

Configurations of Adolescents' Peer Experiences: Associations With Parent–Child Relationship Quality and Parental Problem Behavior

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Adolescents' peer experiences embrace behavior, relationship quality, status, and victimization, but studies that account for multiple dimensions are rare. Using latent profile modeling and measures of peer behavior, relationship quality, peer status, and victimization assessed from 1,677 adolescents, four profiles were identified: High Quality, Low Quality, Low Quality Victimized, and Deviant Peers. Multinomial logistic regressions showed that negative parent–child relationships in preadolescence reduced the likelihood of High Quality peer relations in mid-adolescence but only partly differentiated between the other three profiles. Moderation by gender was partly found with girls showing greater sensitivity to parent–child relationship quality with respect to peer experiences. Results underline the multifaceted nature of peer experiences, and practical and theoretical implications are discussed.

Adolescence is characterized by a re organization of one's social environment. The time spent with parents decreases as children transit into adolescence, and peers gain in centrality (Larson &

Richards, 1991). Accounting for their heightened importance, research into adolescent development has focused on peer behavior (Brechwald & Prinstein, 2011), peer relationship quality (Rose & Rudolph, 2006), status among peers (Cillessen & Rose, 2005), and negative experiences with peers such as victimization (Hawker & Boulton, 2000), reflecting the complexity of the peer context.

However, we know little about unique configurations of these dimensions and even less about factors that are linked to one's individual likelihood to experience particular patterns. The first aim of this study was to derive latent peer experience profiles that reflect the multifaceted nature of adolescents' peer experiences using latent profile modeling. These profiles can be linked to distal variables. Parent–child relationship quality and parent behavior are particularly likely antecedents given the proximal nature of parents and peers that is central to various theories of human development including attachment (Bowlby, 1977), social learning (Bandura & McClelland, 1971), social systems (Hartup, 1979), and ecological theories (Bronfenbrenner, 1997), as well as studies that link parents and peers (e.g., De Goede, Branje, Delsing, & Meeus, 2009). By considering various peer expe-

This research is part of the TRacking Adolescents' Individual Lives Survey (TRAILS). Participating centers of TRAILS include various departments of the University Medical Center and University of Groningen, the Erasmus University Medical Center Rotterdam, the University of Utrecht, the Radboud Medical Center Nijmegen, and the Parnassia Bavo group, all in the Netherlands. TRAILS has been financially supported by various grants from the Netherlands Organization for Scientific Research NWO (Medical Research Council program Grant GB-MW 940-38-011; ZonMW Brainpower Grant 100-001-004; ZonMw Risk Behavior and Dependence Grants 60-60600-97-118; ZonMw Culture and Health Grant 261-98-710; Social Sciences Council medium-sized investment Grants GB-MaGW 480-01-006 and GB-MaGW 480-07-001; Social Sciences Council project Grants GB-MaGW 452-04-314 and GB-MaGW 452-06-004; NWO large-sized investment Grant 175.010.2003.005; NWO Longitudinal Survey and Panel Funding 481-08-013, NWO Gravitation 024-001-003) the Dutch Ministry of Justice (WODC), the European Science Foundation (EuroSTRESS project FP-006), Biobanking and Biomolecular Resources Research Infrastructure BBMRI-NL (CP 32), the participating universities, and Accare Center for Child and Adolescent Psychiatry. We are grateful to all adolescents, their parents, and their teachers who participated in this research and to everyone who worked on this project and made it possible.

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periences simultaneously, we extend prior research that has often focused on associations between parent factors and peer experiences in a one-dimensional fashion and account for the complexity of peer experiences.

The Multifaceted Nature of Adolescents' Peer Experiences

Different research lines have focused on facets of adolescents' peer experiences. For instance, research into peer influence has examined positive domains such as peer prosociality (Barry & Wentzel, 2006) and academic achievement (Wentzel, Baker, & Russell, 2012) but particularly associations between deviant peer behavior and adolescent development have received attention (e.g., Haynie & Osgood, 2005). Substantial estimates of peer influence were yielded even in studies that controlled for selection effects (Knecht, Snijders, Baerveldt, Steglich, & Raub, 2010), which reflect the tendency to affiliate with those whom one perceives as behaviorally similar (Veenstra, Dijkstra, Steglich, & Zalk, 2013). This emphasizes the crucial nature of peer behavior for adolescent development.

Another broad facet of interest to peer researchers concerns relationship quality, which is comprised of constructs such as peer support and affection but also quarrels and arguments. Low-quality relationships have been associated with adjustment difficulties and quality of interpersonal relations later in life (e.g., Yu, Branje, Keijsers, & Meeus, 2014), supporting the notion that peer relationships are an important provider of the fundamental psychological need belongingness (Deci & Ryan, 2000).

Apart from peer behavior and relationship quality, peer status has received attention from researchers. High status among peers reflects popularity (someone others want to hang out with) and a more powerful position within the group but not necessarily indicates that an adolescent is also well liked (Cillessen & Rose, 2005). While high status has been associated with aggression, studies have shown that popular adolescents tend to be at lower risk for adjustment problems (Sandstrom & Cillessen, 2006).

Finally, peer victimization has been of concern to peer researchers. Being the target of gossip or relational and physical peer aggression has been linked to maladjustment (e.g., Reijntjes, Kamphuis, Prinzie, & Telch, 2010) through biological, cognitive, and emotional mechanisms. Victimized individuals may become physiologically hyper-

hyposensitive to stress, interpret social interactions in a distorted way, and react to emotional cues differently than nonvictimized individuals and thus be at greater risk for psychopathology.

The reviewed literature shows that peer behavior, peer relationship quality, status among peers, and peer victimization have all been associated with adjustment, signifying the importance of peers for adolescent well-being. The centrality of these experiences has been emphasized in reviews on adolescents' social contexts. In detail, Brown and Larson (2009) discussed status and victimization as peer-related characteristics of individuals, friendship quality as an important feature of peer relationships, and influence as the most prominent peer relationship process. The topics reviewed by Steinberg and Morris (2001) and Smetana, Campione-Barr, and Metzger (2006) were similar: both studies focused on peer influence, victimization, the role of peer status, and the quality of relationships with closer friends and peers. Thus, these dimensions appear to characterize adolescents' most significant peer experiences.

Curiously, most research has focused on one experience at a time, thus somewhat ignoring that adolescents have to strike a balance between ensuring relationship positivity, gaining high status, avoiding becoming a target of victimization, and figuring out the degree to which deviant peers may exert influence. Only few studies have examined several facets at once but have not always provided us with systematic knowledge. For instance, inconsistent findings characterize research into relationship quality between deviant versus nondeviant peers, with some studies showing that deviant peers are as supportive as nondeviant peers whereas others find positive associations between peer deviance and low relationship quality (Boman, Krohn, Gibson, & Stogner, 2012; Giorlando, Cernkovich, & Pugh, 1986). Studies have also shown that affectionate and supportive friends can buffer the negative effects of peer victimization to some extent (Hodges, Boivin, Vitaro, & Bukowski, 1999) and that high-status adolescents rarely become targets of victimization (Heilbron & Prinstein, 2010). What can be learned from these studies is that different peer experiences are not independent, but no study has yet formally described distinct configurations.

