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Peer Teasing Experiences of Fathers and Their Children: Intergenerational Associations and Transmission Mechanisms

David C. R. Kerr^{1,2,*}, Gianluca Gini³, Lee D. Owen¹, and Deborah M. Capaldi¹

¹Oregon Social Learning Center

²Oregon State University

³University of Padua

Abstract

Being the victim or perpetrator of peer teasing threatens children's immediate and long-term well-being. Given that many individual and contextual risk factors for peer victimization are transmitted within families, we tested whether fathers' childhood victimization experiences were directly or indirectly (via poor parenting and poor child adjustment) associated with their children's increased risk for similar experiences. Generation two (G2) fathers ($n = 130$) who had been assessed since age 9 years participated in an intergenerational study with their 268 G3 children and the 163 G2 mothers of these children. Peer teasing ratings were collected annually from G1 mothers, fathers, and teachers across G2 ages 9–16 years, and from the same three informant types across the same ages for G3 children. Also assessed was G2 fathers' poor parenting of G3 at ages 3–7 years and G3 poor adjustment (externalizing and internalizing behaviors, deviant peer association, low social competence) and body mass index (BMI) at ages 7–16 years. Models supported intergenerational stability in being teased that was partially mediated through G2 fathers' poor parenting and G3 poor adjustment. A direct intergenerational path in being teased remained significant, and G3 BMI uniquely predicted being teased. Childhood peer victimization is perpetuated across generations. Prevention aimed at poor parenting, child poor adjustment, and peer victimization itself may disrupt intergenerational stability in these adverse experiences.

Keywords

adolescence; fathers; intergenerational studies; peer victimization; BMI

1. Introduction

Victimization by peers during childhood and adolescence has negative—even lifethreatening—consequences for longterm physical and psychological health (Copeland, Wolke, Angold,

*Address for correspondence: David C. R. Kerr, Oregon Social Learning Center, 10 Shelton McMurphey Blvd, Eugene, Oregon, USA, 97410, (541) 485-2711 davidk@oslc.org.

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& Costello, 2013; Gibb, Horwood, & Fergusson, 2011; Swearer & Hymel, 2015). Although most research on peer victimization focuses on bullying involving repeated aggression by more powerful peers, bullying is not the only detrimental peer victimization experience children can have (see Finkelhor, Turner, & Hamby, 2012). Indeed, peer teasing in childhood also is associated with concurrent problems and long-term negative outcomes in adulthood (e.g., Kerr, Gini, & Capaldi, 2017). Thus, further research is needed to document both the risk for and long-term consequences of peer victimization involvement in childhood and adolescence.

The present study concerns the intergenerational legacies of peer victimization—used here to encompass being teased, “picked on,” or bullied, and teasing or bullying of peers—by evaluating the extent to which fathers’ childhood involvement predicts similar involvement for their children. In doing so, we also consider whether fathers who were targets or perpetrators of teasing in childhood more often have offspring with higher levels socioemotional maladjustment that in turn increases their risk of involvement in peer victimization. Furthermore, we evaluate the extent to which fathers’ parenting behaviors may be a mechanism linking fathers’ and children’s peer victimization experiences. Thus, we review research on risks for peer victimization that may illuminate intergenerational transmission mechanisms.

1.1 Socioemotional risks.

Cross-sectional studies have linked peer victimization (usually bullying) with other serious emotional and behavioral problems (e.g., van Geel, Vedder, & Tanilon, 2014). Anxious, depressed, socially withdrawn, or socially unskilled children are more often targeted by peers, as are children with externalizing behavior problems such as impulsivity, hyperactivity, and general aggression and antisocial behavior (e.g., Kerr et al., 2017; Reijntjes, Kamphuis, Prinzie, Boelen, Van der Schoot, & Telch, 2011). The stress of being teased, harassed, or bullied by peers also may alter stress reactivity (Ouellet-Morin, Danese, Williams, & Arseneault, 2011) and lead to symptoms and maladjustment. Furthermore, being victimized by peers may lead to emotional and behavioral problems through effects on social status, selfefficacy, and the development of interpersonal skills (e.g., Swearer & Hymel, 2015). Also at risk for maladjustment are children who victimize others. For example, bullies often show higher rates of conduct problems, callous unemotional traits, depression, and social marginalization (e.g., Fanti & Kimonis, 2012; Frick, Cornell, Barry, Bodin, & Dane, 2003), and their use of manipulative, coercive, and aggressive interpersonal behaviors may lead to weaker or more hostile relationships (Rodkin, Espelage, & Hanish, 2015).

Poor social adjustment also is related to victimization by and of peers. Peer interactions and friendships serve important and diverse functions in children’s social development by facilitating the acquisition of key social skills (e.g., conflict resolution) (Asher & Renshaw, 1981; Boivin, Hymel, & Hodges, 2001). For children who are uninvolved in peer victimization, positive and supportive relationships with peers help promote successful adaptation during adolescence (e.g., Compas, Hinden, & Gerhardt, 1995; Hartup, 1992). In contrast, children who are bullies or victims of peer teasing may lack social competence,

withdraw socially, affiliate with deviant or socially unskilled children who reinforce passive or aggressive behavior with peers, or otherwise develop problematic interpersonal behaviors with long-term negative implications (e.g., Caravita, Gini, & Pozzoli, 2012; Farmer et al., 2010; Espelage, Holt, & Henkel, 2003; Vieno, Gini, & Santinello, 2011; Witvliet, Brendgen, van Lier, Koot, & Vitaro, 2010). Thus, it is worthwhile to examine whether children's socioemotional maladjustment may help account for relations between parents' and children's peer victimization experiences.

