

SOCIAL PROCESSES AND CORRELATES OF SOCIAL EXCLUSION AMONG CHILDREN AND ADOLESCENTS

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ABSTRACT

This chapter focuses on social exclusion among children and adolescents. Social exclusion has been observed among animals in their natural environment, as well as among humans in different contexts, such as the workplace and the school (Crick and Grotpeter 1995; Leung, Wu, Chen and Young 2011; McGuire and Raleigh 1986). It can be considered a serious risk factor for developing physiological, emotional, behavioral, and social problems, in particular for those youths who are repeatedly excluded and socially isolated (Sijtsema, Shoulberg and Murray-Close 2011). In this respect, depression, loneliness, and anxiety have been described as consequences of exclusion (Leary 1990). Despite much attention has been paid to the negative consequences of social exclusion, less consideration has been given to the social and moral mechanisms underlining inclusionary and exclusionary processes in the peer group. According to empirical findings, children and adolescents can legitimate social exclusion, since it allows the group to work well. For instance, youths consider legitimate to exclude incompetent peers and include skillful peers in the group, due to individual merits (e.g., ability to play baseball) (Killen and Stangor 2001). They may also interpret fairness and unfairness of social exclusion on the basis of moral judgments (e.g., rights, equal treatment, equal access to the group) or on stereotypical and contextual characteristics (e.g., gender-related group activities) (Bennett 2014; Killen 2007; Killen and Stangor 2001). In this way, social exclusion contributes to delineate social status membership and dominance positions in the peer group (Underwood and Ehnreich 2014). In conclusion, the present contribution aims at summarizing recent findings and theories

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about social exclusion, also underlining the need for intervention programs aimed at contrasting this phenomenon among youths.

INTRODUCTION

Social inclusion presented many benefits for our evolutionary ancestors, since living in small groups offered the possibility of sharing resources and preserving survival and reproductive needs (DeWall and Bushman 2011). However, belonging to a social group is not only required for reproductive success and survival: It is especially important for psychosocial wellbeing (Baumeister and Leary 1995).

Humans manifest a fundamental need for long-lasting relationships, thus, being included in a social group is rewarding (DeWall and Bushman 2011), whereas social exclusion is commonly experienced as an adverse condition (Baumeister and Leary 1995; Williams Cheung and Choi 2000). In the last fifteen years, a growing amount of studies about social exclusion has been published, confirming its negative consequences on the psychosocial wellbeing (Kelly, McDonald and Rushby 2012; Williams et al., 2000; Zadro, Williams and Richardson 2004). However, the majority of studies investigated the immediate responses to social exclusion, but long-term consequences have been scarcely analyzed and deserve further investigation (Stenseng, Belsky, Skalicka and Wichstrom 2014).

This chapter focuses on the correlates and outcomes of social exclusion. The terms social exclusion and ostracism are used interchangeably (Williams 2007a), in order to refer to the process of being “singled out and isolated from social relationships” (Gruter and Masters 1986, p. 150), with overt or implicit declaration of dislike (Williams 2007a). Although we also expose findings on adults, we aim at preserving a special focus on the processes and consequences associated with social exclusion among children and adolescents. We first offer an overview on the process of social exclusion. Then, we show a conceptual distinction between social exclusion and indirect forms of bullying, together with methods used in recent years for studying exclusion in laboratory settings. We expose researches investigating the immediate responses to social exclusion and its negative consequences on the psychosocial wellbeing. Moreover, we also focus on the psychological characteristics of those who tend to exclude others and who are excluded from the group. Then, we show the developmental trends of social exclusion among children and adolescents, together with group norms regulating social exclusionary and inclusionary processes. Children's judgments about fairness and unfairness of social exclusion are also exposed. Finally, we give suggestions for future research directions and for intervention programs aimed at contrasting the negative outcomes of social exclusion among youths.

THE PROCESS OF SOCIAL EXCLUSION

Human psychological wellbeing depends on four fundamental needs: belonging to a social group, controlling the environment, having a high self-esteem, and giving meaning to one's own existence (Baumeister and Leary 1995; Greenberg et al., 1992). According to Williams (1997; 2007a), being excluded from the group threatens these fundamental needs and constitutes a painful experience, independently from ethnicity, age, and gender. Williams

and colleagues (2000) demonstrated that social exclusion constitutes a threatening cue not only when the source of ostracism (e.g., the excluder) is present, but even when individuals are excluded over the Internet. Specifically, after a brief experience of cyberostracism, young adults reported that their fundamental needs were threatened.

The reactions to social exclusion follow three stages (Williams and Zadro 2005). In the *first stage*, feelings of pain are expected to be a common reaction to the potential threat of being ignored or excluded. This reaction is supposed to be unmitigated by situational factors such as intentional or unintentional ostracism, or ostracism by the in-group or by the out-group (Gonsalkorale and Williams 2006; Zadro et al., 2004). In addition, also individual differences, such as trait self-esteem and social anxiety, seem to be unrelated with the response to social exclusion (Leary, Haupt, Strausser and Chockel 1998; Zadro, Boland and Richardson 2006).

In the *second stage* of the exclusion process, individuals attempt to deal with the situation of being ostracized. Although the immediate reaction to ostracism seems to be strong and invariant, the subsequent process of coping is dependent on cognitive appraisal of the situation and on individual differences (Williams and Zadro 2005). Zadro and colleagues (2004) found that both high and low socially anxious participants reported equal levels of distress immediately after being excluded. However, the high socially anxious individuals recovered their fundamental needs more slowly compared to the low socially anxious group. In addition, situational factors could also moderate the long-term response to ostracism. For instance, individuals excluded by the out-group are less inclined to manifest conformity (i.e., a mean to improve inclusionary status), in respect to those ostracized by the in-group (Williams et al., 2000).

Finally, the *third stage* of this process includes the long-term consequences of ostracism. Individuals who are repeatedly excluded manifest adverse negative consequences, such as feelings of helplessness, alienation, and despair. Letters from people ostracized for long periods of time documented that they felt depressed and alienated (Williams and Nida 2009; Williams and Zadro 2005). In addition, they stopped seeking for others' support: In a vicious circle, they ostracize themselves, in the attempt to avoid further rejection.

SOCIAL EXCLUSION AND BULLYING

Social exclusion has been found to constitute a common form of indirect, or relational, bullying (Crick and Grotpeter 1995; Heilbron and Prinstein 2008). However, contrarily to direct forms of bullying, which at least acknowledge the existence of the victim, social exclusion makes the ostracized person feel nonexistent, invisible, and insignificant (Williams and Nida 2009). For this reason, it has been suggested that being excluded is even worse than being physically or verbally bullied (Williams and Nida 2009) and that ostracism constitutes the pathway to social death (Williams 2007b). Although bullying and systematic exclusion have similar characteristics and psychological consequences, in the following we offer a conceptual distinction between these two forms of harassment.

The term “bullying” has been used to refer to peer harassment among children and adolescents at school, as well as in other settings among adults (Juvonen and Graham 2001). Being bullying a widespread phenomenon, a growing number of researchers tried to

understand its dynamics, together with the emotional, cognitive, and behavioral characteristics of the students involved (Gini, Albiero, Benelli and Altoè 2007; Menesini and Camodeca 2008; Menesini et al., 2003; Salmivalli, Lagerspetz, Björkqvist, Österman and Kaukiainen 1996; Salmivalli 2010; Sutton, Smith and Swettenham 1999; Wolke, Woods, Bloomfield and Karstadt 2000).