Our first aim was to systematically model the multifaceted nature of adolescents' peer experiences. To this end, we utilized person-oriented latent profile modeling to derive distinct patterns of endorsement of items referring to peer behavior, status

among peers, relationship quality, and peer victimization. Traditional variable-centered analyses have usually treated peer experiences as separate constructs, methodologically not fully accounting for the complex reality of peer experiences. In contrast, the person-centered approach informs about “the tendency for a given person to have a distinct pattern of factors on which they are high, medium, or low” (Morin & Marsh, 2015, p. 39). While new to peer research, latent profile (or class) modeling has been used before, for instance to describe configurations of childhood risks and their specific associations with adjustment (Oliver, Kretschmer, & Maughan, 2014), maladjustment in adolescence (Kretschmer, Barker, Dijkstra, Oldehinkel, & Veenstra, 2015), classroom behavior (Pas, Cash, O’Brennan, Debnam, & Bradshaw, 2015), and problem behaviors (Arbeit et al., 2014). A central advantage of latent profile analyses is that profiles inform about shape rather than solely level differences and provide a more differentiated look into associations between multifaceted constructs such as peer experiences and their correlates. Put differently, latent profile analysis allows us to derive multidimensional profiles, which comprise information of multiple indicators, thus combining several peer experiences into one variable. As such, latent profiles provide a more realistic understanding of the multifaceted nature of adolescents’ peer experiences.

Parent Factors as Antecedents of Peer Profiles

Besides establishing outcomes of peer experiences, peer research has examined antecedents of peer experiences, that is, asked why some adolescents experience positive and supportive peer relationships whereas others are victimized or enjoy high status among peers, and why some adolescents are more prone to affiliate with deviant peers than others. The roles of parent–child relationship quality and parent behaviors in shaping adolescents’ peer experiences are central. We subsequently introduce several theoretical frameworks that have guided empirical research into links between parent factors and adolescents’ peer experiences. Our empirical analyses aimed to establish whether these associations are also present when peer experiences are modeled as a multifaceted construct.

Parent–Child Relationship Quality and Peer Experiences

Different theoretical models have been proposed to explain links between parent–child interactions and

peer experiences. For instance, attachment theory (Bowlby, 1977) suggests that variations in interactions between caregiver and infant result in variations in attachment of the child to the caregiver, which in turn are associated with individual differences in the quality of other close relationships. Social learning theory (Bandura & McClelland, 1971) puts forward that children learn how to behave from observation, modeling, and positive and negative reinforcement. Parents provide children with opportunities to learn how to interact with others, model conflict or cooperation, and praise or punish behavior. The knowledge gained in parent–child interactions is applied in other relationships (Domitrovich & Bierman, 2001). Social systems theory is influenced by general systems theory (Bertalanffy, 1968) and proposes that individuals are embedded in various interdependent social systems and that changes in one system can be related to (in-) stability in other systems. For children and adolescents, the family and peer systems are central for development and socialization (Hartup, 1979). Similarly, human ecology theory (Bronfenbrenner, 1997) describes family and peer systems as interconnected and part of a larger “eco-system.”

The theoretical approaches overlap in their explanations of parent–peer linkages. For instance, attachment theorists have suggested that securely attached individuals have a greater sense of security, feel safer to explore, and differ from nonsecurely attached individuals in their mental representations of themselves and others. Assuming parents to be primary caregivers, the relationship between them and the child is thought to represent a working model for later interpersonal relationships (Sroufe, 2005).

Social systems and human ecology theories have built on this explanation and suggested that one mechanism through which the family system is linked to the peer system is by providing a secure base that allows for exploration of the peer environment (Bronfenbrenner & Morris, 2006; Hartup, 1979). Besides, social systems theory has brought forward the spillover mechanism, defined as carrying over and spreading of feelings or behaviors from one into another social system (Erel & Burman, 1995). For instance, conflict or irritation experienced in the parent–child system may be acted out in peer relationships, thus explaining associations between both.

The social learning perspective states that modeling of parental cooperation and conflict resolution through communication and compromise is posi-

tively related to children's social competence. Parents influence child development through reinforcement of desirable interaction and communication behaviors and through teaching of strategies to handle social situations, which are useful skills in peer interactions (Domitrovich & Bierman, 2001). The various mechanisms likely operate simultaneously and in interaction with each other.

Given the variety of theoretical models, the plethora of studies on links between parent-child relationship quality and experiences with peers is not surprising (e.g., De Goede et al., 2009). Regardless of theoretical framing and particular mechanisms tested, studies commonly find a congruence pattern among the different relationships; that is, affectionate, positive parent-child relationships tend to be associated with positive peer relationships.

Importantly, the parent-child relationship can also elevate one's risk for peer victimization. Arsenault, Bowes, and Shakoor (2010) highlighted the roles of child maltreatment and domestic violence in increasing peer victimization risk, and a recent meta-analysis showed that lack of parental support, warmth, and affection was associated with peer victimization (Lereya, Samara, & Wolke, 2013). These associations reflect mechanisms discussed in attachment and social learning theory. In detail, individuals with negative and hostile working models for relationships—a consequence of harsh parenting—may expect interpersonal interactions similar to those experienced in the past or misread social cues. Individuals without the safe base of a secure attachment to a caregiver may also be more withdrawn. Likewise, lacking social skills and missing out on models for effective communication and positive interaction can put children and adolescents at greater risk for peer rejection and victimization (Domitrovich & Bierman, 2001).

Status and popularity are highly salient to adolescents and associated with prosocial behavior toward peers and peer competence in general (Cilllessen & Rose, 2005). Nevertheless, relatively little is known about associations between parent-child relationship quality and peer status or popularity, and findings are ambiguous. That is, Allen, Porter, McFarland, McElhaney, and Marsh (2007) showed that securely attached mid-adolescents were more popular among peers, but Lieberman, Doyle, and Markiewicz (1999) did not find this association for younger adolescents. Given that popularity and victimization tend to be mutually exclusive positions within the peer group as well as relatively

stable links between parent-child relationship quality and peer victimization, it is feasible that adolescents who enjoy a high status among peers are more likely to have experienced positive parent-child relationships.

Finally, there is some support that parent-child relationship quality also predicts deviant peer affiliation. Pike and Eley (2009) showed that punitive parental discipline predicted adolescents' affiliation with deviant peers. Fuligni and Eccles (1993) found that adolescents who felt that they were not granted autonomy in decision making by their parents were more peer-oriented than those whose parents relaxed their power. Fergusson and Horwood (1999) suggested that maternal unresponsiveness and parent-child conflict were linked to affiliation with deviant peers.

