

Running head: PEER-VICTIMIZATION AND DEPRESSION

Psychosocial mediators and moderators of the effect of peer-victimization upon
depressive symptomatology.

Simon C. Hunter and Kevin Durkin

University of Strathclyde

Derek Heim

University of Central Lancashire

Christine Howe

University of Cambridge

Dermot Bergin

University of Cardiff

FULL REFERENCE:

Hunter, S.C., Durkin, K., Heim, D., Howe, C., & Bergin, D. (2010). Psychosocial mediators and moderators of the effect of peer-victimization upon depressive symptomatology. *Journal of Child Psychology and Psychiatry*, 51 (10), 1141-1149.

Can be accessed here:

<http://onlinelibrary.wiley.com/doi/10.1111/j.1469-7610.2010.02253.x/abstract>

Author Note

Simon C. Hunter, Department of Psychology, University of Strathclyde; Kevin Durkin, Department of Psychology, University of Strathclyde; Derek Heim, School of Psychology, University of Central Lancashire; Christine Howe, Faculty of Education, University of Cambridge; Dermot Bergin, Department of Psychology, University of Cardiff.

This research was funded by the *Economic and Social Research Council*, RES-000-22-1428. We would like to thank all pupils, teachers and associated staff who gave their time to participate in this project. None of the authors have any conflicts of interest to declare.

Correspondence concerning this article should be addressed to Dr Simon C. Hunter, Department of Psychology, University of Strathclyde, 40 George Street, Glasgow, G1 1QE, UK. E-mail: simon.hunter@strath.ac.uk. Tel. (+44) 0141 548 4879. FAX: (+44) 0141 552 6948.

Abstract

Background: Intervention strategies and developmental models of stress have been criticized for failing to integrate social psychological variables. This study investigates both self-referential cognitive mediators (perceived threat and control) and a social psychological moderator (ethnic/religious identity) of the effect of peer-victimization upon depressive symptomatology. **Methods:** Self-report questionnaires were completed by 924 students (46% female), aged 8 to 12 years. Experiences of discriminatory and non-discriminatory peer-victimization, threat and control appraisals, depressive symptoms, and strength of main identity were assessed. **Results:** Perceived threat partially mediated the effect of peer-victimization (regardless of whether it was discriminatory or not) upon depressive symptoms. Perceived control partially mediated the effect of non-discriminatory peer-victimization upon depressive symptoms. Strength of ethnic/religious identity buffered the effect of peer-victimization on depressive symptoms. Victimization perceived to be discriminatory in nature was more strongly associated with depressive symptoms than non-discriminatory victimization.

Conclusions: Findings support calls for a greater emphasis to be placed on social psychological variables in explaining depressive symptomatology. For clinical, counseling and intervention purposes, it is important to examine whether victims perceive peer-victimization as discriminatory and whether their own strength of identity affects symptomatology. **Keywords:** Appraisal; Depression; Discrimination; Peer-Victimization; Social Identity.

Psychosocial mediators and moderators of the effect of peer-victimization upon depressive symptomatology.

Previous commentators have recommended that prevention strategies pertaining to depression among children and young people (Spence & Shortt, 2007), as well as developmental models of stress in general (Compas, Connor-Smith, Saltzman, Thomsen, & Wadsworth, 2001), need to take the social environment and social psychological variables more seriously. Ignoring the child's social environment runs the risk of failing both to understand the complex processes associated with the genesis of depression, and to identify appropriately the variables that need to be tackled in intervention. One social factor which is strongly associated with depressive symptoms is peer victimization (Hawker & Boulton, 2000). The current study sought to examine cognitive mediators, and social psychological moderators, of this relationship among preadolescent students. Appraisals of the impact of victimization upon the individual were tested as potential cognitive mediators, while strength of ethnic/religious identity was examined as a potential moderator. This represents the first attempt to assess both these mediating and moderating factors in a single study.

Peer-victimization and mediation of depressive symptoms

Peer-victimization reflects aggression directed toward a child from his or her peer group. The process can range in intensity from relatively brief to frequent and long-term. These aggressive behaviors can be direct (hitting, teasing) and indirect (spreading rumors, manipulating relationships) (Viding, Simmonds, Petrides, & Frederickson, 2009). When investigating experiences during the preceding two weeks, 62% of students report at least one encounter with an aggressive peer (Hunter, Boyle, & Warden, 2007).

The effect of peer-victimization on children's and young people's adjustment is serious and wide-ranging. In their meta-analysis, Hawker and Boulton (2000) reported that victimization is associated with depression, loneliness, self-esteem, and anxiety, with the largest effect size relating to depression. Addressing the causes and symptoms of peer victimization among children has become a pressing concern, for both theoretical and practical reasons.

Prevailing cognitive theories relating to the etiology of depressive symptomatology emphasize the role played by maladaptive self-referential cognitions (Beck, 1967; Seligman, 1975; Spence & Shortt, 2007). This implies that the effects of peer-victimization on depressive symptoms may be mediated by cognitions. Mezulis, Hyde, and Abramson (2006) provided evidence that this is the case by showing that the effects of peer-harassment upon depressive symptoms among 9- to 11-year-olds were mediated via 'cognitive vulnerability' (e.g., internal, stable, global attributions and negative inferences for negative events). Characterological self-blame also mediates the relationship between victimization and internalizing symptoms (loneliness and social phobia) for preadolescent children (Graham, Bellmore, Nishina, & Juvonen, 2009; Graham & Juvonen, 1998). Thus, we expected that self-referential cognitions specific to peer-victimization would mediate the effect of victimization on depressive symptoms.

