

**Profiling social, emotional and behavioural difficulties of children involved
in direct and indirect bullying behaviours**

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Abstract

Being involved in bullying places a child at risk of poor psychosocial and educational outcomes. This study aimed to examine the profile of behavioural, emotional and social functioning for two subtypes of bullying; direct and indirect (relational). Pupils aged between seven and eleven years old completed sociometric measures of social inclusion and bullying behaviour to identify 192 pupils considered to be involved in either direct, indirect, both or neither types of bullying. These pupils and their teachers completed a battery of assessments relating to behaviour, social competence and self-perception. All bully-groups experienced similar levels of significant social rejection. 'Direct' and 'both' groups showed the greatest number of behavioural, emotional and social difficulties, while the 'indirect' group showed weaknesses in self-perception, but no teacher-rated problems. Understanding the behavioural, emotional and social correlates of bullying is of particular importance for early identification of children at risk of becoming bullies and for developing targeted interventions.

Keywords: Bullying, conduct problems, self-perception, gender, social competence

Introduction

Bullying has been defined as a subset of aggressive behaviour which involves intentional harm that is repeated over time, and where there is an imbalance of power between the bully and the victim (Rigby & Smith, 2011). Craig et al. (2009) have reported the prevalence of school-aged bullying behaviour across 40 countries as 10.7%, with 39.8% of school-aged children reporting themselves as being victims of bullying.

Some researchers have argued for the presence of two particular subtypes of bullying behaviour; 'direct' and 'indirect' (or 'relational') (e.g. Rivers & Smith, 1994; Scheithauer, Hayer, Petermann & Jugert, 2006). Direct bullying is defined as involving face-to-face physical and verbal aggression, while indirect bullying is more covert in nature and may occur via a third person (e.g. spreading malicious rumours, purposefully isolating others from social situations). The effects of bullying on its victims have been comprehensively researched (Hemphill et al., 2011; Jaana, Yueyan, & Guadelope, 2011; Knack, Jensen-Campbell, & Baum, 2011; Löhre, Lydersen, Paulsen, Mæhle, & Vatten, 2011) and bullying behaviour itself has also been found to be associated with a range of difficulties in children and adolescents; for example, Conduct Disorder, Oppositional Defiant Disorder, Attention Deficit Hyperactivity Disorder (ADHD) and passive-aggressive personality disorder (Coolidge, DenBoer, & Segal, 2003).

Children who bully at school have also been reported to have increased conduct problems and hyperactivity symptoms on the Strengths and Difficulties Questionnaire (SDQ; Goodman, 1997) (e.g. Gini, 2008; Viding, Simmonds, Petrides, & Frederickson, 2009; Wolke, Woods, Bloomfield and Karstadt, 2000) . However, as in much of the bullying literature, many

studies have considered bullying as a single entity, without considering possible different outcomes for different subtypes of bullying behaviour. Wolke et al. examined direct and relational/indirect subtypes of bullying in almost 2000 British students aged between six and nine years of age. Children who reported themselves as direct bullies had statistically greater scores on the total difficulties scale of the SDQ than did relational bullies. This group, and the group of children who took part in both direct and indirect bullying, also had greater conduct problems, hyperactivity symptoms and peer problems than relational bullies and children who did not bully. The finding that differences exist between these different subtypes of bullying behaviours suggests that these subtypes should be examined separately in future research.

Children who bully have been found to be more aggressive in terms of both reactive and proactive aggression compared to children who do not bully. Comparison children, including victims of bullying, appear to only show reactive aggression (Camodeca & Goossens, 2005; Salmivalli & Nieminen, 2002). Reactive aggression is defined as a defensive response to provocation, whereas proactive aggression is deliberate and provocative and may involve some pleasure or satisfaction (Crick & Dodge, 1996). Although these studies compared bullies to victims and children who are both bullies and victims, direct and indirect bullying subtypes were not considered. As differences have previously been found between direct and indirect bullies in terms of behavioural difficulties on the SDQ, differences may also exist between these bullying subtypes for incidences of proactive and reactive aggression.

Children involved in bullying have been reported to show greater levels of emotional difficulties. In particular, these individuals have been reported to show increased rates of depression, self-harm, suicide and suicidal ideation (Barker, Arseneault, Brendgen, Fontaine, & Maughan, 2008; Coolidge et al., 2003; Klomek et al., 2009; Salmon et al., 1998; Seals &

Young, 2003). As children's behavioural difficulties have been shown to differ between direct and indirect bullies, emotional difficulties related to different bullying subtypes also need to be explored.

