

Adolescents' Judgments of Doubly Deviant Peers: Implications of Intergroup and Intragroup Dynamics for Disloyal and Overweight Group Members

Dominic Abrams¹, Sally B. Palmer², Julie Van de Vyver¹, Daniel Hayes³, Katrina Delaney⁴, Sophie Guarella¹ and Kiran Purewal¹

¹*University of Kent*

²*UCL Institute of Education*

³*University College, London*

⁴*Hertfordshire County Council*

Abstract

Group membership, loyalty, and weight are highly relevant for adolescent peer evaluations at school. This research tested how in-group/out-group membership affected judgments of peers who deviated from social norms for weight and loyalty. Two hundred and forty 11–13-year-olds (49 percent female; 94 percent Caucasian) judged two in-group or out-group peers: one was normative (loyal and average weight) and the other was non-normative (i.e., 'deviant'). The deviant target was overweight, disloyal to their own group (school), or both ('doubly deviant'). Derogation of overweight relative to average weight peers was greater if they were in-group rather than out-group members, revealing a strong 'black sheep effect' for overweight peers. Disloyal out-group deviants were judged favorably, but this effect was eliminated if they were doubly deviant, suggesting that their disloyalty was insufficient to overcome the overweight stigma. Consistent with developmental subjective group dynamics theory, effects of group membership and types of deviance on adolescents' favorability toward peers were mediated by adolescents' perceptions of how well the deviant members would 'fit' with the in-group school.

*Correction added on 28 November 2015, after original online publication on 28 October 2015. Due to a mistake during production, the original version of the article was published online with an error in the title, which has been corrected in this version.

This research was supported by ESRC grant number ES/J500148/1.

Correspondence should be addressed to Dominic Abrams, Centre for the Study of Group Processes, School of Psychology, University of Kent, Canterbury CT2 7NP, Kent, UK. Email: D.Abrams@kent.ac.uk

Additional Supporting Information may be found in the online version of this article at the publisher's web-site.

Implications for theory and strategies to reduce peer exclusion, particularly weight stigmatization, are considered.

Keywords: subjective group dynamics; overweight stigma; loyalty; peer exclusion

Peer exclusion powerfully affects adolescents' fundamental needs for belonging and esteem (Abrams, Weick, Colbe, Thomas, & Franklin, 2011), and has negative implications for adolescents' mental health, academic engagement, and social withdrawal (Cappadocia, Pepler, Cummings, & Craig, 2012). Understanding determinants of peer exclusion is, therefore, paramount for developing preventative strategies. One explanation for adolescent peer exclusion may lie in the personal characteristics of victims and victimizers (Crick & Dodge, 1994; Hawker & Boulton, 2000; Storch, Milsom, DeBraganza, Lewin, Geffken, & Silverstein, 2007). A complementary explanation, offered by developmental subjective group dynamics (DSGD) theory (Abrams & Rutland, 2011), holds that exclusionary attitudes and behavior can arise from particular constellations of group membership, intergroup dynamics, and social norms. The present paper focuses on the combined effects of three bases of exclusionary responses toward peers that are particularly salient for adolescents; that peer's in-group/out-group membership, group loyalty, and weight.

According to DSGD theory, in-group/out-group memberships and intergroup contexts frame judgments of deviant vs. normative individuals within a group. Deviant characteristics will therefore be judged differently depending on their implications for in-group identity and status. During middle childhood children acquire social knowledge, perspective taking capacity and skills that equip them to anticipate how peers will respond to non-conformity by members of their own and other groups (Abrams, Rutland, Pelletier, & Ferrell, 2009). By adolescence they understand that groups are relatively intolerant of disloyalty among their own members but tolerant toward disloyal members of out-groups. DSGD theory holds that evaluations of a deviant are mediated by perceivers' beliefs about how well the in-group would tolerate or accept that deviant. Individuals who provide a closer match or fit with the norms and positive distinctiveness of the in-group are favored over those who provide a relatively poorer fit.

Situations often involve multiple norms (e.g., Rutland, Mulvey, Hitti, Abrams, & Killen, 2015). The question for the present research is whether deviance from norms at two different levels (generic and oppositional) have comparable, additive or possibly multiplicative effects. Therefore, the novel contribution is to develop hypotheses regarding these effects and to test them using two highly meaningful forms of deviance that could have important consequences for relationships among adolescents in school settings. To examine these questions, we asked adolescents to evaluate in-group or out-group members who were portrayed as conforming to or deviating from generic (weight) norms, oppositional (loyalty) norms, or both (double deviance). We examined favorability, attributions of laziness and competence, and judgments of the members' 'fit' to the in-group.

Group Membership

The school years involve multiple situations in which adolescents and children are members of teams, class groups, and cliques. Considerable research has focused on the

role of in-group/out-group differentiation in peer inclusion, exclusion, and prejudice (see Abrams & Killen, 2014). When children and adolescents perceive a peer to be a member of an out-group it can be sufficient to elicit prejudice, expressed as biases in favor of in-group members, against out-group members, or both. These effects are found in *ad hoc* or ‘minimal groups’ (Degner & Wentura, 2010; Vaughan, Tajfel, & Williams, 1981), in national and ethnic groups, as well as in school groups—the focus of the present research (Aboud, 2008; Powlishta, Serbin, Doyle, & White, 1994; Rutland, Abrams, & Levy, 2007; Verkuyten & de Wolf, 2007). Our overall *group membership hypothesis*, based on social identity theory, is that participants will express in-group bias when judging the in-group and out-group schools (Abrams, Palmer, Rutland, Cameron, & Van de Vyver, 2014; Abrams, Rutland, Palmer, Pelletier, Ferrell, & Lee, 2014; Nesdale, Durkin, Maass, Kiesner, & Griffiths, 2008; Nesdale & Lawson, 2011) and will be more favorable toward target individuals who are in-group rather than out-group members.

Generic, Oppositional, and Double Deviance

Within a social group, members are more likely to be derogated or excluded if they deviate from valued norms (Schachter, 1951; Zdaniuk & Levine, 2001). Based on this principle, DSGD theory proposes that children’s intergroup bias is qualified by a more precisely targeted form of differentiation between group members (Abrams & Rutland, 2011). Specifically, in-groups can be bolstered by derogating particular in-group members or by responding positively toward particular out-group members who deviate from valued group norms (Hitti, Mulvey, Rutland, Abrams, & Killen, 2013). Importantly, DSGD theory predicts different responses to in-group vs. out-group deviant group members, and different responses to peers who deviate from two different types of norms. These are generic norms (such as norms about body weight shared across groups or society), and oppositional norms (such as loyalty norms which imply opposing behavior by members of in-groups and out-groups) (Abrams, Palmer, et al., 2014).

Generic Norms. Generic norms apply to individuals across groups. They include rules of politeness, acceptable forms of appearance, abiding by laws, and moral principles such as fairness. We focus on generic weight norms because weight is a particular preoccupation among adolescents. Moreover, the increasing incidence of youth obesity in western countries (Wang & Lobstein, 2006) is becoming a significant public health concern (Puhl & Heuer, 2010), as well as being a sustained focus in the media (Fouts & Burggraf, 1999, 2000). Weight-based stigma is well-documented, such that people may consider negative responses to overweight individuals as acceptable (Cramer & Steinwert, 1998; Puhl & Latner, 2007). A range of evidence is consistent with the idea that being overweight is widely viewed as a form of generic deviance (Crandall, 1994; Paxton, Wertheim, Gibbons, Szumukler, Hillier, & Petrovich, 1991). For example, people may attribute overweightness to being dispositionally less attractive, lazier, less successful, and having less willpower (Puhl & Brownell, 2001, 2003; Puhl & Latner, 2007). In a recent study, more than a quarter of students reported weight-based stigmatization (Lampard, MacLehose, Eisenberg, Neumark-Sztainer, & Davison, 2014).

