

Developmental Changes in the Link Between Gender Typicality and Peer Victimization and Exclusion

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Abstract The present study takes a broad and nuanced view of gender typicality in normative populations and suggests that this aspect of children's gender identity might be a fundamental aspect of vulnerability to peer maltreatment. Using a cross-sectional sample from the Southwestern United States, developmental differences were examined in the relations between kindergarten ($n=210$, $M_{age}=5.81$, 52 % female), second ($n=205$, $M_{age}=7.62$, 50 % female), and fourth ($n=205$, $M_{age}=9.56$, 44 % female) grade students' self-reported similarity to own- and other-gender peers and teacher-reported peer victimization and exclusion. Parents' reports of children's own- and other-gender friendships were also examined to test whether friendships would attenuate this relation. We hypothesized (a) lower gender typicality would be associated with higher victimization/exclusion for 2nd and 4th grade children and (b) friendships with own- and other-gender peers, but especially own-gender peers, would moderate the typicality and victimization/exclusion relation, acting as a buffer against victimization/exclusion. Supporting our hypotheses, results indicated developmental differences in the link between gender typicality and victimization/exclusion with a more consistent relation in 2nd and 4th grades. For girls, having other-gender friends moderated the negative relation of other-gender similarity and victimization/exclusion. Own-gender friendships were protective overall for both genders, and other-gender friendships were protective for 4th graders. Our study suggests that gender-related intolerance is a central issue to

peer maltreatment and affects more than just those who exhibit the most extreme cases of gender nonconformity and that friendships can provide a buffer against victimization/exclusion.

Keywords Gender identity · Peer victimization · Gender typicality · Friendships · Child development

Children exist on a spectrum of conformity to their same-gender peers; where they fall on this continuum has consequences for their peer relationships (Egan and Perry 2001). Previous research in the United States has found that children at an extreme end of this spectrum (that is, children perceived by their peers as gender non-conforming) are targets for maltreatment by their peers (Horn 2007; Pauletti et al. 2014). The idea that gender identity plays a role in peer maltreatment raises the question of whether variations in children's feelings of gender typicality might relate to maltreatment from peers. Furthermore, given that gender identity develops over time in childhood (Egan and Perry 2001), are there are age-related differences in such a link?

Much of the research from which we draw has used U.S. and other English-speaking samples (e.g., Canadian) that, although generally representative of their population as a whole, might obscure processes pertaining to peer maltreatment that are particular to different groups and intergroup and cultural contexts (Hanish and Guerra 2000; Kawabata and Crick 2015). For instance, there are limits to the generalizability of results pertaining to various dimensions of gender identity across cultural groups, even within the United States (Corby et al. 2007). To more precisely characterize the nature of the literature we review, we have highlighted when findings we describe are based on non-U.S. samples. The present investigation using a U.S. sample provides new information about

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links between identity and negative peer experiences for this sample that may also be relevant to children in other cultures with both more or less extreme gender roles, pressures, and social norms.

In the current study, we take a broad view of gender typicality, and we use a recently developed dual identity measure that assesses children's feelings of similarity to own- as well as other-gender peers (Martin et al. *in press*). By using this measure, we are able to consider whether variations in children's feelings of similarity to own- and other-gender peers are related to peer maltreatment. Such an approach could reveal that gender-related intolerance is a basic and central issue to the problem of peer maltreatment that affects more children than only those who exhibit the most extreme cases of gender non-conformity. In other words, children's feelings of gender typicality might be a fundamental aspect of vulnerability to maltreatment, alongside other individual difference factors (e.g., internalizing/externalizing) that have traditionally been the focus of peer maltreatment research (Cook et al. 2010).

Our theoretical framework is grounded in cognitive theories of gender development and is based on the ideas that children's cognitions about gender motivate their own behaviors and interactions and that these cognitions change across development (Martin and Halverson 1981). We apply this perspective (Martin et al. *in press*; Martin et al. 2002; Tobin et al. 2010) to explain why a child who feels atypical might be at risk for maltreatment. Feeling atypical reflects internal summary judgments that children make concerning where they feel they fit relative to external attributes and norms they observe for their own gender (Egan and Perry 2001; Spence 1993). Research on children as young as age 2 (i.e., when they first develop an explicit sense of gender identity; Zosuls et al. 2014b), as well as in preschool and older children (Martin et al. *in press*), suggests that gender identity also includes an assessment of where they fit relative to other-gender peers. Thus, even in early childhood, children may feel atypical because they think they are not like others of their own gender, because they feel similar to the other gender, or both. We propose that children's sense of gender typicality should relate to peer maltreatment because this aspect of gender identity is in fact reflective of shared beliefs about gender norms (Egan and Perry 2001). That is, although gender atypical children may vary in what personal attributes they use to determine their degree of typicality (e.g., appearance, interests), these internal judgments may reflect attributes that are evident to others in a variety of ways, leading other children to target them for maltreatment due to perceived norm violations (Horn 2007; Pauletti et al. 2014). In addition, we propose that children might be vulnerable because they *feel* different in their gender identity, even if this difference is not obvious to others. Feelings of gender atypicality might translate into other behaviors that are not gender-specific, but that are related to peer maltreatment (e.g., low assertiveness, Schwartz et al. 1993). In

other words, perpetrators might target peers who feel less gender typical because they noticeably do not fit gender norms, because they appear socially vulnerable due to less social confidence, or because of a combination of these factors.

Little is known about the peer consequences of low gender typicality among children in early and middle childhood relative to preadolescence and adolescence. Researchers have only recently begun to investigate the full developmental trajectory of gender typicality (Martin et al. *in press*), thus we have limited information on its relevance to children's social adjustment at younger ages (Martin and Ruble 2010). As such, the first goal of our study was to explore developmental differences in the relation between children's gender typicality and peer relationship difficulties, namely peer victimization and exclusion. In particular, we studied children in kindergarten (early childhood), second grade, and fourth grade (both middle childhood). At each of these grade levels, the school context provides some similar peer experiences, including friendship formation and peer maltreatment; however, these children may differ in the sophistication of their understanding of gender identity. Kindergarteners differ from children in middle childhood in terms of having a more rigid and less complex understanding of gender identity compared to older children (Lurye et al. 2008). At around the second grade, children exhibit more advanced social cognitive abilities that provide them with a more nuanced understanding of their peers (Ruble and Dweck 1995), and by the time children are in the later part of elementary school, they have complex gender-related attitudes about own- and other-gender peers (Martin 1989; Zosuls et al. 2011). Research has also shown a complex interplay between children's gender typicality and friendships with own- versus other-gender peers that evolves by the fourth grade (Lee and Troop-Gordon 2011).

