profile Moderation of the Relationship Between Important Non-parental Adults and the Five Cs

Our final analyses involved testing whether parenting profile membership moderated the relationship between participants' reports of their important non-parental adult relationships and the Five Cs of PYD. Full results of these analyses are presented in Table 5.

At Grade 9, we found moderation for all Five Cs. Having an adult to talk to about some or all of their problems was associated with increased connection for participants in the Integrative, Authoritative, and Authoritarian parenting profiles; increased confidence for participants of Authoritative parents; increased character for youth who perceived their parents to be School-Focused, Authoritative, or Authoritarian; and increased caring and competence for youth with Authoritarian parents. In contrast, having an adult to talk to about some problems (but not all) was associated with a decrease in confidence among youth in the School-Focused profile.

At Grade 10, having an adult to talk to about some or all of their problems was associated with increased connection for participants in the Integrative, Highly Involved, and Authoritative parenting profiles. In turn, having an important non-parental adult to talk to about some of all of their problems was associated with increased confidence for participants of Integrative parents and increased character for youth who perceived their parents to be Authoritarian. Finally, having an important non-parental adult to talk to about some of all of their problems was associated with

increased caring for youth in the Integrative and Highly Involved profiles, and increased competence for youth in the Highly Involved and Authoritative profiles.

At Grade 11, having an adult to talk to about some or all of their problems was associated with increased connection for participants in the Integrative and Highly Involved parenting profiles. In addition, having an important non-parental adult to talk to was associated with increased confidence for participants of Highly Involved parents and increased character for youth who perceived their parents to be Uninvolved or Highly Involved. The degree of important non-parental adult availability to talk was also associated with increased caring for youth in the Uninvolved and Permissive profiles and increased competence for youth in the Permissive profile. In contrast, having an adult to talk to about all problems was associated with decreased confidence and competence for those in the Uninvolved profile and having an adult to talk to about some problems was associated with decreased character for participants who perceived their parents to be Permissive.

At Grade 12, having an adult to talk to about some or all of their problems was associated with increased connection for participants in all parenting profiles except Permissive parenting and increased confidence for participants of Highly Involved parents. In addition, having an important non-parental adult to talk was also associated with increased character for youth who perceived their parents to be Highly Involved, Authoritarian or Uninvolved and increased caring for youth in the Integrative, Authoritarian and Uninvolved profiles. Having an important non-parental adult to talk to about some or all of their problems was also associated with increased competence for youth in the Integrative, Authoritarian, and Uninvolved profiles. In contrast, for participants in the Permissive profile having an adult to talk to about some or all problems was associated with decreased confidence, character, caring, and competence.

Discussion

Relational developmental systems models emphasize that development is embodied within a system involving cross-context relationships (e.g., Bronfenbrenner and Morris 2006; Overton 2013). Little research, however, has appraised the simultaneous effects of multiple contexts for indices of healthy and positive development in adolescence. In the present study, we used relational developmental systems thinking to examine youth-reported relationships with both parents and important non-parental adults as they coalesce within four years of high school to predict positive youth outcomes as indexed by the Five Cs of PYD (Bowers et al. 2010; Lerner et al. 2005). We tested several hypotheses to describe and explain the relationships among

these contextual resources for youth PYD outcomes with the aim to extend earlier work on parenting styles (e.g., Baumrind 1991; Steinberg et al. 1991; Gray and Steinberg 1999; Maccoby and Martin 1983) and important non-parental adults (Bowers et al. 2012; DuBois and Silverthorn 2005a, b).