Despite the wealth of studies on associations between parent-child relationship quality and peer experiences, a notable limitation of this literature is its common focus on one peer experience at a time. Put differently, studies have examined parent-child relationship quality as antecedent of peer relationship quality, peer status, peer behavior, and peer victimization, but it is not clear how these associations will look when different peer experiences are combined into a multidimensional construct.

Parental Behavior and Peer Experiences

Not only the quality of the parent-child relationship, but also parental problem behavior has attracted researchers' attention as precursor of problems in children's and adolescents' behavioral and social development. It is not surprising that having parents who engage in antisocial behavior or substance abuse increases the risk for an adolescent to affiliate with deviant and substance using peers (Fergusson & Horwood, 1999). Social learning theory proposes that adolescents who observe antisocial behavior in their parents select themselves into similar peer contexts and generally assign greater normativity to antisocial behavior and substance use than adolescents whose parents abstain. Further, parental problem behavior compromises parental influence on their offspring's peer group choice (Blazei, Iacono, & Krueger, 2006) and thus increases their risk for deviant peer affiliation.

Can parental problem behavior also affect the quality of peer relations or be linked to greater victimization risk? Hussong, Curran, Moffitt, Caspi, and Carrig (2004) showed that daughters of alcohol-abusing parents were less socially competent

than those of nonabusing parents. Although differences receded as girls grew older, lacking the skills to successfully engage in interpersonal situations with peers is linked to loneliness (DiTommaso, Brannen-McNulty, Ross, & Burgess, 2003). Associations between parental delinquency and child aggression were also reported (Tzoumakis, Lussier, & Corrado, 2014), suggesting that children apply observed behaviors in the peer context. Aggressive behavior has been linked to peer rejection (Ettel & Ladd, 2014), poor-quality friendships (Campbell, Spieker, Burchinal, & Poe, 2006), low peer status (Jia & Mikami, 2014), and victimization (Ladd & Troop-Gordon, 2003). Indeed, children from families with high levels of parental problem behavior were at greater risk for victimization through being bullies themselves (Eiden et al., 2010).

The Current Study

Prior research has indicated that parent and peer relationships are interdependent with respect to relationship quality and behaviors both of parents and peers. However, we do not know whether associations of various peer experiences with parent-child relationship quality and parental behavior can be detected when we take a more multidimensional perspective and several peer experiences into account simultaneously. The first aim of this study was therefore to employ a person-centered latent profile approach to explore whether distinct configurations of peer behavior, relationship quality, status among peers, and victimization can be identified. We expected individual variation (i.e., level differences) in each of the items reflecting peer behavior, relationship quality, status among peers, and victimization. In addition, we expected to find unique shapes, that is, configurations of different peer experiences with particular patterns of high and low endorsement of items referring to the various peer experiences. The lack of such studies in the peer literature means that we had no strong hypotheses regarding the emergence of specific profiles. However, we tentatively expected that many adolescents experience positive relationships, are not victimized but relatively popular among their peers, and affiliate with peers who are not deviant—a “general positive” pattern. Presumed level differences across peer experiences may also suggest a “general negative” profile with negative relationships, low status, high victimization, and deviant peer affiliation. We expected the emergence of additional configurations but had no specific assumption regarding their shape.

Our second aim was to examine links between parent-child relationship quality and parental problem behavior and peer experiences from a multidimensional perspective. We tested whether parent factors that have previously been associated with specific peer experiences would also be linked to unique configurations of these experiences. We expected that parent-child negativity and parental problem behavior would be associated with risk for a “general negative” profile that reflects deviant peer affiliation, greater victimization, low status, and relationship negativity and a decreased likelihood for a “general positive” profile. Naturally, without knowledge on specific peer experience profiles, it was difficult to derive hypotheses regarding links between parent factors and other patterns. Thus, we tested in exploratory fashion whether differently shaped patterns of peer experience endorsement were distinguished by parent-child relationship quality and parental problem behavior. In short, by examining whether parent-child relationship quality and parental problem behavior differentiated peer profiles, we focused on established antecedents of peer experiences but extended this literature using a multidimensional peer experience composite.

METHOD

Participants and Procedure

This study included data from the first and third waves of the TRacking Adolescents' Individual Lives Survey (TRAILS), a prospective Dutch cohort study, 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, and the third wave (T3) took place in 2006 and 2007 when participants were between 15 and 17 years old. As described in Huisman et al. (2008), recruitment at T1 was performed by obtaining information about all inhabitants of five municipalities in the north of the Netherlands born between 1 October 1989 and 30 September 1990 (two municipalities) or between 1 October 1990 and 30 September 1991 (three municipalities) from community registers. Virtually all children born within this time and still resident in the area at the time of the study could be reached through 135 primary schools of which 122 agreed to participate. Parents (or guardians) received two brochures, one for themselves and one for their children, with information about the study. In addition, TRAILS staff visited the schools to inform

eligible children about the study. Approximately one week later, a TRAILS interviewer contacted parents by telephone to give additional information, answer questions, and ask whether they and their child were willing to participate in the study. Parents who refused to participate were asked for permission to call back in about two months to minimize the number of refusals due to temporary reasons. If parents agreed to participate, an interview was scheduled during which parents and children signed consent forms. We excluded 210 children due to inability to participate, severe mental retardation or physical illness, or because of language difficulties. In total, 2,230 children (51% female) participated at T1. At T3, 81% of the original participants were still in the study and completed questionnaires at school. In addition, trained researchers conducted Event History Calendar (EHC; Caspi, Moffitt, Thornton, & Freedman, 1996) interviews with 1,197 participant adolescents in private settings.

Most families (90%) were of Dutch ethnicity, and 80% resided in urban areas (Ormel et al., 2012). The majority lived with their biological parents (76%). Most parents had completed various tracks of secondary education or senior vocational education, with 7% of mothers and 6% of fathers having completed elementary education and 7% of mothers and 14% of fathers having completed university education. Parental occupations were classified according to the International Standard Classification of Occupations system (Ganzeboom & Treiman, 1996): 31% of mothers and 39% of fathers worked in the highest two (e.g., senior officials and professionals) and 15% of mothers and 12% of fathers worked in the lowest two (e.g., plant and machine operators and elementary occupations) categories.

Initial participation was more likely when children were female, from higher socioeconomic (SES) background, and with better school performance. Individuals lost to attrition were more often male, of non-Western ethnicity and with divorced parents, low SES, low IQ and academic achievement, poor physical health, and externalizing problems as well as low peer status. More details are published elsewhere (Oldehinkel et al., 2014; Ormel et al., 2012).