In middle childhood and later, children's friendships might also play an important role in attenuating the risk of gender-linked peer maltreatment (Lee and Troop-Gordon 2011; Smith and Leaper 2006). In fact, research on adolescents has found that the adjustment implications of low gender typicality might be due to challenges in the social context rather than to individual pathology (Smith and Leaper 2006). Thus, the second goal of our study was to investigate the role of children's own- and other-gender friendships as a buffering factor in the relation between typicality and peer maltreatment in middle childhood.

Gender Typicality and Peer Maltreatment

Starting in early childhood, children show unfavorable attitudes toward peers who express gender in a non-normative way (Martin 1989). Research primarily focused on middle childhood through adolescence has found that gender non-normative youth are at a higher risk for victimization and

exclusion (Drury et al. 2013, Columbia; Kochel et al. 2012; Young and Sweeting 2004, Scotland) and as a consequence, are at increased risk for psychological maladjustment (Roberts et al. 2013). However, studies that have investigated links between children's gender identity and peer maltreatment have also tended to focus on highly atypical populations, such as extreme tomboys (Bailey et al. 2002; Egan and Perry 2001), children referred for gender identity issues (e.g., Zucker and Bradley 1995), and gay or bisexual youth (D'Augelli et al. 2006). Discussions have usually been framed around gender atypicality rather than a continuum of gender typicality, even though it has been acknowledged that gender non-conformity may relate to peer maltreatment in broader populations beyond, for example, sexual minority youth (Horn 2007; Toomey et al. 2014). Thus, a wider range of children might be prone to peer maltreatment if researchers used a broader continuum of gender typicality and drew from a more normative population.

The Developmental Context

Gender typicality refers to self-perceptions of the degree to which individuals feel like a typical member of their own gender category and is generally assessed by asking children how similar they feel to members of their own gender (Egan and Perry 2001). Recent research suggests that a broader view of typicality, which includes comparisons to both genders, provides an enhanced understanding of the role of this dimension of gender identity in children's adjustment outcomes (Martin et al. *in press*). Our recent research indicates that as early as kindergarten, children have a firm sense of gender typicality, with most children expressing a stronger sense of feeling similar to own-gender peers than to other-gender peers (Martin et al. *in press*). Given that children across a wide spectrum of ages have a sense of gender typicality, the developmental context is an understudied yet important factor to consider when examining links with adjustment outcomes.

The link between typicality and adjustment might vary depending on children's age, perhaps because of changes in the norms and values of peer relationship contexts (Lurye et al. 2008). Social cognitive abilities (Carver et al. 2003) that do not fully emerge until middle childhood might also limit the degree to which early variations in gender identity translate into adjustment implications. For instance, in early childhood, peers' physical features (e.g., visible between-gender differences; belonging to the category "boy" or "girl") may be more salient than within-gender variations (e.g., differences in gender typicality) in perceptions of others (Ruble and Dweck 1995) and thus should play a dominant role in peer acceptance, exclusion, and victimization. However, as children enter middle childhood (approximately second to sixth grade), their interpersonal perceptions and judgments increasingly incorporate more subtle

individuating features (Ruble and Dweck 1995), including gradations in the degree to which people possess certain traits (Gonzalez et al. 2010). Thus, within-gender variations in gender typicality may become increasingly salient and come to play a more significant role in children's relationships with peers in middle childhood than in early childhood.

Friendships as Moderators

Although some factors that put children at individual risk for maltreatment also are risk factors in forming social relationships (e.g., behavioral problems), just one high-quality friendship in middle childhood can act as a buffer against negative peer experiences, even for children who face overall low levels of peer acceptance (Malcolm et al. 2006). A number of mechanisms have been proposed that might explain why friendships mitigate children's risk for peer maltreatment, including providing children with protection against victimizers as defenders or allies (Criss et al. 2002; Hodges et al. 1999; Hodges et al. 1997), as facilitators of social integration (Schwartz et al. 1999), or as markers of children's existing core social competencies and reinforcers of those qualities (Schwartz et al. 2000).

An important question to ask is whether friendships with peers of either gender can moderate any negative consequences that might arise between gender atypicality and maltreatment. It might be that both types of friends have potential for increasing children's sense of belongingness, which might lessen feelings of being different, and both own- and other-gender friends could actively defend against teasing and bullying (Smith and Leaper 2006). However, we posit that own-gender friendships may be more likely to serve a protective function than other-gender friendships for a few reasons. Own-gender friendships might be associated with increased actual (and possibly perceived) conformity to gender norms despite children's feelings of lower gender typicality (Lee and Troop-Gordon 2011). In addition, such friendships might be associated with less activation of negative stereotypes about cross-gender behaviors (e.g., sissies, tomboys) among potential perpetrators of peer maltreatment (Lee and Troop-Gordon 2011). In contrast, other-gender friendships may serve a protective function, yet also signal gender atypicality because same-gender friendships are much more common than other-gender friendships (Ruble et al. 2006)

Present Study

The first aim of our study was to investigate the relation between gender typicality, (measured as similarity to one's own gender and similarity to the other gender) and peer maltreatment, and in particular, whether there are developmental differences in this relation. Using this more comprehensive measure of typicality

allows for a greater depth of understanding of the typicality-victimization/exclusion relation by inquiring whether variations in own- versus other-gender similarity might relate differently to the risk for peer victimization/exclusion. For example, it might be the case that feeling higher levels of similarity to the other gender is linked to peer victimization/exclusion more so than feeling low levels of similarity to one's own gender. Higher other-gender similarity might represent more of a departure from feelings of compatibility with own-gender peers and might be more highly associated with attributes that children's peers interpret and respond to as gender nonconforming. Importantly, our measure of maltreatment, victimization/exclusion (combined due to high correlation, see Methods section), represents a broad range of ways in which children might be the recipients of negative treatment from their peers, encompassing both aggressive and nonaggressive behaviors. Given that children develop the ability to use more subtle, graded differences in individuating features to process information about peers in middle childhood (Ruble and Dweck 1995), we expected to see relations between lower gender typicality and victimization/exclusion among older children (second and fourth graders).