Developmentally, negative attitudes toward overweight others arise early in childhood, and the impact on peer relationships is likely to become particularly

acute during early adolescence (Barker & Galambos, 2003; Crystal, Wantanabe, & Chen, 2000; Jones, 2004, Hutchinson & Rapee, 2007). Overweight children are likely to be teased, victimized (Griffiths, Wolke, Page, & Harwood, 2006; Neumark-Sztainer, Falkner, Story, Perry, Hannan, & Mulert, 2002), and not be chosen as playmates (Palmer & Rutland, 2011; Webb & Zimmer-Gembeck, 2014).

DSGD theory holds that adolescents' unfavorable judgments of peers who deviate from (vs. conform to) generic norms will become amplified when the peers are in-group rather than out-group members. This so-called 'black sheep effect' (Marques & Paez, 1994) arises because people are especially vigilant to preserve positive in-group image and value (Tajfel & Turner, 1979). A recent study that examined reactions to peers who broke generic behavioral norms demonstrated that the black sheep effect emerged after the age of about 7 years and was associated with greater social awareness that peers use group membership as a basis for their social evaluations (Abrams, Palmer, et al., 2014). According to Crandall (1994) overweight individuals may be perceived as tarnishing the image of those with whom they are associated. Based on the assumption that being overweight is a form of generic deviance, we expect overweight targets will be judged less favorably than average weight targets, and will be likely to receive more dispositional attributions on stereotypic dimensions of laziness and incompetence. Based on DSGD theory, our *generic deviance hypothesis* is that a black sheep effect should arise, such that the difference in judgments of overweight vs. average weight targets should be larger when the targets are in-group members rather than out-group members. This hypothesis has not been tested in previous research on weight stigma.

Oppositional Norms. Oppositional norms specify different (usually contrasting) behaviors or intentions for in-groups vs. out-groups. A pervasive oppositional norm is to be loyal to one's own group (Zdaniuk & Levine, 2001). Oppositional deviance arises when an in-group member advocates an out-group's attitude, or expresses a positive attitude toward an out-group, thereby exhibiting a degree of disloyalty (see Abrams, Rutland, et al., 2009). Children and adolescents negatively evaluate disloyal in-group members (Castelli, De Amicis, & Sherman, 2007). Furthermore, they are aware of peer expectations that in-group and out-group members should be loyal only to their respective groups (Abrams, 2011). Disloyal in-group members are judged unfavorably because their oppositional deviance undermines the value of the in-group. In contrast, disloyal out-group members may well be judged favorably because their oppositional deviance potentially enhances the in-group. Adolescents understand that peer acceptance is partially contingent on demonstrations of in-group loyalty, and that in-group disloyalty can result in social exclusion (Abrams, et al., 2009). On this basis, our *oppositional deviance hypothesis* is that adolescents will demonstrate more *favorable* reactions toward a disloyal out-group member than toward a loyal out-group member, and more *unfavorable* reactions toward a disloyal in-group member than a loyal in-group member.

In the present research, we also measured the perceived competence of the group members. To the extent that a group member is judged as competent their opinions or actions have greater credibility. Given that an important goal is to establish the subjective validity of in-group superiority (see Marques, Abrams, & Serodio, 2001; Zdaniuk & Levine, 2001) we would expect disloyal in-group members to be judged as less competent than loyal members because this helps to prevent the in-group from being undermined. Conversely, disloyal out-group members may be

judged as more competent than loyal out-group members because this helps to reinforce the in-group and undermine the out-group.

Double Deviance. A new question tested in the present research is to compare directly whether adolescents evaluate peers differently when the peer breaches generic or oppositional norms in the same intergroup context. Moreover, it is unknown how adolescents will judge peers who exhibit *both* forms of deviance simultaneously within the same context ('double deviance'). The research therefore extends the reach of DSGD theory both by extending it to the realm of adolescent weight stigmatization and also by examining the consequences of double deviance.

Prior research has explored reactions to different kinds of deviance (cf. Killen, 2007), but has not formally tested the independent and combined effects of generic vs. oppositional deviance. Of focal interest is whether double deviance invites an even greater likelihood of exclusion. Based on DSGD theory our *double deviance hypothesis* is that the effects should differ depending on whether adolescents are judging in-group or out-group members. When people judge *in-group* members the two types should have *congruent* and potentially additive effects because both generic and oppositional forms of deviance reflect negatively on the in-group. Thus effects should be equivalent or larger but consistent with the single deviance situation. In contrast, when people judge out-group members the two types of deviance should have *incongruent* effects, producing contrasting reactions. Generic out-group deviants reinforce a negative evaluation of the out-group, so that derogating them may provide a socially 'legitimate' vehicle to derogate the out-group as a whole. However, oppositional out-group deviants undermine the out-group by reinforcing the ingroup. Therefore oppositional out-group deviants should receive favorable reactions compared with normative out-group members. Because generic and oppositional out-group forms of deviance have opposing implications for judgments and evaluations they could potentially neutralize one another.

Perceived Fit. Regardless of the form of deviance, DSGD theory holds that an important basis for evaluations of deviant peers should be the extent to which they are prototypical of the judge's group (perceived fit with the group; Abrams, 2011; Abrams et al., 2009; Abrams, Rutland, et al., 2014; Nesdale et al., 2008). Specifically, the more differently a normative and deviant member of a group are seen as fitting the in-group, the larger the difference will be in favorability toward those members. Thus, our *mediation hypothesis* is that differences in perceived fit should mediate the effects of group membership on the difference in favorability ratings toward deviant vs. normative group members.

Method

Pilot Studies

See Supporting Information and Purewal, Abrams, & Calogero (2014) for additional details of the development of materials. Silhouettes representing different body-types were used to depict targets of different weights, as this is a commonly employed method to assess children's weight-based attitudes (Kirkpatrick & Sanders, 1978; Lawson, 1980; Palmer & Rutland, 2011; Turnbull, Heaslip, & Mcleod, 2000). The pilot work established: (1) that the silhouettes were not perceived differently by males and females; (2) the different weight targets were perceived as

relatively underweight, neutral and overweight; and (3) perceptions of the targets were not affected by participants' own weight.

Participants and Design

Participants were 240 adolescents (123 male), aged 11–13, from three schools (mean age = 11.83-years). All but 15 participants were Caucasian and all resided in a predominantly lower middle-class municipality. The incidence of being overweight in this region, and in the schools in question, was within 2 percent of the national average at the time of testing. Participants were randomly assigned to conditions in a 2 (Group: in-group members vs. out-group members) \times 3 (Type of Deviant: generic vs. oppositional vs. double) \times 2 (Target: normative and deviant) design with Target as a within-participants factor.