As we expected, several profiles of perceived parenting that were similar to parenting “styles” identified previously were identified (e.g., Baumrind 1991; Maccoby and Martin 1983). At all four waves, we identified parenting profiles analogous to authoritarian and authoritative/highly involved types. In addition, we identified an uninvolved parenting profile at three grades and a permissive parenting profile at two grades. The appearance of these two profiles at later grades is consistent with research indicating that parents generally decrease their monitoring of adolescents as they mature (McElhaney et al. 2009). In turn, we also identified several parenting profiles in the current study that have not been described in earlier studies. These novel profiles are most likely due to our inclusion of parenting characteristics concerning the home (warmth), school (involvement), and out-of-school time (monitoring) contexts. Most parenting typology work (e.g., Baumrind 1991; Maccoby and Martin 1983) includes indices of behavioral control and warmth, but not educational involvement.

At all four waves, we identified an Integrative parenting profile (relatively moderate parental school involvement, monitoring, and warmth) as we hypothesized. We also identified a School-Focused profile (Higher parental school involvement, lower warmth and monitoring) at Grade 9 and a Controlling parenting profile (relatively high parental school involvement and monitoring, but lower warmth) at Grade 12. Furthermore, analyses of the latent profile frequencies indicated that the majority of youth in our sample perceived their parents to exhibit a relatively positive parenting style/profile. At each grade, many youth were members of the Integrative profile. However, although we expected that most youth would be associated with this profile, most youth were actually members of the Authoritative or Highly Involved parenting profiles. In turn, there were theoretically expected differences in the Five Cs of PYD according to profile membership; however, Integrative parenting was not associated with higher PYD. In general, youth who perceived their parents as being Authoritative or Highly Involved consistently had higher levels of PYD than the Integrative, Uninvolved, and Authoritarian profiles at each wave.

These findings were consistent with prior work (e.g., Baumrind 1991; Maccoby and Martin 1983; Steinberg 2001), but not consistent with our hypotheses. As noted, we expected that an Integrated profile, involving moderate levels of each of the three assessed parenting attributes, would be most frequently seen. However, this expectation

was not the case for any of the four grades. In turn, we based this expectation on the view that such a profile would reflect maximum plasticity, affording parents the capacity to modulate their parenting behaviors to fit the time and place wherein they were interacting with their children. We expected, therefore, that youth having Integrative parents would show the highest levels of PYD and also would be most likely to report having an important non-parental adult in their lives. Only partial support for these predictions was found.

Of course, the methodology of this study could not directly assess (1) whether this Integrative profile actually involved more plastic attributes than other parenting profile or, relatedly (2) whether parents whom we have labeled integrated actually modulated their parenting across time (the age of their children) and place (the situation wherein parent–youth interaction occurred). Future longitudinal research, involving direct behavioral assessments of parenting behaviors, will be needed to test the ideas about the plasticity and enactment across time and place of the profile we have termed integrative parenting.

The effect of parenting on PYD outcomes across the waves was most evident for connection. Youth in parenting profiles characterized by low perceived warmth from parents (Uninvolved, Authoritarian) reported lower feelings of connection to family, peers, and community. Parents who are engaged in their children’s lives in a warm manner seem to provide youth with the skills and motivation to develop healthy relationships outside of the home.

School-Focused youth at Grade 9 had particularly low PYD scores, but this profile was not present at any of the other grades. Perhaps parents who were previously school-focused as their children entered ninth grade also began to monitor their maturing adolescents in other domains as these youth sought autonomy in the form of new activities and friends in later years of high school. The increased monitoring practices of these school-focused parents may have increased the likelihood that their parenting might be deemed authoritarian or controlling at later grades. However, we were not able to test this hypothesis directly in our work due to treating the sample as embedded within cross-sectional grades.

The low C scores reported by the School-Focused youth were also reflected in the low C scores of participants of Authoritarian parents at Grades 10 and 11. Youth in the Authoritarian parenting profile were actually doing worse than youth in the Uninvolved parenting profile at Grade 10. However in Grades 11 and 12, children of Uninvolved parents were generally reporting the lowest C scores, especially in terms of connection. Consistent with prior research on parenting (Gray and Steinberg 1999), our results suggest that (1) parents who monitor their children at a relatively high level without also expressing a

commensurate level of warmth; and (2) parents who are uninvolved or neglectful of their children, are most likely to have children reporting lower PYD-related outcomes. Therefore, the influence of parental school involvement did not wane over time (Eccles and Harold 1996), but it was an asset for positive development in adolescence (Hill et al. 2004), provided that parents also expressed warmth and acceptance for their children.