Bullying is intended to harm someone weaker, or less powerful; it is unprovoked and repeated over time and implies an imbalance of psychological or physical power between the bully and the target of the aggressions (Coie, Dodge, Terry and Wright 1991; Olweus 1993). Bullying is a social process that, beyond the bully and the victim, involves all classmates with different behaviors (Salmivalli et al., 1996). For instance, some peers directly assist the bully, whereas others indirectly encourage peer prevarications by laughing and cheering during bullying situations. Some classmates, even though well aware of bullying, try to escape and remain not involved. Finally, some peers take action against bullying or try to comfort the victim (Salmivalli et al., 1996).

Together with relational, verbal, and physical bullying, in recent years electronic forms of bullying (i.e., cyberbullying) have been documented among youths (Sticca, Ruggieri, Alsaker and Perren 2013). Cyberbullying consists of using electronic tools (i.e., the Internet, mobile phones) to harm the victim and presents peculiar characteristics: a) the perpetrator can be anonymous; b) the audience is potentially infinite; c) the perpetrator cannot observe the victim's reaction, which may weaken his/her empathy and sense of responsibility; d) the victim can be harassed in any moment and in any situation, thus time and space constraints are absent (Slonje and Smith 2008).

The various forms of bullying have different goals. Generally, by verbal or physical bullying, children and adolescents aim at gaining material and social resources, such as the best role in a game or power and dominance in the peer group (Pellegrini and Long 2002; Salmivalli 2010; Salmivalli and Peets 2008). Relational forms of bullying aim at damaging the relationship, or the social status of the victim (Crick and Grotpeter 1995). Similarly, cyberbullying aims at ruining the victim's reputation, in particular when social networks or any other audience are involved. The co-occurrence of these subtypes of bullying increases the risk for physical (e.g., medically attended injuries) and psychological detrimental outcomes (e.g., depression) (Wang, Iannotti, Luk and Nansel 2010).

Although repeated direct forms of bullying and social exclusion have similar consequences (i.e., depression, anxiety, loneliness) (Saylor et al., 2012), the literature has widely shown that even a single episode of ostracism can be painful for the target (Williams et al., 2000; Zadro et al., 2004). In other words, being considered as unworthy of others' consideration deprives the target from the possibility of establishing a social connection (Einarsen and Mikkelsen 2003). This assumption is confirmed by a recent work investigating ostracism at the workplace, which demonstrates that being harassed by colleagues (e.g., being teased and humiliated in front of others) is associated with a better psychological wellbeing than being ostracized (O' Really, Robinson, Berdhal and Banki 2014). Furthermore, it is noteworthy that even a simulated experience of ostracism turns to be harmful for the ostracized individuals (Sijtsema, et al., 2011; Zadro et al., 2004). Thus, even when individuals are aware of being involved in a simulated experience of exclusion, they still manifest negative mood and low scores on the four fundamental needs previously indicated (Williams et al., 2000). These findings support the idea that humans are sensitive to social exclusion

cues, independently of whether they are simulated or acted by real agents (Kothgassner et al., 2014; Sijtsema et al., 2011; Zadro et al., 2004).

In sum, bullying and social exclusion seem to have similar characteristics in terms of the negative consequences for the targets (Klages and Wirth 2014; Saylor et al., 2012). Although repeated episodes of bullying affect the individual wellbeing both in the short and in the long term (Newman, Holden and Deville 2005), humans seem to be negatively influenced even by brief and single episodes of social exclusion (Williams et al., 2000; Zadro et al., 2004). This points out the importance of belonging to the social group, in order to preserve one's own psychological wellbeing (Baumeister and Leary 1995).

PARADIGMS TO STUDY SOCIAL EXCLUSION

In recent years, social exclusion has been studied in laboratory settings by successful experimental paradigms (Baumeister, Twenge and Nuss 2002; Sijtsema et al., 2011; Williams et al., 2000). The *Cyberball* paradigm is one of the most used (Hartgerink, van Beest, Wicherts and Williams 2015). Although it was conceived for studying social exclusion effects among adults (Williams et al., 2000), it seems to be a reliable tool to analyze the immediate consequences of social exclusion also among children and adolescents (Scheithauer, Alsaker, Wölfer and Ruggieri 2013). The experimental paradigm of Cyberball consists of an online interactive experience of inclusion followed by an exclusion phase (Williams et al., 2000). The participant is supposed to play a virtual ball-tossing game with two or more other participants who are actually acted by the computer program: Ostracized players do not receive the ball after the initial tosses. In recent years, several studies, using the Cyberball paradigm, demonstrated the detrimental effects of an online experience of social exclusion in laboratory sessions (Hartgerink et al., 2015).

Within the social exclusion literature, other successful experimental paradigms have been developed in order to elicit ostracism. For instance, the *O-Cam paradigm* (Goodacre and Zadro 2010) simulates a webcam conference: In the inclusion condition the prerecorded confederates listen politely to the participant's two minutes speech, whereas in the exclusion condition the prerecorded confederates listen to the participant's speech for fifteen seconds only. Afterwards, they ignore the participant by starting their own conversation.

Another successful tool to elicit social exclusion is the *Autobiographical recall paradigm* (Bernstein, Young, Brown, Sacco and Claypool 2008), which induces ostracism by instructing the participant to recall a personal episode of ostracism. Although it has the limitation of merely ruminating about a past experience of ostracism, rather than experiencing exclusion during the laboratory session, it seems to successfully elicit feelings of exclusion (Godwin et al., 2013).

In the *Life alone* paradigm (Baumeister, et al., 2002; Twenge, Baumeister, Tice and Stucke 2001) participants are told, on the basis of a personality test, that they are going to end up alone in their own life. Conversely, participants in a first control group are told that the personality test feedback revealed that they are going to be surrounded by people who care about them (future belonging condition). In order to control the confounding factors of the negative events, a second control group is told that they will encounter many accidents later in life, but that they will not be alone (misfortune control condition). Participants in the

experimental condition performed worse on an intelligence test than the other two control groups, even worse than the second control group.

Post-experimental questionnaires about mood and perceived threat to fundamental needs demonstrate that all these experimental paradigms successfully elicit social exclusion (Williams et al., 2002). In addition, physiological measures (heart rate, skin conductance) (Gunther-Moor, Crone and van der Molen 2010; Sijtsema, et al., 2011) and neuroimaging techniques confirm that social exclusion investigated by these experimental paradigms affects arousal levels and neural processes (Eisenberger, Lieberman and Williams 2003).

CONSEQUENCES OF SOCIAL EXCLUSION

Social exclusion affects physiological, emotional, cognitive, and behavioral spheres (Coyne, Gunderson, Nelson and Stockdale 2011; Gross 2009; Kelly et al., 2012; Williams 2007a; Wölfer and Sheithauer 2013). In the following paragraphs we try to delineate the consequences in each of these domains, being aware that usually they overlap each other, producing a cumulative effect.

Physiological Consequences

Social exclusion can be considered a social threat, potentially generating changes in the autonomic arousal (Kelly et al., 2012; Sijtsema et al., 2011). Research findings on young adult samples suggest that social exclusion is associated with transient slowing of heart rate, which may indicate parasympathetic effort to regulate the painful experience of being excluded (Gunther-Moor et al., 2010). Physiological changes, in terms of skin conductance fluctuations, have been reported as a consequence of social exclusion in young adult samples and among adolescent girls (Kelly et al., 2012; Sijtsema et al., 2011). Specifically, high levels of skin conductance have been registered after ostracism, whereas habituation effects have been documented during inclusion (Kelly et al., 2012).