Procedure

Parental consent was obtained for all participants, and they were assigned randomly to conditions within the session. The study was introduced as a study of people's judgments of others. Participants were told their opinions would remain anonymous and confidential. They read and completed the questionnaire without discussion. They were informed that they would be viewing information about students at their own school or a 'similar neighboring school'. The first part of the questionnaire asked participants to report how they felt about the two schools (the in-group bias measure). Afterwards they were provided with information about anonymous members (targets) of from their in-group' or an out-group school. The targets were depicted in silhouette form with names as initials. One target was normative (average weight and loyal) and the second was deviant. The deviant either breached a generic norm (overweight), an oppositional norm (disloyal), or both (overweight and disloyal). Weight was depicted by the image in the silhouette. Loyalty was depicted by reporting comments that each target made about the schools (see Abrams, Rutland, et al., 2009, 2014). The normative target silhouette was accompanied by a statement that said, 'I like being at our school and there are lots of things about our school that are better than the other school'. When the generically deviant target was loyal the accompanying statement was 'I like being at our school and our school is better than the other school in lots of ways'. When the deviant target was disloyal (oppositionally deviant) the accompanying statement was, 'I like being at this school but the other school is better in lots of ways'. Participants rated their favorability to the targets, made attributions about their laziness and competence, and judged how well the targets would fit in at their school. To ensure that the experiment could be completed without cross-contamination among participants the testing was conducted simultaneously by graduate researchers in multiple sessions over a period of 3 days. No participants expressed concerns or suspicions during debriefing. Preliminary analysis revealed no evidence of effects of experimenter or session or participants' age. As none of these variables were predicted to have effects, these variables are not discussed further.

Measures

In-group Bias. This was measured by asking, 'How do you feel about your school?' and 'How do you feel about the other school?' (1 = *very negative*, 7 = *very positive*).

Favorability. Based on previous studies (e.g., Abrams et al., 2009), participants indicated how favorable they felt toward each target: ‘I like X’, ‘X is fun to be around’, and ‘X is nice’ (1 = *not at all* and 7 = *very much*) (for all targets, Cronbach’s $\alpha > .85$).

Trait Attributions. Participants were asked to indicate to what extent they thought the target was ‘clever’, and ‘good at school work’. We averaged these items and labeled the score *competence* (for all targets, Cronbach’s $\alpha > .72$).

Participants were asked to what extent they thought the target was ‘lazy’ and ‘boring’. The latter item was excluded in the analysis below (see Supporting Information).

Perceived Fit. Participants were asked to state to what extent they thought that the target ‘would fit into my school well’ (1 = *not at all*, 7 = *very much*).

Results

Analytic Strategy

First, we conduct a within-participants analysis to test whether participants show the predicted in-group bias (preferring their own school over the out-group). We then examine judgments of Targets from one or other group and test the interactive effects of Group (in-group vs. out-group) and Type of Deviant (generic vs. oppositional vs. double) as between participants factors and Target (normative vs. deviant) as a within participants factor on favorability judgments, trait attributions and perceptions of whether the target would fit with the participants’ school. We examine whether a black sheep effect occurs for disloyal or overweight targets relative to their normative counterparts, and we test what difference double deviance makes. Relevant interactions are followed by simple effects tests.

Preliminary Analyses and In-group Bias

A Gender \times Group Analysis of Variance (ANOVA) on overall ratings of the in-group and the out-group, with Group as a within-participants factor showed significant main effects of Group, $F(1,232) = 193.15$, $p < .001$, $\eta_p^2 = .452$, and Gender, $F(1,234) = 6.78$, $p = .010$, $\eta_p^2 = .029$. As predicted, participants felt more positive toward their own school ($M = 5.00$, $SE = .09$) than the other school ($M = 3.50$, $SE = .09$). Females were more favorable to both schools overall ($M = 4.42$, $SE = .10$) than were males ($M = 4.08$, $SE = .09$). The Gender \times Group interaction was not significant. Because preliminary analysis on Target measures revealed no significant effects or interactions involving Gender this was not included as a factor in analyses reported below. All means for the Group \times Target \times Type of Deviant effects are in Table 1.

Favorability Judgments

There were significant main effects of Group and Target and significant interactions between Group \times Target, Target \times Type of Deviant, and Group \times Target \times Type of Deviant.

The Group \times Target interaction, $F(1,234) = 73.50$, $p < .001$, $\eta_p^2 = .240$ showed that in-group normatives ($M = 4.65$, $SE = .11$) were favored more than out-group

Table 1. Means for Judgments of Normative and Deviant Targets as a Function of their Type of Deviance and Group Membership

Type of Deviant	Group	Target	Favorability		Competence		Laziness		Fit	
			M	SE	M	SE	M	SE	M	SE
Generic	In	N	4.59	.194	4.38	.195	2.70	.245	4.83	.260
	Out	D	3.50	.195	3.84	.192	5.20	.251	3.80	.251
Oppositional	In	N	3.38	.194	3.54	.195	3.53	.245	3.40	.260
	Out	D	3.08	.195	3.53	.192	4.63	.251	3.15	.251
Double	In	N	4.75	.194	4.60	.195	2.98	.245	4.75	.260
	Out	D	3.88	.195	3.98	.192	3.95	.251	3.90	.251
	In	N	2.73	.194	3.50	.195	3.55	.245	3.15	.260
	Out	D	4.48	.195	4.48	.192	3.48	.251	4.48	.251
	In	N	4.60	.194	4.66	.195	2.85	.245	4.50	.260
	Out	D	3.32	.195	3.74	.192	4.73	.251	3.65	.251
	In	N	3.76	.194	4.00	.195	3.83	.245	3.78	.260
	Out	D	4.08	.195	4.29	.192	4.68	.251	3.43	.251

Note: All variables are scored on 1–7 scales. Higher means reflect stronger judgment (e.g., favorability). Target: N = Normative, D = Deviant. Generic deviant targets are overweight but loyal, Oppositional deviant targets are normal weight but disloyal. Double deviant targets are both overweight and disloyal.

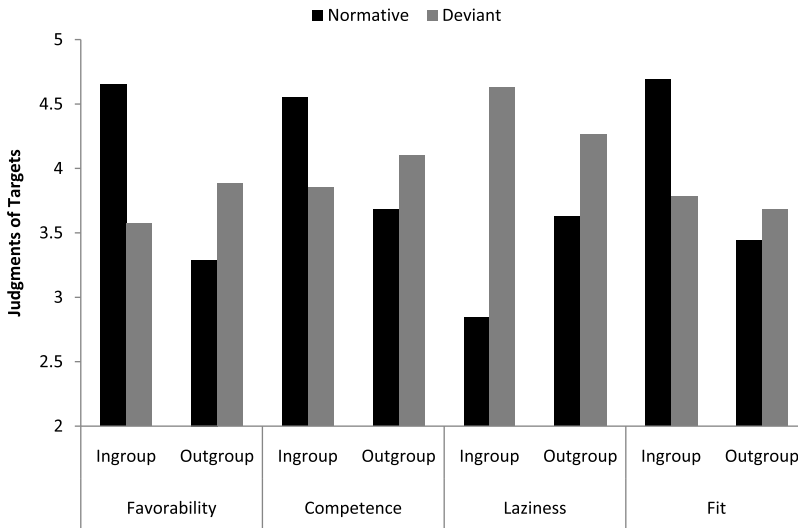


Figure 1. Judgments of the Normative and Deviant Targets as a Function of their Group Membership.

normatives ($M = 3.29$, $SE = .11$), $F(1,234) = 73.65$, $p < .001$, $\eta_p^2 = .240$. In contrast, in-group deviants ($M = 3.57$, $SE = .11$) were favored slightly less than out-group deviants ($M = 3.88$, $SE = .11$), $F(1,234) = 3.82$, $p = .052$, $\eta_p^2 = .020$. Consistent with the black sheep effect participants differentiated more between normative and deviant in-group targets than the out-group counterparts (see Figure 1).