Findings have been mixed with regards to the self-perceptions and self-esteem of children who bully. Using a measure of self-perception, Austin and Joseph (1996) reported lower self-perception scores were associated with pupils in middle childhood who reported themselves to be bully-victims. However those children in the 'bully-only' group did not differ from non-bully comparison pupils. Seals and Young (2003) report no statistically significant differences in self-esteem of children who bully and children who do not (Seals & Young, 2003), while others have reported those who bully to have lower self-esteem (Coolidge et al., 2003; O' Moore & Kirkham, 2001). Using peer reports and exploring different subtypes of self-esteem, Salmivalli et al. (1999) found that young people who bully tend to be characterized by a type of self-esteem known as 'defensive egotism', a term used to describe individuals who have a grandiose and self-enhancing attitude and who are defensive in response to criticism. This was not the same as 'low self-esteem', but rather a group of young people whose sense of self appears sensitive to criticism.

In addition to the behavioural and emotional difficulties associated with bullying, associations have been found between school bullying and social functioning. Children who bully have been shown to have lower peer acceptance and greater peer rejection than those not involved in bullying behaviour (Dijkstra, Lindenberg, & Veenstra, 2008). Furthermore, Viding et al. (2009) found that children who bully had increased peer problems and lower prosocial behaviour scores on the SDQ. However, it may be the case that the association between social rejection and bullying should be considered from a developmental

perspective. During adolescence, some research has reported that those who bully do not fare less well than their peers on measures of popularity (Caravita, DiBlasio & Salmivalli, 2009). The nature of any social deficit that may play a role in bullying behaviours remains unclear, and two main theories have been postulated.

One theory core to our understanding of bullying behaviour is the Social Deficit Model (Crick & Dodge, 1996). This model suggests that children who bully lack social perspective-taking skills and are unable to form an accurate perception of the intentions and motivations of others. However, Sutton, Smith, and Swettenham (1999a) argue that this view relies on evidence from aggressive children or those with conduct disorders, rather than direct studies of bullying behaviour. They propose an opposing theory which suggests that children who bully actually have good social cognition skills and that this allows them to successfully manipulate others whilst avoiding detection (Sutton, Smith & Swettenham. 1999b). Sutton et al. make use of the 'theory of mind' paradigm to discuss social cognition in relation to bullying behaviour. Having a good 'theory of mind' allows individuals to accurately attribute mental states to others and therefore can make sensible predictions about others' behaviour.

In support of their theory, Sutton et al (1999b) found 'bullies' scored higher than comparison peers on understanding social cognition and emotions in a social story task. However, 'bullies' were grouped as a single category in this study. It may be that indirect bullying requires a good 'theory of mind' in order to manipulate the mental states of others, whereas a 'theory of mind' may not be necessary for direct bullying behaviours. Again, this suggests differences in the profiles of direct and indirect bullies and supports the idea that bullying behaviour should be considered in terms of these subtypes.

One further consideration when profiling children involved in bullying is the gender of the 'bully'. There is a reported higher prevalence of males than females involved in bullying behaviour (Jolliffe, 2011; Rivers & Smith, 1994; Wolke et al., 2000). However, it may be that boys and girls differ in terms of the type of bullying behaviour that they are involved in, and this higher male prevalence may reflect the fact that previous studies have predominantly studied direct bullies only. Girls may also bully but may be less direct and instead bully indirectly. It is important that gender differences are considered as this may help explain some of the behavioural, emotional and social differences found between the different subtypes of bullying.

The difficulties associated with bullying behaviour during childhood and adolescence is cause for concern alone, however negative long-term effects have also been identified. Bullying at school has been shown to predict antisocial behaviour, violent offences, illicit drug use, and psychiatric hospital admissions and psychopharmacologic treatment in adulthood (Bender & Losel, 2011; Luukonen, Riala, Hakko, & Räsänen, 2011; Niemelä et al., 2011; Renda, Vassallo, & Edwards, 2011; Sourander et al., 2009). Such adverse potential outcomes make it clear that effective interventions for bullying are important for both victims of bullying and children who bully others. The development of such intervention strategies requires a fine-grained understanding of the cognitive and affective profile of abilities and difficulties that underpin bullying behaviour. However, as previous research has shown, there appear to be many correlates of bullying behaviour and inconsistencies in the literature remain. It is unlikely that considering one single profile of a bully is sensible, and instead we should seek to consider different risk pathways to becoming a bully. This kind of research speaks to an ultimate aim of informing the development of interventions that relate directly to

the profiles of strengths and weaknesses shown by children who are involved in different bullying subtypes.