Our second aim was to investigate whether friendships with own- and other-gender peers attenuate the relation between gender typicality and risk for victimization/exclusion. Lower gender typicality might lead children to have fewer own-gender friends, friends with more behavior problems, and possibly fewer friends overall (Martin et al. 2012; Young and Sweeting 2004, Scotland); but, there is also evidence that some of these children make friends with other-gender peers (Martin et al. 2012; Zucker and Bradley 1995). At the same time, own-gender friendships might more effectively serve a protective function because such friendships signal greater own-gender typicality in themselves and thus may be associated with greater typicality according to the perceptions of peers. Therefore, it becomes important to ask whether both types of friends moderate the link between typicality and maltreatment.

We tested our hypotheses using multiple regression analyses. Based on the theory that children are limited in their ability to use more subtle and graded features in their person perceptions (Ruble and Dweck 1995), our first hypothesis was that lower own-gender similarity and higher other-gender similarity, our independent variables, would be related to higher victimization/exclusion, our dependent variable, in middle childhood (second and fourth grade) (Hypothesis 1). Specifically, we tested these relations in separate regression models in which victimization/exclusion was the dependent variable and the interactions between own-gender similarity and grade was the predictor in one model and other-gender similarity and grade was the predictor in the other model.

Based on theories of the protective role of friendships (Criss et al. 2002; Hodges et al. 1997; Schwartz et al. 1993; Schwartz et al. 2000), in our second set of hypotheses, we predicted that

the second set of independent variables included in our regressions models, own- and other-gender friendships, would moderate the link between typicality and victimization/exclusion (Hypothesis 2a) but that own-gender friendships would provide more consistent moderation than other-gender friendships (Hypothesis 2b). These moderating effects of own- versus other-gender friendships were tested in separate models using interaction terms with own- and other-gender similarity. Age was also included as an independent variable and two-way interaction terms of age and own- and other-gender similarity were used to test developmental differences in Hypothesis 1 and three-way interaction terms of age, typicality (own- and other-gender similarity) and gender were used to test developmental differences in Hypotheses 2. Multiple regression analyses were conducted separately for girls and boys. We felt that both girls and boys are likely to be vulnerable to peer maltreatment linked to gender typicality and thus the analyses were conducted separately by gender for exploratory purposes.

Method

Participants

Participants were kindergarten, second, and fourth grade children from eight public elementary schools in an urban Southwestern city in the United States. Schools were chosen in consultation with local school districts to develop a sample of children that was representative of the area. With principal's approval at each school, teachers were approached for permission to conduct classroom-wide research, and all children in each participating class were then recruited to participate in a 2-year longitudinal study on gender development. Students from each class who returned signed parental consent forms to opt into the study and provided assent on the day of data collection were included in the study (47 %). The present study was based on data from the first year of the study.

The final sample consisted of 210 kindergarten children ($M_{\text{age}}=5.81$, $SD=.44$, 52 % female), 205 second grade children ($M_{\text{age}}=7.62$, $SD=.43$, 50 % female), and 205 fourth grade children ($M_{\text{age}}=9.56$, $SD=.65$, 44 % female). The children were relatively ethnically diverse, came from a large range of socioeconomic status backgrounds, and the majority came from two-parent households (see Table 1). Teachers (114 women, 15 men) reported on children's experiences of peer victimization/exclusion, and parents or guardians (83.5 % mothers, 13.1 % fathers, 3.4 % other) reported on children's friendships and child demographics. Parents ($M_{\text{age}}=36.84$ years, $SD=7.05$, range 21–66), like their children, were relatively ethnically diverse (62 % White, 20 % Latino/Hispanic, 5 % Asian American, 4 % African American, 3 % Native American, 1 % Pacific Islander, 5 % other). There were no significant differences in study variables

Table 1 Child demographics by age and gender

Variable	Kindergarten		Second Grade		Fourth Grade	
	Boys <i>n</i> (%)	Girls <i>n</i> (%)	Boys <i>n</i> (%)	Girls <i>n</i> (%)	Boys <i>n</i> (%)	Girls <i>n</i> (%)
Household composition						
Single parent	20 (20.0)	28 (25.9)	28 (28.0)	25 (24.3)	23 (20.4)	23 (25.3)
Two parent	80 (80.0)	108 (74.1)	72 (72.0)	78 (75.7)	90 (79.6)	68 (74.7)
Ethnicity						
White	46 (46.0)	53 (48.6)	58 (58.6)	58 (55.8)	63 (56.3)	46 (51.1)
Black/African American	6 (6.0)	6 (5.5)	5 (5.1)	7 (6.7)	5 (4.5)	1 (1.1)
Latino/Hispanic	21 (21.0)	20 (18.3)	14 (14.1)	19 (18.3)	22 (19.6)	16 (17.8)
Asian	6 (6.0)	7 (6.4)	7 (7.1)	4 (3.8)	3 (2.7)	8 (8.9)
Native American	5 (5.0)	5 (4.6)	4 (3.9)	1 (1.0)	4 (3.6)	3 (3.3)
Pacific Islander	0 (0.0)	2 (1.8)	1 (1.0)	0 (0.0)	1 (0.9)	1 (1.1)
Other	16 (16.0)	16 (14.7)	10 (10.1)	15 (14.4)	14 (12.5)	15 (16.7)
Household income						
\$25,000 or less	19 (19.4)	22 (20.4)	17 (17.3)	12 (11.9)	19 (17.4)	19 (21.1)
\$26–50,000	24 (24.5)	18 (16.7)	26 (26.5)	21 (20.8)	25 (22.9)	18 (20.0)
\$51–75,000	20 (20.4)	31 (28.7)	16 (16.3)	14 (13.9)	18 (16.5)	12 (13.3)
\$76–100,000	11 (11.2)	12 (11.1)	17 (17.3)	24 (23.8)	21 (19.3)	21 (23.3)
\$101–150,000	13 (13.3)	10 (9.3)	8 (8.2)	16 (15.8)	13 (11.9)	9 (10.0)
above \$150,000	11 (11.2)	15 (13.9)	14 (14.3)	14 (13.9)	13 (11.9)	11 (12.2)

Age and gender differences in child demographics were tested using analysis of variance; no group differences were found

found either by gender of parent or by mother versus non-mother reporter using Welch's *t*-tests (for either the total sample or by child's gender), which are robust to unequal sample sizes.