The Target \times Type of Deviant interaction, $F(1,234) = 13.03$, $p < .001$, $\eta^2 = .10$, showed that Type of Deviant had no effect on judgments of the normative targets, $F(1,234) = 2.61$, $p = .076$, $\eta^2 = .022$ but strongly affected favorability toward deviants, $F(1,234) = 10.58$, $p < .001$, $\eta^2 = .083$. The oppositional deviants were favored more ($M = 4.18$, $SE = .14$) than the generic ($M = 3.29$, $SE = .14$) and double deviants ($M = 3.70$, $SE = .14$).

However, the three-way interaction, $F(1,234) = 7.49$, $p < .001$, $\eta_p^2 = .060$ indicates greater complexity in judgments. Pairwise comparisons showed that when participants judged in-group members, normatives were always favored more than deviants by the same amount regardless of Type of Deviant ($ps < .001$). In contrast, when participants judged out-group members they were equally unfavorable toward normatives vs. either generic or double deviants ($ps > .18$), but were more favorable toward the oppositional deviant than to normatives ($p < .001$). Comparisons between judgments of in-group and out-group deviants showed that participants judged in-group and out-group generic (overweight) deviants equally unfavorably, $F(1,234) = 2.37$, $p < .125$, $\eta_p^2 = .010$, but were less favorable toward in-group than out-group oppositional deviants, $F(1,234) = 4.73$, $p = .031$, $\eta_p^2 = .020$ and double deviants, $F(1,234) = 7.56$, $p = .006$, $\eta_p^2 = .031$.

Traits and Dispositions

Competence. There were significant main effects of Group and Type of Deviant and a significant Group \times Target interaction, $F(1, 234) = 29.45$, $p < .001$, $\eta_p^2 = .112$.

In-group normatives were judged as more competent ($M = 4.55$, $SE = .11$) than out-group normatives ($M = 3.68$, $SE = .11$), $F(1,234) = 29.63$, $p < .001$, $\eta_p^2 = .112$. In contrast, in-group deviants ($M = 3.85$, $SE = .11$) and out-group deviants ($M = 4.10$, $SE = .11$) were judged as similarly competent, $F(1,234) = 2.46$, $p = .118$, $\eta_p^2 = .010$. Consistent with the black sheep effect, there was greater differentiation between in-group normative and deviant targets than between out-group normative and deviant targets (see Figure 1).

Laziness. There were significant main effects of Target and Type of Deviant and interactions between Group \times Target and Target \times Type of Deviant. Analysis of simple effects within the Group \times Target interaction, $F(1,234) = 15.66$, $p < .001$, $\eta_p^2 = .063$ showed that although normatives were judged as less lazy than deviants in both groups this difference was greater for in-group than for out-group targets, $F(1,234) = 9.12$, $p = .003$, $\eta_p^2 = .038$, consistent with the black sheep effect (Figure 1). Indeed, in-group normatives were judged as less lazy than out-group normatives, $F(1,234) = 15.65$, $p < .001$, $\eta_p^2 = .063$ whereas in-group deviants were judged as marginally more lazy than out-group deviants, $F(1,234) = 3.20$, $p = .075$, $\eta_p^2 = .013$.

The Target \times Type of Deviant interaction, $F(1,234) = 7.38$, $p < .001$, $\eta_p^2 = .059$ showed that generic ($M = 4.91$, $SE = .18$) and double ($M = 4.70$, $SE = .18$) deviants were perceived as lazier than the oppositional deviant ($M = 3.71$, $SE = .18$). Type of Deviant had no effect on judgments of their normative counterparts.

Perceived Fit

There were significant main effects of Group and Target, and interactions between Group \times Target, Target \times Type of Deviant, and Group \times Target \times Type of Deviant. The Group \times Target interaction, $F(1, 234) = 17.67$, $p < .001$, $\eta_p^2 = .070$, is consistent with the black sheep effect. In-group normatives ($M = 4.69$, $SE = .15$) were judged as fitting better in the group than out-group normatives ($M = 3.44$, $SE = .15$), $F(1,234) = 34.77$, $p < .001$, $\eta_p^2 = .129$. In contrast, in-group deviants were not judged as fitting in with the group better or worse ($M = 3.78$, $SE = .14$) than out-group deviants ($M = 3.68$, $SE = .14$), $F(1,234) = .24$, $p = .626$, $\eta_p^2 = .001$ (see Figure 1, also Supporting Information).

The Target \times Type of Deviant interaction, $F(1,234) = 4.36$, $p = .014$, $\eta_p^2 = .036$, revealed that generic ($M = 3.48$, $SE = .18$) and double ($M = 3.54$, $SE = .18$) deviants were judged as fitting less well in the group than the oppositional deviants ($M = 4.19$, $SE = .18$), both $ps < .01$. Type of Deviant did not affect judgments of normatives, $F(1,234) = .31$, $p = .736$, $\eta_p^2 = .003$.

These effects are qualified by a three-way interaction, $F(1,234) = 3.59$, $p = .029$, $\eta_p^2 = .030$. Results showed that the simple two-way Group \times Target interactions were significant within the oppositional deviance condition, $F(2,234) = 6.44$, $p = .002$, and double deviance condition, $F(2,234) = 4.33$, $p = .014$, but not within the generic deviance condition, $F(2,234) = .68$, $p = .510$. Moreover, as expected, in-group normatives were judged to fit better with the group than in-group deviants ($F_s > 6.43$, $ps < .013$, $\eta_p^2 > .026$). Out-group double and generic deviants were seen as fitting the in-group just as poorly as the out-group normative ($F_s < 1.10$, $ps > .29$, $\eta_p^2 < .005$). In contrast, out-group oppositional

deviants were seen as fitting the in-group significantly better than out-group normatives, $F = 15.65$, $p < .001$, $\eta_p^2 = .063$.

Mediation Analysis

We tested the hypothesis that the effects of Group (in-group vs. out-group) on differences in favorability toward normative vs. deviant targets (i.e., the Group \times Target interaction) should be mediated by differences in perceived fit of these two targets in the in-group. To do this we reduced the within-participants Target factor by constructing difference scores (normative minus deviant target) for favorability (*differential favorability*) and for perceived fit (*differential fit*). The means for these can be derived from Table 1 and are shown in Figure 2. The indirect effect of differential fit was tested using Preacher and Hayes' (2008) Indirect macro with 5000 bootstraps (see also Supporting Information). The total effect of Group on differential favorability, $b = -1.732$, $SE = .217$, $t = 7.98$, $p < .001$ was significant. The indirect effect showed differential fit significantly mediated the effect of Group on differential favorability, $b = -.388$, $SE = .126$, $CI95 = -.659/-.170$ and the direct effect of group was also significant, $b = -1.352$, $SE = .201$, $t = 6.74$, $p < .001$. Thus, perceived differential fit partially mediated the effects of Group on differential favorability toward the normative vs. deviant targets (Figure 3).