1.2 Body weight risk.

Being overweight is associated with peer victimization. Multiple studies have linked peer teasing and victimization by bullies with childhood obesity (Griffiths, Wolke, Page, Horwood, & The ALSPAC Study Team, 2006; Jansen et al., 2014), and children who are overweight report high rates of weight-related victimization (Puhl, Peterson, & Luedicke, 2013). Given genetic and socioemotional influences on child weight, it may play a role in the intergenerational transmission of peer victimization experiences.

1.3. Risk from the parenting environment.

Children with histories of insecure attachment, especially anxious/resistant attachment, are at higher risk for becoming targets of peer aggression than children with prior secure attachment (e.g., Jacobson & Wille, 1986; Troy & Sroufe, 1987). This may be because children who are anxious and develop feelings of helplessness and personal incompetence "attract" victimization (Perry, Hodges, & Egan, 2001). Studies of bullied children also suggest that parents' over-protectiveness and over-involvement increases children's risk for peer victimization (Georgiou, 2008; Ladd & Ladd, 1998), perhaps by undermining their selfconfidence and assertiveness in peer relationships (Finnegan, Hodges, & Perry, 1998).

Other parenting behaviors consistently associated with adolescents' peer victimization include aggression, harshness, hostility, and lack of support (Kawabata et al., 2011; Mann, Kristjansson, Sigfusdottir, & Smith, 2015). A meta-analysis showed that bullying victims including those who bully others tend to be exposed to negative parenting behavior, including abuse and neglect and maladaptive parenting (e.g., high levels of hostility, hitting and shouting). Conversely, positive parenting behavior, characterized by good communication, warm and affectionate relationships, parental involvement and support, and parental supervision, protects against peer victimization (Lereya, Samara, & Wolke, 2013).

Family risks for bullying others include low warmth (Olweus, 1993), positive attitudes toward aggression and the use of violence to solve interpersonal conflicts (Bowers, Smith, & Binney, 1994; Duncan, 2004; Olweus, 1993), and harsh and inconsistent child-rearing practices (Carney & Merrell, 2001; Olweus, 1993). These family risks suggest social learning mechanisms, whereby aggressive behavior is modeled, reinforcement, and generalized to peer contexts (e.g., Baldry, 2003; Farrington, 1993). Whether these family risks relate to a broader pattern of teasing and other noxious behaviors towards peers deserves study.

1.4. Intergenerational stability in peer victimization.

Based on a general model of parent transmission of aggression (e.g., Eron & Huesmann, 1990), some have proposed that bullying is passed across generations (Farrington, 1993). However, we are unaware of prospective research showing that parents' own childhood experiences with bullying or other peer victimization increase risk for these experiences in their children, and if so, why. This is surprising given that parents have an influence on all of the risk factors reviewed above (Ball et al., 2008). Most obviously, parents enact poor discipline and play an essential role in many problematic parent–child relationship factors, such as low warmth, that are risks for child involvement in peer victimization. Parents also can help children manage bullying or offset its negative effects (e.g., Bowes, Maughan, Caspi, Moffitt, & Arseneault, 2010). Additionally, parent behaviors and characteristics influence the child risk characteristics that are linked with victimizing peers and being victimized, such as aggression, social withdrawal, poor social skills, and obesity (e.g., Albuquerque, Stice, Rodríguez-López, Manco, & Nóbrega, 2015; Kim, Capaldi, Pears, Kerr, & Owen, 2009; Shaffer, Burt, Obradovi, Herbers, & Masten, 2009; Tiberio et al., 2014).

In summary, there are strong theoretical reasons to expect associations between parents' childhood peer victimization experiences—both as perpetrators and victims of peer teasing and bullying—and those of their children. Yet, there are no prospective intergenerational studies of these associations. There is clear evidence that parenting predicts risk factors for peer victimization as well as victimization itself, and that adults' childhood victimization experiences are linked with their poorer adult adjustment. However, parenting is a critical aspect of adult-role functioning that has not been examined as an outcome of childhood peer victimization experiences. Thus, the present study brings these connections together in a single model of whether and how peer victimization experiences may be perpetuated across generations.

1.5. The present study.

We evaluated the intergenerational transmission of peer victimization experiences using a prospective study of linked longitudinal studies. The first study began with 9-year-old boys (generation two or G2), and their G1 parents. G2 boys were assessed regularly through middle adulthood. Their children (G3) were then followed longitudinally starting at age 22 months. Childhood peer victimization experiences were assessed prospectively for both G2 fathers and G3 offspring using highly similar, multi-informant measures. As in longterm studies of bullying (e.g., Copeland et al., 2013; Gibb et al., 2011) peer victimization was assessed across a broad developmental period (ages 9–16 years).

Central to the present study were tests of intergenerational stability within each kind of peer victimization involvement. We hypothesized there would correlations between G2 and G3 experiences bullying or teasing peers, and also G2-G3 stability in being teased by peers. Given shared risks and traits underlying these roles, we also expected that victimizing peers and being victimized would co-occur within each generation (e.g., Copeland et al., 2013) and show some cross-role associations across generations (e.g., G2 childhood teasing to G3 being teased).