Procedure

In the mid-to-late fall semester, children were administered questionnaires at school. Second and fourth grade children were administered the questionnaire in small groups of three to five students with one trained researcher guiding them through the questionnaire packet. A trained researcher individually interviewed kindergartners and recorded their verbal responses in the questionnaire packet. The questionnaires took approximately 45 min to complete and consisted of measures assessing children's gender-related beliefs and attitudes and friendships. Four different versions of the questionnaire were used to control for order effects. A parent questionnaire was sent home with the consent form, and parents were asked to complete the questionnaire and return it with the consent form. The parent questionnaire included items asking demographic information and measures related to their child's social behaviors and their own and their child's gender-related attitudes. In the spring semester, teachers reported on the social behaviors of each student in their class participating in the study. Parents, teachers, and schools received monetary compensation for

their participation, and children were given a small prize upon completion of the questionnaire.

Measures

Perceived Similarity to Own-Gender Peers

Children completed a measure that assessed their perceived similarity to own-gender peers (Martin et al. *in press*). This measure used a graphic of two circles representing the self and the own-gender group that were spaced at varying increments of closeness, and children were asked to select one of the spacings in response to questions. Fourth graders' response choices ranged from 0 (circles farthest apart) to 4 (overlapping circles). Second graders' and kindergartners' response choices ranged from 0 (circles farthest apart) to 2 (overlapping circles). Because scaling for kindergarten and second grade children was different than that of fourth grade children, younger children's responses were re-scaled to be comparable to the 5-point fourth grade scale, based on procedures suggested by Reiser and Eggum (2007). Children were asked a global question about perceived similarity to own-gender peers (second and fourth graders: "How similar do you feel to [girls/boys]?"; kindergartners: "How much are you like girls/boys?"). Second and fourth grade children also were asked questions about four specific behavioral and appearance-related

dimensions of similarity (act like [girls/boys], look like [girls/boys], like to do the same things as [girls/boys], like to spend time with [girls/boys]). Responses on the five items administered to the older children were then averaged to create a score for similarity to own-gender peers (fourth grade: $\alpha = .83$; second grade: $\alpha = .79$ for own-gender).

Perceived Similarity to Other-Gender Peers

Using the same measure and response scale described previously, we assessed children's perceived similarity to other-gender peers. Fourth and second graders responded to the same five items, this time assessing their similarity to other-gender peers, and Kindergarteners responded to the same global item of similarity as described above (fourth grade: $\alpha = .86$; second grade: $\alpha = .76$).

Parent-Reported Child's Friendships with Own- and Other-Gender Peers

Parents reported how many of their child's friends at school were own-gender peers, on a 5-point scale, ranging from 0 (*None/Almost None*) to 4 (*Almost All/All*). We measured school friendships because those are likely the most relevant friendships in terms of protecting children against victimization/exclusion that occurs in the school context (Hodges et al. 1999). Parent reports of children's friendships have been found to have very high agreement with children's reports of friendships (Fletcher et al. 2013; Ladd and Emerson 1984). Using the same item, parents reported how many other-gender friends their child had at school.

Victimization/Exclusion

Teachers completed a questionnaire assessing each child's levels of peer victimization and exclusion. The peer victimization scale (Ladd and Kochenderfer-Ladd 2002) consisted of five items (e.g., "How often is this child hit or kicked by other children") with a 3-point scale, ranging from 0 (*Seldom*) to 2 (*Often*). A peer victimization score was obtained by averaging the scores for all items ($\alpha = .85$), such that a higher score indicated higher levels of victimization. Teachers also completed the exclusion subscale of the Child Behavior Scale (Ladd et al. 2009), which included seven items (e.g., "Not chosen as playmate by peers"), each rated on a 3-point scale ranging from 0 (*Doesn't Apply*) to 2 (*Certainly Applies*). A peer exclusion score was obtained by averaging the scores ($\alpha = .92$), such that a higher score indicated higher levels of exclusion. Because the victimization scale and the exclusion subscale were highly correlated ($r = .72, p < .001$), as might be expected based on previous research that has found these two constructs to fall into the same factor (Rubin et al. 2006), the two measures were combined into one victimization/exclusion scale ($\alpha = .93$).

Results

Descriptive Analyses

Our main independent variables (similarity to own- and other-gender peers and parent reported friendships with own- and other-gender peers) were normally distributed for boys and girls in all grades. Table 2 shows means and standard deviations of these variables and the interaction terms among them

Table 2 Means and standard deviations of study variables

Variable	Kindergarten				Second Grade				Fourth Grade			
	Boys		Girls		Boys		Girls		Boys		Girls	
	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>	<i>M</i>	<i>SD</i>
Similar-Own	3.16	1.34	3.39 _a	1.26	2.95	1.15	2.90 _a	.98	2.83 _b	1.01	2.29 _{ab}	.96
Similar-Other	1.30 _{cd}	1.57	1.37 _a	1.58	.72 _c	.93	.89 _{ab}	.84	.74 _{de}	.77	1.43 _{bc}	1.03
Friends-Own	2.85	.71	2.66	.88	2.98	.78	2.91	.69	2.93	.90	2.86	.81
Friends-Other	2.08	.86	1.81	.84	1.89	1.03	1.73	.84	1.64	.95	1.68	.91
Similar-Own X Friends-Own	-.10	.82	.19	1.12	.04	.90	-.02	.72	.21	.95	.23	.78
Similar-Own X Friends-Other	.11	.85	-.18	1.04	.06	1.27	.21	.91	.00	.97	-.21	.92
Similar-Other X Friends-Own	-.01	1.02	.05	1.27	-.02	.48	-.03	.51	-.16	.83	-.12	.80
Similar Other X Friends-Other	.09	1.31	.10	1.25	.22	.82	.13	.78	.12	.86	.20	1.11
Victimization/Exclusion	.28 _{abc}	.39	.10 _c	.19	.17 _a	.33	.13	.25	.18 _b	.32	.12	.27

ns = 210 Kindergarteners, 205 2nd graders, 205 4th graders. Similar-Own/Other = Child report of similarity to [own/other]-gender peers, ranging from 0 to 4. Friends-Own/Other = Parent report of their child's [own/other]-gender friendships, ranging from 0 to 4. Victimization/Exclusion = Teacher report of victimization and exclusion, ranging from 0 to 2. Independent variables were centered before creating interaction terms. Within each row, shared subscripts indicate that means differ at $p < .01$