Discussion

The present research makes a novel contribution to the literatures on the development of group dynamics and on adolescent weight stigma by examining adolescents' responses to double deviance. There remain surprisingly few studies of adolescents' responses to overweight peers, and we are aware of none that have considered the potentially moderating roles of the peer's in-group or out-group membership, or their expressions of group loyalty. The results confirmed that adolescents' evaluations of peers can be affected by all three of these potentially powerful and important variables – group membership, deviance from social norms, and the type of deviance (i.e., being overweight or being disloyal).

In line with the *group membership hypothesis* there was significant in-group bias, shown in global evaluations of the in-group and the out-group. There were also in-group biases in the judgments of individual targets, expressed in terms of favorability and judgments of perceived competence and in-group fit. Consistent with overweight stigma, adolescents judged overweight peers from either group less favorably, attributed a lazier disposition and expected they would fit the in-group less well than average weight peers (Greenleaf, Starks, Gomez, Chambliss, & Martin, 2004; Klaczynski, Goold, & Mudry, 2004).

In line with previous research (Abrams, Palmer, et al., 2014) and with the *generic deviance hypothesis*, across all, there was a strong black sheep effect across all dependent variables. Specifically, the difference in adolescents' favorability toward normative and overweight targets was approximately three times greater when they judged in-group members than when they judged out-group members (see Table 1). Therefore, the impact of stigma on evaluations of overweight peers, and on the dispositional attributions made about them, is substantially more severe when adolescents evaluate in-group members than when they judge out-group members. An implication is that although overweight adolescents may feel strongly pressured to withdraw from

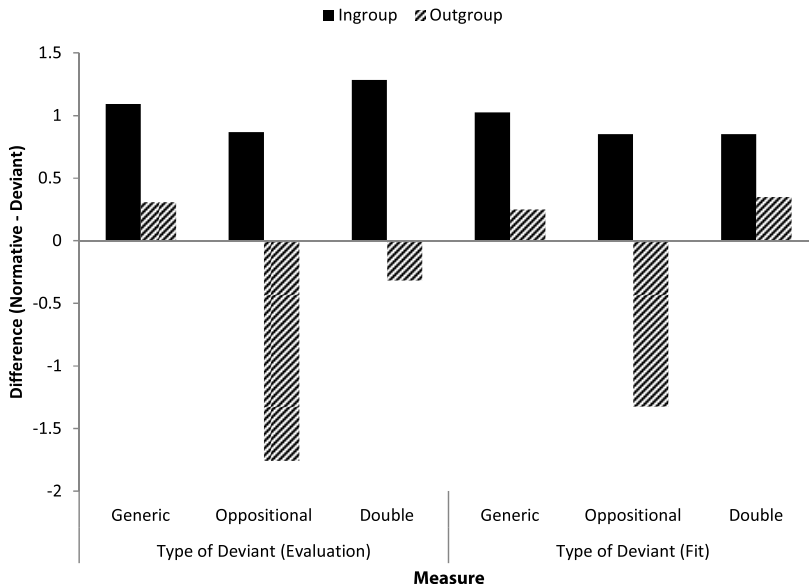


Figure 2. Differential Evaluation (Favorability) and Differential Fit Judgments of Normative vs. Deviant Targets as a Function of their Group Membership and the Type of Deviance.

Notes: Differential scores are rating of the normative minus rating of the deviant target for the relevant measure. Means above zero indicate that the normative target is evaluated more highly than the deviant. Means below zero indicate that the deviant target is evaluated more highly than the normative.

an in-group in the hope that they may be more accepted in an out-group they may then find they face exactly the same problem among out-group peers. Thus, the existence of a strong black sheep effect for being overweight is a finding of importance for practitioners seeking to limit peer exclusion based on weight.

A different pattern arose when adolescents judged oppositionally deviant (disloyal) peers. Consistent with previous research (Abrams et al., 2009) and the *oppositional deviance hypothesis*, adolescents favored in-group normative members over in-group oppositional deviants, but favored out-group oppositional deviants over out-group normative members. This reflects the strategic attraction groups place on out-group disloyalty and suggests disloyal peers may well find a welcoming reception from opposing groups.

Of focal interest was how generic deviance *combines* with oppositional deviance to affect peer evaluations. Theoretically this raises a question not previously examined in DSGD research because no prior study has examined responses to combinations of generic and oppositional deviance. Practically, the question is whether an overweight adolescent may find greater acceptance among out-group members by showing disloyalty toward their own in-group? Given that such combinations could easily arise as adolescents seek to find routes to peer acceptance (cf., Webb & Zimmer-Gembeck, 2014), this study provides informative new evidence.

The *double deviance hypothesis* was that the effect of double deviance should differ depending on whether adolescents are judging in-group or out-group members. This was confirmed by a significant three-way interaction between Group,

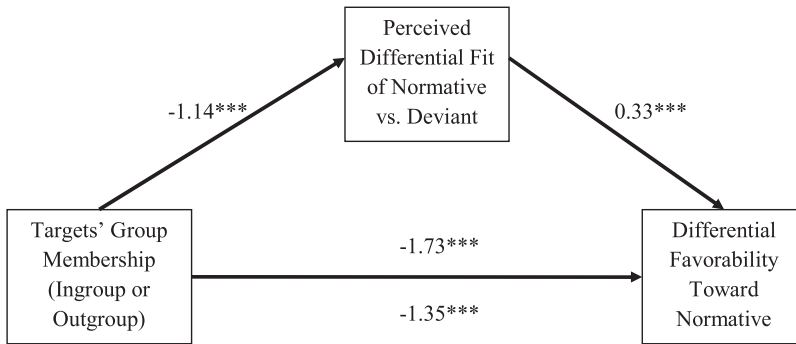


Figure 3. Indirect Effect of Group on Differential Favorability via Differential Perceived Fit of Normative and Deviant Targets.

Notes: Calculation of differential scores is the same as explained in Figure 2. Unstandardized coefficients. *** $p < .001$. The total and direct effects of Group on differential favorability are shown above and below the arrow respectively. Adjustment for baseline differences in participants' responses followed procedures specified by Judd, Kenny, and McLelland (2001).

Type of Deviant and Target on favorability. When in-group members were either overweight *or* disloyal this evoked negative evaluations. The combination of both types did not add to this effect. However, a different pattern applied to *out-group* members, highlighting that adolescents were sensitive to the context for both types of deviance. Whereas adolescents responded favorably toward a solely oppositional (disloyal) out-group deviant, they were substantially less favorable if that out-group member was also generically deviant (overweight). The practical implication is that being overweight may be such a stigmatizing form of generic deviance that even an out-group member's salient expression of oppositional deviance cannot overcome its effects on peer judgments. Thus, being overweight, and the associated black sheep effect, present an obstacle to being included in one's own group and to being able to join new groups. For overweight adolescents, even a (usually strong) tactic of currying favor with an opposing group by expressing disloyalty is insufficient to appeal to members of that opposing group. The stigma of being overweight is stronger than the appeal of out-group disloyalty. Given the undoubted importance of peer acceptance and inclusion for adolescents' lives (Abrams et al., 2011) such strong barriers to overweight individuals are likely to have a substantial impact on their psychological health (Puhl & Latner, 2007).