The particular mediators we investigated were perceptions of one's own control over victimization and its perceived negative impact for the self (i.e., appraisals of threat). These self-referential cognitions are related to both coping strategy use and event-specific emotional arousal among victimized students (Hunter & Boyle, 2004; Hunter, Boyle, & Warden, 2006). Perceived lack of control, especially over the occurrence of future

negative events, is implicated in the development of depressive symptoms among preadolescents (Gibb, 2002; Hilsman & Garber, 1995), and acts as a mediator of the relationship between peer-stress and depressive symptoms for 10- to 16-year-olds (Deardoff, Gonzales, & Sandler, 2003). High levels of perceived threat are associated with increased anxiety and anticipation of negative events recurring (Suarez & Bell-Dolan, 2001). Grych, Fincham, Jouriles, and McDonald (2000) found that threat mediated the effects of parental conflict on internalizing difficulties, including depression, among 10- to 14-year-olds. We therefore expected that perceptions of both control and threat would act as mediators of the effect of peer-victimization upon depressive symptoms (see Figure 1).

Insert Figure 1 about here

Discriminatory peer-victimization and moderation of depressive symptoms

Peer-victimization perceived to be discriminatory in intent is also related to the development of depressive symptoms (Brody, Chen, Murry, Ge, Simons, Gibbons, Gerrard, & Cutrona, 2006; Wong, Eccles, & Sameroff, 2003). However, an important feature of discriminatory aggression is that it is directed toward targets because they are members of particular groups (Augoustinos & Reynolds, 2001), rather than toward the individual *per se*. This implies that group-level cognitions – specifically, ethnic/ religious identity – may be more important in the context of discriminatory peer-victimization than in non-discriminatory victimization, and may moderate the use of self-referential cognitions. Ethnic/religious identity is that component of an individual's self-concept which is derived from belonging to a specific ethnic or religious group, identifying with its characteristics, and participating in its social and cultural practices (Phinney, 1990).

This functions as a means of constructing and maintaining a positive self-image. Measures of ethnic identity have been shown to moderate the effects of discrimination upon adjustment among both adolescents (Sellers, Caldwell, Schmeelk-Cone, & Zimmerman, 2003; Wong et al, 2003) and preadolescents (Rivas-Drake, Hughes, & Way, 2008). We therefore expected that discriminatory victimization would be associated with depressive symptoms, and that this relationship would be moderated by strength of ethnic/religious identity.

The salience of ethnic/ religious identity is itself likely to vary with social context (Turner, 1987). For example, when children are victimized because of individual characteristics or arbitrary dislike, and no reference is made to their ethnic or religious group, then there is no *a priori* reason to expect that ethnic or religious identity would be invoked in their appraisals of the event. However, when children are subjected to perceived threat from an ethnic out-group, ethnicity becomes more salient (Nesdale, Maass, Durkin, & Griffiths, 2005). Thus, it is likely that the moderating effect of ethnic/religious identity operates only when victimization is perceived to be discriminatory and not when it is non-discriminatory (see Figure 2).

Insert Figure 2 about here

In both cross-sectional (Bellmore, Witkow, Graham, & Juvonen, 2004) and longitudinal (Graham et al, 2009) studies, when victims were part of a numerical minority in a classroom juxtaposed with a clear majority group (e.g., a Latino student in a 20% Latino/ 80% African American classroom), they drew on group status to interpret instances of victimization (“*I’m in a minority, and minorities are victimized*”). This was not the case when the victim was part of a numerical majority (e.g., an African American

student in a 20% Latino/ 80% African American classroom). In the latter context, it is harder to interpret victimization as due to the vulnerability of one's group, and instead the child resorts to self-referential explanations ("*Majority groups aren't victimized, so it must be my fault*"). In this way, we expect that paths leading from victimization to the appraisals of threat and control will be moderated by whether the victimization is perceived to be discriminatory or not. We expect the paths to be significant only when non-discriminatory victimization is experienced.

In sum, the current study examines mediators and moderators of the effects of peer-victimization on depressive symptomatology among preadolescents. Two self-referential cognitions, namely perceived control and threat, are expected to mediate the effects of peer-victimization when individual-level processing, rather than group-level processing, is likely to be most salient (i.e., when no discriminatory intent is perceived). In contrast, when group-level rather than individual-level processing is likely to be most salient (i.e., when discriminatory intent is perceived), ethnic/religious identity is expected to moderate the effect of victimization on depressive symptoms. Specifically, higher levels of identity should buffer victims against the negative effects of discriminatory peer-victimization. In this context, there should be less recourse to self-referential cognitions (i.e., their mediating function should be reduced or absent).

Methods

Participants

Nine hundred and twenty five children (46% female) participated. They were aged 8 to 12 years ($M = 9.81$, $SD = 0.91$) and attended primary schools in Glasgow (Scotland) and Preston (England). Participants were from the last three years of the

primary system. Schools were selected so that there would be a high percentage of students from minority ethnic and/or religious backgrounds. ‘Minority’ was defined as questionnaire responses (see Measures) indicating any religious or national group other than “*Scottish*”, “*English*”, “*British*”, “*Northern Irish*” (no participants reported “*Welsh*” as an identity), and “*Christian*”. Children were classified as minority if any of their three most important identities were minority. Minority students made up between 26.6% and 99.1% (median 64.2%) of students in participating schools. The relationship between gender and minority/majority status was not statistically significant, $\chi^2(1) = 3.56, p = .06$.

Measures

Peer-victimization. A list of different ways that children might experience peer-victimization (seven types, plus “*Other*”) was presented (following Hunter, Boyle, & Warden, 2004). Each description was accompanied by a tick-box. The instruction to participants stated: “*Below is a list of ways that children can be nasty or unpleasant to others. Have any children been nasty to you, in any of these ways, in the past two weeks? If they have, tick that box.*” (Kuder-Richardson 20 for this sample = .77). Total scores could range from 0 (no victimization) to 8 (diverse victimization). To avoid the possibility that victimized children would be easily identifiable to their classmates due to the length of time spent completing the questionnaire, students were instructed “*if **no one** has been nasty to you in the last two weeks, please think about an earlier time when someone was nasty to you*” Therefore all students answered all questionnaire items. To assess discriminatory intent, children were asked “*Were they nasty to you because of your skin colour or religion?*” Response options were “*Yes*”, “*No*”, and “*Don’t know*”.

Only children who reported experiencing victimization in the preceding two weeks (i.e., victimization scores > 0) were used in the analyses because the item relating to discriminatory intent is problematic if applied to children who report experiencing no aggression in the preceding two weeks. Specifically, an experience of no peer-aggression cannot logically be perceived to be discriminatory or not. Only children who perceived victimization to be discriminatory or not (i.e., omitting those who reported “*Don’t know*”) were included in analyses. The final sample for analyses was 473.