This study set out to refine the understanding of the profiles associated with bullying by examining differences in teacher and self-reports of behaviour, social functioning and self-perception in a group of children who were rated by their peers as being involved in direct or indirect bullying behaviour, both, or neither. In line with previous research, six specific hypotheses were formulated for investigation:

1. A gender difference is expected in the proportion of males and females involved in direct and indirect bullying. Specifically, we expect more boys to be involved in direct bullying, and more girls to be involved in indirect bullying.
2. We expect that direct bullies (and children involved in both types of bullying) will be characterized by greater levels of behavioural problems (in terms of conduct problems, hyperactivity and aggression) than indirect bullies and a non-bully comparison group. Furthermore, in line with previous research, we predict that direct bullies will report more reactive and proactive aggression than children who do not bully.
3. We expect that both direct and indirect bullies (and those involved in both) will show greater levels of emotional difficulties than their peers who are not involved in bullying.
4. We expect some group differences in self-perception, with children who are not involved in bullying having the most positive self-perception profile, and those who are involved in 'both' to have the poorest.

5. We expect that children reported by their peers to be ‘bullies’ (direct, indirect, or children involved in both) will fare less well in terms of social acceptance, and will experience greater levels of social rejection than children not involved in bullying.
6. Finally, we expect that indirect bullies will not have social skills difficulties, but direct bullies (and children involved in both) will be less socially competent than indirect bullies and children not involved in bullying behaviour.

Method

The study employed a two-stage design with a proportion of pupils from stage one being asked to participate in stage two.

Participants

Pupils in year groups three to six (aged between 7 and 11 years) were recruited from three local authority maintained mainstream primary schools. The schools were all based in London boroughs, with free school meal percentages (22.8% – 28.8%) placing them within the average range for the UK (28.7%)¹. The three participating schools yielded twenty classes and 576 pupils who were all invited to take part. Of these pupils, 512 took part in the first stage of the study. Pupils who did not take part were either absent from school on the day of assessment (n = 36), had recently left the school (n=6) or had been withdrawn from the study by their parents or guardians (n=22). No child was excluded due to literacy or other difficulties.

Of the 512 pupils who took part in the first stage, 192 students were seen in stage two. Only one pupil who was recruited to stage two elected not to take part, while three others were

¹ Information obtained from <http://www.education.gov.uk/aboutdfe/foi/disclosuresaboutchildrenyoungpeoplefamilies/a00271/free-school-meals>, which was updated in January 2011.

away from school during the times that a researcher was available to work with them. Pupils from all age groups were recruited into stage two; 58 from year three, 45 from year four, 31 from year five and 58 from year six. The mean age for participants in stage two was 9 years 7 months (SD = 1 year 3 months) and 47.4% were female. A full breakdown of the participants' characteristics by each of the four groups is provided in Table 1.

Procedure

Parents of all year three to six pupils at participating schools were sent a letter containing information about the whole study and were asked to indicate via returning a form, telephone or email within two weeks if they did not want their child to take part. This opt-out consent was approved by the schools and was granted permission from the (*name temporarily removed to maintain anonymity in the review process*)'s Research Ethics Committee. This opt-out method was included in order to gain maximum possible involvement in the whole-class sociometric stage of the study, which allowed us to obtain the most accurate peer-reports of behaviour. Final consent to take part was given by the pupils' class teacher, and each pupil was made aware that they did not have to take part and that they could stop participating at any time.

During stage one, participating pupils took part in a whole-class exercise in which they completed the Social Inclusion Survey (Frederickson & Graham, 1999) and the Guess Who measure (Frederickson & Graham, 1999) (described below) with the research team and their teachers and classroom assistants to support pupils as necessary. Each item was completed by the whole class before moving on to the next, and students were reminded that they were not to disclose their responses to their peers.

Nominations on the 'Guess Who' sociometric measure were used to identify pupils recruited to participate in stage two. The second stage of the study involved individual sessions with pupils who had fulfilled one of four criteria:

1. Direct bully group: One-third² or more of their classmates had nominated them as being involved with 'direct bullying behaviours';
2. Indirect bully group: One-third or more of their classmates had nominated them as being involved with 'indirect bullying behaviours';
3. Both direct and indirect bully group: One-third or more of their classmates had nominated them as being involved with both 'direct bullying behaviours' and 'indirect bullying behaviours'.
4. Comparison group: Fewer than ten percent of their classmates had nominated them as being involved with both 'direct bullying behaviours' and 'indirect bullying behaviours'.

One member of the research team (*name temporarily removed to maintain anonymity in the review process*) was responsible for grouping the pupils into the four groups. This member of the team did not take part in any subsequent testing, and all of stage two testing was carried out by researchers who were blind to the pupil's bully group status. Each pupil who met the criteria for one of the groups above was seen individually by a researcher in a quiet space where they completed the second stage measures. Teachers were also given a short pack of measures that they completed in their own time.

Measures

² One-third was used a criterion proportion for involvement in bullying behaviours to allow for a large enough number of students to be entered into the second stage of analysis. Ten percent was used as a cut-off for the comparison group to select a group of pupils who were minimally involved in bullying behaviours.

Information about participants' gender was collected from pupils at the beginning of this session.