Consistent with the *mediation hypothesis* from DSGD theory, effects of group membership on differences in evaluations of the deviant vs. normative peers were partly accounted for by judgments of how well they would fit into the in-group. This highlights the importance of group membership as a context for peer evaluations. Adolescents' expectations about other in-group members' beliefs about acceptability of deviants to the group played an important role in their own judgments.

Limitations and Questions

The present study has some inevitable limitations but also suggests interesting new questions to pursue. We used gender-neutral silhouettes based on previous research (Simeon, Rattan, Panchoo, Kungeesingh, Ali, & Abdool, 2003) rather than

photographs of real people. Our pilot work and main study showed no gender differences in evaluations of the neutral silhouettes and our methodological choice reflected both the need for efficiency in limiting the number of factors in the design and ethical requirements that prohibited depicting real peers. This method also reflected our desire to sustain internal validity by eliminating effects of theoretically non-relevant variables (e.g., facial attractiveness). Although a separate study showed that using gender-matched silhouettes did not produce differences in evaluations of overweight targets (see Supporting Information), it is plausible that children of each gender may evaluate overweight males and females differently (Barker & Galambos, 2003; Jones, 2004; Palmer & Rutland, 2011). Therefore, future research could more directly assess the role of gender to determine whether this would moderate evaluations.

Cultural differences have been observed in stigmatization of overweight peers (Crystal et al., 2000; Davidson & Knafl, 2006; Latner, Stunkard, & Wilson, 2005), therefore it would be informative to explore how effects of stigmatization may combine with oppositional deviance across cultures. Individual differences may also be important, both among judges and targets. Research with adults indicates that implicit biases against overweight individuals are held by people of all weights (Schwartz, Vartanian, Nosek, & Brownell, 2006), though more strongly amongst lower weight individuals. Because participants were randomly assigned to condition we assume that any effects of participants' own weight or size did not systematically affect the findings. Moreover, in a different study we found no relationship between adolescents' own weight and their judgments of the targets (see Supporting Information).

Another possibility is that individuating information about the targets could moderate evaluations. Prior research has established that being overweight attracts dispositional attributions, but we deliberately did not provide any personality information about the targets. This allowed participants to make their own inferences. It is conceivable that overweight individuals may be able to offset stigma regarding their weight if they have sufficiently positive personal characteristics in other domains. For example, future research could use a larger set of dependent variables and multiple item measures to test whether an overweight person's display of peer valued characteristics, such as a good sense of humor, might mitigate effects of weight stigma on peers' evaluations (Adler & Adler, 1995).

We focused on school membership as the in-group-out-group dimension because previous research on oppositional deviance in intergroup contexts has used schools and also shown comparable effects when using nationality (e.g., Abrams et al., 2009). It would now be useful to explore whether the present findings can replicate across various important intergroup contexts, such as ethnicity, nationality, and teams. In addition, some research has shown that although average-weight people do not usually view overweight people as members of a different social group, children may be more prone to do so (cf. Holub, 2008). Unlike school membership, weight is on a continuum and nothing in the procedures of the present study provided a cue to categorize the overweight target as a member of a group. However, it would be interesting to determine whether and how adolescents might categorize overweight individuals into a 'group'.

Previous research has examined the negative impacts of individuals' multiple stigmatizing characteristics (i.e., 'layered stigma'; Mill et al., 2007). The current research employed one stigmatizing characteristic and one non-stigmatizing characteristic in the creation of a 'double deviant'. Thus a possible avenue of future

research is to explore the effects of layering stigma in double deviants, on adolescents' peer evaluations.

Finally, given that both the black sheep effect and positive reactions to out-group oppositional deviants develop in tandem with greater social understanding and perspective taking abilities from the age of about 7-years (Abrams, Rutland, et al., 2009, 2014) it would be interesting to test whether the double deviance patterns in the present research extend earlier into childhood and continue later into adolescence and adulthood.

Implications and Conclusions

The present evidence offers a new test of subjective group dynamics theory, showing how two different types of deviance may operate in conjunction in the same context. Focusing on an important setting for adolescents and two salient types of deviance, the findings show for the first time that generic deviance, in the form of being overweight, results in greater relative derogation by adolescent peers when displayed by in-group members than by out-group members. Moreover, whereas out-group disloyalty can be sufficient to reduce negative evaluations, its effects seem to be mitigated when the disloyal person is also overweight. Future research needs to identify alternative approaches to attenuating negative evaluations of weight stigma, particularly in situations when peers may be evaluated in an inter-group context. For example, it is not known whether deviance with regard to this generic norm can be offset by overt adherence to a separate but equally valued generic norm (e.g., kindness, prosociality), and whether generic deviance that is non-stigmatizing (e.g., acting rudely) is easier to overcome with other tactics (e.g., combining it with derogation of an out-group).

The present study also raises interesting developmental questions. It would be informative to examine children's and adolescent's reasoning and justifications for inclusion or exclusion of overweight and disloyal group members (cf. Abrams, Palmer, et al., 2014; Abrams, Rutland, et al., 2014; Killen, 2007). Understanding reasoning for weight-based exclusion may help in the development of effective strategies to reduce such exclusion.

Given the significant challenges faced by overweight adolescents in averting potential peer exclusion based on weight stigmatization it may fall to community and school-based strategies to facilitate peer acceptance of overweight adolescents. One way to ameliorate peer exclusion of overweight adolescents may be for teachers to challenge adolescents' beliefs about overweight peers' dispositions. However, prior work suggests that interventions directed at children's or adolescents' beliefs about the medical basis or controllability of being overweight may not be effective in reducing effects of overweight stigma (Bell & Morgan, 2000; Tiggeman & Anesbury, 2000). Therefore, and given that in reality there may be multiple norms, group memberships and potential stigma in play, a different approach may be necessary, such as focusing on the extent to which overweight individuals adhere to other important generic norms (i.e., kindness, prosociality), or influencing peer group norms of (overweight) peer inclusion (cf. Nesdale et al., 2008). To develop effective strategies to overcome weight-based exclusion, further research should examine the potential of these different strategies on children's and adolescent's willingness to include overweight peers.