Appraisals. To measure threat appraisal, participants completed a scale based on Hunter et al’s (2004), which asks “*When other children are nasty to you, what do you think might happen?*”, followed by four statements (“*Your friends won’t like you anymore*”, “*You will be hurt physically (beaten up)*”, “*You will feel bad about yourself*”, and “*More and more people will be nasty to you*”), each of which was rated on a 4-point scale (1 = “*Not at all likely*”; 4 = “*Very likely*”) (Cronbach’s α for this sample = .67). A mean of these responses was taken, and scores ranged from 1 to 4, with higher scores reflecting more threat. To measure control appraisals, Hunter et al’s (2004) single-item “*How easy is it for you to stop other people being nasty to you?*” was used. Responses were again measured on a 1 to 4 scale (1 = “*Very difficult*”; 4 = “*Very easy*”). Previous research using a single-item Likert-style measure of control has supported the validity of such measures in child and adolescent populations (Causey & Dubow, 1992; Kliwer, Fearnow, & Walton, 1998).

Depressive symptomatology. The Children’s Depression Inventory: Short Version (Kovacs, 1985) was administered. The CDI-S is an established and standardized 10-item questionnaire used to assess the extent and severity of depressive symptoms among

young people aged between 7 and 17 years. Responses were recorded on 3-point scales. Total scores ranged from zero to 20. Higher scores reflected more depressive symptoms. (Cronbach's α for this sample =.81).

Ethnic/religious identity. The adolescent version of the Strength of Identification Scale (SoIS: Barrett, 2007) was adapted for children aged 8 to 12 years. The present measure began with a broad, generic description of what 'groups' are, and then participants were presented with the following: "*Here are some groups that people identify with. Please draw a circle around any of the groups that you feel you belong to (You can circle more than one)*" with response options "Christian", "Hindu", "Muslim", "Buddhist", "Jewish", "Boy", "Girl", "Scottish", "British", "Pakistani", "Indian", "Chinese", "Other (please state)". These examples were based on the minorities and religious affiliations most likely to be reported where data were being collected. The measure ended by asking "Which group is the MOST IMPORTANT to you?", "Which group is the SECOND MOST IMPORTANT to you?" and "Which group is the THIRD MOST IMPORTANT (if any)?" The "most important" identities mentioned by children differed across schools, though 'Muslim' (range = 16.2% to 86.6%), a Christian religion (2.7% to 35.7%), 'Scottish' (0% to 32.3%), 'British' (0% to 9.3%), Pakistani (0% to 5.9%), and Indian (0% to 4.7%), were the most frequently chosen national/religious identities. The pattern for the "second most important" identity was: 'Muslim' (0% to 5.4%), a Christian religion (0.9% to 7.1%), 'Scottish' (1.3% to 34.0%), 'British' (3.6% to 25.0%), Pakistani (8.1% to 58.9%), and Indian (0% to 29.6%),

Strength of identification with the most important identity was assessed using four items, adapted from Barrett (2007): 1) importance ("*How strongly do you feel you are a*

member of this group?”, response options “*Very strongly*” to “*Not at all*”); 2) pride (“*How proud are you of being a member of this group?*”, response options “*Very proud*” to “*Not at all proud*”); 3) feeling (“*How do you feel about being a member of this group?*”, response options “*Very happy*” to “*Very sad*”); 4) internalization (“*How would you feel if someone said something bad about people in this group?*”, response options “*Very happy*” to “*Very sad*”) (Cronbach’s α for this sample = .63). Mean scores ranged from 1 to 4, with higher scores reflecting stronger identification.

Procedure

Ethical approval was first gained from the relevant University Ethics Committee. Informed consent was obtained from parents, and children were also allowed to opt out of the research. Questionnaires were completed anonymously in participants’ classrooms. A researcher read out each item one-by-one, guided respondents through questionnaire completion, and was available throughout to clarify any misunderstandings. Very few problems in administration were experienced and participants were able to complete the instruments without difficulty.

Results

Preliminary data screening indicated that the strength of identity measure was heavily skewed: a majority of children (63.3%) reported what Verkuyten (2007) referred to as ‘total’ identification, that is, they scored a mean of one on the four items which they could rate from one to four. Following Verkuyten, scores were therefore dichotomized into either High or Total identification. Both depressive symptoms and peer-victimization scores were skewed, but here the skew was remedied by performing square root

transformations on scores (all subsequent reference to these variables therefore relates to the transformed scores).

Correlations and between-groups analyses

Before proceeding with the main analyses, a one-way ANOVA was used to compare children who had experienced no peer-victimization at all ($n = 309$), with those who reported experiencing non-discriminatory peer-victimization ($n = 532$) and those who reported experiencing discriminatory peer-victimization ($n = 80$) on depressive symptoms. This revealed a significant effect of group membership, $F(2, 918) = 35.76$, $p < .001$, $\eta_p^2 = .07$. Post-hoc Tukeys revealed that all three groups differed from each other ($p = 0.001$). The untransformed means¹ for the three groups were 1.83 (SD = 2.45), 3.13 (SD = 3.08) and 4.48 (SD = 4.45), respectively.

Means, standard deviations and correlations for variables included in the theoretical model are shown in Table 1. As expected, levels of depressive symptoms were positively and significantly correlated with both discriminatory and non-discriminatory peer-victimization. Both types of victimization were positively associated with appraisals of threat, but only non-discriminatory victimization was (negatively) associated with perceived control. Levels of depressive symptoms were positively associated with threat and negatively associated with perceived control regardless of type of victimization experienced.

Insert Table 1 about here.