Next, we considered several mechanisms of intergenerational associations. First, we tested whether G3 peer teasing involvement might be secondary to other G3 risks associated with their fathers' childhood victimization involvement. That is, the transmission pathway might not be specific to peer victimization after concurrent general G3 risk was controlled. Specifically, we questioned whether G2 fathers' childhood peer-teasing involvement would predict more severe G3 socioemotional problems (externalizing and internalizing behaviors, poorer social competence, and greater affiliation with deviant peers) and higher body weight. We then considered whether these risks were concurrently associated with G3 peer-teasing involvement and accounted for intergenerational stability in teasing or being teased by peers.

Second, we examined G2 fathers' parenting as a mechanism linking the generations' shared experiences with peer victimization. We predicted that G2 fathers who were perpetrators or victims of peer teasing would show less consistent and confident discipline, and harsher and less warm supportive parenting of G3. Further, we predicted these G2 approaches would be associated with G3 peer victimization involvement. Finally, we considered whether G2 parenting might fully account (i.e., no direct effect would remain) for the G2-G3 association in peer victimization. We examined parenting during early to middle childhood for G3 given that broad consequences of fathers' adverse childhood experiences on their parenting should be evident in these pivotal years. Limiting the assessment of G2 parenting to these years also ensured temporal separation between this G2 mediator and G3 peer victimization.

2. Method

2.1. Intergeneration study overview

Participants were drawn from a prospective intergenerational study that began with a longitudinal study of G2 boys and their G1 parents. G2 boys were assessed into adulthood, and many became fathers of G3 children who were enrolled in another study. At the time of the present analysis there were 321 G3 children of 148 G2 fathers and 193 G2 mothers who had provided data to the overall project (which is ongoing). G3 children were excluded from the current analyses if they were not yet old enough (age < 7) to have participated in the first of the outcome assessments ($n = 21$), or if they were old enough but did not participate in at least one of the outcome assessments from ages 7–16 years ($n = 32$); G2 parents were included in the present analyses only if their G3 child was included. Thus the present study included 130 G2 fathers, their 268 G3 children ($n = 139$ girls), and the 163 G2 mothers of these children.

2.2. Participants

G2 boys ($n = 206$, or 74% of those eligible) aged 9–10 years were recruited into the Oregon Youth Study (OYS) from entire fourth-grade classes in 1983–1985. Classes were selected from school districts with higher-than-average delinquency rates in a mid-sized Pacific Northwestern metropolitan area (Capaldi & Patterson, 1989). Families were representative of the area at the time (90% of boys were European American, 3% African American, 2% Native American, 1% Latino, and 5% other races/ethnicities). Family socioeconomic status was low overall (e.g., median annual income of \$15,000; Hollingshead, 1975). G2 boys were assessed annually from age 9 through adolescence, and regularly to middle adulthood with

retention rates (excluding five who have died) of 89% or higher at each assessment from ages 9 to 40 years.

The ongoing Three Generation Study (3GS) began by enrolling OYS men's G3 children and the children's G2 mothers. Originally all G3 children were study eligible, but after budget restrictions, recruitment was limited to the first two biological G3 children per G2 partner of G2 fathers. The G2 fathers in the present analytic sample had one ($n = 35$, 27%), two ($n = 63$, 49%), three ($n = 22$, 17%), four ($n = 9$, 7%), or five ($n = 1$, 1%) participating G3 children, who were their step-children ($n = 14$), adopted ($n = 2$), or biologically related ($n = 252$, 94%) offspring.

2.3. Procedures

In the OYS, G2 boys were assessed every year from enrollment at age 9 through adolescence using multi-method and multi-informant measurement that included mother, father, and teacher questionnaires. In adulthood, G2 fathers and their children's mothers (G2 mothers) were assessed when G3 participated; G2 and G3 measures included parent, partner, teacher, and self-report instruments, structured interviews, and staff ratings of parent-child interactions.

In the 3GS, G3 children were repeatedly assessed at: Time 1 (T1) age 1.5 years (no T1 data were used presently), T2 age 3 ($n = 215$), T3 age 5 ($n = 226$), T4 age 7 ($n = 255$), T5 age 9 ($n = 117$), T6 age 11–12 ($n = 198$), T7 age 13–14 ($n = 170$), and T8 age 15–16 ($n = 135$). Sample sizes differ by assessment wave in part because (a) some G3 are not yet old enough to participate at some ages, (b) staff were not aware some G3 had been born until they were too old to participate at some ages, and (c) T5 was eliminated midway into the study due to budgetary constraints. Thus, although the listwise sample size was 71 for all G3 variables, 188 G3 had scores for all aggregate constructs and 268 G3 contributed some data to the present analyses.

2.4. Measures

2.4.1. Scale formation overview.—G2 victimization and perpetration variables were based on seven annual OYS waves (W1 to W7; G2 ages 9–16 years). 3GS assessments T2 through T8 (ages 3–16 years) were used in measures of G2 fathers' parenting (at G3 ages 3–7 years), G3 maladjustment (ages 7–16) and the peer teasing outcomes (ages 9–16). The primary predictors and outcomes (G2 and G3 peer teasing) were latent variables based on observed informantspecific means of cross-time, face-valid items (e.g., mean mother-reports of G3 teasing across ages 9–16 years). Other indicators and scales were formed as the mean of informant- and timespecific scales. Construct and scale formation procedures were that scales should have a standardized $\alpha \geq .60$, and indicators on a scale should each have a factor loading $\geq .30$ (Patterson & Bank, 1986), though there were exceptions. The appendix provides full details on scale construction, statistics, and sample items, which are too lengthy to include here.