(see below for further explanation of interaction terms), separately by grade and by gender. A multivariate analysis of variance was conducted to test for grade and gender differences in the main study variables. Overall, this analysis indicated a significant grade by gender interaction, $F(10, 1164)=2.83$, $p=.002$, $\eta^2=.02$; specifically, for own- and other-gender similarity and victimization/exclusion, $F_s(2, 586)\geq 3.40$, $p_s\leq .03$, $\eta^2_s\geq .01$. Probing these interactions indicated that girls in higher grades were higher in own-gender similarity than girls in lower grades ($p_s\leq .001$) and that among fourth graders, boys were higher in own-gender similarity than girls ($p< .001$; see Table 2). When considering similarity to other-gender peers, second grade girls were lower in other-gender similarity than fourth grade and Kindergarten girls ($p_s\leq .002$), and Kindergarten boys were higher in other-gender similarity than second and fourth grade boys ($p_s< .001$). Further, fourth grade girls had higher other-gender similarity than boys ($p< .001$). Finally, Kindergarten boys had higher victimization/exclusion than second or fourth grade boys ($p_s\leq .03$) and had higher victimization/exclusion than Kindergarten girls ($p< .001$). Zero-order correlations were also computed separately for boys and girls by grade to assess the relations among all study variable. Higher similarity to own-gender peers and own-gender friendships were associated with lower victimization/exclusion, and higher similarity to other-gender peers was associated with higher victimization/exclusion; however, patterns differed across gender and grade (see Table 3).

Hypothesis Testing

Our first hypothesis was that lower own-gender similarity and higher other-gender similarity would be associated with higher victimization/exclusion among second and fourth graders. According to our second hypotheses, we expected associations between typicality and victimization/exclusion to be moderated by friendships at school such that friendships might act as a buffer against high victimization/exclusion. Although we anticipated that both own- and other-gender peers would serve a protective function (Hypothesis 2a), we hypothesized this relation would be found more consistently with own-gender peers (Hypothesis 2b).

To test the hypothesized relations, four hierarchical multiple regression analyses were conducted; each contained one measure of similarity (similarity to own-gender or similarity to other-gender) and one measure of parent-reported friendships (own- or other-gender friendships). Because we were interested in developmental differences, dummy coded variables for second grade and fourth grade (with Kindergarten as the reference group) were included in each regression model. Thus, in the first step of each model, first-order predictors were included: grade (second and fourth), similarity (either own- or other-gender), and parent-reported friendships (either own- or other-gender). In the second step of each regression model, we added multiplicative interaction terms among these variables by multiplying similarity by age, friendships by age, and similarity by friendships. Similarity by grade and

Table 3 Correlations of study variables by age and gender

Variable	1	2	3	4	5
Kindergarten					
1. Similarity to Own-Gender Peers	–	–.07	–.09	.12	.10
2. Similarity to Other-Gender Peers	–.19*	–	–.01	.07	.03
3. Friendships with Own-Gender Peers	.18	.04	–	.07	–.05
4. Friendships with Other-Gender Peers	–.16	.08	.05	–	–.02
5. Victimization and Exclusion	–.03	.23*	–.14	–.08	–
Second Grade					
1. Similarity to Own-Gender Peers	–	–.37***	.05	.05	–.15
2. Similarity to Other-Gender Peers	–.10	–	–.03	.24*	.22*
3. Friendships with Own-Gender Peers	–.03	–.06	–	.05	–.03
4. Friendships with Other-Gender Peers	.26*	.20*	–.23*	–	.00
5. Victimization and Exclusion	.07	.16	–.20*	–.07	–
Fourth Grade					
1. Similarity to Own-Gender Peers	–	–.19*	.23*	.01	–.13
2. Similarity to Other-Gender Peers	–.29**	–	–.22*	.16	.03
3. Friendships with Own-Gender Peers	.29**	–.13	–	–.11	–.38***
4. Friendships with Other-Gender Peers	–.24*	.21*	–.21*	–	–.18
5. Victimization and Exclusion	–.29**	.09	–.41***	.05	–

ns = 210 Kindergarteners, 205 2nd graders, 205 4th graders. Correlations for boys are presented above diagonal, correlations for girls are presented below

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

friendships by grade interaction terms allowed us to assess developmental differences in the association between similarity and victimization/exclusion (Hypothesis 1), as well as potential developmental differences in the association between friendships and victimization/exclusion. Further, the similarity by friendships interaction term enabled us to assess whether friendships moderated associations between similarity and victimization/exclusion (Hypotheses 2). In the third step of each regression model, we added two three-way interactions for similarity by friendships by grade (second and fourth) to assess developmental differences in the moderating role of friendships on victimization/exclusion.

Continuous predictors were mean centered prior to creating interaction terms. Significant interactions with grade were further examined in separate regression models for each grade level. Significant interactions between similarity and parent-reported friendships were probed according to procedures suggested by Aiken and West (1991): Parent-reported friendship with either own- or other-gender peers was held constant at the centered mean and at one standard deviation above and below the centered mean. The slopes of simple regression lines of similarity predicting victimization/exclusion were calculated separately at those three values of the friendship variable. The variance inflation factor was calculated for each predictor variable to assess multicollinearity; values for independent variables were below 1.60, and values for interaction terms were below 3.57 (although 3.57 is high, this is expected for multiplicative interaction terms, and centering predictors decreases the correlations among independent variables and interaction terms).

Given that past research has shown gender differences in typicality-type measures (Egan and Perry 2001), we initially ran a full model that included interactions among all variables and gender. However, this model indicated minimal gender differences among associations of interest. For clearer presentation, we report simplified models run separately for boys and girls; readers are invited to contact the lead author for more information about additional analyses.