To evaluate whether there were differences on study variables when comparing children experiencing discriminatory and non-discriminatory victimization, ANOVAs were conducted. Children who perceived their victimization to be discriminatory had

significantly higher scores on the measures of threat, $F(1,463) = 18.09, p < .001, \eta_p^2 = .04$, and peer-victimization, $F(1,471) = 29.80, p < .001, \eta_p^2 = .06$, compared to those who did not perceive their victimization to be discriminatory. Those who did not perceive their victimization to be discriminatory reported significantly higher levels of perceived control, $F(1,454) = 6.06, p = .01, \eta_p^2 = .01$. Perceived discrimination was associated with strength of identity, $\chi^2(1) = 7.43, p = .006$. Among those children with a High ethnic/religious identity, 11.0% perceived their peer-victimization to be discriminatory in nature, while among children with Total ethnic/religious identity this was 20.4%.

Analytic strategy

Analyses proceeded in two stages. First, we assessed whether the effects of victimization upon depressive symptoms were mediated via appraisals of perceived threat and control, and whether this effect was unique to non-discriminatory victimization. Second, we assessed whether the effects of victimization upon depressive symptoms were moderated by strength of identity, and whether this moderating effect was unique to discriminatory victimization. The initial step in all analyses controlled for possible effects of gender, age, percentage of minority children in school, and minority/majority status. Continuous variables were centered before creating interaction terms. Dichotomous variables were scored as 0 or 1.

Stage 1. Do threat and control mediate the effect of non-discriminatory, but not discriminatory, victimization upon depressive symptoms?

The opening goal of these analyses was to assess the impact of victimization upon depressive symptoms. Control variables were entered at the first step in a hierarchical multiple linear regression predicting depressive symptoms. These factors did not account

for a significant portion of the variance in depressive symptoms, $F(4,458) = 1.28, p = .28, R^2 = .011$. At the second step in the regression, victimization was added, accounting for a significant portion of unique variance, $F_{change}(1,457) = 41.59, p < .001, R^2_{change} = .082$. This confirmed that victimization was significantly and positively associated with depression ($\beta = .30, p < .001$).

Does Only Non-Discriminatory Victimization Predict Threat and Control? Next, we assessed whether victimization predicted threat, and if that relationship was moderated by whether or not victimization was discriminatory. As above, the same control variables were entered at Step 1 of the regression, accounting for a significant portion of the variance in threat, $F(4,451) = 2.86, p = .02, R^2 = .025$. The only significant predictor here was age ($\beta = -.12, p = .01$), indicating that older children perceived less threat. At Step 2, both victimization and Perceived discriminatory intent were added as predictors, $F_{change}(2,449) = 32.54, p < .001, R^2_{change} = .123$. Victimization was positively associated with threat ($\beta = .33, p < .001$), as was perceived discrimination ($\beta = .10, p = .04$). To test our expectation that this effect of victimization would be significant for non-discriminatory victimization only, an interaction term (Victimization x Perceived discriminatory intent) was added at Step 3. This did not account for a significant portion of variance, $F_{change}(1,448) = 0.73, p = .39, R^2_{change} = .001$, so the interaction term was non-significant ($\beta = -.04, p = .39$). Thus, victimization predicts perceived threat for all participants, regardless of whether the aggression they experienced was regarded as discriminatory or not (see Figure 3).

Insert Figure 3 about here

Turning to the prediction of perceived control, the same control variables (gender, etc.) were entered at Step 1, accounting for a significant portion of variance, $F(4,443) = 5.32, p < .001, R^2 = .046$. Age was a significant, positive predictor of control ($\beta = .11, p = .02$), girls reported lower perceived control than boys ($\beta = -.14, p = .002$), and participants in schools with a higher percentage of minority ethnic/religious pupils reported lower perceived control ($\beta = .14, p = .01$). The second step in this analysis included both victimization and Perceived discriminatory intent as predictors, and was significant, $F_{change}(2,441) = 11.87, p < .001, R^2_{change} = .049$. Victimization was negatively associated with control ($\beta = -.20, p < .001$), while perceived discrimination was not a significant predictor ($\beta = -.07, p = .13$). Step 3 (the interaction term for Victimization x Perceived discriminatory intent) accounted for a significant portion of unique variance, $F_{change}(1,440) = 9.90, p = .002, R^2_{change} = .020, \beta = .17$. To interrogate the significant interaction, a simple effects analysis was conducted. These analyses revealed a significant effect of victimization ($\beta = -.27, p < .001$) for the no-discrimination group: $R^2_{change} = .068, F(1,367) = 28.26, p < .001$, but no equivalent effect of victimization ($\beta = .11, p = .36$) for the perceived discrimination group: $R^2_{change} = .011, F(1,69) = 0.86, p = .36$. Thus, victimization is only a predictor of control when it is perceived to be non-discriminatory.

These results indicated that victimization (i) predicts depression, (ii), predicts threat and (iii) predicts control, but only when it is perceived to be non-discriminatory. Therefore, we examined whether perceived threat mediated the effect of victimization (regardless of whether the victimization was discriminatory or not) and whether perceived control mediated the effect of non-discriminatory victimization.

Do Threat and Control Act as Mediators? Data from all participants experiencing victimization were used to assess whether threat acted as a mediator of the effect of victimization on depressive symptoms. In this analysis, the criterion variable was depressive symptoms. Step 1 and Step 2 of the regression therefore replicated the analysis detailed at the beginning of stage 1 of the analyses. At Step 3, threat was added and accounted for a significant portion of unique variance, $F_{change}(1,448) = 30.48, p < .001$. $R^2_{change} = .058$. Threat was a significant, positive predictor of depressive symptoms ($\beta = .26, p < .001$). Importantly, at Step 3 the strength of the standardized beta from victimization to depressive symptoms markedly reduced ($\beta = .21, p < .001$). This reduction implied partial mediation may be occurring, an interpretation supported by the significance of the indirect effect of peer-victimization upon depressive symptoms via threat ($Sobel = 4.50, p < .001$). The results of these mediating analyses relating to threat are shown in Figure 3.