Stage One

Social Inclusion Survey (Frederickson & Graham, 1999): This is a sociometric measure assessing how willing children are to associate with classmates at school. Children were asked to indicate how much they like to play with each classmate at school. The measure uses a forced-choice format in which children are presented with a list of classmates' names in the order they appear in the class register. Opposite each name are four response options: a question mark (to indicate any classmates they did not know well enough to decide how much they like to play with them – usually reserved for pupils who are very new to the class); a smiling face ('would be happy to play with'); a neutral schematic face ('don't mind whether they play with or not'); and a sad face ('rather not play with'). Any missing data was coded as 'don't know'. For each participant a proportion score of acceptance (or rejection) was calculated by dividing the number of smiling faces (or sad faces) received by the total number of ratings in categories other than 'don't know'. Test-retest reliabilities for acceptance and rejection have been reported at $\alpha = .70-.78$ over a 5 week period (Frederickson & Furnham 1998). This instrument also allows a measure of 'mutual friends', that is the number of peers that an individual reports as 'happy to play with' that also report that individual as being someone with which they are 'happy to play with'.

'Guess Who' Social Behaviour and Bullying Measure (Frederickson & Graham 1999)

An unlimited nomination peer assessment measure adapted from Coie and Dodge (1983) was used where children were asked to identify anyone in their class who fitted each of the following behavioural descriptors:

‘Sporty’ – This person is very good at sport. They can run pretty fast and they like to play games.

‘Co-operates’—this person is really good to have as part of your group because they are agreeable and co-operate. They join in, share and give everyone a turn.

‘Direct Bully’— this person often picks on other people or hits them or teases them or does other nasty things to them for no good reason.

‘Shy’— this person is shy with other children, they always seem to work or play by themselves. It is hard to get to know this person.

‘Indirect Bully’ – this person who often tells stories about people, says things behind people’s backs to make them lose their friends and leaves people out of things on purpose to be mean.

‘Leader’ – This person gets chosen by the others as the leader. Other people like to have this person in charge.

A mixture of positive and negative descriptor items were included here so that ‘bullying’ and negative peer nominations were not the focus of the assessment. Data from these descriptors are not included here.

Stage Two

Strengths and Difficulties Questionnaire (SDQ; Goodman 1997)

The SDQ is a widely used and well-validated measure of adjustment and psychopathology in children (Goodman, 2001). This study used the 25-item teacher-rated versions which both have five subscales: Prosocial behaviour, Conduct Problems, Hyperactivity, Emotional Symptoms, and Peer Problems. Internal consistencies in this study were comparable to those reported by Goodman (2001) ranging between $\alpha = .69$ (peer problems) – $.91$ (hyperactivity) (Goodman, 2001: $\alpha = .70-.88$ for teachers).

Social Perception Profile for Children (Harter, 1985)

This widely-used instrument covers five domains of self-competence together with an assessment of global self-worth. Subscales include the child's perception of their: scholastic competence; social acceptance; athletic competence; physical appearance and behaviour conduct. The global self-worth scale taps the extent to which the child likes him or herself as a person. The question format is designed to offset the tendency to give socially desirable responses by asking participants to decide which kind of child he or she is most like by presenting him/her with two contrasting alternatives (for example, "some children often forget what they learn" as opposed to "other children can remember things easily"). Having made that decision the child is asked to decide whether the description is "sort of true" or "really true" for them. Higher scores reflect higher perceived competence.

Reactive and Proactive Aggression Questionnaire (Raine, Dodge, Loeber, Gatzke-Kopp, Lynam, Reynolds et al., 2006)

This is a 23-item measure designed to assess proactive and reactive aggressive acts in children and adolescents. Participants were asked to rate each item on a 3-point scale of never, sometimes and often. Greater scores are indicative of greater aggression. This measure has been demonstrated to have good internal reliability and good construct validity (Raine et al., 2006). Internal consistencies for this study were $\alpha=.80$ for reactive aggression and $\alpha=.86$ for proactive aggression. This is comparable with those alphas reported by Raine et al. (both $\alpha>.81$).

Social Competence Inventory (SCI; Rydell, Hagekull & Bohlin, 1997)

The SCI is a teacher-reported method of obtaining information about social skills and social functioning. It comprises 25 items, which are subdivided by two subscales measuring Pro-

social orientation (e.g. ‘Is often able to find solutions or compromises when involved in a conflict’) and Social initiative (e.g. ‘Often suggests activities and games to play with peers’). Greater scores are indicative of greater social competence. The SCI has good reported reliability and validity, and internal consistencies for this study are comparable to those reported by Rydell et al. (1997) ($\alpha=.86$ and $.95$ for social initiative and prosocial orientation subscales in this study, compared with $\alpha=.91$ and $.94$ respectively in Rydell et al., 1997).