Social exclusion seems to be associated also with skin temperature variations, which can be considered as an indirect index of the autonomic nervous system functioning. Specifically, increasing levels in skin temperature have been found to reflect the distress associated with social exclusion in a sample of preadolescents (Mazzone, Camodeca, Cardone and Merla 2015). In addition, skin temperature variations are associated with scores on bullying and victimization. Hence, preadolescents with higher scores on bullying manifest lower arousal levels (i.e., skin temperature) in front of social exclusion, compared to their peers with higher scores on victimization. These findings suggest that social experiences with peers may be related with physiological arousal in front of exclusion.

In addition, immune system responses and neural activation seem to be involved too. For instance, cortisol levels (i.e., stress hormone) increase after being excluded (Blackhart, Eckel and Tice 2007; Dickerson, Gruenewald and Kemeny 2011), whereas findings from neuroimaging documented increased activity (in particular during adolescence) in the same neural circuits involved in processing the affective component of physical pain (e.g., dorsal anterior cingulate cortex; anterior insula), suggesting that being excluded is a painful

experience, similar to being physically hurt (Bolling et al., 2011; Eisenberger et al., 2003; Masten et al., 2009).

Emotional and Cognitive Consequences

Social pain (i.e., painful feelings evoked by the actual or potential separation from others) can be the consequence of early and repeated experiences of adverse ostracism and rejection experiences (MacDonald and Jensen-Campbell 2011; Riva, Wesselmann, Wirth, Carter-Sowell and Williams 2014). The experience of exclusion seems to generate feelings of anger, sadness, shame and anxiety (Chow et al., 2008; Gross 2009). The negative emotions related with ostracism seem to be affected by individuals' perception of exclusion. For instance, when individuals perceive that they have been excluded for unfair reasons (e.g., on the basis of gender), they are angrier and more prone to engage in antisocial behavior than when they feel to have been excluded for fair reasons (e.g., on the basis of the ability to play a game) (Chow et al., 2008).

Social exclusion seems to emotionally affect also the witnesses. Young female adults have been found to manifest empathy when witnessing social exclusion experienced by others (Novembre, Zanon and Silani 2014). Wesselmann, Bagg, and Williams (2009) demonstrated that young adults instructed to take the perspective of an ostracized individual reported threats to the fundamental needs and negative affect. In other words, the vicarious experience of social exclusion is sufficient to generate negative mood and feelings of distress.

Social exclusion has negative consequences also on the cognitive sphere, though, it affects complex cognitive tasks, requiring active thinking and cognitive effort, rather than simple and basic information processing (Baumeister et al., 2002). Specifically, after a brief experience of exclusion, impairment of memory and attentional focusing has been registered (Baumeister, DeWall, Ciarocco and Twenge 2005; Wyer 2008). Anticipated exclusion affects intelligent thought and working memory (measured by a recall task) (Baumeister et al., 2002). These negative effects on cognitive performance seem to be specific for social exclusion. Hence, the anticipation of negative events in life (i.e., non-social misfortunes, such as accidents or injuries) does not impair intelligent thought. In addition, ostracism generates selective attention and memory for social events: When asked to recall a list of individual and social events (e.g., relational events) read on a diary, ostracized adolescents reported selective memories for social events, which could be related with the possibility of refilling the thwarted need to belong (Wölfer and Sheithauer 2013).

Cognitive and emotional characteristics seem to be in turn related with behavioral reactions to ostracism. For instance, low perspective taking and anger control skills deficit are associated with antisocial reactions to ostracism (Wölfer and Sheithauer 2013). In the next section, a more detailed overview on the behavioral consequences of ostracism will be offered.

Behavioral Consequences

Although few individuals manifest avoiding tendencies after being briefly ostracized (Wölfer and Sheithauer 2013), literature has shown two main ways in which individuals

respond to social exclusion. They may end up behaving aggressively or trying to reestablish social bonds, manifesting prosocial behavior and affiliative tendencies oriented at social reconnecting with others (Baumeister, Brewer, Tice and Twenge 2007; Coyne et al., 2011; Maner, DeWall, Shaller and Baumeister 2007; Williams 2001). Behavioral responses to ostracism seem also related with the emotional state. For instance, angry ostracized individuals are motivated to engage in antisocial behavior, whereas sad individuals are prone to behave prosocially (Chow et al., 2008).

In general, the experience of exclusion seems to be detrimental for the self-regulation ability (Baumeister et al., 2005). After being excluded, young adults act in a socially inappropriate way and are unable to control and modify, their own behavior according to the requests of the social context (Baumeister et al., 2005). For instance, excluded adults are unable to conclude a frustrating task and recur more than non-excluded ones to food intake (Baumeister et al., 2005).

Twenge et al., (2001) found that ostracized people tend to take revenge for being excluded through aggressive behavior: They are prone to give extremely negative evaluations to potential job candidates, and to inflict annoying noise to strangers. Children and adolescents who are chronically rejected and excluded may incur in maladjustment outcomes, such as externalizing problems and aggressive behavior (Dodge, Schlundt, Schoken and Delugach 1983; Newcomb, Bukowski and Pattee 1993). However, the tendency to react aggressively towards the source of exclusion could actually cause further experiences of ostracism, potentially leading to destructive behavioral consequences. For instance, adolescents who are chronically ostracized may take revenge on their peers by destructive behaviors. This is the case of school-shootings, as supported by Leary, Kowalski, Smith, and Phillips (2003), who demonstrated that perpetrators of school-shootings had been rejected by their peers in the form of ostracism or bullying.

However, as anticipated, ostracized individuals have also been found to manifest affiliative tendencies in the attempt of being re-included in the group (Wesselmann, Ren and Williams 2015). For instance, young adults are prone to form positive impressions and evaluate positively a novel target (Maner et al., 2007). They are also interested in making new friends after being excluded. Interestingly, young adults, who are not afraid of being evaluated by others, respond positively to new sources of potential affiliation (e.g., new social partners), whereas those who are afraid of evaluation tend to avoid social interactions with new partners (Maner et al., 2007). These findings support the idea that social exclusion motivates interpersonal reconnection and affiliative behavior, in particular in those individuals with a higher dispositional need to belong (Leary, Kelly, Cottrell and Schreindorfer 2013; Maner et al., 2007).

SOCIAL ROLES AND OSTRACISM: THE EXCLUDERS AND THE EXCLUDED

The literature has mainly analyzed how individuals respond to social exclusion in laboratory settings, showing the pervasiveness of brief experiences of ostracism for the psychological wellbeing (Williams et al., 2000; Zadro et al., 2004). Less is known regarding the antecedents of social exclusion. In the current section, we will try to explain the reasons

why some individuals are inclined to exclude others and why some other individuals are excluded.

Ostracism could be seen as a form of social control, typical of individuals who are prone to dominate and use social forms of aggression. Individuals who employ social exclusion seem to take advantage of it, at least for three reasons. First, it simultaneously and strongly threatens the fundamental needs of their victimized target. Second, being a covert form of aggression, ostracism could be easily denied, preserving a positive image within the group (Williams and Zadro 2005). Third, social exclusion may serve to reduce the social standing of others and in turn, to affirm one's own social status (Heilbron and Prinstein 2008; Underwood and Ehrenreich 2014).