2.4.2. G2 peer victimization (ages 9–16 years).—The extent to which boys were victimized was assessed with 29 items; specifically, mothers, fathers, and teachers

completed item 38 (*Gets teased a lot*) from the Child Behavior Checklist (CBCL) and Teacher Report Form (TRF; Achenbach 1991a) at seven annual assessments (9–16 years), and mothers and fathers completed an item (*How often do other kids pick on or tease your child*) from the Peers Questionnaire (Dishion & Capaldi, 1985) at four annual assessments (12–16 years). For each informant and questionnaire the CBCL, TRF, and Peers Questionnaire items were averaged across waves ($\alpha = .75-.86$). The means from the two parent questionnaires were then averaged for mothers ($r = .73$, $n = 198$) and fathers ($r = .67$, $n = 158$, both $p < .01$) forming their informant scores, which were used in latent variable modeling with the teacher indicator.

2.4.3. G2 peer perpetration (ages 9–16 years).—Similarly, boys' perpetration of peer teasing or bullying were assessed with 42 items; specifically, parents and teachers completed items 16 and 94 (*Cruelty, bullying or meanness to others* and *teases a lot*) on the CBCL or TRF at seven assessments (9–16 years). Informant-specific means for each item were calculated across waves ($\alpha = .69-.85$) and the two item means were averaged (means) within mothers ($r = .53$, $n = 202$), fathers ($r = .55$, $n = 167$), and teachers ($r = .78$, $n = 206$, all $p < .01$).

2.4.4. G3 peer victimization (ages 9–16 years).—The G3 scale was formed from 20 items, using the same items used for G2. At four assessments (ages 9–16), the CBCL item and the Peers Questionnaire item were asked of both parents and the TRF item was asked of teachers. Items within each questionnaire were again averaged across years ($\alpha = .36-.78$), means from each questionnaire were combined within parent (mother, $r = .68$, $n = 199$, $p < .01$; father, $r = .52$, $n = 180$, $p < .01$), and mother, father, and teacher indicators were used in latent variable modeling.

2.4.5. G3 peer perpetration (ages 9–16 years).—The items used for G2 were combined in the same fashion for G3; there were 24 items (two CBCL and two TRF items from parents and teachers at four assessments (ages 9–16 years). The correlations for the component time averaged scales (for which $\alpha = .27-.78$) were: mothers ($r = .52$, $n = 200$, $p < .01$), fathers ($r = .60$, $n = 181$, $p < .01$), and teachers ($r = .77$, $n = 184$, $p < .01$).

2.4.6. G2 fathers' poor parenting (G3 ages 3–7 years).—This observed variable was formed from three constructs described below—poor discipline confidence/efficacy, harsh discipline, and low warmth—that were intercorrelated, $r = .33-.49$, $p < .001$. The mean of zstandardized construct scores (reverse coding warmth) was used as the observed poor parenting variable ($\alpha = .68$). Details beyond those below on the constituent scales are in the appendix.

2.4.6.1. G2 poor discipline confidence/efficacy: was a construct formed as the mean of the indicators ($\alpha = .84$) from the Discipline Questionnaire (Capaldi, 1995) collected at three waves (T2–T4) at ages 3–7. Each was formed as the mean of two scales: poor discipline implementation and low confidence in results of discipline (e.g., “How often does your partner [the G2 father] let your child get away with things you feel should have been punished?”). Each subscale was formed from the mean of self and partner report scales of

father's behavior on the component items, seven for implementation ($\alpha=.58-.67$) and five for results ($\alpha=.63-.76$).

2.4.6.2. G2 harsh discipline: was the mean of three scales ($\alpha=.78$) from the Discipline Questionnaire (Capaldi, 1995) across ages 3–7 years (e.g., “*How often do you think your partner's discipline is harsh or mean?*”). Each wave score contained self and partner report on the harsh discipline scale, each comprised of six items ($\alpha=.62-.79$).

2.4.6.3. G2 warmth: was the mean ($\alpha=.78$) of indicators collected in three waves from G3 ages 3–7 years. Father-report on the 10-item Pleasure in Parenting (Fagot, 1995) scale was used at T2 [e.g., “*How much do you enjoy dressing your child?*”; $\alpha=.80$]. The indicators from T3 and T4 were each formed as the mean of self and staff report scales ($r=.14$ and $.24$). Relevant items (e.g., “*I enjoy spending time with my child.*”) from the father-reported Monitor and Parent–Child Relationship Questionnaire (Capaldi & Wilson, 1998) were used at T3 ($\alpha=.70$) and T4 ($\alpha=.74$). Staff ratings indicators were constructed at T3 and T4 ($\alpha=.60-.91$) based on scales following parent–child interaction tasks: Parent-Child Social Teaching Task (T3 and T4; Fagot, 1998), Parent–Child Interactive Free Play (T3; Pears & Ayres, 2000), Cognitive Task Part 2: Parent–Child Interactive (T3; Fagot & Gauvain, 1997), Communications Task (T3; OSLC instrument), Parent-Child Discussion Tasks (T4; OSLC instrument), Parent-Child Interactive Free Play (T4; Pears & Ayres, 2000). Staff ratings on the Parent Interviewer Impressions Scale were collected at T4 (Capaldi & Wilson, 1994; e.g., “*parent seemed generally accepting of target child?*”).