Measures

Peer experiences. Peer experience measures comprised peer relationship quality, perceived status among peers, peer behavior, and peer

victimization. The peer measures were assessed using EHC and questionnaires. As part of the EHC, adolescents were asked to nominate up to seven friends. Of the 1,197 participants that completed the EHC interview, 1,184 nominated at least one friend, 1,168 at least two, 1,130 at least three, 1,040 at least four, 865 at least five, and 645 at least six friends, while 469 nominated seven friends. Thirteen individuals who completed the EHC did not nominate any friends; these were treated the same as adolescents who did not complete the EHC—that is, information on EHC peer measures was coded as missing. Besides peer deviant behavior and substance use, the EHC assessed peer help, fights, and peer victimization (details below). The T3 questionnaire contained the subscales affection, behavioral confirmation, and status of the Social Production Functions questionnaire (SPF; Ormel, Lindenberg, Steverink, & Vonkorf, 1997), assessed on a 5-point scale where 1 = *never* and 5 = *always*. A longer version of the Social Production Functions questionnaire has been extensively validated (Nieboer, Lindenberg, Boomsma, & Bruggen, 2005).

Peer relationship quality. Both EHC and questionnaires assessed relationship quality. With regard to the EHC, adolescents responded for each nominated friend “Does [name] help you when you are feeling down?” (*emotional help*), “Does [name] help you practically?” (*practical help*), and “Do you and [name] have fights?” (*fights*). With regard to questionnaire assessments, *affection* consisted of four items such as “Most of my classmates are considerate of my feelings” ($\alpha = .80$). *Behavioral confirmation* also consisted of four items including “Most of my classmates like to do things with me” ($\alpha = .76$).

Perceived status among peers. Status was assessed by questionnaire and consisted of three items including “Most of my classmates want to be like me” ($\alpha = .79$).

Peer behavior. As part of the EHC, adolescents were asked to indicate for each nominated friend “Did [name] do something that is not allowed?” (*deviant peer behavior*), “Did [name] smoke cigarettes?”, “Did [name] drink alcohol?”, “Did [name] use soft drugs?”, and “Did [name] use hard drugs?” (all binary format). For each friend, we created a substance use score by summing the binary scores for smoking, drinking, soft drug use, and hard drug use (0 = *did not consume any of these substances* to 4 = *consumed all four substances*)

(*substance use*). Averages of all nominated friends were used in the latent profile model.

Peer victimization. Two items in the EHC assessed peer victimization: "I have been bullied at least once" was assigned a score of 1 when adolescents confirmed; otherwise, a score of 0 was assigned. "I have been the target of gossip" was coded in the same manner. Both items were summed to constitute the peer victimization item, which ranged from 0 to 2.

Parent factors. All parent factors were assessed at T1, hence preceding the assessment of peer experiences by approximately five years.

Parent-child relationship quality. Adolescents reported on parent-child relationship quality using four subscales of the Social Productions Functions questionnaire (1 = *never* and 5 = *always*): *maternal affection* ($\alpha = .78$), *maternal behavioral confirmation* ($\alpha = .70$), *paternal affection* ($\alpha = .84$), and *paternal behavioral confirmation* ($\alpha = .77$). The *affection* scales contain four items such as "I can trust my mother/father" and "My mother/father is considerate of my feelings," and the *behavioral confirmation* scales four items such as "My mother/father likes to do things with me" and "My mother/father likes me the way I am."

Parental problem behavior. The measure of *parental problem behavior* reflects parental antisocial behavior and substance abuse as reported by parents at T1, based on vignettes that described the main DSM-IV characteristics of the domains together with questions as to whether these symptoms were ever experienced by the parent. Parents were presented with a brief definition of symptoms of substance use that described the types of substances, definitions of addiction (including for instance "We say someone is addicted when he/she needs more and more of the substance to reach the same effect and experiences withdrawal symptoms whenever he/she stops using the substance"), and common consequences. Nicotine addiction was explicitly excluded. Further, parents read a brief definition of behavioral problems, again listing and briefly explaining symptoms that are represented by the psychiatric diagnosis, including lying and aggressive and deviant behavior (Ormel et al., 2005). For both vignettes, parents responded to several items that inquired about occurrence (duration), consequences, and treatment. The lifetime prevalence was low: 2% of mothers and 7% of

fathers reported substance abuse, and 3% of mothers and 7% of fathers reported antisocial behavior. Maternal and paternal antisocial behavior and substance use scores were summed to represent *parental problem behavior*.

Analytic Strategy

Following preliminary descriptive and correlational analyses, a latent profile analysis was conducted to derive peer experience profiles. To avoid restricting our analyses to complete cases, that is, only include adolescents with information on *all* peer experience indicators, we used full information maximum likelihood estimation for these analyses, which takes into account any available information. Thus, latent profiles are based on adolescents who had completed at least one T3 peer assessment ($n = 1,677$).

Latent profile modeling is based on continuous indicators and identifies unobserved population heterogeneity. We standardized peer indicators prior to model estimation to account for different scaling but note that no differences in profile derivation were observed when nonstandardized scores were used as indicators. Solutions with one to five profiles were compared based on adjusted Bayesian information criterion (BIC, smaller relative values indicate better fit), entropy (measure of class separation, with a value of 1.00 representing perfect separation and low values high classification error), Vuong-Lo-Mendell-Rubin likelihood ratio test (LMR-LR, compares model with k latent groups against a model with $k-1$ groups), and minimum group size (ideally no group smaller than 5% of the sample) (Berlin, Williams, & Parra, 2014). The latent profiles were identified in Mplus 7.0, and information from the best fitting model was used in subsequent analyses. In detail, each individual was assigned their most likely profile, and the resulting nominal variable constituted the outcome measure in following analyses. To account for classification uncertainty, we saved individual posterior probabilities and weighted subsequent analyses. Apart from latent profile derivation, all analyses were conducted in Stata 12.

We first compared endorsement of all peer measures across the peer profiles derived from the latent profile analyses. This step reveals significant differences in peer affection, behavioral confirmation, status among peers, emotional help, practical help, fights, victimization, substance use, and deviant peer behavior between peer experience profiles, thus informing about the distinctiveness of each profile. We expected differently shaped peer

experience profiles, that is, variations beyond level differences. Support for this expectation would be provided by endorsement differences that are not equivalent across all items.

In the second step, we examined profile-related differences in parent-child relationship quality measures and parental problem behavior to gain insight into profile differences with respect to proposed antecedents. These preliminary comparisons were followed up by weighted multinomial logistic regression in which latent peer experience profile functioned as dependent variable. These analyses were based on cases for whom the latent peer profile had been derived and who had parent-child relationship and parental problem behavior data. Between 1.8% and 3.8% of adolescents for whom we had derived peer profiles had missing data on one or more of the parent factors. Given this small proportion and the absence of clear recommendations regarding multiple imputations for weighted data, we estimated regressions based on existing data. This resulted in sample sizes of $n = 1,613$ to 1,647 for models involving parent factors. We estimated marginal effects, which help to explain the absolute prediction of a profile by a one-unit change in the parent factors as well as relative risk ratios, which inform about increase or decrease in likelihood of a particular profile compared to another profile given predictor-level change.