However, beyond the tendency to manipulate social relations, also other personal traits could make individuals inclined to ostracize others. For instance, low need for affiliation, together with insecure attachment and avoidance, may lead people to exclude others (Williams and Zadro 2005). These behavioral and relational characteristics could be expression of the tendency to use indirect ways, rather than confrontational methods, to solve conflictual situations (Williams and Zadro 2005).

In respect to the excluded individuals, some targets are more likely to be ostracized than others for different reasons. Social exclusion may result as the consequence of the inability to behave appropriately in different social contexts and to carry on a social interaction (Kurzman and Leary 2001). For instance, adolescents who display poor social skills and dysregulated behavior (e.g., inattentive and hyperactive) may be considered as a threat for the good functioning of the group and thus be rejected (Frentz, Gresham and Elliott 1991; Stormshak et al., 1999). Similarly, children with special health care needs (e.g., autism spectrum disorders) are also at risk of being ostracized by their peers (Twyman et al., 2010).

Individuals may also develop the expectation of being excluded on the basis of personal characteristics, such as gender, race, and social experiences. For instance, some members of historically excluded social groups (e.g., African-Americans) continue to experience expectations of rejection and exclusion by social institutions that have marginalized them in the past (Mendoza-Denton, Downey, Purdie, Davis and Pietrzak 2002). The expectation of being excluded and rejected (e.g., rejection sensitivity) by important others may constitute a risk factor for future exclusion experiences (Downey, Lebolt, Rincon and Freitas 1998).

For instance, based on their previous social experiences, children and adolescents with victimization reputations may develop high sensitivity to be rejected, manifesting hypervigilance to social cues related with exclusion (Downey et al., 1998; Mazzone et al., 2015; Rosen, Milich and Harris 2009; Williams 2007a). These individuals may develop and incorporate the role of "victim" in their social schemas (Rosen et al., 2009). The anxious feelings of being rejected may actually lead to maladaptive responses (e.g., aggression, anger) in social interactions, which in turn can affect exclusion experiences (Downey et al., 1998; Zadro et al., 2006).

In sum, some individuals are prone to exclude others in order to manipulate social relations and reaching their own goals, such as a high status in the group (Underwood and Ehrenreich 2014), whereas others tend to use ostracism because of the tendency to avoid conflictual situations (Williams and Zadro 2005). With respect to ostracized people, despite the general universal need for belonging, individual differences may exist in social competence and in the way people respond to social exclusion. Thus, previous social experiences may alter individual reactivity to social threats (Downey et al., 1998; Rosen et al.,

2009; Williams 2007a). In a vicious circle, the expectation of being rejected may actually cause future episodes of exclusion and rejection.

A DEVELOPMENTAL PERSPECTIVE ON SOCIAL EXCLUSION

Preschool Age

The majority of studies investigating social exclusion among children and adolescents included ostracism in the category of relational bullying (Crick, Casas and Mosher 1997; Crick and Grotpeter 1995) or psychological aggression (Galen and Underwood 1997). An increase in relational forms of aggression, such as social exclusion (investigated by peer nominations), is often observed during adolescence (Crick and Grotpeter 1995; Heilbron and Prinstein 2008). However, observational studies in natural settings demonstrated that, even among preschoolers, social exclusion is a common way to aggress indirectly (Corsaro 1985; Crick et al., 1997; Fanger, Frankel and Hazen 2012). For instance, a peer can be told that he/she will be excluded from the group, unless he/she will do what their peers wants. These forms of relational victimization and exclusion reflect the nature of social relationships among preschoolers and their relatively simple social skills at this developmental stage (Crick et al., 2001).

Social exclusion has negative outcomes on preschool children's social development and wellbeing, because it prevents them from opportunities to satisfy the need for closeness and acceptance by peers. A recent study by Stenseng and colleagues (2014) showed that excluded preschool children who manifested high levels of aggression at age 4 were more likely to manifest aggressive behavior and low levels of cooperation two years later in respect to their non-excluded peers. In other words, aggressive behavior seems to be amplified by repeated experiences of social exclusion. Therefore, social exclusion impairs children's social functioning, as well as their ability of self-regulation (e.g., control over immediate impulses, inhibition of anger, attentional focus) (Stenseng et al., 2014). In addition, preschool children with poor ability to regulate their own behavior are at risk of being excluded by their peers (Stenseng, Belsky, Skalicka and Wichstrom 2015). In other words, social exclusion and self-regulation seem to have a reciprocal influence on each other (Stenseng et al., 2015). As a consequence, it is particularly important identifying social exclusion among young children, with the aim to prevent its detrimental consequences.

Middle Childhood

Children experience a significant growth in different domains during middle childhood, improving their linguistic, cognitive, and social skills. Therefore, during this developmental stage, social exclusion becomes more covert and sophisticated than during the preschool age. As a consequence, children start to use less confrontational forms of aggression (e.g., spreading rumors) in order to reach their own goals within the group (Crick et al., 2001). Additionally, social groups become more and more exclusive, leading the members to deny access to potential newcomers (Archer and Coyne 2005).

Longitudinal studies involving children from the preschool period through elementary school have shown that in a vicious circle, chronically excluded children tend to withdraw from social interactions, being afraid of further exclusion (Buhs, Ladd and Herald 2006). They are at risk of manifesting reduced classroom participation and school avoidance, which in turn lead to poor school achievement (Buhs et al., 2006). Besides, social exclusion may also cause depression, loneliness, and social anxiety (Saylor et al., 2012). In sum, social exclusion among children is a serious risk factor for developing psychiatric conditions. Therefore, as we have previously pointed out, intervention programs are needed to contrast social exclusion and its detrimental consequences. However, we will further discuss more detailed proposals for intervention programs.

Adolescence

As anticipated, relational harassment increases and becomes even more sophisticated during adolescence (e.g., damaging friendship and excluding others, in order to reach a high status in the peer group) (Crick and Grotpeter 1995). Different studies indicate that adolescent girls use more relational than direct methods of aggression, in comparison to boys (Crick and Grotpeter 1995). This gender difference could be dependent on the characteristics of friendship among girls. More clearly, girls attach particular importance to trust, loyalty, and caring in respect to boys; hence, their female peers who do not exhibit these qualities are at risk of exclusion from the group (Nilan 1991). In addition, social forms of aggression seem to be particularly subtle among girls. For instance, non-verbal behaviors (e.g., nasty faces, eye-rolling) are salient aspects of relational aggression, serving the function of excluding non-desired peers from the group (Owens, Shute and Slee 2002). Adolescent girls seem also to perceive relational forms of aggression as particularly hurtful (Galen and Underwood 1997). The explanation can be found in the great importance placed by adolescent girls on close relationships and in the desire of being included within high status same-sex groups (Owens et al., 2002).

Despite adolescent girls seem to be more affected by social aggression in comparison to adolescent boys, both girls and boys have been suggested to be hypersensitive to social exclusion: They report a more negative mood and more threatened fundamental needs than children and adults after being excluded (Pharo, Gross, Richardson and Hayne 2011; Ruggieri, Bendixen, Gabriel and Alsaker 2013b; Sebastian, Viding, Williams and Blakemore 2010).

In addition, they also report negative feelings of dysphoria, shame, anger, and anxiety (Gross 2009). However, these negative emotions can be reduced by some situational factors. For instance, after the experience of ostracism, adolescents' negative feelings are reduced following the online sharing with an unknown same-age peer (Gross 2009).