Turning to control, only data from students experiencing non-discriminatory victimization were analysed, since only this type of victimization predicted control. Step 1 of the regression analysis controlled for the same variables as above. At Step 2, victimization was added, and this accounted for a unique portion of the variance, $F_{change}(1,366) = 22.66, p < .001$. $R^2_{change} = .057$. This confirmed that non-discriminatory victimization was a significant predictor of depressive symptoms ($\beta = .25, p < .001$). At Step 3, perceived control was added and it accounted for a significant portion of unique variance, $F_{change}(1,365) = 13.11, p < .001$. $R^2_{change} = .032$. Control was negatively associated with depressive symptoms ($\beta = -.19, p < .001$). At this step in the analysis, the standardized beta for victimization reduced to $.20 (p < .001)$, suggesting partial

mediation. The indirect effect was significant ($Sobel = 2.98, p = .003$). The results of this second mediational analysis are shown in Figure 4.

Insert Figure 4 about here

Stage 2. Does strength of identity moderate the effect of discriminatory, but not non-discriminatory, victimization on depressive symptoms?

With depression serving as the criterion variable, the control variables were again all entered at Step 1 in a hierarchical multiple linear regression. At Step 2, peer-victimization, perceived discrimination (no/yes), and identity (High/Total) were added, accounting for a significant additional portion of variance, $F_{change}(3,447) = 15.27, p < .001$. $R^2_{change} = .092$. Only victimization ($\beta = .26, p < .001$) and discrimination ($\beta = .11, p = .02$) were significant individual predictors. At Step 3 in the analysis, two interaction terms were added: Victimization x Identity, and Victimization x Perceived discrimination, and together these accounted for a significant portion of variance, $F_{change}(2,445) = 5.43, p = .005$. $R^2_{change} = .021$. Only the interaction between victimization and identity was significant ($\beta = -.21, p = .002$). Finally, at Step 4, a three-way interaction, Victimization x Identity x Perceived discrimination, was added to assess whether strength of identity acted as a moderator of the effect of victimization upon depressive symptoms only when victimization was discriminatory. This did not account for a significant portion of the variance in depressive symptoms, $F_{change}(1,444) = 0.98, p = .32$. $R^2_{change} = .002$.

To interrogate the significant two-way interaction between victimization and identity (reported in Step 3), a simple effects analysis was conducted. This revealed a significant effect of victimization ($\beta = .40, p < .001$) for the High identity group: $F(1,199) = 35.58, p < .001, R^2_{change} = .143$. Victimization also had a significant, though

weaker, effect ($\beta = .19, p = .004$) for the Total identity group: $F(1,244) = 8.36, p = .004, R^2_{Change} = .033$. This indicates that victimization is associated with depressive symptomatology, but that this effect is buffered by identity such that the effect is smaller when identity is Total rather than High.

Discussion

This study investigated the effects of peer-victimization on depressive symptomatology among preadolescents. As predicted, perceived control partially mediated the effect of non-discriminatory, but not discriminatory, victimization on depressive symptomatology. Unexpectedly, threat partially mediated the effects of both types of victimization. Children's strength of religious/ethnic identity buffered the effects of peer-victimization upon depressive symptoms but, contrary to expectation, this was not unique to those who experienced only non-discriminatory peer-victimization. These results partially support our contention that peer-victimization has different effects according to whether it invokes individual- or group-level processes.

Children who experienced peer-victimization which they perceived to be discriminatory reported significantly higher levels of depressive symptomatology, peer-victimization and threat, as well as lower levels of control, than children whose victimization was not perceived to be discriminatory. Furthermore, perceiving victimization to be discriminatory was associated with Total rather than High ethnic/religious identity, supporting Nesdale et al's (2005) finding that when children are subjected to perceived threat from an ethnic out-group, ethnicity becomes more salient.

Children aged 8 to 12 years, growing up in multicultural contexts, seem to be sensitive to whether acts of peer-victimization directed towards them are discriminatory

or not. When perceived to be non-discriminatory, self-referring cognitive processing, such as perceptions of control and threat, can mediate the impact of the trauma. This is consistent with a cognitive-contextual theoretical framework (Grych et al, 2000) and with theory pertaining to the etiology of depressive symptomatology in general (Beck, 1967; Seligman, 1975). An effect of perceived control was absent in the context of discriminatory peer-victimization, supporting Graham et al's (2009) conclusion that when group-level attributions are available there is little or no reason for an experience to impinge upon self-referential cognitions.

On the other hand, perceived threat was a mediator irrespective of perceived discriminatory intent. We had expected that both types of self-referential cognitions would be less likely to be activated in the context of discriminatory victimization. Graham et al (2009) had found that characterological self-blame was less likely under this condition, and we report similar findings in respect of perceived control. Both of these constructs tap aspects of internal focus (the extent to which the child assesses that he or she is responsible for, or can handle, the problem). Perceived threat differs from these variables in that it focuses on the potential harm to the self from external agents. A possible interpretation, then, is that the social context of perceived discrimination affects the extent to which children appraise their own responsibility but does not mitigate the evaluation of threat. An aggressive peer is dangerous, irrespective of whether he or she is motivated by personal or group membership concerns.

An important finding of this study is that the effect of peer-victimization (whether discriminatory or not) upon young people's reported depressive symptoms is buffered by the strength of their religious/ethnic identity. Self Categorization Theory (Turner, 1987)

would predict that perceived discrimination leads to greater categorization of oneself at the social level rather than at the individual level, and that therefore religious/ethnic identity only buffers the effects of discriminatory victimization. Instead, religious/ethnic identity operated as a buffer regardless of the nature of peer-victimization. Thus, religious/ethnic identity is somehow brought to bear upon the problem of peer-victimization so that the negative effect upon depressive symptomatology is blunted. Social support moderates the stability of victimization experiences (Fox & Boulton, 2006), and it may be the case that children with Total religious/ethnic identities have access to more social support (Tse, 1999). Future research could usefully investigate the extent to which strong religious/ ethnic identity is associated with other dimensions of psycho-social well-being in children.

Both frequency (O'Moore & Kirkham, 2001) and duration (Crozier & Skliopidou, 2002) of victimization relate to psychological wellbeing and distress. Greater victimization in the present study represented increasingly diverse victimization (i.e., experiencing more types). Future research should consider whether the effects of duration/frequency of victimization upon wellbeing can also be accounted for by self-referential cognitions.