In turn, youth who perceived their parents as permissive were doing relatively well and were not significantly different on any of the Cs from youth with highly involved parents at Grade 12. Permissive youth were significantly better than Integrative, Controlling, and Uninvolved parents on several PYD outcomes at Grade 12. These findings suggest that as youth progress through adolescence, parenting marked by relatively high warmth and relatively low involvement and monitoring is just as likely to be associated with positive outcomes as parenting marked by relatively high warmth, involvement, and monitoring. These findings echo the mixed findings associated with the parental monitoring literature (Crouter et al. 1990; Peterson et al. 1988), but are consistent with work showing parents tend to decrease their oversight of adolescents as they develop (McElhaney et al. 2009). Perhaps as adolescents exhibit appropriate prosocial behaviors, parents are less likely to monitor their behavior closely or be involved in their schoolwork. Warmth seems to be the primary predictor of positive outcomes (Gray and Steinberg 1999), but from a relational systems perspective, whether highly involved parenting versus permissive parenting is beneficial for PYD may depend on individual characteristics (e.g., age, self-regulatory skills) or factors in the larger ecological context (e.g., other social support). More work is needed on what individual and contextual factors might moderate the impact of these two very different parenting styles on adolescent development; that is, for what youth in what settings are these parenting styles most favorable? We discuss findings below about the role of important non-parental adults in moderating the effect of parenting on PYD that may shed some light on possible contextual factors that need to be considered.

Parenting profiles were also related to the likelihood of having an important non-parental adult. Consistent with prior work (Erickson et al. 2009; Hurd et al. 2013), positive parenting profiles were associated with the likelihood of reporting the presence of an important non-parental adult. However, youth with Authoritative or Highly Involved parenting were most likely to report an important non-parental adult relationship, not youth with Integrative parenting as we expected. Youth with higher contextual resources in the parental domain (those youth in the Authoritative and Highly Involved Parenting profiles) are more likely to report having someone other than their

parents to talk to about some or all of their problems (Erickson et al. 2009). Conversely, youth in School-Focused (Grade 9), Authoritarian (Grade 10 and 11), and Uninvolved parenting profiles (Grades 10 through 12) were significantly less likely to report having an important non-parental adult to talk to if they were having problems even when compared to youth of Integrative parenting. Perhaps youth in the Authoritative and Highly Involved profiles are able to learn from their parents the knowledge, schema, and skills needed to develop relationships with, and recruit resources from, other adults around them. However, the small profile sizes (<20 for some profiles) generated very high odds ratios (e.g., for the Authoritarian profile in Grade 12), so these results should be interpreted with caution.

Finally, although youth with less optimal parenting were less likely to report having an important non-parental adult, we did find that parenting profile did moderate the relationship between having an important non-parental adult and the Five Cs of PYD, such that having an important non-parental adult seemed to matter more for youth with certain profiles of parenting. These findings are consistent with prior work that considered familial or parental and important non-parental adult resources simultaneously (e.g., Erickson et al. 2009; Hurd et al. 2013; Kogan and Brody 2010). The moderating effect of parenting on the relationship between important non-parental adults and the Five Cs of PYD depended on the PYD outcome of interest and the type of parenting youth reported. Therefore, the interaction between parenting and important non-parental adult relationships could have had a complementary (combined positive influence of resources on an outcome); compensatory (a positive relationship buffered the effect of a poor relationship); or detrimental (combined negative influence of resources) effect.