References

- About, F. E. (2008). A social-cognitive developmental theory of prejudice. In S. M. Quintana & C. McKown (Eds.), *Handbook of race, racism, and the developing child* (pp. 55–71). Hoboken, NJ: Wiley.
- Abrams, D. (2011). Wherein lies children's intergroup bias? Egocentrism, social understanding and social projection. *Child Development, 82*, 1579–1593. doi: 10.1111/j.1467-8624.2011.01617.x
- Abrams, D., & Killen, M. (2014). Social exclusion of children: Developmental origins of prejudice. *Journal of Social Issues, 70*, 1–11. doi: 10.1111/josi.12043
- Abrams, D., Palmer, S., Rutland, A., Cameron, L., & Van de Vyver, J. (2014). Evaluations of and reasoning about normative and deviant ingroup and outgroup members: Development of the black sheep effect. *Developmental Psychology, 50*, 258–270. doi: 10.1037/a0032461
- Abrams, D., & Rutland, A. (2011). Children's understanding of deviance and group dynamics: The development of subjective group dynamics. In J. Jetten & M. Hornsey (Eds.) *Rebels in groups: Dissent, deviance, difference and defiance* (pp. 135–157). Oxford: Blackwell.
- Abrams, D., Rutland, A., Palmer, S. B., Pelletier, J., Ferrell, J. M., & Lee, S. (2014). The role of cognitive abilities in children's inferences about social atypicality and peer exclusion and inclusion in intergroup contexts. *British Journal of Developmental Psychology, 3*, 233–247. doi: 10.1111/bjdp.12034
- Abrams, D., Rutland, A., Pelletier, J. & Ferrell, J. M. (2009). Children's group nous: Understanding and applying peer exclusion within and between groups. *Child Development, 80*, 224–243. doi:10.1111/j.1467-8624.2008.01256
- Abrams, D., Weick, M., Thomas, D., Colbe, H., & Franklin, K. M. (2011). On-line ostracism affects children differently from adolescents and adults. *British Journal of Developmental Psychology, 29*, 110–123. doi:10.1348-026151010X494089
- Adler, P. A., & Adler, P. (1995). Dynamics of inclusion and exclusion in pre-adolescent cliques. *Social Psychology Quarterly, 58*, 145–162. doi:10.2307/2787039
- Barker, E. T., & Galambos, N. L. (2003). Body dissatisfaction of adolescent girls and boys: Risk and resource factors. *Journal of Early Adolescence, 23*, 141–165. doi:10.1177/0272431603023002002
- Bell, S. K., & Morgan, S. B. (2000). Children's attitudes and behavioral intentions toward a peer presented as obese: Does a medical explanation for the obesity make a difference? *Journal of Pediatric Psychology, 25*, 137–145. doi:10.1093/jpepsy/25.3.137
- Cappadocia, M. C., Pepler, D., Cummings, J. G., & Craig, W. (2012). Individual motivations and characteristics associated with bystander intervention during bullying episodes among children and youth. *Canadian Journal of School Psychology, 27*, 201–216. doi: 10.1177/0829573512450567
- Castelli, L., De Amicis, L., & Sherman, S. J. (2007). The loyal member effect: On the preference for ingroup members who engage in exclusive relations with the ingroup. *Developmental Psychology, 43*, 1347–1359. doi:10.1037/0012-1649.43.6.1347
- Cramer, P., & Steinwert, T. (1998). Thin is good, fat is bad: How early does it begin? *Journal of Applied Developmental Psychology, 19*, 429–451. doi:10.1016/S0193-3973(99)80049-5
- Crandall, C. S. (1994). Prejudice against fat people: Ideology and self-interest. *Journal of Personality and Social Psychology, 66*, 882–894. doi:10.1037/0022-3514.66.5.882
- Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information processing mechanisms in children's social adjustment. *Psychological Bulletin, 115*, 74–101. doi: 10.1037/0033-2909.115.1.74
- Crystal, D. S., Watanabe, H., & Chen, R. S. (2000). Reactions to morphological deviance: A comparison of Japanese and American children and adolescents. *Social Development, 9*, 40–61. doi:10.1111/1467-9507.00110
- Davidson, M., & Knafel, K. A. (2006). Dimensional analysis of the concept of being overweight. *Journal of Advanced Nursing, 54*, 342–350. doi:10.1111/j.1365-2648.2006.03812.x
- Degner, J., & Wentura, D. (2010). Automatic prejudice in childhood and early adolescence. *Journal of Personality and Social Psychology, 98*, 356–374. doi:10.1037/a0017993
- Fouts, G., & Burggraf, K. (1999). Television situation comedies: Female body images and verbal reinforcement. *Sex Roles, 40*, 473–481. doi:10.1023/A:1018875711082

- Fouts, G., & Burggraf, K. (2000). Television situation comedies: Female weight, male negative comments, and audience reactions. *Sex Roles, 42*, 925–932. doi:10.1023/A:1007054618340
- Greenleaf, C., Starks, M., Gomez, L., Chambliss, H., & Martin, S. (2004). Weight-related words associated with figure silhouettes. *Body Image, 1*, 373–384. doi:10.1016/j.bodyim.2004.10.004
- Griffiths, L. J., Wolke, D., Page, A. S., & Horwood, J. P. (2006). Obesity and bullying: Different effects for boys and girls. *Archives of Disease in Childhood, 91*, 121–125. doi:10.1136/adc.2005.072314
- Hawker, D. S. J., & Boulton, M. J. (2000). Twenty years' research on peer victimization and psychosocial maladjustment: A meta-analytic review of cross sectional studies. *Journal of Child Psychology and Psychiatry and Allied Disciplines, 41*, 441–455. doi:10.1111/1469-7610.00629
- Hitti, A., Mulvey, K.L., Rutland, A., Abrams, D., & Killen, M. (2013). When is it okay to exclude a member of the ingroup? Children and adolescents' social reasoning. *Social Development, 3*, 451–469. doi: 10.1111/sode.12047
- Holub, S. C. (2008). Individual differences in the anti-fat attitudes of preschool-children: The importance of perceived body size. *Body Image, 5*, 317–321. doi:10.1016/j.bodyim.2008.03.003
- Hutchinson, D. M., & Rapee, R. M. (2007). Do friends share similar body image and eating problems? The role of social networks and peer influences in early adolescence. *Behavior Research and Therapy, 45*, 1557–1577. doi: 1.1016/j.brat.2006.11.007
- Jones, D. C. (2004). Body image among adolescent girls and boys: A longitudinal study. *Developmental Psychology, 40*, 823–835. doi:10.1037/0012-1649.40.5.823
- Judd, C. M., Kenny, D. A., & McClelland, G. H. (2001). Estimating and testing mediation and moderation in within-subject designs. *Psychological Methods, 6*, 115–134. doi:10.1037/1082-989X.6.2.115
- Killen, M. (2007). Children's social and moral reasoning about exclusion. *Current Directions in Psychological Science, 16*, 32–36. doi:10.1111/j.1467-8721.2007.00470.x
- Kirkpatrick, S. W., & Sanders, D. M. (1978). Body image stereotypes: A developmental comparison. *The Journal of Genetic Psychology: Research And Theory On Human Development, 132*, 87–95. doi:10.1080/00221325.1978.10533317
- Klaczynski, P. A., Goold, K. W., & Mudry, J. J. (2004). Culture, being overweight stereotypes and the “thin ideal”: A social identity perspective. *Journal of Youth and Adolescence, 33*, 307–317. doi:10.1023/B:JOYO.0000032639.71472.19
- Lampard, A. M., MacLehose, R. F., Eisenberg, M. E., Neumark-Sztainer, D., & Davison, K. K. (2014). Weight-related teasing in the school environment: Associations with psychosocial health and weight control practices among adolescent boys and girls. *Journal of Youth and Adolescence, 43*, 1770–1780. doi:10.1007/s10964-013-0086-3.
- Latner, J. D., Stunkard, A. J., & Wilson, G. T. (2005). Stigmatized students: Age, sex, and ethnicity effects in the stigmatization of being overweight. *Being Overweight Research, 13*, 1226–1231. doi:10.1038/oby.2005.145
- Lawson, M. C. (1980). Development of body build stereotypes, peer ratings, and self-esteem in Australian children. *The Journal of Psychology 104*, 111–118. Retrieved from <http://psycnet.apa.org/index.cfm?fa=search.displayRecord&UID=1981-07782-001>
- Marques, J., Abrams, D., & Seródio, R. G. (2001). Being better by being right: subjective group dynamics and derogation of in-group deviants when generic norms are undermined. *Journal of Personality and Social Psychology, 81*, 436–447. doi:<http://dx.doi.org/10.1037/0022-3514.81.3.436>
- Marques, J. M., & Paez, D. (1994). The “black-sheep effect”: Social categorization, rejection of in-group deviates, and perception of group variability. In W. Stroebe & M. Hewstone (Eds.), *European review of social psychology* (Vol. 5, pp. 37–68). London: Wiley.
- Mill, J., Austin, W., Chaw-Kant, J., Dumont-Smith, C., Edwards, N., Groft, J., et al. (2007). *The influence of stigma on access to health services by person with HIV illness*. Ottawa: Canadian Institutes of Health Research.
- Nesdale, D., Durkin, K., Maass, A., Kiesner, J., & Griffiths, J. A. (2008). Effects of group norms on children's intentions of bullying. *Social Development, 17*, 889–907. doi:10.1111/j.1467-9507.2008.00475.x