These results have implications for the provision of therapy for children whose depression is associated with peer-victimization. In particular, they suggest that practitioners need to consider the social context of aggression when evaluating specific treatment goals. For example, many school-based anti-bullying interventions incorporate elements of cognitive behavior therapy (CBT) and there is evidence that this can be effective (e.g., DeRosier & Marcus, 2005). However, while attention to maladaptive

cognitions relating to threat (e.g., fears relating to social isolation and escalation of victimization: Hunter & Boyle, 2004) and control (Turner, Holtzman, & Mancl, 2007) may be pertinent here, our results suggest that they may be most efficacious when victimization is non-discriminatory. When discrimination is present, or likely to be present, such interventions may be bolstered by adding strands relating to the development and strengthening of ethnic and religious identity.

The cross-sectional nature of the data collected in this study limits the extent to which causal inferences can be drawn. For example, perceived lack of control may lead to greater peer-victimization (rather than vice-versa) due to its association with unassertive coping strategy use (Hunter et al, 2006). Future research should consider longitudinal designs as an avenue toward disentangling causation (cf. Graham et al, 2009). A further limitation of the present study is the reliance on self-report data, which may inflate associations between variables, and triangulation of multi-method data should be considered in future. Nevertheless, the present results are consistent with other research (Graham & Juvonen, 1998; Graham et al, 2009) indicating that self-referential cognitive processes are associated with depressive symptomatology, and that this process is sensitive to social context.

In conclusion, the current study indicates that some self-referential cognitive processes (such as perceived control) may be invoked in the context of non-discriminatory peer-victimization, where the social-cognitive focus is at the inter-individual level. These processes are less likely in the context of discriminatory victimization, where the social-cognitive focus is at the intergroup level. Perceived threat appears to mediate the relationship between victimization and depression in both non-

discriminatory and discriminatory settings. Working to change maladaptive cognitions of children who experience any type of peer-victimization remains an important goal, but the findings suggest that interventions should take into account that cognitive foci are differentiated as a function of social context. The study also provides evidence that ethnic/religious identity can help protect children against internalizing difficulties associated with peer-victimization. Attending to, and influencing, the strength of ethnic and religious identity among children who are victimized is therefore an important feature that future anti-bullying efforts should consider.

References

- Augoustinos, M., & Reynolds, K.J. (2001). Prejudice, racism, and social psychology. In M. Augoustinos, & K.J. Reynolds, (Eds.), *Understanding prejudice, racism, and social conflict* (pp.1-23). London: Sage.
- Barrett, M. (2007). *Children's knowledge, beliefs and feelings about nations and national groups*. Psychology Press: East Sussex.
- Beck, A.T. (1967). *Depression: Clinical, experimental, and theoretical aspects*. New York: Harper & Row.
- Bellmore, A., Witkow, M.R., Graham, S., & Juvonen, J. (2004). Beyond the individual: The impact of ethnic context and classroom behavioral norms on victims' adjustment. *Developmental Psychology, 40*, 1159-1172.
- Brody, H.H., Chen, Y-F., Murry, V.M., Ge, X., Simons, R.L., Gibbons, F.X., Gerrard, M., & Cutrona, C.E. (2006). Perceived discrimination and the adjustment of African American youths: A five-year longitudinal analysis with contextual moderation effects. *Child Development, 77*, 1170-1189.
- Causey, D.L., & Dubow, E.F. (1992). Development of a self-report coping measure for elementary school children. *Journal of Clinical Child Psychology, 21*, 47-59.
- Compas, B.E., Connor-Smith, J.K., Saltzman, H.M. Thomsen, A.H., & Wadsworth, M.E. (2001). Coping with stress during childhood and adolescence: Problems, progress, and potential in theory and research. *Psychological Bulletin, 127*, 87-127.
- Crozier, W.R., & Skliopidou, E. (2002). Adult recollections of name-calling at school. *Educational Psychology, 22*, 113-124.

- Deardorff, J., Gonzales, N.A., & Sandler, I.N. (2003). Control beliefs as a mediator of the relation between stress and depressive symptoms among inner-city adolescents. *Journal of Abnormal Child Psychology, 31*, 205-217.
- DeRosier, M.E., & Marcus, S.R. (2005). Building friendships and combating bullying: Effectiveness of S.S.GRIN at one-year follow-up. *Journal of Clinical Child and Adolescent Psychology, 34*, 140-150.
- Fox, C. L., & Boulton, M. J. (2006). Friendship as a moderator of the relationship between social skills problems and peer victimisation. *Aggressive Behavior, 32*, 110-121.
- Gibb, B.E. (2002). Childhood maltreatment and negative cognitive styles. A quantitative and qualitative review. *Clinical Psychology Review, 22*, 223-246.
- Graham, S., Bellmore, A., Nishina, A., & Juvonen, J. (2009). "It must be *me*": Ethnic diversity and attributions for peer victimization in middle school. *Journal of Youth and Adolescence, 38*, 487-499.
- Graham, S., & Juvonen, J. (1998). Self-blame and peer victimization in Middle School: An attributional analysis. *Developmental Psychology, 34*, 587-599.
- Grych, J.H., Fincham, F.D., Jouriles, E.N., & McDonald, R. (2000). Interparental conflict and child adjustment: Testing the mediational role of appraisals in the cognitive-contextual framework. *Child Development, 71*, 1648-1661.
- 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, 41*, 441-455.