Developmental Differences in the Association Between Gender Typicality and Victimization/Exclusion

Our first hypothesis was that lower typicality (either lower own-gender similarity or high other-gender similarity) would be associated with higher victimization/exclusion among second and fourth graders. For girls, we found a significant own-gender similarity \times fourth grade interaction (in the model with other-gender friendships) (see Table 4 for all regression model coefficients). Probing this interaction by running the model separately for fourth graders and Kindergarteners (the reference group) indicated that higher own-gender similarity was associated with less victimization/exclusion at fourth grade ($b = -.09$, $p = .006$) but not Kindergarten ($b = -.01$, $p = .56$).

Other-gender similarity also was associated with higher victimization/exclusion for girls, $b = .03$, $p = .006$, but this association did not differ by grade. Interestingly, for boys, there was no main effect of similarity to other-gender peers on victimization/exclusion. However, there were significant interactions between similarity to own-gender peers and second grade for boys (in the model with both parent-report of own- and other-gender friendships). Probing this interaction indicated that lower similarity to own-gender peers was associated with higher victimization/exclusion for second graders ($bs \leq -.05$, $ps \leq .06$), but not for Kindergarteners ($bs \geq .03$, $ps \geq .24$). In summary, our findings provide some support for the notion that gender similarity is related to victimization/exclusion for children in middle childhood.

Moderation of the Typicality-Victimization Link by Friendships With own- and Other-Gender Peers

Our second hypothesis was that associations between typicality and victimization/exclusion would be moderated by friendships with own- and other-gender peers (Hypothesis 2a) and that moderation would be stronger for own-gender friendships (Hypothesis 2b). For girls, we found support for Hypothesis 2a. The main effect of similarity to other-gender peers ($b = .03$, $p = .006$) suggests that girls who feel more similar to the other gender are more highly victimized/excluded; however, there was a significant interaction between similarity to other-gender peers and parent-reported friendships with other-gender peers ($b = -.04$, $p = .005$). Probing this interaction indicated that, for girls with many other-gender friends, there was, in fact, a negative association between similarity to other-gender peers and victimization/exclusion. Thus, having more other-gender friends was protective against victimization/exclusion for girls who were high in other-gender similarity (see Fig. 1). However, note that none of the simple slopes reached significance: slopes for low (.01), medium (–.02), and high (–.05) parent-reported other-gender friends, $ps \geq .36$. For boys, we did not find support for Hypothesis 2a or 2b, as indicated by nonsignificant interactions between similarity and friendships.

Additional Findings

In models with similarity to own-gender peers, we found a main effect indicating that parent-reported friendships with own-gender peers were protective against victimization/exclusion for both girls and boys ($bs \leq -.07$, $ps \leq .003$). However, in models with similarity to other-gender peers, we found significant interactions between parent-reported friendships with own-gender peers and fourth grade, again for both girls and boys ($bs \leq -.11$, $ps \leq .04$). Probing these interactions by running models separately for fourth graders and Kindergarteners indicated that, for both boys and girls,

Table 4 Regression coefficients (b) of gender similarity and friendships predicting victimization/exclusion

Regression Steps	Similar to Own-Gender Peers		Similar to Other-Gender Peers	
	Friends-Own	Friends-Other	Friends-Own	Friends-Other
Girls				
Step 1: 2nd Grade	.03	.00	.05	.03
4th Grade	.02	-.01	.03	.01
Similarity	-.01	-.02	.03**	.03**
Friends	-.08***	-.01	-.08***	-.01
Step 2: Similarity X Friends	.02	.01	-.01	-.04**
Similarity X 2nd Grade	.00	.04	.02	.04
Similarity X 4th Grade	-.05	-.07*	-.01	.00
Friends X 2nd Grade	-.06	.00	-.06	-.02
Friends X 4th Grade	-.07	.03	-.11**	.04
Step 3: Similarity X Friends X 2nd Grade	.04	-.02	-.03	-.04
Similarity X Friends X 4th Grade	.06	.05	.06	-.02
Boys				
Step 1: 2nd Grade	-.12*	-.15**	-.11*	-.13*
4th Grade	-.10*	-.12*	-.09	-.10*
Similarity	-.01	-.01	.02	.02
Friends	-.07**	-.03	-.07**	-.03
Step 2: Similarity X Friends	.03	.01	-.04	-.02
Similarity X 2nd Grade	-.08*	-.10*	.05	.06
Similarity X 4th Grade	-.05	-.07	-.03	.01
Friends X 2nd Grade	.01	.02	-.02	-.02
Friends X 4th Grade	-.09	-.04	-.12*	-.07
Step 3: Similarity X Friends X 2nd Grade	-.08	-.11*	-.04	.10
Similarity X Friends X 4th Grade	.00	-.04	-.06	.03

Grade is dummy coded with Kindergarten as the reference group. Friends-Own = Parent-reported friendships with own-gender peers. Friends-Other = Parent-reported friendships with other-gender peers

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

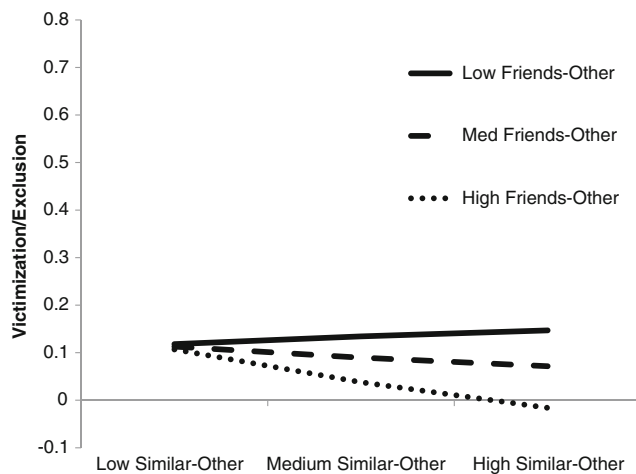


Fig. 1 Association between girls' similarity to other-gender peers and victimization/exclusion, moderated by parent-reported friendships with other-gender peers

own-gender friendships were protective for those in fourth grade ($bs = -.14$, $ps < .001$), but not for those in Kindergarten ($bs = -.03$, $ps \geq .11$).