2.4.7. G3 Poor Adjustment (ages 7–16 years).—This observed variable was formed from four constructs described below, namely peer competence (reverse coded), deviant peer association, internalizing behaviors and externalizing behaviors ($\alpha = .76$).

2.4.7.1. G3 peer competence: was assessed using parent and teacher-report Peer Involvement/Social Skills scales (Walker & McConnell, 1988; e.g., “*Other children seek child out to involve him in activities?*”). Mother, father, and teacher scales were computed separately within each wave ($\alpha=.63-.95$). Mother and father reports at T4–T7 were averaged to form parent reports at each wave ($r = .20-.43$) and then the parent reports were averaged with teacher reports to form a peer competence indicator at each time point ($r = .17$ to $.42$), with the exception of T8, at which there was only a teacher report. The final G3 peer competence composite variable was the mean of the four cross-informant indicators that were calculated at each wave ($\alpha=.82$).

2.4.7.2. G3 deviant peer association: was the mean of indicators created at five waves (T4–T8; $\alpha=.76$). The parent indicator was the mean of mother and father reports on four-item scales from the Peers Questionnaire (Dishion & Capaldi, 1985; e.g., “*Do you feel that your child's friends have a bad influence on his or her behavior?*”). The same scale/items were used at all 5 time points ($\alpha = .57-.85$ for mothers; $\alpha = .57-.72$ for fathers). The teacher indicators were formed from a two-item scale (e.g., “*How often does this student associate with kids who misbehave in school?*”) at T4 ($r = .65$) and three-item scales from T5 to T8 ($\alpha = .83-.91$). Selfreport from the Child Interview (Capaldi, Pears, Wilson, & Bruckner, 2001; “*In the last year, how many of your friends have...stolen something worth more than \$50?*”)

was added as an informant indicator at T6–T8 and consisted of 7 items ($\alpha = .74-.79$). The within-wave construct was thus formed from parent and teacher indicators at T4 ($r = .16$) and T5 ($r = .19$) while from T6 through T8 the wave construct was formed from parent, teacher, and self-report ($\alpha = .58-.78$).

2.4.7.3. G3 internalizing and externalizing behavior: were assessed using the raw (unadjusted sum) scales scores from the CBCL and TRF (Achenbach, 1991a; Achenbach, 1991b; e.g., “*disobedient at home*”), except that items relating to bullying (#16 and #94; see above) were omitted from the externalizing scale. Given the frequent usage of these scales, they were combined across informants within waves T4–T8 regardless of convergence.

For internalizing symptoms, the mother- and father-report scales each contained 31 items (e.g., “*feels worthless or inferior*”; $\alpha = .85-.92$) for mothers and $\alpha = .70-.93$ for fathers); the two informants’ scales were averaged to form the within-time parent indicators. The teacher internalizing scales from the TRF contained 35 highly similar items ($\alpha = .87-.93$ at each wave). Teacher and parent indicators were averaged to form the multi-informant observed constructs at each of the five waves; the five means were then averaged ($\alpha = .84$). Externalizing behavior scales were formed in the same way. Mother- ($\alpha = .86-.93$) and father-reports ($\alpha = .70-.96$) that were each formed of 31 items were averaged at each wave. The teacher scales had 32 items ($\alpha = .94-.96$). The means of parent and teacher scales were then calculated within each wave. The final externalizing indicator was a mean of these cross-informant means across waves ($\alpha = .88$).

2.4.8. G3 body mass index z-scores (zBMI; ages 7–16).—As described in Tiberio et al. (2014) weight and height of the G3 child were measured using scale and tape when assessments occurred on site, and in other cases from parents by phone. To correct for age variation in the assessments the zBMI then was calculated relative to national norms (i.e., not a z-score based on the present sample mean). Finally, mean zBMI scores across T4–T8 were calculated ($\alpha = .91$); one outlier with an extreme mean zBMI (approximately -6) was recoded to system missing.

2.5. Data analyses

Structural equation modeling (SEM) was conducted using Mplus 7.3 (Muthén & Muthén, 1998–2012); the complex samples option adjusted standard errors to account for nesting multiple G3 within G2. We used the Robust Maximum Likelihood (MLR) option to provide estimates robust to non-normality and non-independence of observations (Muthén & Muthén, 1998–2012) and unbiased estimates when data are missing at random (MAR; Arbuckle, 1996).

2.6. Missing data

There were 15 observed variables used in study models—12 peer victimization variables (mother, father, and teacher reported G2 and G3 perpetration and victimization), G2 poor parenting, G3 poor adjustment, and G3 BMI. For the 268 G3 cases, patterns of missing data were as follows: 44% had no missing data, 25% were missing 1–2 variables, 7% were missing 3–4, 18% were missing 5–6, and 8% were missing 7 or more variables. Thus, 72%

were missing data on three or fewer variables and only 7% were missing more than one half the variables. The effects that missingness on the outcomes could have on statistical power and estimation bias were mitigated in several ways. Using cross-time mean scores for each informant limited the effects of missingness at individual timepoints. Specifying cross-informant latent outcome variables reduced the impact of informant missingness (e.g., no mother reports at any assessment). And maximum likelihood estimation was used, which minimizes bias relative to many other methods (e.g., listwise deletion) even when data are not MAR (Graham, 2009).