- Nesdale, D., & Lawson, M. J. (2011). Social groups and children's inter-group attitudes: Can school norms moderate the effects of social group norms? *Child Development, 82*, 1594–1606. doi:10.1111/j.1467-8624.2011.01637.x
- Neumark-Sztainer, D., Falkner, N., Story, M., Perry, C., Hannan, P. J., & Mulert, S. (2002). Weight-teasing among adolescents: Correlations with weight status and disordered eating behaviors. *International Journal of Obesity, 26*, 123–131. doi:10.1038/sj.ijo.0801853
- Palmer, S., & Rutland, A. (2011). Do children want skinny friends? The role of 'weight' in children's friendship preferences and inter-group attitudes. *Anales de Psicologia, 27*, 698–707.
- Paxton, S. J., Wertheim, E. H., Gibbons, K., Szmukler, G. I., Hillier, L., & Petrovich, J. L. (1991). Body image satisfaction, dieting beliefs, and weight loss behaviors in adolescent girls and boys. *Journal of Youth and Adolescence, 20*, 361–379. doi:10.1007/BF01537402
- Powlisha, K. K., Serbin, L. A., Doyle, A., & White, D. R. (1994). Gender, ethnicity, and body type biases: The generality of prejudice in childhood. *Developmental Psychology, 30*, 526–536. doi:10.1037/0012-1649.30.4.526
- Preacher, K. J., & Hayes, A. F. (2008). Asymptotic and resampling strategies for assessing and comparing indirect effects in multiple mediator models. *Behavior Research Methods, 40*, 879–891. doi:10.3758/BRM.40.3.879
- Puhl, R., & Brownell, K. D. (2001). Bias, discrimination, and being overweight. *Being Overweight Research, 9*, 788–805. doi:10.1038/oby.2001.108
- Puhl, R., & Brownell, K. D. (2003). Psychosocial origins of being overweight stigma: Toward changing a powerful and pervasive bias. *Being Overweight Reviews, 4*, 213–227. doi:10.1046/j.1467-789X.2003.00122.x
- Puhl, R. M., & Heuer, C. A. (2010). Obesity stigma: Important considerations for public health. *American Journal of Public Health, 100*, 1019–1028. doi:10.2105/AJPH.2009.159491
- Puhl, R. M., & Latner, J. D. (2007). Stigma, being overweight, and health of the nation's children. *Psychological Bulletin, 133*, 557–580. doi:10.1037/0033-2909.133.4.557
- Purewal, K., Abrams, D., & Calogero, R. (2014). The relationship between gender, weight and evaluation of normal and overweight peers in childhood and adolescence. Paper presented at 2nd Annual International Weight Stigma Conference, University of Kent, Canterbury.
- Rutland, A., Abrams, D., & Levy, S. (2007). Extending the conversation: Transdisciplinary approaches to social identity and intergroup attitudes in children and adolescents. *International Journal of Behavioral Development, 31*, 417–418. doi:10.1177/0165025407083669
- Rutland, A., Hitti, A., Mulvey, K. L., Abrams, D., & Killen, M. (2015). When does the in-group like the out-group? Bias among children as a function of group norms. *Psychological Science, 26*, 834–842. doi:10.1177/0956797615572758
- Schachter, S. (1951). Deviation, rejection, and communication. *Journal of Abnormal and Social Psychology, 46*, 190–208. doi:10.1037/h0062326
- Schwartz, M. B., Vartanian, L. R., Nosek, B. A., & Brownell, K. D. (2006). The influence of one's own body weight on implicit and explicit anti-fat bias. *Obesity, 14*, 440–447. doi: 10.1038/oby.2006.58
- Simeon, D. T., Rattan, R. D., Panchoo, K., Kungeesingh, K. V., Ali, A. C., & Abdool, P. S. (2003). Body image of adolescents in a multi-ethnic Caribbean population. *European Journal of Clinical Nutrition, 57*, 157–162. doi: 10.1038/sj.ejcn.1601515
- Storch, E. A., Milsom, V. A., DeBraganza, N., Lewin, A. B., Geffken, G. R., & Silverstein, J. H. (2007). Peer victimization, psychosocial adjustment, and physical activity in overweight and at-risk-for-overweight youth. *Journal of Pediatric Psychology, 32*, 80–89. doi: 10.1093/jpepsy/32.1.113
- Tajfel, H., & Turner, J. C. (1979). An integrative theory of intergroup conflict. In W. G. Austin & S. Worchel (Eds.), *The social psychology of intergroup relations* (pp. 33–47). Monterey, CA: Brooks/Cole.
- Tiggemann, M., & Anesbury, T. (2000). Negative stereotyping of being overweight in children: The role of controllability beliefs. *Journal of Applied Social Psychology, 30*, 1977–1993. doi:10.1111/j.1559-1816.2000.tb02477.x
- Turnball, J. D., Heaslip, S., & McLeod, H. A. (2000). Pre-school children's attitudes to fat and normal male and female stimulus figures. *International Journal of Obesity, 24*, 1705–1706. doi:10.1038/sj.ijo.0801462

- Vaughan, G. M., Tajfel, H., & Williams, J. (1981). Bias in reward allocation in an inter-group and an interpersonal context. *Social Psychology Quarterly*, *44*, 37–42. doi:10.2307/3033861
- Verkuyten, M., & De Wolf, A. (2007). The development of in-group favoritism: Between social reality and group identity. *Developmental Psychology*, *43*, 901–911. doi:10.1037/0012-1649.43.4.901
- Wang, Y., & Lobstein, T. (2006). Worldwide trends in childhood overweight and obesity. *International Journal of Pediatric Obesity*, *1*, 11–25. doi:10.1080/17477160600586747
- Webb, H. J., & Zimmer-Gembeck, M. J. (2014). Body image and body change strategies within friendship dyads and groups: Implications for adolescent-based rejection sensitivity. *Social Development*, doi: 10.1111/sode/12081
- Zdaniuk, B., & Levine, J. M. (2001). Group loyalty: Impact of members' identification and contributions. *Journal of Experimental Social Psychology*, *37*, 502–509. doi:10.1006/jesp.2000.1474