As peer relationships provide an important contribution to adolescents' emotional and social development, as well as to their social identity (Asher and Coie 1990; Newmann and Newmann 2001), it could be expected that being ostracized by peers has serious consequences during adolescence. Hence, the hypersensitivity to rejection manifested by adolescents is associated with the importance assumed by group belonging during this developmental stage (Pharo et al., 2011).

Adolescents seem to be distressed even when they observe a peer excluded from a virtual ball-tossing game. A recent study investigated how they allocate money to their peers who were excluders and excluded (Will, Crone, van de Bos and Güroğly 2014). Results showed that adolescents were more prone than children and young adults to punish the excluders by giving them less money, and to compensate the victims of exclusion by sharing with them their own money. Contrarily to adolescents, children give importance to the norms of distributive equality (i.e., sharing money equally with the other recipients), whereas the tendency found for young adults to punish the excluders less severely is coherent with a decrease in punitive behavior registered from late adolescence through early adulthood (Will et al., 2014).

These results suggest an increased concern for the ostracized peers during adolescence. Interestingly, the level of affective perspective taking is correlated with the amount of money shared with the victim of exclusion (Will et al., 2014). In other words, adolescents who adopt the victims' point of view and infer their affective state tend to sacrifice their own resources to compensate the victims and are also prone to punish the excluders.

Overall, these findings in the literature suggest that relational forms of aggression, such as exclusion, are common among children and adolescents of different ages, although they are usually more frequent and painful among adolescents.

GROUP NORMS REGULATING SOCIAL INCLUSIONARY AND EXCLUSIONARY PROCESSES

Establishing significant social relations and a sense of belonging to the peer group is a human normative developmental task (Adler and Adler 1995; Parker, Rubin, Stephen, Wojslawowicz and Buskirk 2005). During the course of childhood, social affiliative behavior is regulated by social categorization processes. In particular, children choose same-sex peers to play with and to form social groups (or cliques), whereas, throughout adolescence, other aspects become more salient than gender. For instance, sharing the same values, norms, and dispositional characteristics is an important aspect associated with group formation among adolescents (Parker et al., 2005).

Cliques have a hierarchical structure and are exclusive, since not all children and adolescents who want to affiliate are accepted; they need to maintain their exclusivity through carefully choosing their members and excluding potential newcomers (Adler and Adler 1995). In this respect, leaders have the critical power of deciding whether new members can be included or not. In other words, they influence the stratification and the membership within the group (Adler and Adler 1995). Children who aim at gaining membership may try to be accepted by peripheral members of the group. In addition, they could also try to ingratiate the leader by imitating his/her own tastes and behaviors (Adler and Adler 1995; Dodge et al., 1983).

The possibility of being included in a clique is considered to be particularly important by preadolescents, since it contributes to define their social identity (Newman and Newman 2001). The quality of relationships with peers, together with the sense of belonging to the school community, positively contributes to social development (Osterman 2000; Pittman and Richmond 2007). Thus, children and adolescents who feel to belong to the school community

manifest the best social developmental outcomes, in terms of mental health and academic achievement (Bond et al., 2007). The sense of belongingness also promotes responsibility towards the members of the group (Ahmed 2008). For instance, preadolescents who feel emotionally and socially connected to the school community are likely to intervene on the behalf of their victimized peers during bullying episodes (Ahmed 2008). In other words, the sense of belongingness promotes active agency and social support.

Despite the positive social outcomes of belonging to the group, social exclusion could sometimes be required for making the group itself functioning better. Actually, social exclusion may also serve to establish greater intimacy among few group members and to strengthen social boundaries (Heilbron and Prinstein 2008). For instance, Grotperter and Crick (1996) found that socially aggressive boys and girls presented the highest levels of self-reported friendship exclusivity, intimacy, and personal disclosure. Research findings also indicate that young children are used to exclude their peers in order to protect the interactive space, the relationship, or the success of their play (Corsaro 1985).

Ostracism can also be used as a form of social control on problematic, burdensome, and harmful group members (Wesselmann, Nairne and Williams 2012; Wesselmann, Wirth, Pryor, Reeder and Williams 2013). Children and adolescents can be casted out from the group due to standing up against the leader, unpopularity, or infractions of norms (Adler and Adler 1995). The literature suggests that, among school-aged children, the acceptability of social behaviors varies as a function of the group norms (Stormshak et al., 1999). Children who present non-normative behaviors, such as aggressive conduct, may be excluded if their behavior does not conform to the expectations of the group. Conversely, in other peer contexts, aggressive behavior may be well accepted and considered an appropriate way to make friends or maintain inclusion (Berger and Rodkin 2012; Coie, Dodge and Kupersmidt 1990). Beyond the acceptability of such behaviors and their normative features, other kinds of behaviors, such as prosociality, have more absolute value in respect to the possibility of maintaining positive relationships and are correlated with peer acceptance across different contexts (Stormshak et al., 1999).

In sum, during childhood and adolescence, inclusionary processes are regulated by social categorization and by the need to conform to the group norms and expectations. Although social exclusion is commonly viewed as a strategy for acting aggressively and manipulating others at one's own advantage (Williams 2001), it could be sometimes mitigated by a reason or an excuse (Fanger et al., 2012). Thus, some deviant members may be considered as a threat for the good functioning of the group and then excluded. This should contribute to ameliorate the relationships within the group.

CHILDREN'S AND ADOLESCENTS' REASONING ABOUT SOCIAL EXCLUSION

Moral and socio-conventional beliefs seem to influence children's judgments about fairness and unfairness of social exclusion (Killen and Stangor 2001). Moral beliefs refer to wrongfulness and appropriateness of exclusion, to rights, equal treatment, and equal access to the peer group. Socio-conventional beliefs refer to judgments about social group processes

and group functioning related with exclusion (e.g., understanding that the baseball team will not work well if individuals who are not good at it would be admitted).

Although children's and adolescents' reasoning about exclusion depends on multiple factors (e.g., moral and socio-conventional beliefs), with increasing age, the individual merits for gaining access to the group become more and more important (Killen 2007). During the course of development, children start to consider the possibility that social exclusion is sometimes needed for the effective group functioning (Killen and Stangor 2001). As previously pointed out, a peer could not be included in a group, because he/she lacks the particular abilities needed for admission (Hitti, Mulvey and Killen 2011). Children with good social perspective taking skills are more likely to understand group dynamics and the reasons for including or excluding some members (Abrams, Rutland, Pelletier and Ferrell 2009). For example, they may consider fair excluding a disloyal member, who has rejected a norm about the equal allocation of resources within the group (Hitti, Mulvey, Rutland, Abrams and Killen 2014).

As anticipated, social exclusion may sometimes occur as the consequence of personal and behavioral characteristics of the excluded peer. Children evaluate positively (e.g., using a socio-conventional belief) the possibility of excluding a peer on the basis of personality traits which threaten the good functioning of the group (Park and Killen 2010). Specifically, social exclusion based on personality is considered to be more acceptable than exclusion based on nationality (Killen and Stangor 2001; Malti, Killen and Gasser 2012).