In general, there was a positive effect of an important non-parental adult on connection for most youth, except for those youth in the Permissive parenting profile. This general finding is consistent with Rhodes (2005) contention that positive relationships with important non-parental adults may help youth learn how to have more positive interactions with others. When we considered youth reports of having an important non-parental adult to talk to about some or all of their problems, we also found that were also stronger results for Character and somewhat for Competence and Confidence. Youth from authoritative and highly involved parenting profiles benefitted from having an important non-parental adult they could talk to about their problems. When these youth reported having an important non-parental adult to talk to about *all* of their problems, they reported significantly higher Character at all four grades and Confidence in Grades 9, 11, and 12.

Having an important non-parental adult to talk to about their problems also served as a compensatory resource for

many youth. Youth who were identified as having relatively problematic parenting profiles—School-focused, Authoritarian, Uninvolved, and Controlling—reported higher levels of Character when they had an important non-parental adult to talk to about their problems. These results are consistent with prior work indicating that positive non-parental adult involvement is especially critical for youth who often do not report having these non-parental supports (e.g., Erickson et al. 2009). These results also suggest that when important non-parental adults are there to listen to youth who do not see their parents as warm or involved in their lives, youth are more likely to have integrity, be honest, follow rules, value diversity, and be socially conscious. These results are consistent with earlier work linking the quantity of important non-parental adult relationships and the emotional closeness of important non-parental adult relationships to character (Bowers et al. 2012). Future work should disentangle the effects of youth–adult relationships on specific aspects of character as these studies have both used a composite index of character.

Finally, these analyses also indicated there were several “contrary” results, that is, results in which the moderating effects were negative. When youth reported having an important non-parental adult to talk to about their problems, they also reported decreased scores on several of the Five Cs. These patterns were only found among less favorable parenting profiles—School-Focused at Grade 9, Uninvolved at Grade 11, and Permissive at Grades 11 and 12—which may indicate that the characteristics of the non-parental adults themselves are particularly important for these youth. Of particular note were the effects of having an important non-parental adult on the Confidence, Character and Caring of youth with Permissive parents. The results from Table 2 indicated that youth in the Permissive profile were generally doing well in terms of the Five Cs. However, youth outcomes differed when one considered the larger adult milieu. Permissive parents might not have any influence over who their child selects as an important non-parental adult, and therefore, these youth might be vulnerable to the effects of “poor” important non-parental adults or role models who may be themselves depressed or engage in problem behaviors (Haddad et al. 2011). Another possibility is that since these adolescents have been granted freedom by their parents generally seen as normative (McElhaney et al. 2009), having a non-parental adult available may negatively affect youth autonomy (Peterson et al. 1988). Again there were many analyses where the coefficients were large but non-significant, most likely due to small sample sizes within many of the profiles. The negative interactive effects may also result from these small sample sizes and associated decreased variation. The parameter estimates are much more stable in the large

groups, so those patterns of results should be interpreted with caution.

Although the present study provided insight into the nuanced relationship between parental and non-parental resources in predicting adolescent outcomes, there were several limitations to consider when interpreting our results. First, the results were based on four separate cross-sectional waves of the 4-H Study of PYD rather than considering the joint-effect of cross-contextual resources on the positive and healthy *development* of youth. The decision to consider the relationships among parenting, important non-parental adults, and PYD concurrently rather than longitudinally was due to the complexity of the models considered in conjunction with the low proportion of overlap in participation across waves. We were not able to conduct latent transitional analyses as they were often not enough youth in consecutive waves to examine whether or not they remained in the same parenting profile from wave to wave. Future research should investigate these patterns longitudinally to determine how the coalescence of familial and extra-familial relationships influences youth development across adolescence. In addition, the small sizes of some profiles within waves give us caution when making interpretations.

The 4-H Study of PYD includes youth from a diversity of demographic, economic, and social backgrounds; however, the participants generally report positive relationships with family, friends, and community and are, overall, doing relatively well in terms of healthy functioning. Future work should examine parental and non-parental influences at the extremes of parenting, for example in families marked by overparenting or “helicopter” parenting (Padilla-Walker and Nelson 2012) as well as those families marked by neglect and abuse.