Complete missingness on the teasing outcomes was highly related to G3 age at their last (most recent) assessment [$t(266) = 23.94, p < .001$] because many children were not yet old enough to have participated at all assessment ages, and because later-born children did not participate in the eliminated T5 assessment. However, G3 age at their last assessment was not correlated with being teased or teasing others [$r(214) = -.06, p = .42$; $r(212) = .12, p = .07$, respectively]. Controlling for the effects of G3 age at the last assessment on the teasing outcomes in the models did not alter the estimates, patterns of significance, or substantive conclusions, but did worsen fit. Thus age was not included in the final models. Additionally, G3 children for whom peer teasing outcomes were completely missing did not differ from other G3 on other variables in the model (t -tests, $p = .124-.989$). Thus, we did not find evidence that this missingness would bias the models.

Overall, 209 (78%) G3 cases had all indicators for G2, and only one case was missing all G2 data. Bivariate coverage ranged from .54 for the covariance between G2 and G3 father-report victimization indicators to a 1.00, indicating full coverage of G3 poor adjustment. The mean covariance coverages for the variables in the primary models were .72 (.12 *SD*) and .79 (.14 *SD*).

3. Results

3.1. Univariate correlations in peer teasing

3.1.1. Correlations within each generation.—Table 1 provides evidence of convergence among informants' ratings of the same teasing construct. There were significant associations among the three informants' (mothers, fathers, and teachers) reports of whether the child was teased by peers ($r = .50-.66$ for G2, and $.36-.53$ for G3), as well as among reports of whether the child teased or bullied peers ($r = .38-.63$ for G2, and $.31-.40$ for G3). Ratings of the two primary variables (being teased and bullying/teasing others) were associated within informants (e.g., mother reports $r = .51$ for G2 boys and $.42$ for G3 children). Although not evaluated inferentially the cross-informant associations tended to be weaker across construct than within construct.

3.1.2. Correlations between the two generations.—Table 1 also shows that ratings of the extent to which G2 was teased predicted ratings of the same experiences for G3. Ratings of G2 boys' bullying/teasing of others also predicted ratings of G3 children's similar behavior. Intergenerational correlations appeared to be weaker across constructs (i.e., G2 bullying/teasing to G3 being teased) than within constructs. Likewise, as shown in Table 2, there were intergenerational associations for each cross-informant construct, whereas cross-

construct (e.g., from G2 bullying/teasing to G3 being teased) associations were not significant.

3.2. Univariate correlations among other model variables

As shown in Table 2, correlations among the predictors, mediators/controls, and outcome constructs were generally significant and in expected directions, with some notable patterns. G2 fathers' childhood experience of being teased was associated with their poorer parenting of G3, which was in turn associated with G3 being teased as well as bullying/teasing others.

3.3. Latent variable models of intergenerational associations in peer victimization experiences

Figure 1 depicts the SEM testing associations within and between the two peer victimization experiences—being teased and bullying/teasing others—across generations. Model fit was adequate ($\chi^2 [df = 44] = 51.914, p = .193$). Consistent with the Table 1 correlations: informant indicators loaded on two latent variables, there were significant covariances for mothers and teachers indicating similarities in their ratings of the two peer variables, and within each generation there were significant correlations between the two latent peer victimization constructs. Of primary interest here, there was a significant association between G2 fathers' childhood experience of being teased with the same experience by their G3 children; whereas G2 fathers' childhood teasing/bullying of others did not significantly predict similar behavior in G3. Additionally, there were no significant cross-over intergenerational effects from G2 teasing/bullying others to G3 being teased or from G2 being teased to G3 teasing/bullying others.

There were no hypotheses regarding gender differences in intergenerational associations. Nested model comparisons of the SEM depicted in Figure 1 indicated that allowing the four directional path coefficients from G2 to G3 behaviors to differ by gender did not improve fit relative to the model in which those paths were constrained to be equal (corrected χ^2 difference test = $-1.375, p = .849$).

3.4. Mediation of intergenerational associations in peer victimization.

Given there was no significant intergenerational stability in teasing/bullying others in model 1, a mediation test of that pathway was moot. For the sake of parsimony and to maximize statistical power for further probing intergenerational stability in being teased (i.e., victimization), we removed the perpetration indicators/construct and used this new model as a basis for testing mediational processes. This model fit the data adequately ($\chi^2 [df = 8] = 13.759, p = .088$), and the intergenerational association in the latent victimization variables remained significant ($\beta = .38, p < .001$) and not appreciably different from the model in Figure 1.

3.4.1. Mediation by G3 BMI.—The model indicated that G2 victimization did not predict G3 zBMI ($\beta = .073, p = .403$), thus ruling out this mediation pathway. However, with that path trimmed, G3 zBMI remained a unique predictor of G3 victimization ($\beta = .296, p < .001$). The subsequent mediation tests built on this model that included G3 zBMI as a predictor.