Discussion

Our study demonstrated age-related differences in the patterns of links between typicality (i.e., similarity) and victimization/exclusion. In support of our first hypothesis, associations between own-gender similarity and victimization/exclusion were generally found among second and fourth graders, but not among Kindergarteners. However, when considering other-gender similarity, links were found with victimization/exclusion for all youth, even as early as Kindergarten (at least for girls). For both genders, own-gender friendships were generally protective against peer maltreatment, thus highlighting the importance of considering the gender of children's peers when investigating child maltreatment processes. We also

found limited support for the moderating effects of friendship in our second hypothesis. For girls, other-gender friendships appeared to serve a protective function against victimization/exclusion when children felt high other-gender similarity. Taken together, our results indicate that the construct of gender typicality—both in terms of similarity to own- and other-gender peers—is important for understanding peer maltreatment processes and that these processes appear to emerge even among very young children who have generally not been thought of as having a consequential sense of gender typicality.

The Link Between Gender Typicality and Victimization

Overall, we did not find any main effects linking low (own-gender) typicality to victimization/exclusion for Kindergarteners, consistent with the findings from one study involving a normative sample of young children (Martin et al. 2012). However, for girls, we found that other-gender similarity was associated with victimization/exclusion, with no evidence of developmental difference. That is, even for Kindergarten girls, other-gender similarity was associated with higher levels of victimization/exclusion. Although the lack of developmental differences for other-gender similarity was unexpected, this finding lends credence to the idea that gender typicality is already becoming integrated in a meaningful way into young children's self-concepts (Martin et al. *in press*). This finding is also consistent with the idea that gender identity is an early emerging construct that involves intergroup awareness of one's relation to each gender, rather than just one's own-gender (Zosuls et al. 2009, 2014b), and that it is a highly salient aspect of young children's behaviors and appearances (Halim et al. 2013).

It is interesting, however, that the link between other-gender similarity and victimization/exclusion was found for girls but not for boys. For Kindergarteners of both genders, there are norms about gender-appropriate behavior and appearance (see Ruble et al. 2006) and presumably adopting behavior and appearance of the other gender could set the stage for peer maltreatment. However, there are differences in the ways in which young girls and boys express their gender identities that might explain the asymmetry in our results. Young girls in particular commonly express their gender roles in exaggerated and visually salient ways, for instance, by wearing pink frilly dresses (Halim et al. 2013); thus feeling other-gender similarity and displaying this similarity might be especially readily perceived as incongruous with peer norms among girls. On the other hand, young boys do not appear to display their gender identities as strongly in similarly visually salient ways. At the same time, boys are under particularly strong pressures not to exhibit behaviors that cross gender boundaries (Blakemore 2003) and are less likely to show flexibility in their gender-typed behavior than young girls do (DiDonato et al. 2012). Thus, pressure to conform to gender-appropriate behavior and appearance among

boys prevents the displays of feeling similar to the other gender (e.g., wearing dresses) that might lead to even stronger peer maltreatment. Future research is needed to explore why the genders differ in how gender typicality and peer maltreatment are linked at this early age.

In second grade, low similarity to own-gender peers among boys was associated with greater victimization/exclusion (compared to Kindergarten boys). In other words, by the second grade, boys need not necessarily feel similar to girls to be victimized/excluded; they might only have to feel less typical of their own gender compared to other boys. From a developmental perspective, this finding suggests that in middle childhood boys are cognizant of and reinforce more narrowly defined boundaries for what is considered acceptable in terms of gender typicality. This idea is also consistent with the notion that boys are being monitored by peers more closely than are girls, and deviations from the typical for their own gender are becoming central ways to identify children who are different from others thus making them susceptible to peer maltreatment. It is not clear why this difference from younger boys was not also found among fourth graders, although we later discuss potential dynamics that might lead older boys to compensate for feelings of lower own-gender similarity to meet strong pressures to conform to norms as they approach adolescence.

In contrast, by the second grade, girls have reached a period of greater gender flexibility and might have more leeway in terms of expectations for them to adhere to gender stereotypes. For instance, although children overall appear to show a decline in the endorsement of gender stereotypes across elementary school (Trautner et al. 2005, Germany), some studies suggest that this shift towards flexibility in gender stereotypes is greater for girls compared to boys (Miller et al. 2009; O'Brien et al. 2000; Signorella et al. 1993). Although feeling similarity to the other-gender might increase girls' risk for victimization/exclusion, girls might still have considerable leeway in terms of the degree to which they may feel similar to own-gender peers. For example, it might be considered normative and acceptable for girls to range from being girly girls to not girly girls, and possibly even tomboys in some respects (Martin and Dinella 2012), but boys who veer from being anything other than typical boys' boys might not be afforded the same latitude and might be more vulnerable to negative peer treatment.

Among fourth grade girls, lower similarity to own-gender peers was associated with higher victimization/exclusion (compared to Kindergarteners). We speculate that although second grade girls might enjoy greater flexibility compared to boys in terms of conformity to own-gender norms, as they approach puberty and the idea of romantic relationships with the other gender become more salient, girls might face new pressures and ideals related to femininity that lead own-gender similarity to take on greater significance in terms of negative peer treatment. For example, adolescent girls' concerns with grooming,

physical attractiveness, and being fashionable appear to show earlier roots in elementary school (Adler et al. 1992).

Why the fourth grade boys did not show a link between own- or other-gender typicality and peer maltreatment is surprising and interesting. Older children tend to show stronger reactions against gender norm violations than do younger children (Carter and McCloskey 1984) and so we might expect to find strong links between typicality and maltreatment in this group. The lack of these relations could be due to the effectiveness of earlier peer socialization on boys such that few boys display any signs of low gender typicality even if they feel strongly identified with the other gender or if they feel low levels of identification with their own gender. Indeed, second and fourth grade boys on average reported low levels of other-gender similarity, suggesting that there may be different socialization pressures for each gender. If early socialization experiences more strongly modify boys' external displays of low typicality, these same boys may report and experience stronger felt pressure for being low gender typical than do girls, which might ultimately lead to adjustment difficulties (Egan and Perry 2001).

Moderation by Friendships

We found that other-gender friends moderated the association between other-gender similarity and victimization/exclusion, such that having other-gender friends was protective for those high in other-gender similarity. However, this protective effect was only found for girls. Thus, it seems that, for girls, other-gender friends might serve an alternative, protective friendship system for children that provides social and emotional benefits (Bukowski et al. 1999; Kovacs et al. 1996). It may be that, although it is socially acceptable for boys to support, protect, and defend girls who are their friends, the same might not be true for boys. For boys, norms dictate toughness and stoicism as core aspects of masculine behaviour (Santos et al. 2013). Thus, for boys who feel similar to other-gender peers, other-gender friendships fall short of specifically protecting these gender atypical boys. In fact, friendships with other-gender peers might in themselves represent a form of nonconformity, especially before cross-gender interactions become more common and accepted at older ages (Connolly et al. 2004), and thus reinforce feelings of atypicality rather than shield children from its consequences.