RESULTS

Descriptive statistics of all peer and parent measures are presented in Table 1. The rates for victimization are similar to those reported in other studies (Wolke, Woods, Stanford, & Schulz, 2001). Correlations between study measures are presented in Table 2. Peer relationship indicators showed modest to moderate yet significant overlap, and all peer measures were also related to at least one of the parent measures.

Establishing Peer Experience Profiles

The first aim of this study was to establish latent profiles that reflect the multifaceted nature of adolescents' peer experiences. To this end, we estimated models with increasing numbers of profiles based on all peer experience dimensions. Table 3 contains fit indices for latent profile models. BIC values decreased steadily with increasing number of classes. LMR-LR yielded significant improvements in fit for the two- compared to the one-profile model, the three- compared to the two-profile

TABLE 1
Descriptive Statistics of Study Measures

	<i>M</i>	<i>SD</i>	<i>Range</i>
Peer environment			
Affection	3.51	0.63	1-5
Behavioral confirmation	3.63	0.56	1-5
Status among peers	2.37	0.73	1-5
Emotional help	2.75	0.89	0-4
Practical help	2.17	1.02	0-4
Fights	0.45	0.48	0-4
Substance use	1.29	0.80	0-4
Deviant behavior	0.35	0.56	0-4
	<i>No</i>	<i>One form</i>	<i>Both forms</i>
Victimization	67.8%	26.9%	5.3%
	<i>M</i>	<i>SD</i>	<i>Range</i>
Parent factors			
Maternal affection	4.37	0.64	1-5
Maternal behavioral confirmation	4.22	0.57	1-5
Paternal affection	4.22	0.76	1-5
Paternal behavioral confirmation	4.21	0.67	1-5
Parental problem behavior	0.14	0.42	0-4.32

model, and by trend also the four- compared to the three-profile model. No significant improvement was observed for the five- compared to the four-profile model. Entropy values did not differ much between the different models; we thus concluded that the four-profile model represented the data best. Subsequent analyses were conducted based on most likely class memberships; that is, profile assignment was done based on the highest likelihood for a profile. These memberships are statistically not perfectly certain; thus, we weighted analyses by posterior probability.

Peer item endorsement of the four groups is depicted in Figure 1. The endorsement of the indicators characterizes the largest group of adolescents (47%, 62% girls) as having High Quality peer relationships (above-average peer affection, behavioral confirmation, emotional and practical help; relatively high status among peers, less fighting and victimization than other classes; and below-average peer substance use and deviant peer behavior). The second largest group (40%, 48% girls) reported lower levels of peer relationship quality indicators, that is, scored below average on peer affection and behavioral confirmation and lower than any other group on emotional and practical help. Perceived status among peers was also low in this group. Notably, no elevated rates of peer deviance or peer victimization were observed;

TABLE 2
Pairwise Correlations Between Study Measures

	1	2	3	4	5	6	7	8	9	10	11	12	13
1. Affection	.74***												
2. Behavioral confirmation	.24***	.19***											
3. Emotional help	.25***	.26***	.03										
4. Status among peers	.18***	.15***	.53***	.07*									
5. Practical help	-.10***	-.11***	.03	.02	.00								
6. Fights	-.01	-.08**	.08**	.10***	-.02	.12***							
7. Substance use	-.14***	-.14***	-.08**	.14***	.06*	.14***	.41***						
8. Deviant behavior	-.10***	-.08**	.07*	-.12***	.00	.11***	.08	-.01					
9. Peer victimization	.11***	.10***	.12***	.07*	.13***	.01	-.04	-.05	-.04				
10. Maternal affection	.11***	.13***	.12***	.09***	.12***	-.02	-.08**	-.07*	-.06*	.72***			
11. Maternal behavioral conf.	.12***	.11***	.05	.08**	.05	.05	-.08**	-.08**	-.03	.62***	.52***		
12. Paternal affection	.11***	.14***	.06*	.08**	.06*	.01	-.09**	-.10	-.04	.58***	.65***	.78***	
13. Paternal behavioral conf.	-.01	-.03	.06*	-.03	.03	.02	.10***	.08**	.05	.02	.00	-.01	-.01
14. Parental problem behavior													

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

we thus termed this group Low Quality. The third largest group (8%, 27% girls) reported moderate levels of peer relationship quality indicators and little victimization but high status among peers, fighting, and above-average levels of substance use and peer deviant behavior. We thus termed this group Deviant Peers. Finally, the smallest group (5%, 48% girls) was characterized by low levels of peer affection and behavioral confirmation and high victimization. Taking into account this distinct feature, we termed the group Low Quality Victimized.

We examined whether the latent peer experience profiles indeed represented distinct groups in the population by comparing average endorsement of all peer environment measures. The peer experience profiles differed on all peer indicators (Table 4) with adolescents in the High Quality group reporting significantly higher affection and behavioral confirmation and more emotional and practical help than other profiles. They also reported less fighting and were less victimized than adolescents in the Deviant Peers and Low Quality Victimized groups. Fewer differences were found between the Low Quality and Low Quality Victimized profiles, with those in the Low Quality Victimized group perceiving the least peer affection, behavioral confirmation, and status among peers. As may be expected, the Deviant Peers group reported substantially higher deviant peer behavior and substance use.

In sum, we derived distinct peer experience profiles that were characterized by unique patterns of endorsement of peer behavior, relationship quality, status among peers, and victimization. While we indeed identified a “general positive” profile, we did not derive the “general negative” profile that we had tentatively expected.

Parent Factors as Predictors of Peer Experience Profile

The second main aim of this study was to establish whether variations in parent-child relationship quality and parental problem behavior would distinguish peer profiles. As described above, analyses were of an exploratory nature but we tentatively expected that parent-child negativity and parental problem behavior would be linked to an increased risk for profiles that incorporate affiliation with deviant peers, victimization experiences, low status, and/or negative peer relations. Before we examined this question in multinomial logistic regressions, we compared averages of parental

TABLE 3
Comparisons of Models With Different Numbers of Classes

Number of classes	Bayesian information criterion (BIC)	Entropy	Vuong–Lo–Mendell–Rubin likelihood ratio	Class size in percent (modal class assignment)				
1	34224.64	1.00		100				
2	33270.82	0.76	983.05, $p < .001$	74	24			
3	32748.39	0.74	557.41, $p < .001$	65	26	9		
4	32470.30	0.73	316.30, $p = .09$	47	40	8	5	
5	32031.31	0.73	475.07, $p = .50$	40	28	17	9	5