3.4.2. Mediation by G2 Parenting and G3 Maladjustment.—Next we evaluated the extent to which the intergenerational association in victimization was mediated by G2 poor parenting and G3 maladjustment. The model also tested whether G3 maladjustment mediated any association between G2 parenting and G3 victimization. As shown in Figure 2, model fit was adequate ($\chi^2 [df=23] = 29.880, p = .153$). There was a significant total effect supporting intergenerational stability in victimization ($\beta = .359, p < .001$) that was composed of a direct effect ($\beta = .229, p = .002$) and several indirect effects (total indirect $\beta = .130, p < .001$). Specifically, indirect effects included a path from G2 to G3 victimization via G2 parenting and G3 adjustment (i.e., G2 victimization to G2 parenting to G3 maladjustment to G3 victimization; $\beta = .055, p = .016$), and two nonsignificant paths: one via G3 maladjustment unique from G2 parenting ($\beta = .088, p = .127$) and similarly one via G2 parenting only ($\beta = -.013, p = .485$).

3.4.3. Simplified Model of Mediation by G2 Parenting.—Some items comprising G3 maladjustment were measured concurrently with or after G3 victimization. If the estimated association between these two variables reflects effects of G3 victimization on adjustment (rather than vice versa) then the role of G2 parenting as a mediator of intergenerational stability in victimization would be unclear. Thus, we fit the model again removing the G3 maladjustment variable. This fully prospective mediation model, which fit the data adequately ($\chi^2 [df=18] = 21.640, p = .248$), showed that G2 fathers' boyhood victimization experiences were associated with their later poor parenting of G3 ($\beta = .276, p = .001$) that in turn was significantly associated with G3 victimization ($\beta = .172, p = .021$). Furthermore, G2 victimization had significant direct ($\beta = .327, p = .002$) and marginal indirect ($\beta = .048, p = .068$ via G2 parenting) intergenerational associations with G3 peer victimization experiences (total [direct + indirect] $\beta = .375, p < .001$).

4. Discussion

To our knowledge, this is the first study to demonstrate that boys' peer victimization experiences in childhood and middle adolescence (ages 9–16 years) were associated with those of their own children at similar ages. The intergenerational stability was partially explained by the tendencies of fathers victimized in childhood to enact poorer parenting strategies with their own children and for their children to more often show a range of socioemotional problems. Thus, whereas separate studies have established that 1) peer victimization experiences in childhood are associated with longterm adult maladjustment (e.g., Copeland et al., 2013), and 2) poor parenting and child socioemotional maladjustment are associated with risk for child peer victimization experiences (e.g., Olweus, 1993; Reijntjes et al., 2011), the present findings integrate established and expected pathways in a single model of intergenerational transmission.

Intergenerational stability in being teased remained significant even after controlling for G3 offspring's maladjustment (emotional and behavioral symptoms, peer deviance, and low social competence). Treating G3 maladjustment as a control variable is conservative for the purposes of making this inference. However, the fact that G3 children's maladjustment was assessed across the same time period as their peer victimization means we cannot draw firm conclusions regarding some of paths. For example, the weak (non-significant) association

between fathers' childhood teasing experiences and their children's maladjustment may reflect that consequences of that maladjustment (i.e., G3 teasing) were controlled. Likewise, it is unclear how to interpret the apparent indirect effect of fathers' peer victimization experiences on their children's similar experiences through effects on their children's poor adjustment. For example, fathers' childhood peer victimization experiences may increase their children's risk for poor social competence that, in turn, makes them prone to being teased or, alternatively, being teased may negatively impact G3 children's social competence by undermining their confidence and status with peers. Still, the significant remaining direct intergenerational effect does indicate that the broad markers poor adjustment did not wholly account for intergenerational stability in being teased by peers. Thus, this rather stringent analysis tends to refute the notion that fathers' and their children's peer experiences reflect more general transmissible risks.

This is the first study to demonstrate fathers' childhood teasing experiences predict their poorer parenting of the next generation. In this way, the present findings contribute to the already clear case that bullying and other adverse peer experiences have public health—not just school yard—consequences (Gibb et al., 2011). Future studies should evaluate the mechanisms linking childhood teasing experiences and later parenting, such as bullying and harassment in adulthood. Particularly likely mediators are the forms of adult maladjustment (e.g., depression, substance abuse) that have been linked to childhood peer experiences (e.g., Copeland et al., 2013) and that are risks for poor parenting (Belsky, Conger, & Capaldi, 2009). Additionally, findings were consistent with previous research on the association of negative parenting (e.g., harsh parenting, parental hostility, lack of parental support) with children's maladjustment and peer victimization (Kawabata et al., 2011; Lereya et al., 2013; Mann et al., 2015), which supports the value of general parenting interventions in protecting against a range of negative outcomes.

As in prior studies (Puhl et al., 2013), children with a higher BMI were more often teased, independent of the other parenting and child adjustment factors in the model. Thus, apart from poor parenting or concurrent socioemotional risks, children with higher BMI were more likely to be teased. A prior study of G2 men (not just those who became fathers) did not support an association between their experiences being teased in childhood and adult BMI or obesity status (Kerr & Gini, 2017). Thus, findings are consistent with studies linking obesity to bullying and weight-related teasing (Griffiths et al., 2006; Jansen et al., 2014; Puhl et al., 2013) but do not support that intergenerational stability in peer victimization occurs via G3 BMI.

4.1. Strengths and limitations.

The use of multiple informants to assess bullying and peer teasing using similar measures at similar ages in two prospectively assessed generations of children is a unique contribution. Moreover, literature on parenting and child development often focuses on mothers' characteristics and influences, whereas the present study provided evidence of fathers' roles in intergenerational transmission of risk. Additionally, the separations among predictors (G2 peer experience in childhood), mediators (G2 parenting in G3 early to middle childhood) and outcomes (G3 peer experiences in late childhood to early adolescence) enhances

confidence in temporal inferences about the primary findings. Our use of latent constructs to represent the predictors and outcomes also improves the reliability and rigor of the findings.