Nevertheless, children begin from a very early age to negatively view the categories to which they do not belong (Killen, Lee-Kim, McGlothlin and Stangor 2002), presenting biases in favor of the in-group members over the out-group members (Parker et al., 2005). Thus, they often justify social exclusion based on group membership using conventional criteria, instead of moral beliefs (Rutland and Killen 2015). For instance, they are prone to exclude the members of the out-group if the tradition does not allow to interact with that group (Rutland and Killen 2015). These beliefs promote psychosocial processes oriented at including the members who share the same norms and prototypical attributes and at excluding those who deviate from the group norms and prototypical characteristics.

In other words, this process leads to prejudice towards the out-group members (Killen et al., 2002; Killen, Pisacane, Lee-Kim and Ardila-Rey 2001; Parker et al., 2005). Prejudices are more difficult to change if children manifest a strong identification with their in-group and understand that showing prejudice towards the out-group fits with the expectation of the in-group (Rutland and Killen 2015). However, prejudices are reduced in case of contact with members of the out-group (e.g., ethnic majority children who have cross race friends). In this case, children begin to use moral criteria, rather than the socio-conventional ones, with the consequent understanding that social exclusion is unfair and wrong (Rutland and Killen 2015).

It has been suggested that prejudices acquired during childhood are very hard to change in adulthood (Killen 2007). Hence, we argue that in order to discourage prejudices and discrimination, children need to be educated to use moral judgments and to include in their social groups peers coming from different social and racial backgrounds.

In sum, children's reasoning about inclusion and exclusion of peers is associated with moral development and with socio-conventional beliefs. During the course of development, children become able to take into consideration the costs and benefits for the group functioning (e.g., socio-conventional beliefs) when they reason about inclusion and exclusion.

Although socio-conventional beliefs are useful for evaluating potential threats to the group functioning, children also need to recur to moral judgments in order to avoid the prejudices that are at the core of peer exclusion.

CONCLUSION

In this chapter, we exposed social exclusion and inclusion processes and the characteristics of children and adolescents who exclude and who are excluded. We have presented research findings demonstrating that even brief virtual experiences of social exclusion have detrimental effects for the ostracized individuals (Williams et al., 2000; Zadro, et al., 2004). Recent works suggested that social exclusion could be even worse than bullying and other forms of relational victimization (Williams and Nida 2011), as it strongly threatens our fundamental needs for belonging to a social group, preserving self-esteem, giving a meaning to our existence, and having control over social situations (Baumeister and Leary 1995; Williams 2007a; Williams et al., 2000). We have shown that consequences of repeated exclusion cause social pain, turning to be harmful for the individual psychosocial wellbeing (MacDonald and Jensen-Campbell 2011; Riva et al., 2014). However, social exclusion is not always a form of social aggression. It could sometimes be mitigated by an excuse and could potentially ameliorate the group functioning (Fanger et al., 2012).

The majority of studies investigating social exclusion analyzed responses to brief experiences of exclusion in laboratory settings (Williams et al., 2000; Zadro et al., 2004). We suggest that a qualitative process for studying long-term consequences of exclusion compared to brief episodes may be developed (e.g., to study social exclusion in natural settings) (Williams 2001). Hence, future studies should take into account long-term exposure to social exclusion and its consequences on psychophysiological and social wellbeing.

Furthermore, the association between social exclusion and autonomic activation in children and adolescents has been scarcely considered (Kelly et al., 2012; Gunther-Moor et al., 2010; Sijtsema et al., 2011). Future researches should also investigate which variables may account for physiological reactivity to social exclusion, such as rejection sensitivity and emotion regulation in front of threatening social cues (Downey et al., 1998; Rosen et al., 2009). We argue that analyzing physiological arousal associated with this kind of social threat may help to better relate physiological and social functioning, which may have implications for understanding adaptive and maladaptive social outcomes (Murray-Close 2012).

As many children and adolescents experience social exclusion on a regular basis (Wang et al., 2010), it is of great importance to implement intervention programs oriented at contrasting this phenomenon.

Some protective factors can reduce the negative effects of social exclusion. For instance, it has been shown that adolescents who spend more time with peers are less sensitive to the experience of exclusion, compared to their peers who spend less time with their friends (Masten, Telzer, Fuligni, Lieberman and Eisenberger 2012). In other words, the feeling of acceptance by peers can be internalized over time, reducing the distress of social threatening cues (Masten et al., 2012). In this respect, it is particularly important for parents and teachers to let children spend time with peers and creating occasions for their social encounters.

In addition, great care should be taken to promote positive social relationships among peers.

We suggest that specific intervention programs should address both pupils who are excluders and those who are excluded. Encouraging prosocial behavior and empathy may help to contrast relational forms of aggression such as exclusion. It is of main importance to identify subgroups of children and adolescents who are particularly sensitive to exclusion (i.e., those who are victimized), in order to develop adequate intervention programs oriented at preventing, or alleviating, the adverse consequences of being excluded. For instance, promoting effective coping strategies to deal with social exclusion may help youths to become more resilient when confronted with exclusion.

REFERENCES

- Abrams, D., Rutland, A., Pelletier, J. and Ferrell, J. M. (2009). Children's group nous: Understanding and applying peer exclusion within and between groups. *Child Development*, 80(1) 224-243. doi: 10.1111/j.1467-8624.2008.01256.x.
- Adler, P. A. and Adler, P. (1995). Dynamics of inclusion and exclusion in preadolescent cliques. *Social Psychology Quarterly*, 58(3) 145-162. doi: 10.2307/2787039.
- Ahmed, E. (2008). Stop it, that's enough: Bystander intervention and its relationship to school connectedness and shame management. *Vulnerable Child and Youth Studies*, 3(3) 202-213. doi: org/10.1080/17450120802002548.
- Archer, J. and Coyne, SM. (2005). An indirect review of indirect, relational and social aggression. *Personality and Social Psychology Review*, 9(3) 212-230. doi:10.1207/s15327957pspr0903_2.
- Asher, S. R. and Coie, J. D. (1990). *Peer rejection in childhood*. New York, NY: Cambridge University Press. ISBN: 9780521398367
- Baumeister, R. F., Brewer, L. E., Tice, D. M. and Twenge, J. M. (2007). Thwarting the need to belong: Understanding the interpersonal and inner effects of social exclusion. *Social and Personality Psychology Compass* 1(1), 506-520. doi: 10.1111/j.1751-9004.2007.00020.x.
- Baumeister, R. F., DeWall, N., Ciarocco, N. J. and Twenge, J. M. (2005). Social exclusion impairs self-regulation. *Journal of Personality and Social Psychology*, 88(4), 589-604. doi: 10.1037/0022-3514.88.4.589.
- Baumeister, R. F. and Leary, M. R. (1995). The need to belong: Desire for interpersonal attachments as a fundamental human motivation. *Psychological Bulletin* 117(3), 497-529. doi: 10.1037/0033-2909.117.3.497.
- Baumeister, R. F., Twenge, J. M. and Nuss, C. (2002). Effects of social exclusion on cognitive processes: Anticipated aloneness reduces intelligent thought. *Journal of Personality and Social Psychology*, 83, 817-827. doi: 10.1037//0022-3514.83.4.817.
- Bennett, M. (2014). Intergroup social exclusion in childhood: Forms, norms, context and social identity. *Journal of Social Issues*, 70(1) 183-195. doi: 10.1111/josi.12054.
- Berger, C. and Rodkin, P. C. (2012). Group influences on individual aggression and prosociality: Early adolescents who change peer affiliation. *Social Development* 21(2), 396-413. doi: 10.1111/j.1467-9507.2011.00628.x.