Results

Out of the 512 initial participants in this study, 7.2% met our criteria for being involved in only direct bullying, 6.1% met our criteria for being involved in only indirect bullying, and 8.0% met our criteria for being involved in both direct and indirect bullying.

Participant Characteristics

A preliminary analysis was carried out to investigate age, gender, and IQ differences in relation to the three bully-types and the comparison group. Pupils did not significantly differ in age between the four groups (see Table 1). However, there was a significant association between gender and group status, $\chi^2(3) = 44.87, p < .001$, Cramer’s $V = .48$. As shown in Table 1, more males than females were rated as being ‘direct’ bullies and more females were rated as being ‘indirect’ bullies. There were more males than females who were rated as being involved in ‘both’ direct and indirect bullying behaviour, whilst the comparison group had a relatively even proportion of males and females.

<TABLE 1 HERE>

Behavioural, Emotional, and Social Functioning

A series of MANOVAs were carried out to examine bullying group and gender differences in each of the measures completed by teachers and pupils' self-reports. All post-hoc investigations compare each group with every other group and are reported as having been corrected for multiple comparisons using Tukey's HSD test.

Behavioural and Emotional Functioning

Main effects of gender were reported for teacher ratings of conduct problems and hyperactivity, where boys were reported as having greater levels of conduct problems and hyperactivity (Conduct Problems: M (males) = 2.88 (SD=2.91); M (females) = 1.25 (SD=1.85); Hyperactivity: M (males) = 3.09 (SD=2.82); M (females) = 1.24 (SD=1.95)). A main effect of bullying group was observed for teacher-rated SDQ total difficulties, conduct problems, hyperactivity, peer problems and prosocial behaviour (see Table 2). There were no statistically significant interaction effects. Post-hoc comparisons revealed that children involved in direct bullying ('direct') and children identified as being involved in both direct and indirect bullying ('both') had statistically significantly more total difficulties and conduct problems, and fewer prosocial behaviours than children involved in indirect bullying ('indirect') and the comparison group ('comparison'). The 'direct' and 'both' group had significantly more hyperactivity compared to all other groups. 'Direct' and 'both' groups did not differ statistically significantly in terms of their SDQ profiles and the 'indirect' group did not differ statistically significantly from the 'comparison' group. Post-hoc comparisons revealed no statistically significant differences between the groups for peer problems.

<TABLE 2 HERE>

There were no statistically significant main effects of gender for either reactive or proactive aggression. Statistically significant group differences were found for the proactive and reactive aggression measure (see Table 3). The 'direct' group had the highest total aggression scores and the highest scores on the proactive and reactive aggression subscales. The 'direct' group was found to be statistically significantly more aggressive than the 'indirect' and 'comparison' groups. The 'both' group did not differ statistically significantly from the 'direct' or 'indirect' groups on any measure of aggression, however the 'both' group had statistically significantly higher aggression total scores and proactive and reactive scores than the 'comparison' group. There were no statistically significant differences between the 'indirect' and 'comparison' groups on total aggression or proactive or reactive aggression subscales.

<TABLE 3 HERE>

Main effects of gender were reported for 'athletic competence' and 'social acceptance' subscales, where males self-rated more highly than females (Athletic Competence: M (males) = 3.17 ($SD=.61$); M (females) = 2.79 ($SD=.73$); Social Acceptance: M (males) = 3.14 ($SD=.57$); M (females) = 2.79 ($SD=.73$)). There were statistically significant differences between the groups on pupils' self-rated social perception (see Table 4). Neither the 'direct' nor the 'indirect' group differed to the 'comparison' group on self-reported scholastic competence. However, both 'direct' and 'indirect' groups had statistically significantly lower scholastic competence ratings compared to the 'comparison' group. Post-hoc tests revealed no statistically significant differences between groups for social acceptance or athletic competence. Children grouped as indirect bullies had a statistically significantly lower perception of their physical appearance compared to the comparison group. There were no

other group differences on this subscale. All three of the ‘bully’ groups reported lower self-perceptions of own behaviour than the ‘comparison’ group, but there were no differences between the three bully subtypes. Pupils in the 'both' group had statistically significantly lower global self-worth than the comparison group, but there were no other group differences in terms of global self-worth

<TABLE 4 HERE>

Social Acceptance and Rejection and Social Competence

MANOVAs revealed no main effects of gender for social acceptance, rejection or the number of mutual friends that a participant had. A statistically significant main effect of bullying group was demonstrated for both social acceptance and rejection and the number of mutual friends (see Table 5). For whole class measures of social acceptance and social rejection, all three ‘bully’ groups fared less favourably than the comparison group; with statistically significant post-hoc tests indicating greater levels of social rejection and poorer levels of social acceptance. A similar finding was also reported for the number of mutual friends, with the three ‘bully’ groups having statistically significantly fewer mutual friends than comparison children. There was a statistically significant interaction effect between gender and bully group for the social rejection outcome, where social rejection for pupils involved in ‘indirect’ and ‘both’ types of bullying was only statistically significantly different from the comparison group for girls.