- Hilsman, R., & Garber, J. (1995). A test of the cognitive diathesis-stress model of depression in children: Academic stressors, attributional style, perceived competence, and control. *Journal of Personality and Social Psychology, 69*, 370-380.
- Hunter, S.C., & Boyle, J.M.E. (2004). Coping and appraisal in victims of school bullying. *British Journal of Educational Psychology, 74*, 83-107.
- Hunter, S.C., Boyle, J.M.E., & Warden, D. (2004). Help seeking amongst child and adolescent victims of peer-aggression and bullying: The influence of school-stage, gender, victimization, appraisal, and emotion. *British Journal of Educational Psychology, 74*, 375-390.
- Hunter, S.C., Boyle, J.M.E., & Warden, D. (2006). Emotion and coping in young victims of peer-aggression. In P. Buchwald (Ed.), *Stress and anxiety - Application to health, community, work place and education* (pp.307-324). Newcastle, UK: Cambridge Scholar Press.
- Hunter, S.C., Boyle, J.M.E., & Warden, D. (2007). Perceptions and correlates of peer-victimization and bullying. *British Journal of Educational Psychology, 77*, 797-810.
- Kliewer, W., Fearnow, M.D., & Walton, M.N. (1998). Dispositional, environmental, and context-specific predictions of children's threat perceptions in everyday stressful situations. *Journal of Youth and Adolescence, 27*, 83-100.
- Kovacs, M. (1985). The Children's Depression Inventory (CDI). *Psychopharmacology Bulletin, 1*, 995-998.

- Mezulis, A.H., Hyde, J.S., & Abramson, L.Y. (2006). The developmental origins of cognitive vulnerability to depression: Temperament, parenting, and negative life events in childhood as contributors to negative cognitive style. *Developmental Psychology, 42*, 1012-1025.
- Nesdale, D., Maass, A., Durkin, K., & Griffiths, J. (2005). Group norms, threat and children's racial prejudice. *Child Development, 76*, 652-663.
- O'Moore, M., & Kirkham, C. (2001). Self-esteem and its relationship to bullying behaviour. *Aggressive Behavior, 27*, 269-283.
- Phinney, J. S. (1990). Ethnic identity in adolescence and adulthood: A review and integration. *Psychological Bulletin, 108*, 499-514.
- Rivas-Drake, D., Hughes, D., & Way, N. (2008). A closer look at peer discrimination, ethnic identity, and psychological wellbeing among urban Chinese American sixth graders. *Journal of Youth and Adolescence, 37*, 12-21.
- Seligman, M.E. (1975). *Helplessness: On depression, development, and death*. San Francisco: Freeman.
- Sellers, R.M., Caldwell, C.H., Schmeelk-Cone, K.H., & Zimmerman, M.A. (2003). Racial identity, racial discrimination, perceived stress, and psychological distress among African American young adults. *Journal of Health and Social Behavior, 43*, 302-317.
- Spence, S.H., & Shortt, A.L. (2007). Research review: Can we justify the widespread dissemination of universal, school-based interventions for the prevention of depression among children and adolescents? *Journal of Child Psychology and Psychiatry, 48*, 526-542.

Suarez, L., & Bell-Dolan, D. (2001). The relationship of child worry to cognitive biases: Threat interpretation and likelihood of event occurrence. *Behavior Therapy, 32*, 425-442.

Tse, L. (1999). Finding a place to be: ethnic identity exploration of Asian Americans. *Adolescence, 34*, 121-138.

Turner, J.A., Holtzman, S., & Mancl, L. (2007). Mediators, moderators, and predictors of therapeutic change in cognitive-behavioral therapy for chronic pain. *Pain, 127*, 276-286.

Turner, J.C. (1987). A self-categorization theory. In J.C. Turner, M.A. Hogg, P.J. Oakes, S.D. Reicher, & M.S. Wetherall (Eds.), *Rediscovering the social group: A self-categorization theory* (pp.42-67). Oxford, UK: Blackwell.

Verkuyten, M. (2007). Religious group identification and inter-religious relations: A study among Turkish-Dutch Muslims. *Group Processes and Intergroup Relations, 10*, 341-357.

Viding, E., Simmonds, E., Petrides, K.V., & Frederickson, N. (2009). The contribution of callous-unemotional traits and conduct problems to bullying in early adolescence. *Journal of Child Psychology and Psychiatry, 50*, 471-481.

Wong, C.A., Eccles, J.S., & Sameroff, A. (2003). The influence of ethnic discrimination and ethnic identification on African American adolescents' school and socioemotional adjustment. *Journal of Personality, 71*, 1197-1232.

Footnote

¹Results were the same regardless of whether the transformed or untransformed scores were used, so we report untransformed values to ease interpretation.

Table 1.

Means, Standard Deviations, and Correlations of Variables Included in the Theoretical Model and Shown According to Discriminatory Nature of Victimization.

	2	3	4	Mean (SD)
Non-Discriminatory Peer-Victimization (N = 379 to 392)				
1. CDI-S ^{1,2}	.31***	-.25***	.25***	1.43 (0.95)
2. Perceived Threat	-	-.30***	.37***	1.64 (0.67)
3. Perceived Control		-	-.27***	2.33 (1.06)
4. Peer-Victimization ²				0.33 (0.28)
Discriminatory Peer-Victimization (N = 77 to 80)				
1. CDI-S ^{1,2}	.39***	-.26*	.39***	1.86 (1.02)
2. Perceived Threat	-	-.13	.28*	2.03 (0.91)
3. Perceived Control		-	.08	2.01 (1.14)
4. Peer-Victimization ²				0.52 (0.30)

¹CDI-S: Children's Depression Inventory – Short Form.

²Square root transformed scores.

Note: Due to missing data, sample sizes varied. * $p < .05$. *** $p < .001$.

Figure Captions

Figure 1. Non-discriminatory victimization and depressive symptoms: Hypothesized mediation by perceived threat and perceived control.

Figure 2. Discriminatory victimization and depressive symptoms: Moderation by strength of ethnic or religious identity.

Figure 3. Standardized regression weights for all children (i.e., including both discriminatory and non-discriminatory victimization).