- Bernstein, M. J., Young, S. G., Brown, C. M., Sacco, D. F. and Claypool, H. M. (2008). Adaptive responses to social exclusion: Social rejection improves detection of real and fakes smiles. *Psychological Science* 19, 981-983. doi: 10.1111/j.1467-9280.2008.02187.x.
- Blackhart, G. C., Eckel, L. A. and Tice, D. M. (2007). Salivary cortisol in response to acute social rejection and acceptance by peers. *Biological Psychology*, 75(3) 267-276. doi: 10.1016/biopsycho.2007.03.005.
- Bolling, D. Z., Pitskel, N. B., Deen, B., Crowley, M. J., Mayes, L. C. and Pelphrey, K. A. (2011). Development of neural systems for processing social exclusion from childhood to adolescence. *Developmental Science* 1 1-14. doi: 10.1111/j.1467-7687.2011.01087.x.
- Bond, L., Butler, H., Thomas, L., Carlin, J., Glover, S., Bowes, G. ... Nome ultimo autore. (2007). Social and school connectedness in early secondary school as predictors of late teenage substance use, mental health and academic outcomes. *Journal of Adolescent Health*, 40, 357-375. doi: 10.1016/j.jadohealth.2006.10.013.
- Buhs, E. S., Ladd, G. W. and Herald, S. L. (2006). Peer exclusion and victimization: Processes that mediate the relation between peer group rejection and children's classroom engagement and achievement? *Journal of Educational Psychology*, 98(1) 1-13. doi: 10.1037/0022-0663.98.1.1.
- Chow, R. M., Tiedens, L. Z. and Govan, C. L. (2008). Excluded emotions: The role of anger in antisocial responses to ostracism. *Journal of Experimental Social Psychology*, 44, 896-903. doi: 10.1016/j.jesp.2007.09.004.
- Coie, J. D., Dodge, K. A. and Kupersmidt, J. B. (1990). Peer group behavior and social status. In S. R. Asher and J. D. Coie (Eds.), *Peer rejection in childhood* (pp. 17-59). New York, NY: Cambridge University Press.
- Coie, J. D., Dodge, K. A., Terry, R. and Wright, V. (1991). The role of aggression in peer relations: An analysis of aggression episodes in boys' play groups. *Child Development*, 62, 812-826. doi: 10.1111/j.1467-8624.1991.tb01571.x.
- Corsaro, W. A. (1985). *Friendship and peer culture in the early years*. Norwood, NJ: Ablex.
- Coyne, S. N., Gunderson, N., Nelson, D. and Stockdale, L. (2011). Adolescents' prosocial responses to ostracism: An experimental study. *The Journal of Social Psychology* 151(5), 657-661. doi: 10.1080/00224545.2010.522625.
- Crick, N. R., Casas, J. F. and Mosher, M. (1997). Relational and overt aggression in preschool. *Developmental Psychology*, 33(4), 579-588. doi: 10.1016/j.jaac.2012.06.018.
- Crick, N. R. and Grotpeter, J. K. (1995). Relational aggression, gender and social psychological adjustment. *Child Development*, 66, 710-722. doi: 10.1111/j.1467-8624.1995.tb00900.x.
- Crick, N. R., Nelson, D. A., Morales, J. R., Cullerton-Sen, C., Casas, J. F. and Hickman, S. E. (2001). Relational victimization in childhood and adolescence: I hurt you through the grapevine. In J. Juvonen and S. Graham (Eds), *Peer harrassment in school: The plight of the vulnerable and victimized* (pp. 196-214) New York, NY: The Guilford Press. Merrill-Palmer.
- Crowley, M. J., Wu, J., Molfese, P. J. and Mayes, L. C. (2010). Social exclusion in middle childhood: Rejection events, slow wave neural activity and ostracism distress. *Social Neuroscience*, 5(5-6), 483-495. doi: 10.1080/17470919.2010.500169.

- DeWall, N. and Bushman, B. J. (2011). Social acceptance and rejection: The sweet and the bitter. *Current Directions in Psychological Science* 20(4) 256-260. doi: 10.1177/0963721411417545.
- Dickerson, S. S., Gruenewald, T. L. and Kemeny, M. E. (2011). Physiological effects of social threat: Implications for health. In J. T. Cacioppo and J. Decety (Eds.), *Handbook of Social Neuroscience* (pp, 787-803). New York, NY: Oxford University Press.
- Dodge, K. A., Schlundt, D. C., Schocken, I. and Delugach, J. D. (1983). Social competence and children's sociometric status: The role of peer group entry strategies. *Merrill-Palmer Quarterly* 29(3), 309-336. doi: jstor.org/stable/23086264.
- Downey, G., Lebolt, A., Rincon, C. and Freitas, A. (1998). Rejection sensitivity and children's interpersonal difficulties. *Child Development*, 69(4) 1074-1091. doi:0009-3920/986904.
- Einarsen, S. and Mikkelsen, E. G. (2003). Individual effects of exposure to bullying at work. In S. Einarsen, H. Hoel, D. Zapf and C. L. Cooper (Eds.), *Bullying and emotional abuse in the workplace. International perspectives in research and practice* (pp.127-144). London: Taylor and Francis.
- Eisenberger, N. I., Lieberman, M. D. and Williams, K. D. (2003). Does rejection hurt? An fMRI study of social exclusion. *Science* 10 290-292. doi: 10.1126/science.1089134.
- Fanger, S. M., Frankel, L. A. and Hazen, N. (2012). Peer exclusion in preschool children's play: Naturalistic observations in a playground setting. *Merrill-Palmer Quarterly*, 58(2) 224-254. doi: 10.1035/mpq.2012.0007.
- Frentz, C., Gresham, F. M. and Elliott, S. N. (1991). Popular, controversial, neglected and rejected adolescent: Contrasts of social competence and achievement differences. *Journal of School Psychology* 29(2) 109-120. doi: 10.1016/S0022-4405(05)80003-2.
- Galen, B. R. and Underwood, M. K. (1997). A developmental investigation of social aggression among children. *Developmental Psychology*, 33 (4), 589-600. doi: 10.1037/0012-1649.33.4.589.
- Garandeau, C. F. and Cillessen, H. N. (2006). From indirect aggression to invisible aggression: A conceptual view on bullying and peer group manipulation. *Aggression and Violent Behavior* 11, 612-625. doi: 10.1016/j.avb.2005.08.005.
- Gini, G., Albiero, P., Benelli, B. and Altoè, G. (2007). Does empathy predict adolescents' bullying and defending behavior? *Aggressive Behavior*, 33, 467-476. doi: 10.1002/ab.20204.
- Godwin, A., MacNevin, G., Zadro, L., Iannuzzelli, R., Weston, S., Gonsalkorale, K. and Devine, P. (2013). Are all ostracism experiences equal? A comparison of the autobiographical recall, Cyberball and O-Cam paradigms. *Behavioral Research* 1 1-8. doi: 10.3758/s13428-013-0408-0.
- Gonsalkorale, K. and Williams, K.D. (2006). The KKK won't let me play: ostracism even by despised outgroup hurts. *European Journal of Social Psychology*, 37(6) 1176-1186. doi: 10.1002/ejsp.392.
- Goodacre, R. and Zadro, L. (2010). O-Cam: A new paradigm for investigating the effects of ostracism. *Behavioral Research Methods*, 42(3), 768-774. doi: 10.3758./BRM.42.3.768.
- Greenberg, J., Solomon, S., Pyszczynski, T., Rosenblatt, A., Burling, J., Lyon, D. ... Ultimo Autore., (1992). Why do people need self-esteem? Converging evidence that self-esteem serves an anxiety buffering function. *Journal of Personality and Social Psychology*, 63(6), 913-922. doi: 10.1037/0022-3514.63.6.913.