<TABLE 5 HERE>

There were no main effects of gender on teacher reports of either social competence or prosocial orientation. However, there was a main effect of bullying group, where the 'direct' group and the 'both' group had statistically significantly lower total social competence scores compared to the 'comparison' group (see Table 6). However, the 'indirect' group did not differ to the 'comparison' group or the other bullying groups in terms of their total teacher-reported social competence. Children in the 'direct' group did not differ from those in the 'both' group in terms of prosocial orientation. However the 'direct' group and the 'both' group had statistically significantly lower prosocial orientation scores compared to the 'indirect' group and the 'comparison' group. The 'indirect' group did not differ on prosocial orientation from the 'comparison' group. There were no statistically significant group differences on the teacher-rated social initiative subscale, neither were there any statistically significant interaction effects for either variable.

<TABLE 6 HERE>

Discussion

This study aimed to investigate the behavioural, emotional and social correlates of bullying behaviours in primary school aged children in order to refine bullying profiles for two bullying subtypes; direct and indirect bullying.

As expected, there were gender differences in the proportion of males and females reported to be involved in direct and indirect bullying. The ratio of males to females involved in direct bullying was approximately 9:1, whilst for indirect bullying, the opposite pattern was observed. These findings are consistent with previous studies (e.g. Rivers & Smith, 1994; Wolke et al., 2000), and are also in line with the theory that boys are more overtly aggressive than girls, while some research suggests that girls show greater levels of relational style

aggression (Crick & Grotpeter, 1995; Card, Stucky, Sawalani & Little, 2008). Although there is a more even spread of boys and girls reported to be both direct and indirect bullies, more boys than girls were reported to be involved. Gender differences in the incidence of bullying behaviours offers a way into further exploring the antecedents and causal processes specific to direct and indirect bullying behaviours, and might prove to be an avenue of research importance. However, it is interesting to note that there were very few outcomes that differed according to gender. Gender differences in teacher-reported conduct problems and hyperactivity are not unusual (Fontaine, Carbonneau, Vitaro, Barker, & Tremblay, 2009; Ullebø, Posserud, Heiervang, Obel & Gillberg, 2011), although it is important to note that in this study, the mean scores for girls and boys were within the 'typical' range of the SDQ.

Our second hypothesis related to teacher- and self-reports of behaviour. Direct bullies and children involved in both types of bullying, were reported by their teachers as having a greater number of conduct problems and hyperactivity symptoms compared to the other groups, whilst the indirect bullying group were indistinguishable from the comparison group on both of these dimensions. The same was also true for reactive and proactive aggression as reported by the children themselves. Behaviours like aggression that are commonly considered under the domain of externalising difficulties may place a child at particular risk for direct bullying behaviours. It may be useful for interventions to focus on aggression reduction amongst this particular subset of children involved in bullying.

The finding that there were no statistically significant group differences in terms of teacher rated emotional symptoms was somewhat surprising, and contrary to our initial hypotheses. However, it may be the case that this type of difficulties were not sufficiently problematic to be reported by the children's teachers. Future work should aim to also obtain information

from parents, who may be more aware of their children's emotional symptoms than teachers. Support was found for our hypothesis that children involved in bullying would have poorer self-perceptions. Both direct and indirect bullying groups self-reported poorer scholastic competence, and all bullying groups self-reported poorer behavioural control than the comparison group. Global self-worth was poorest for those children involved in both types of bullying. These findings support previous research in this area (Coolidge et al., 2003; O'Moore & Kirkham, 2001). Theories have been suggested to explain the link between poorer self-esteem and bullying behaviours, including bullying as a method of compensating for negative self-image; behaving dominantly in order to improve or to concrete one's own social status (Salmivalli et al., 1999). On the other hand, poor self-esteem may be a more direct consequence of bullying behaviours, where children become socially isolated and their self-esteem suffers as a function of this social rejection. In this study, pupils involved in both types of bullying reported lower global self-worth than comparison children. In terms of bullying subtypes, pupils who bully only directly or only indirectly did not differ to the comparison group on self-perception, suggesting that it is children involved in both types of bullying who are at particular risk for poor emotional outcomes.