The Developmental Impact of Friendships

We found a main effect of friendships with own-gender peers for both boys and girls (in models accounting for similarity to own-gender peers), such that those with more own-gender friendships were less victimized/excluded. Own-gender friends might serve as an indication that a child is socially accepted. Interestingly, when accounting for similarity to

other-gender peers, we found that friendships with own-gender peers were associated with less victimization/exclusion for fourth graders, but not for Kindergarteners. These developmental differences might reflect the increasing importance and prominence of more sophisticated forms of aggression (e.g., relational aggression; Cillessen and Mayeux 2004) due to advancing social cognitive skills. As such, own-gender friendships might become increasingly important as children grow older as a protection from peer dynamics that play out in subtle and unseen ways.

We did not test for the mechanisms that might account for why own-gender friendships became increasingly important for protecting children from victimization/exclusion; future research is needed to clarify these relations. As we have suggested, a few processes might have been in play, including changing demands related to gender roles and the increasingly complex ways in which children interact. The role of own-gender friendships for fourth graders might also have to do with the changing nature of friendships that occurs with development. As children's social skills mature, they approach friendships with a greater capacity for perspective taking and their friendships become more intimate (Berndt, 1982). Thus, older children might be better able to look past gender atypicality (e.g., high other-gender similarity), especially when a child has own-gender friendships, and better recognize individual qualities that make a gender atypical peer likeable and acceptable. Younger children are still learning how to balance group identity with a sense of what is fair and justifies maltreatment; however, as children approach adolescence, they have a more sophisticated grasp of the dynamics involved in group norms, intergroup relations, and issues of discrimination (Killen et al. 2013). In addition, children who feel atypical yet do not display it in visible ways might also build confidence and social skills in their friendships that protect them from peer maltreatment. On the other hand, younger children might be more likely to suffer social consequences as they grapple with internal feelings of low gender typicality.

Limitations and Future Directions

A few caveats should be kept in mind when interpreting the results of our study. The similarity measures captured children's self-perceptions of similarity, and not peers' perceptions, and thus it is unknown how much their peers perceived children to be gender typical. Future research could more closely investigate both children's self-perceptions and peers' perceptions of gender typicality to better understand how lower typicality translates into victimization/exclusion. We also wish to note that the similarity measure for second and fourth graders included items that directly tapped into feelings of similarity in terms of behavioural and appearance-related characteristics, as well as more global comparisons of typicality, and thus encompassed both specific and broad

characteristics that reflect a range of sources of felt typicality. These aspects of typicality might be related to overt behaviors in different ways. Thus, whereas gender typicality is thought to reflect summary judgments of similarity that should incorporate comparisons to others on various behavioural dimensions and relate to and be responsive to social experiences (Egan and Perry 2001; Hodges and Perry 1999; Spence 1993), future work could directly assess the separate contributions of actual gender-related behaviors and attributes and felt gender similarity.

Although the incorporation of child, teacher, and parent reports avoids issues of shared method variance, future studies could collect data on children's perceptions of one another using methods such as peer nominations and ratings. In addition, it would be interesting to know whether the findings hold when using children's self-reports of their friendships because parents might not be privy to all the peers their children consider friends in the school setting. Future research could also incorporate measures that would allow a finer-grained analysis of maltreatment behaviors to better understand the range of children's experiences and potential motivators for maltreatment on the part of perpetrators.

Our study was conducted in the United States and cross-cultural investigations could also further our knowledge about how and why the processes we describe develop. For example, gender beliefs held within a culture might influence what peer norms develop, how those norms are used by children in their self-assessments of gender typicality, and which children are targeted for maltreatment. Such insights might be particularly valuable for understanding cultural factors (e.g., social traditionalism regarding gender) that make children more or less vulnerable to victimization/exclusion and for designing interventions that target children's peer perceptions and norms within differing cultural contexts. Gender roles and stereotypes are socially constructed, and the existence of gender-based victimization and exclusion suggests the need for interventions that more broadly address children's gender-related perceptions and how they approach their relationships with own- and other-gender peers. The developmental differences observed in our study also underscore the need for such interventions to account for differences in identity-related processes and social cognitive sophistication.

Implications and Conclusions

An important aspect of our work was our consideration of both own- and other-gender similarity. This distinction was especially interesting when considered from a developmental perspective and suggested that different phases of gender development, such as gender rigidity, might impact how children respond to variations in their peers' feelings of own- and other-gender similarity. It would be interesting for future research to more directly test linkages between felt similarity,

phases of gender development, and intergroup perceptions and behaviors, including victimization/exclusion.

Further, our intergroup approach to negative peer treatment not only helps to explain our findings, but also places greater focus on a different level of analysis. Much peer maltreatment research has focused on the idea that children engage in behaviors that invite negative treatment; however, a perspective that takes account of children's developing social-cognitive abilities indicates that developmental considerations and group-level peer processes might deserve greater attention (Killen et al. 2013). Children's social cognitions play an important role in their peer relationships (Caputi et al. 2012), but more work is needed to understand how perceptions linked to social identities (e.g., gender) influence peer maltreatment. Individual differences that are linked to group membership, such as children's level of gender role rigidity and comfort with own- versus other-gender peers, might also play a role, especially from the standpoint of perpetrators. For example, children who espouse rigid views of what girls and boys should be like and who feel that they can only confidently relate to own-gender peers (Zosuls et al. 2014a) might react with discomfort and negativity to children who do not conform to their narrow views of girls and boys. This idea of more flexible social self-perceptions is consistent with findings that indicate interventions that focus on prompting more flexible views of people are effective in reducing aggressive responses to victimization/exclusion (Yeager et al. 2013).

While the field of children's gender development has devoted much research to understanding processes such as gender identity development and gender-typed behavioral preferences, relatively less attention has been devoted to understanding the impact of gender identity on children's peer relationships. Given the importance of understanding and combatting peer maltreatment, we feel that our research represents an important step toward bringing greater attention and awareness to gender-related characteristics as important risk factors for victimization and exclusion.

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