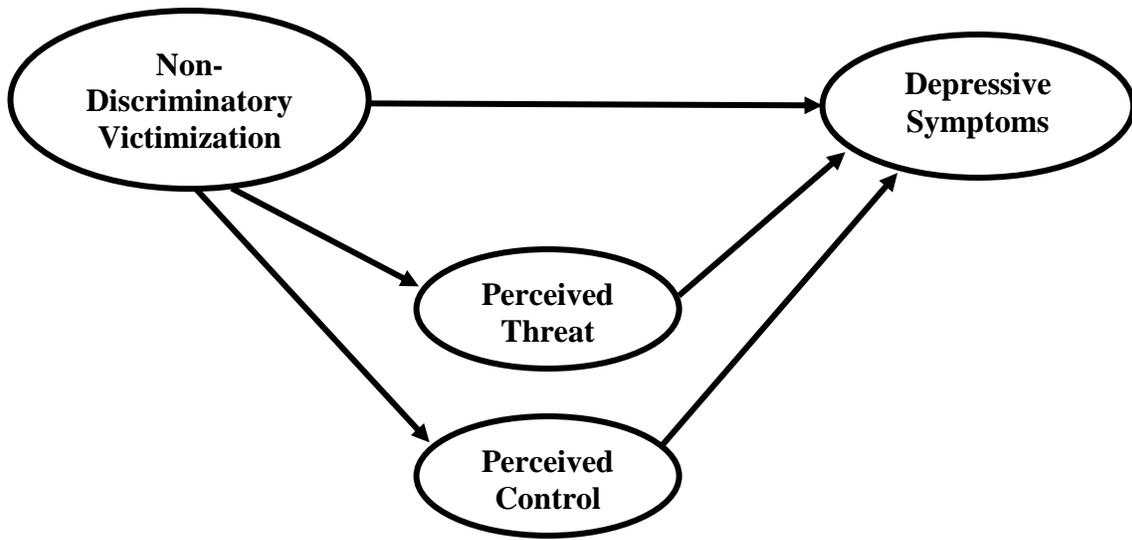
^aWhere two standardized betas are reported, the value in parentheses reflects the path weight following inclusion of the presumed mediator in the regression analysis.

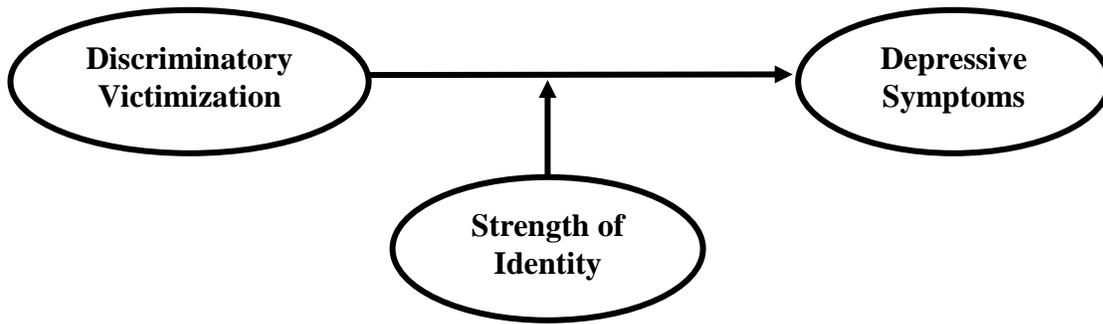
*** $p < .001$.

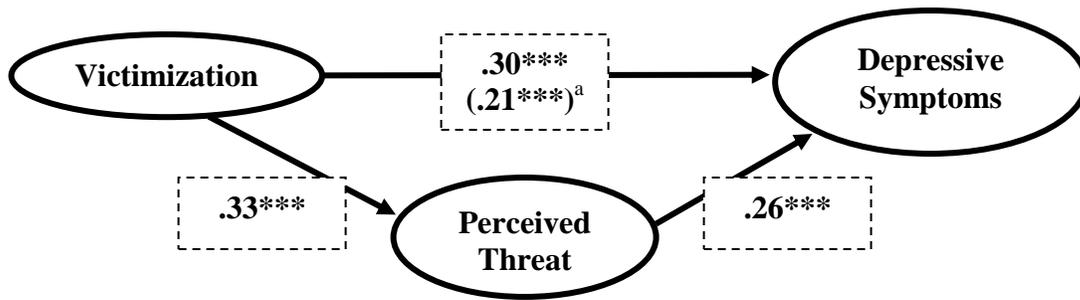
Figure 4. Standardized regression weights for children reporting non-discriminatory victimization only.

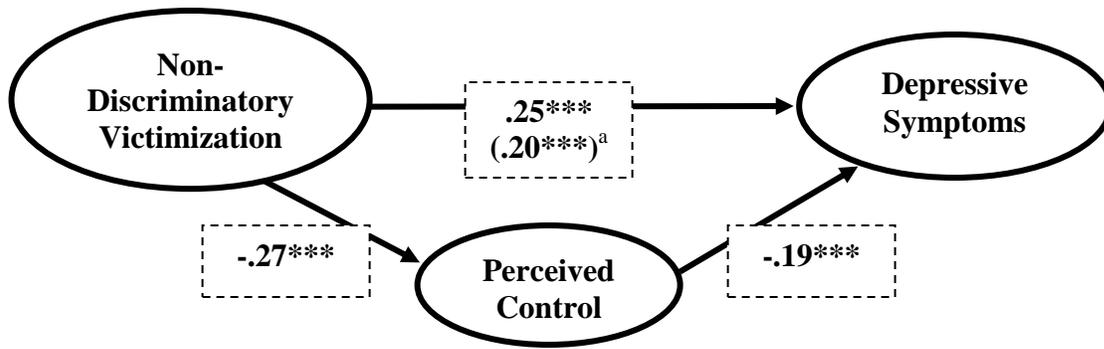
^aWhere two standardized betas are reported, the value in parentheses reflects the path weight following inclusion of the presumed mediator in the regression analysis.

*** $p < .001$.









Key points.

The association between peer-victimization and depressive symptoms in children and adolescents is well documented. However, less attention has been paid to the social context of victimization.

One important contextual variable is ethnic/religious discrimination. This study distinguishes between discriminatory and non-discriminatory peer-victimization experienced by British 8- to 12-year-olds. The social cognitive processes mediating and moderating impact upon depressive symptomatology were examined.

Perceived control partially mediated the effects of non-discriminatory peer-victimization upon depressive symptoms, while threat was a partial mediator of victimization regardless of discriminatory intent. Strength of ethnic/religious identity moderated the effect of peer-victimization.

For clinical purposes, it is important to examine whether victims perceive peer-victimization as discriminatory and whether their own strength of identity affects symptomatology.