In line with previous research, bullies were less socially accepted and more socially rejected by peers compared to the comparison group. All three bullying groups also had fewer mutual friends than comparison children. There was a particular problem with social rejection for girls involved in indirect and both types of bullying. Social rejection is a particular risk factor for poor psychological adjustment and rejection tends to be stable over time with negative associations shown as long-term as thirty years later (Beeri & Lev-Wiesel, 2011; Modin, Östberg & Almquist, 2011). Peer rejection can also be cumulative; children who are rejected by a majority of the peer group tend to be treated more negatively and become more isolated,

contributing to ongoing risks for maladjustment (Buhs & Ladd, 2001). The results of this study tentatively suggest that girls who are involved in indirect bullying during middle childhood may be at risk of social exclusion, and further work may need to consider how far social exclusion may contribute to escalation in these kinds of socially manipulative bullying behaviours amongst girls.

Further to these peer-rated difficulties in the domain of social inclusion, pupils in the direct bully group and those in the both group had the greatest difficulties in terms of teacher-reported prosocial orientation (i.e. tries to intervene in conflicts; gives compliments to peers) and prosocial behaviour (i.e. offering to help out, shares readily). There were no teacher-reports of a general social skills deficit for children involved with indirect bullying, but poorer overall social competence scores were reported for children involved in direct bullying and both types of bullying. Given the previous literature by Sutton and colleagues (1999a, 1999b), it seems sensible to suggest that indirect bullies may not have a general social skills deficit. As noted by Sutton et al (1999a), good social understanding is a requirement for the manipulation of others. It is interesting to note that children involved in indirect bullying were not considered to have a deficit in their prosocial behaviour. These individuals are likely to be aware of the social rules of a classroom, and are able to act in a prosocial manner. As Sutton and colleagues point out, much of the evidence for the social deficit model (Crick & Dodge, 1996) is based on work with children who have increased levels of aggressive behaviour and those who have a diagnosis of conduct disorder, which are both problems that tend to relate more to children involved in direct bullying behaviours. It seems sensible to suggest a social skills deficit, as proposed by the social deficit model, offers the best fit for children who are involved in direct bullying, while Sutton et al's theory that some bullies have good social cognitive skills, fits well for indirect bullying behaviours. Additional work

directly comparing social-cognitive abilities between these two groups will be able to further explore this possibility that there is more than one route to becoming a ‘bully’.

This study was able to make use of a large sample of children from which to draw peer-nominations of bullying behaviour. However, this study did not include information on children’s individual socio-economic status or any specific difficulties. All pupils were included in this study, regardless of ability or previous diagnoses, and it is quite likely that some of these children had diagnoses of ADHD or autism spectrum disorder (ASD). Our a priori reasoning for this was that we were specifically interested in the profiles of behavioural, emotional and social abilities that characterized the direct and indirect subtypes of bullying, which meant that excluding some children on the basis of a diagnosed psychiatric disorder would render our sample unrepresentative of children in mainstream school, and unrepresentative of children involved in bullying. Previous work has demonstrated that children with developmental disorders such as ADHD and ASD are often at risk for greater victimization and bullying (Wiener & Mak, 2009; Van Roekel, Scholte & Didden, 2010). Understanding the underpinnings of bullying behaviours will allow more targeted interventions, and it is hoped, a reduction in peer rejection for these already vulnerable pupils. Future work should also focus on following pupils through their school career and examining the cumulative impact that social and emotional deficits, along with social rejection, might have on a child’s perceived bullying behaviours. Related to this, one further limitation of this study is that bully-victims were not identified. Children in this category are often at risk of poor outcome, and understanding the risk factors for this type of behaviour are clearly important. It would be interesting to examine the prevalence of bully-victim status within the subtypes of direct and indirect bullying.

This study demonstrates differences in the profile of behavioural, emotional and social strengths and weaknesses in children who are perceived as being involved in direct or indirect bullying behaviours. As such, the findings from this study should be particularly useful to those interested in interventions for bullying. In line with previous research, direct bullying behaviours appear to be more greatly associated with psychopathology (e.g. hyperactivity, aggression, poor social skills); while indirect bullying does not appear to be associated with increased aggression or conduct problems, but is associated with intact social skills and some weaknesses in self-perception. It is also of potential importance that indirect bullying appears to be a predominantly female phenomenon. Perhaps of most concern is the finding that children involved in both direct and indirect bullying are those who are at greatest risk of showing difficulties across the broad spectrum of behavioural, emotional and social functioning. Given the findings of this study, it seems sensible to suggest a profile-based approach to understanding bullying behaviours and developing interventions, taking into account profiles of strengths and weaknesses in the behavioural, emotional and social domains for direct and indirect bullying behaviours.

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Table 1: Participant characteristics (IQ, age and gender) reported by group.