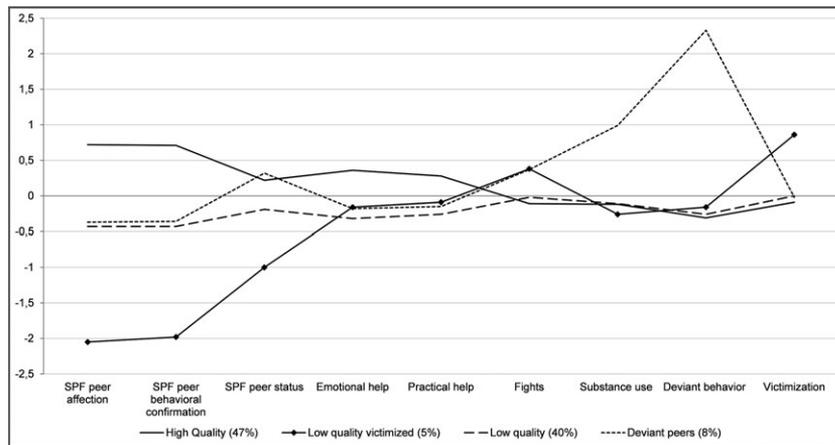


FIGURE 1 Peer indicator item endorsement (standardized scores) by peer experience profile.

affection and behavioral confirmation as well as parental problem behavior (Table 4). Pairwise comparisons suggested that the High Quality group reported greater perceived affection and behavioral confirmation in relationships with both parents, whereas no significant differences were yielded between the Low Quality, Low Quality Victimized, and Deviant Peers profiles. In addition, parental problem behavior differed significantly between the High Quality and Low Quality Victimized groups. The Low Quality and Deviant Peers groups fell between these two and did not differ significantly from either with regard to parental problem behavior.

Multinomial logistic regressions were computed to examine whether perceived parental affection, behavioral confirmation, and problem behavior predicted membership in latent profiles. Given the unequal distributions of boys and girls among profiles, we controlled for gender throughout. Marginal effects (details available from first author) indicate the predicted probability for a specific latent profile given a one-unit change in the predictor variable. Put differently, these analyses informed about the increased or decreased likelihood for an adolescent to experience the High

Quality (or Low Quality, Low Quality Victimized, or Deviant Peers) profile when parental affection (or behavioral confirmation or parental problem behavior) increased (or decreases) by one unit on its respective scale.

As expected, higher levels of perceived affection and behavioral confirmation were associated with more positive peer experiences. A one-unit increase in maternal and paternal affection increased the chance for a High Quality profile by, respectively, 7% and decreased the risk for the Low Quality Victimized profile by 2% and 1% and also decreased the risk for the Low Quality profile by 4% (both). Higher perceived maternal and paternal behavioral confirmation increased the chance for a High Quality profile by 10% and 9%, and decreased the risk of a Low Quality Victimized profile by 2% (both). Finally, a 6% and 5% reduction in risk for the Low Quality profile by maternal and paternal behavioral confirmation was observed as well as a reduction in risk for the Deviant Peers profile by 2% when paternal behavioral confirmation increased. With regard to parental problem behavior, only the Low Quality Victimized profile was predicted; that is, risk for this profile increased by 2% with an increase in parental problem behavior.

TABLE 4
Omnibus and Pairwise Differences by Most Likely Latent Class (Weighted for Classification Error)

	High Quality	Low Quality	Deviant Peers	Low Quality Victimized	F-statistic
Peer indicators					
Affection	3.99 ^a	3.19 ^b	3.28 ^b	2.17 ^c	146.87, <i>p</i> < .001
Behavioral confirmation	4.04 ^a	3.35 ^c	3.45 ^b	2.50 ^d	144.00, <i>p</i> < .001
Status among peers	2.53 ^a	2.23 ^b	2.61 ^a	1.63 ^c	43.97, <i>p</i> < .001
Emotional help	3.07 ^a	2.44 ^b	2.61 ^b	2.56 ^b	37.50, <i>p</i> < .001
Practical help	2.46 ^a	1.87 ^b	2.02 ^b	2.13 ^b	26.31, <i>p</i> < .001
Fight	0.40 ^a	0.44 ^a	0.65 ^b	0.61 ^b	9.62, <i>p</i> < .001
Deviant behavior	0.17 ^a	0.20 ^{ab}	1.65 ^c	0.29 ^b	24.21, <i>p</i> < .001
Substance use	1.20 ^a	1.20 ^a	2.08 ^b	1.06 ^a	37.86, <i>p</i> < .001
Victimized None/One/Both forms	72%/24%/4%	67%/28%/5%	69%/26%/5%	33%/48%/19%	
Parent factors					
Maternal affection	4.45 ^a	4.33 ^b	4.33 ^{ab}	4.20 ^b	6.64, <i>p</i> < .001
Maternal behavioral confirmation	4.30 ^a	4.17 ^b	4.14 ^b	4.09 ^b	8.67, <i>p</i> < .001
Paternal affection	4.33 ^a	4.17 ^b	4.11 ^b	4.10 ^b	6.55, <i>p</i> < .001
Paternal behavioral confirmation	4.29 ^a	4.15 ^b	4.05 ^b	4.03 ^b	8.29, <i>p</i> < .001
Parental problem behavior	0.12 ^a	0.12 ^{ab}	0.17 ^{ab}	0.21 ^b	1.89, <i>p</i> = .13

Note. Values for peer victimization are percentages. Pairwise comparisons were accomplished using multinomial models, thus including all groups. Different superscripts represent significant pairwise difference between peer profiles.

Multinomial logistic regressions also yielded relative risk ratios, which are shown in Table 5. Relative risk ratios are interpreted like odds ratios and inform about increase or decrease in likelihood of a particular profile compared to another profile given higher or lower levels of the predictor. All parent-child relationship measures differentiated the High and Low Quality as well as Low Quality Victimized peer profiles in that lower levels of perceived maternal and paternal affection and behavioral confirmation increased the risk of the these profiles. Notably, neither of these parent factors differentiated between the Low Quality and Low Quality Victimized groups and also not either of these from the Deviant Peers group. In fact, the Deviant Peers group was differentiated from the High Quality group only by paternal affection. In addition, higher parental problem behavior increased the risk of the Low Quality Victimized and by trend Deviant Peers profiles compared to the High Quality profile but did not differentiate the Low Quality profile from the High Quality one.

These results provide support for expected links between parent-child relationship quality and peer profiles, in that more positive relationships with parents were linked to greater likelihood for high-quality peer experiences. When peer relationship quality, victimization, status, and peer deviance were all taken into account in latent profiles, associations between parental problem behavior and peer experiences were relatively weak.