In addition, while the 4-H Study sample is diverse, the sample is largely homogenous (over 60 % White/Caucasian and over 60 % female). Youth SES and ethnic/racial background may moderate the effect of parenting on youth outcomes as authoritarian parenting may be beneficial for minority and low-resourced youth (Brody and Flor 1998; Furstenberg et al. 1999; Hill et al. 2003). However, model complexity as well as the small profile numbers at some grades limited our ability to test whether these relationships differed in relationship to demographics. Future work could test these models with larger and more diverse samples.

The wording of the important non-parental adult item is also an issue when interpreting the results. Without providing clearer criteria for what constituted an important non-parental adult, or asking youth to identify their relationship to the important non-parental adult (e.g., coach, aunt, teacher), the youth could have been referring to a mentor whom they were assigned through a formal

mentoring program; formal mentors are not traditionally considered important non-parental adults. Taking these limitations into account, these findings should be interpreted with caution. Who a youth is designating as an important non-parental adult might explain a great deal about the magnitude of the impact of this person on PYD. Future research should allow participants to note the identity of the important non-parental adult to whom they are responding. These considerations will allow researchers to disentangle the effects of each type of relationship. Finally, future work should include additional measures to index the specific quality of the important non-parental adult relationship. The present paper only included a general item measuring important non-parental adult presence. However, prior work has indicated that specific qualities of the important non-parental adult relationship (Bowers et al. 2012; Dubois and Silverthorn 2005b) and characteristics of the adults themselves (e.g., Haddad et al. 2011) are influential in predicting youth outcomes.

Conclusion

The present findings could be helpful to both parents and practitioners. The findings are consistent with the wisdom that parents should work to develop relationships with their children that are marked by warmth and acceptance, but also with the knowledge of where their children go and with whom they associate. The results also indicate that being involved with young people's academic life and school is only detrimental to youth outcomes when that involvement is parents' *only* concern. Engagement in the multiple domains of a young person's life is associated with general youth well-being.

The results suggest that a key factor in promoting young people's positive development may be to increase their connections to, and experiences with, important non-parental adults. Not only do we want to connect youth to non-parental adults, but we also want those adults to build the skills to develop a deeper relationship with young people. Youth need to see important non-parental adults as a problem-solving resource or as an "open ear." Therefore, out-of-school-time and youth development programs should include training and support for youth-serving professionals so that they learn the best ways to develop positive relationships with young people that enable them to have these characteristics.

While important non-parental adults were generally beneficial to all youth regardless of parenting, identifying important non-parental adults is especially important for youth whose parents may not be fully engaged in their lives, as these youth were more likely to report not having an important non-parental adult. In turn, when these youth

had an important non-parental adult in their lives, the effects were greater than for youth from more resource-advantaged backgrounds (see too Erickson et al. 2009). The results also suggest that character education programs that are developed for "these at-risk" youth should include a mentoring component or should work to engage other adults in the young person's life as important non-parental adults generally benefitted these young people's character.

Important non-parental adult relationships were most consistently related to youth connection. Therefore, important non-parental adults appear to open up the doors for improved youth relationships with families, peers, their school, and their community (Rhodes 2005). The social capital (Coleman 1988) provided by these adults may provide youth the assets they need to develop the mutually beneficial person↔context relationships that define positive development.

Finally, this research recognizes but cannot examine whether the characteristics of children can elicit different behaviors in their parents and other caregivers (Bell 1968; Lewis and Rosenblum 1974; Thomas et al. 1963). By affecting those who are seeking to affect them, children are agents (producers) of their own development (Lerner 1982; Lerner and Busch-Rossnagel 1981). Parent or adult rearing, as well as child rearing, exists (Lerner 2004). Future work framed from relational developmental systems models should include both youth and parent characteristics to explain how youth–adult relationships help to define development more fully.

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