	Direct (N=37)		Indirect (N=31)		Both (N=41)		Comparison (N=76)		<i>F</i>
	Mean	SD	Mean	SD	Mean	SD	Mean	SD	
Mean Age (SD)	9yrs 10m	(1y 4m)	9yrs 4m	(1y 4m)	9yrs 6m	(1y 4m)	9yrs 7m	(1y 2m)	0.80 (n.s.)
Female (%) (n=91)	10.80%		90.30%		39.10%		53.80%		-

Table 2: Means and standard deviations (in parentheses) and tests of group difference on the Strengths and Difficulties Questionnaire as rated by teachers, reported by group.

	Direct	Indirect	Both	Comparison	<i>F</i> (bully group)	Post-hoc (bully group)
Conduct Problems	4.39 (2.79)	1.08 (1.44)	3.62 (2.47)	0.19 (0.46)	33.49***	D, B > I, C
Hyperactivity	4.37 (2.47)	0.96 (1.53)	4.03 (2.44)	0.26 (0.79)	38.59***	D, B > I, C
Emotional Symptoms	2.09 (2.50)	1.76 (2.48)	2.53 (2.61)	1.56 (2.41)	0.91	-
Peer Problems	2.74 (2.32)	1.92 (1.96)	2.76 (2.08)	1.47 (1.89)	3.05*	None after correction
Prosocial Behaviour	4.48 (2.13)	7.11 (1.86)	4.72 (2.34)	8.18 (2.01)	23.11***	C, I > D, B
Total Difficulties	13.59 (7.58)	5.72 (5.17)	12.95 (7.30)	3.47 (3.88)	22.15***	D, B > I, C

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

Table 3: Means and standard deviations (in parenthesis) and tests of group differences on Reactive and Proactive Aggressive Questionnaire as a function of group.

	Direct	Indirect	Both	Comparison	<i>F</i> (bully group)	Post-hoc (bully group)
Proactive	5.75 (5.57)	2.25 (2.10)	4.88 (4.28)	1.7 (2.76)	8.16***	D > I, C; B > C
Reactive	11.67 (3.32)	7.48 (4.41)	10.15 (4.29)	7.13 (3.67)	9.02***	D > I, C; B > C
Total	17.42 (7.83)	9.73 (5.82)	15.03 (7.75)	8.83 (5.66)	11.27***	D > I, C; B > C

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

Table 4: Means and standard deviations (in parenthesis) and tests of group differences on the Social Perception Profile for Children as a function of group.

	Direct	Indirect	Both	Comparison	F (bully group)	Post-hoc (bully group)
Scholastic Competence	2.71 (1.37)	2.31 (1.17)	2.12 (1.20)	2.71 (0.83)	3.34*	C > D, I
Social Acceptance	2.73 (1.13)	2.17 (1.33)	2.35 (1.31)	2.73 (.97)	2.47	-
Athletic Competence	2.76 (1.12)	2.00 (1.34)	2.71 (1.28)	2.59 (1.01)	2.98*	none after correction
Physical Appearance	3.00 (0.57)	2.74 (0.61)	2.98 (0.86)	3.16 (0.59)	2.99*	C > I
Behavioural Conduct	2.55 (0.70)	2.84 (0.64)	2.42 (0.82)	3.26 (0.63)	16.53***	C > D, I, B
Global Self-worth	3.15 (0.53)	2.97 (0.53)	2.89 (0.74)	3.29 (0.59)	4.81***	C > B

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

Table 5: Mean proportion scores and standard deviations (in parenthesis) and tests of group differences on the Social Inclusion Questionnaire as a function of group.

	Direct	Indirect	Both	Comparison	F (bully group)	Post-hoc (bully group)
Whole Class: Acceptance	.34 (.13)	.37 (.17)	.31 (.15)	.55 (.16)	30.73***	C > D, I, B
Whole Class: Rejection	.36 (.17)	.33 (.20)	.41 (.22)	.15 (.13)	27.99***	D, I, B > C
Same-sex: Acceptance	.56 (.25)	.61 (.26)	.44 (.27)	.70 (.21)	11.15***	C > D, B
Same-sex: Rejection	.20 (.21)	.16 (.20)	.26 (.21)	.07 (.11)	13.27***	D, B > C
Mutual Friends	4.20 (2.83)	4.01 (3.59)	3.76 (3.14)	6.25 (3.75)	6.20**	C > D, I, B

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

Table 6: Means and standard deviations (between parenthesis) and tests of group differences on the Social Competence Inventory (SCI) as a function of group.

	Direct	Indirect	Both	Comparison	F (bully group)	Post-hoc (bully group)
Prosocial Orientation	2.66 (0.58)	3.45 (0.67)	2.67 (0.72)	3.70 (0.73)	14.44***	C, I > D, B
Social Initiative	3.48 (0.71)	3.51 (0.87)	3.44 (0.83)	3.35 (0.90)	0.19	-
Total	2.92 (0.50)	3.47 (0.67)	2.93 (0.61)	3.59 (0.73)	6.95***	C > D, B

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