Post Hoc Analyses With Gender as Moderator

Gender ratios differed across profiles, and boys were at greater risk for the Low Quality and Deviant Peers profiles (each 8%), whereas girls had an 18% greater chance for the High Quality profile when estimated as sole predictor. We therefore explored whether gender moderated parent factors in predicting peer profiles by adding interaction terms to the models. These showed that associations of maternal affection and maternal and paternal behavioral confirmation with peer profiles were substantially stronger for girls than for boys. As shown in Table 6, girls were more likely to experience Higher Quality than Low Quality peer relations if they had reported higher levels of maternal affection and maternal and paternal behavioral confirmation, whereas these associations were weak and nonsignificant for boys. Gender moderation was also established with regard to parental problem behavior: While for boys high levels of parental problem behavior increased the likelihood

TABLE 5
Prediction of Peer Experience Profile by Parent Factors (Relative Risk Ratios)

	High Quality– Low Quality	High Quality– Deviant Peers	High Quality– Low Quality Victimized	Low Quality– Deviant Peers	Low Quality Low Quality	Low Quality Victimized– Low Quality	Low Quality Victimized– Deviant Peers
Mat. affection	1.30**	1.23	1.70***	0.94	0.77	0.73	0.73
Mat. behavioral confirmation	1.46***	1.45†	1.85***	1.00	0.79	0.79	0.79
Pat. Affection	1.32***	1.46**	1.48***	1.10	0.90	0.99	0.99
Pat. behavioral confirmation	1.39***	1.65	1.75***	1.18	0.79	0.94	0.94
Parental problembehavior	0.95	0.70†	0.62*	0.74	1.53†	1.13	1.13

Note. Predictors were tested in separate models. Group sizes per profile were High Quality 47%, Low Quality Victimized 5%, Low Quality 40%, and Deviant Peers 8%.
****p* < .001; ***p* < .01; **p* < .05; †*p* < .10.

for a Low Quality Victimized compared to a Low Quality profile, this association was not yielded for girls. Moreover, boys whose parents showed problem behavior were less likely to have Low Quality peer relations than to be in the Deviant Peers group; again this association was not significant for girls. Note that these interactions were significant at $p < .05$.

DISCUSSION

This study aimed to document the landscape of adolescent peer experiences with regard to peer behavior, relationship quality, status among peers, and peer victimization, and examined whether peer experience profiles were associated with a range of parent factors. In light of the exploratory nature of our analyses, this study produced noteworthy findings, which warrant discussion and replication.

Peer Experience Profiles

Our first aim was to capture the multifaceted nature of adolescents' peer experiences in a more realistic manner than previous studies. Latent variable modeling showed that the majority of adolescents affiliated with peers who do not display high levels of substance use and deviant behavior and to a large part perceived their peer relationships to be positive including high levels of peer affection, behavioral confirmation, and emotional and practical help. Further, most adolescents perceived themselves to be popular among their peers. The importance of positive peer relations for adjustment has been shown repeatedly, and it is good to know that many adolescents are embedded in such peer contexts.

How do these findings contribute to what we already know about adolescents' peer experiences? We believe that profiles that incorporate information of various peer measures represent the reality of social relationships much better than examining one facet at a time. One could estimate regression models in which various facets interact, but this option is restricted to analyses with peer experiences as predictors. Profiles are a straightforward way to model the complexity of adolescents' peer experiences and relationships more generally.

Moreover, it would have been difficult to obtain the detailed insights we gained using conventional methods. For instance, while noting that we had no strong assumptions about the shape of the profiles, we did expect to find level differences and possibly two groups: a "general positive" profile, represent-

TABLE 6
Prediction of Peer Experience Profile by Parent Factors Separately for Girls and Boys (Relative Risk Ratios)

	High Quality– Low Quality	High Quality– Deviant Peers	High Quality– Low Quality Victimized	Low Quality– Deviant Peers	Low Quality Victimized– Low Quality	Low Quality Victimized– Deviant Peers
Mat. affection	1.70**	1.57	1.92**	0.92	0.88	0.82
	1.03	1.03	1.48*	1.00	0.69†	0.69
Mat. behavioral confirmation	2.03***	1.80†	2.14**	0.89	0.95	0.84
	1.07	1.20	1.56*	1.11	0.69†	0.77
Pat. Affection	1.44***	1.65*	1.36†	1.14	1.06	1.22
	1.19	1.33†	1.54*	1.12	0.78	0.87
Pat. behavioral confirmation	1.73***	2.02*	1.78*	1.17	0.97	1.13
	1.12	1.41†	1.63*	1.25	0.69*	0.87
Parental problem behavior	0.76	0.87	1.26	1.14	0.60	0.68
	1.39	0.68	0.42**	0.49*	3.28***	1.61

Note. The upper part of each row represents coefficients for girls and the lower part in each row for boys. Predictors were tested in separate models. Group sizes per profile were for girls and boys, respectively: High Quality 55/37%, Low Quality Victimized 5/6%, Low Quality Victimized 36/45%, and Deviant Peers 4/12%.
*** $p < .001$; ** $p < .01$; * $p < .05$; † $p < .10$.

ing adolescents with affectionate, nonvictimizing relationships with nondeviant peers, and a “general negative” profile, representing adolescents with negative relationships with deviant peers. No support was yielded for the general negative profile—adolescents who reported relatively high levels of peer deviance and substance use also reported positive relationship quality. This seems to suggest that “bad kids” are not necessarily bad friends. Another unexpected finding was the derivation of two low-quality classes that were distinguished predominantly by high levels of victimization in one but not the other group. Fortunately, the group of adolescents who reported being the target of gossip or bullying and also did not perceive much affection or behavioral confirmation from their classmates still received help from friends, which may cushion the victimization experience somewhat (Hodges et al., 1999). In other words, while some peer relationship quality measures explicitly referred to classmates, emotional and practical help referred to nominated friends. These friends likely exist outside the school context, stressing the importance for researchers to include outside-school friends in their studies on peer relationships instead of the traditional restriction to classroom-based friendships.

Parent Factors as Predictors of Peer Experience Profiles

In addition to mapping out the landscape of adolescents peer experiences, we also examined whether specific peer experience configurations were linked to parent-child relationship quality and parental problem behavior. Generally, parent factors appeared more important in distinguishing high quality from low-quality peer experiences than in differentiating deviant peer affiliation, at least when examining the full sample. This conclusion suggests itself when inspecting risk ratios for comparisons between deviant peers and nondeviant peer profiles, which were more modest than those yielded when comparing the high quality to any of the other profiles.

Based on perspectives suggested by attachment, social learning, and social and ecological systems theories, we expected less parental affection and behavioral confirmation to be linked to greater risk for low-quality peer relations. Studies that focused on one peer dimension at a time have repeatedly shown that parent and peer relationships are congruent in that negative relationship quality in one is associated with negative relationship quality in

the other (De Goede et al., 2009). This association was also found in our study; that is, adolescents who had reported less parental affection and behavioral confirmation were more likely to experience low-quality peer relationships and high levels of victimization. It is puzzling that parent factors were overall less implied in differentiating deviant from nondeviant peer profiles, especially given previously reported associations between parental problem behavior and deviant peer affiliation (Tzoumakis et al., 2014). Maybe these associations were suppressed by including peer relationship quality into the constructs or individual factors not examined here, such as early conduct problems and callousness, have played a more important role (Kimonis, Frick, & Barry, 2004). Besides that, affiliation with deviant peers may be normative and not necessarily driven by problems in the parent-child relationship.