The study also had some limitations. First, the primary measures of peer teasing differed from contemporary definitions of bullying and its myriad forms (e.g., verbal, physical, cyber). The findings, therefore, may not be directly comparable to those from bullying research and may not represent intergenerational stability in more specific or severe forms of peer victimization. Second, we did not collect self-reports of bullying and peer teasing that could capture events hidden from adult view. On balance, our use of maternal, paternal, and teacher reports assessed a wider range of perspectives on children's/adolescents' lives than is typical and escapes the methodological threats to validity that plague self-report studies (e.g., shared method variance; reliance on perceptions of peer victimization by children who may be low in empathy or high in negative emotionality). Third, the peer teasing constructs were based on very few items at any given age (though up to 42 cross-wave, cross-informant items). It is possible that low variance limited the statistical power to detect intergenerational effects. Fourth, we did not measure mothers' peer experiences; mother-child transmission may not occur or may occur via different mechanisms. A fifth limitation was the consideration of peer victimization across a broad developmental period (ages 9–16 years) dictated in part by study design and power considerations; more developmentally specific assessment periods could yield different conclusions (e.g., teasing may be most impactful at younger ages). Other limitations concern generalizability: fathers were primarily European American men from a single geographic area in the United States who grew up during the 1980s–1990s, and the budgetary limits on recruitment of G3 precluded study of birth order effects.

5. Conclusions

The findings suggest there is meaningful overlap among a number of prevention agendas aimed at enhancing the mental and physical health of children, including those targeting poor parenting, childhood obesity, behavioral and emotional maladjustment, bullying, and the broader class of peer victimization. First, it is well established that parents can be helped to improve their parenting and enhance the adjustment of their children (e.g., Forgatch & Patterson, 2010). The present findings would suggest that if parenting interventions disrupt the poorer practices of parents who were victimized in childhood or enhance the socioemotional functioning of their children, then these interventions may prevent peer victimization—even if such interventions do not explicitly address peer relations, teasing, or bullying. Second, school-based prevention can improve children's socioemotional adjustment (Reinke, Splett, Robeson, & Offutt, 2009). Again, the present findings suggest that by doing so these programs could reduce peer victimization, even if such services do not directly address it. Third, given the direct effects we observed between G2 and G3 peer teasing experiences, the present findings support that prevention directly aimed at reducing teasing, bullying and other peer victimization should be developed further, and effective programs should be championed and implemented (Bradshaw, 2015). Our findings hint at the possibility that effective programs could have unexpected “legacy effects”—namely, on future parents' parenting and the adjustment of their offspring.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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Figure 1.
Standardized estimates from model of intergenerational associations among peer victimization and perpetration.

Figure 2.
Standardized estimates from model of mediated intergenerational associations in peer victimization experiences.

Table 1.

Correlations among observed peer victimization involvement variables by informant

		<i>N</i>	1	2	3	4	5	6	7	8	9	10	11	<i>Mean</i>	<i>SD</i>
1.	G2 victimization, mother	263												0.57	0.39
2.	G2 victimization, father	213	.66**											0.50	0.33
3.	G2 victimization, teacher	267	.62**	.50**										0.32	0.35
4.	G2 perpetration, mother	263	.51**	.25**	.32**									0.59	0.37
5.	G2 perpetration, father	213	.33**	.31**	.21**	.63**								0.49	0.38
6.	G2 perpetration, teacher	267	.25**	.24**	.46**	.38**	.46**							0.38	0.35
7.	G3 victimization, mother	201	.32**	.21**	.20**	.16*	.05	.01						0.39	0.36
8.	G3 victimization, father	183	.21**	.12	.01	.07	.13	.12	.53**					0.29	0.27
9.	G3 victimization, teacher	184	.12 ^t	.14 ^t	.21**	-.02	-.10	.19**	.38**	.36**				0.20	0.41
10.	G3 perpetration, mother	200	.04	.02	.05	-.01	-.02	.04	.42**	.24**	.14 ^t			0.16	0.29
11.	G3 perpetration, father	181	.10	.03	.06	.17*	.11	.11	.23**	.32**	.17*	.31**		0.15	0.27
12.	G3 perpetration, teacher	184	.05	-.01	.10	.06	.03	.28**	.26**	.27**	.44**	.36**	.40**	0.17	0.33

^t $p < .10$.* $p < .05$.** $p < .01$.

Table 2.

Correlations among cross-informant peer victimization constructs and other study variables

		<i>N</i>	1	2	3	4	5	6	<i>Mean</i>	<i>SD</i>
1.	G2 victimization	267							.45	.31
2.	G2 perpetration	267	.48 **						.48	.30
3.	G3 victimization	214	.27 **	.11					.31	.31
4.	G3 perpetration	212	.08	.16 *	.44 **				.16	.23
5.	G2 fathers' poor parenting	251	.23 **	.12 ^t	.19 **	.20 **			.00	.79
6.	G3 zBMI	262	.06	.17 **	.24 **	.13 ^t	.08		.59	1.19
7.	G3 poor adjustment	268	.19 **	.16 **	.57 **	.61 **	.32 **	.11 ^t	.00	.77

^t
p<.10.*
p<.05.**
p<.01.