To some extent, associations differed by gender. That is, boys whose parents had engaged in problem behavior were more likely to have deviant friends than to experience low-quality friendships, but the latter were still more common than experiences of victimization, which in turn were more likely than high-quality peer experiences. Girls, in contrast, showed greater interpersonal sensitivity, a pattern that is in line with previously found gender differences (van Eijck, Branje, Burk, & Meeus, 2012; Rose & Rudolph, 2006). For decades, studies have shown that concepts related to interpersonal sensitivity are socialized in gender-specific manner; that is, girls tend to show more empathy and perspective taking (Eisenberg & Lennon, 1983), which researchers often ascribe to gendered upbringing. Future studies need to confirm whether gender-specific mechanisms are indeed at play given the possibility that the link between parental problem behavior and girls' peer experiences may be a consequence of sparse cells as the deviant peers profile was relatively uncommon in girls.

Practical and Theoretical Implications

To our knowledge, this is the first study to use a person-centered approach to capture the complexity of adolescents' peer experiences. While the profiles we found require replication in other samples, Morin and Marsh (2015) suggested that latent profiles are only meaningful if shape-related qualitative differences can be observed. If profiles merely show level variations in item endorsement, continuous factors represent the data better. We are confident that the profiles found in this study indicate

that the landscape of adolescent peer experiences is not simply characterized by level differences. Rather, we see that affiliating with deviant peers does not mean that adolescents suffer from negative relationships and that victimized adolescents still seem to be able to rely on supportive friends.

What are the implications of these profiles and what does it mean to be in one group rather than another? Specific knowledge about unique configurations of positive and negative aspects of the peer environment that come together in these profiles may inform professionals who work with adolescents and who are advised to not rely on one impression of an adolescent's peer context. We know that close friends can curb a wide array of adjustment problems, but if these friends engage in substance use and deviant behavior, adolescents' own delinquency may increase as well. Similar implications arise from the low-quality victimized profile. Work on peer victimization can be one-dimensional, focusing on the victimization experience and its consequences for adjustment. However, victimized adolescents can still have resourceful peer environments, as this study showed with regard to emotional and practical help by friends—though not classmates. Peer-based prevention and intervention programs should aim to counteract negative peer effects while simultaneously build on positive facets of adolescents' individual peer contexts.

Turning to theoretical implications, we accounted for the multidimensional reality of adolescents' peer experiences by employing latent profiles as dependent variable and were thus able to probe some previously found associations between parent factors and peer experiences. When all peer dimensions were considered simultaneously, parent-child negativity did not distinguish between high-quality nondeviant and deviant friends any more, and parental problem behavior did not distinguish the high-quality from the low-quality profiles any more. It thus seems to be the case that some previously found associations are suppressed when co-occurring peer dimensions are reflected in the analytic model.

Latent profiles can also be conceptualized as predictor variable and compared with regard to outcomes. It is likely that adolescents who experience high-quality relations with nondeviant peers will be better adjusted in the future than those with deviant peers or in low-quality relationships, but it will be fascinating to compare the development of those who affiliate with deviant peers, those who experience low-quality relations, and those who are

exposed to victimization by peers. It will be informative to see whether the deviant group will show greater adjustment problems later on than the low-quality groups, for example. Finally, future studies into the stability of peer experience patterns and antecedents of possible developmental variations are important. Findings from those studies could then again inform practical work with adolescents.

Study Limitations

Despite its innovative approach and novel findings, this study needs to be interpreted with some limitations in mind. First, all measures except parental problem behavior were based on self-reports. Although several years lay between waves, it is possible that child factors such as temperament and biased reporting confounded associations. Importantly, reports of relationship quality both with peers and between parents and children are perceptions thereof rather than objective measures. Extending self-reports with observational measures would be desirable. This being said, perceptions are likely to be more influential on a person's development than are actual yet unperceived relationship characteristics.

Secondly, we did not control for genetic factors. Pike and Eley (2009) showed that genetic propensity was responsible for associations between parental discipline and friendship quality. Genetically sensitive designs have also been proposed to understand how parent antisociality is linked to deviant peer affiliation (Blazei et al., 2006), and our study would have benefitted from being able to disentangle genetic and environmental effects.

A third limitation with regard to study design concerns the peer measures. While affection, behavioral confirmation, and status among peers explicitly referred to classmates, victimization did not specify the perpetrator and all EHC items concerned nominated friends. Profiles may thus refer to different sets of peers. However, we aimed to describe adolescents' peer experiences as holistically as possible, and these naturally contain both classmates and friends. Our measure of peer victimization does not inform about chronicity, form of victimization, or number of perpetrators, and is thus not ideal. However, we were keen on using peer experiences collected at the same wave and thus were restricted to the data available. To ensure that our conceptualization of victimization is valid, we examined correlations with earlier peer-reported victimization and rejection. Those yielded modest yet largely significant associations,

which increased our confidence in the peer victimization measure employed here. Similarly, our measure and conceptualization of friend substance use are not perfect as they do not capture the actual consumption frequency. That is, having a friend who has tried three of the substances only once would yield the same score as having a friend who is a heavy user. Of note is, however, that only very few adolescents reported soft and hard drug use in friends. High scores on the peer substance use measure are thus most likely a result of frequent consumption of alcohol and tobacco. Moreover, we included self-reported peer status into the model, but studies that focused on peer status and peer popularity strongly advocate the use of peer nominations and the distinction into perceived and sociometric status. Besides this, peer researchers have been interested in the roles of cliques and crowds in adolescent development. We do not have information about such larger groups and thus could not take this additional dimension of adolescents' peer experiences into account.

Finally, we chose a latent profile approach to identify peer experience configurations, which carries the risk of sample-specific findings; hence, our results warrant replication in other samples. In addition, links between parent factors and peer affiliation depend on characteristic of the individual, specifically adolescent's own developmental history of problem behavior (Blazei et al., 2006), which we did not examine in the present study.

Despite these limitations, this study contributes to the continuous effort to understand adolescents' peer experiences and the interplay between different interpersonal systems in adolescents' social environments, and adds to the literature on transmission processes between parents and peers. We showed that peer experience profiles are differentially related to prior relationships with parents and, to a lesser extent and in a more gender-specific manner, parental problem behavior. Our approach to elucidate adolescents' peer experiences can hopefully inform future studies into antecedents and outcomes of the diverse and complex landscape of adolescents' social lives.

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