- Gross, E. F. (2009). Logging on, bouncing back: An experimental investigation of online communication following social exclusion. *Developmental Psychology*, 45 1787-1794. doi:10.1037/a0016541.
- Gunther-Moor, B. G., Crone, E. A. and van der Molen, M. W. (2010). The heartbreak of social rejection: Heart rate deceleration in response to unexpected peer rejection. *Psychological Science* 21(9) 1326-1333. doi: 10.1177/0956797610379326.
- Harterink, C. H. J., van Beest, I., Wicherts, J. M. and Williams, K. D. (2015). The ordinal effects of ostracism: A meta-analysis of 120 cyberball studies. *Plos One* 10(5) 1-24. doi: 10.1371/journal.pone.0127002.
- Heilbron, N. and Prinstein, N. J. (2008). A review and reconceptualization of social aggression: Adaptive and maladaptive correlates. *Clinical Child and Family Psychological Review* 11 176-217. doi: 10.1007/s10567-008-0037-9.
- Hitti, A., Mulvey, K. L. and Killen, M. (2011). Social exclusion and culture: The role of group norms, group identity and fairness. *Anales de Psicología* 27(3), 587-599. doi: 10.1111/cdev.12012.
- Hitti, A., Mulvey, K. L., Rutland, A., Abrams, D. and Killen, M. (2014). When is it okay to exclude a member of the ingroup? Children's and adolescents' social reasoning. *Social Development* 23(3), 451-469. doi: 10.1111/sode.12047.
- Gruter, M. and Masters, R. D. (1986). Ostracism as a social and biological phenomenon: An introduction. *Ethology and Sociobiology*, 7 149-158. doi:10.1016/0162-3095(86)90043-9.
- Juvonen, J. and Graham, S. (2001). Bullying in schools: The power of bullying and the plight of victims. *Annual Review of Psychology*, 65 159-165. doi: 10.1146/annurev-psych-010213-115030.
- Juvonen, J. and Gross, E. F. (2005). The rejected and the bullied: Lessons about social misfits from developmental psychology. In K. D. Williams, J. P. Forgas and W. von Hippel (Eds.), *The social outcast: Ostracism, social exclusion, rejection, and bullying* (pp. 155-170). New York, NY: Psychology Press.
- Kelly, M., McDonald, S. and Rushby, J. (2012). All alone with sweaty palms – Physiological arousal and ostracism. *International Journal of Psychophysiology*, 83, 309-314. doi: 10.1016/j.ijpsycho.2011.11.008.
- Killen, M. (2007). Children's social and moral reasoning about exclusion. *Current Directions in Psychological Science* 16(1), 32-36. doi: 10.1002/9781444390933.ch30.
- Killen, M., Lee-Kim, J., McGlothlin, H. and Stangor, C. (2002). How children and adolescents evaluate gender and race exclusion. *Monographs of the Society for Research in Child Development*, 67(4), Serial No. 271. Oxford, Blackwell Publishing.
- Killen, M., Pisacane, K., Lee-Kim, J. and Ardila-Rey, A. (2001). Fairness or stereotypes? Young children's priorities when evaluating group exclusion and inclusion. *Developmental Psychology*, 37(5), 587-596. doi: 10.1037//0012-1649-.37.5.587.
- Killen, M. and Stangor, C. (2001). Children's social reasoning about inclusion and exclusion in gender and race peer group contexts. *Child Development*, 72(1) 174-186. doi: 10.1111/1467-8624.00272.
- Klages, S. V. and Wirth, J. H. (2014). Excluded by laughter: Laughing until it hurts someone else. *The Journal of Social Psychology* 154, 8-13. doi: 10.1080/00224545/2013.843502.
- Kothgassner, O. D., Kafka, J. X., Rudyk, J., Beutl, L., Hlavacs, H. and Felnhofer, A. (2014). Does social exclusion hurt virtually like it hurts in real life? The role of agency and social

- presence in the perception and experience of social exclusion. *Proceedings of the International Society for Presence Research*, 45-56. ISBN: 978-3-7089-1081-9.
- Kurzban, R. and Leary, M. R. (2001). Evolutionary origins of stigmatization: The functions of social exclusion. *Psychological Bulletin* 127(2) 187-208. doi: 10.1037/0033-2909.127.2.187.
- Leary, M. R. (1990). Responses to social exclusion: Social anxiety, jealousy, loneliness, depression and low self-esteem. *Journal of Social and Clinical Psychology*, 9 221-229. doi: 10.1521/jscp.1990.9.2.221.
- Leary, M. R., Kelly, R. M., Cottrell, L. and Schreindorfer, S. (2013). Construct validity of the Need to Belong Scale: Mapping the nomological network. *Journal of Personality Assessment*, 95(6), 610-624. doi: 10.1080/00223891.2013.819511.
- Leary, M.R., Haupt, A.L., Strausser, K.S. and Chockel, J.T. (1998). Calibrating the sociometer: the relationship between interpersonal appraisals and state self-esteem. *Journal of Personality and Social Psychology*, 74 1290-1299. doi: 10.1037/0022-3514-74.5.1290.
- Leary, M. R., Kowalski, R. M., Smith, L. and Phillips, S. (2003). Teasing, rejection and violence: Case studies of the school shootings. *Aggressive Behavior* 29 202-214. doi: 10.1002/ab.10061.
- Leung, A. S. M., Wu, L. Z. and Chen, Y. Y. and Young, M. N. (2011). The impact of workplace ostracism in service organizations. *International Journal of Hospitality Management*, 30(4), 836-844. doi: 10.1016/j.ijhm.2011.01.004.
- MacDonald, G. and Jensen-Campbell, L. A. (Eds.) (2011). *Social pain: Neuropsychological and health implications of loss and exclusion*. Washington, D.C.: American Psychological Association.
- Malti, T., Killen, M. and Gasser, L., (2012). Social judgments and emotion attributions about exclusion in Switzerland. *Child Development*, 83(2), 697-711. doi: 10.1111/j.1467-8624-2011.01705.x.
- Maner, J., DeWall, N., Shaller, M. and Baumeister, R. F. (2007). Does social exclusion motivate interpersonal reconnection? Resolving the “porcupine problem”. *Journal of Personality and Social Psychology*, 92(1), 42-55. doi: 10.1037/0022-3514.92.1.42.
- Mazzone, A., Camodeca, M., Cardone, D. and Merla, A. (September 2015). *Physiological reactivity to social exclusion and personality correlates in bullies and victims: A thermal infrared imaging study*. Poster presented at the 17th European Conference on Developmental Psychology, Braga, Portugal.
- McGuire, M. T. and Raleigh, M. J. (1986). Behavioral and physiological correlates of ostracism. *Ethology and Sociobiology*, 7 187-196. doi: 10.1016/0162-3095(86)90047-6.
- Masten, C. L., Eisenberger, N. I., Borofsky, L. A., McNealy, D. H., Mazziotta, J. C. and Dapretto, M. (2009). Neural correlates of social exclusion during adolescence: Understanding the distress of peer rejection. *Social Cognitive and Affective Neuroscience*, 4 143-157. doi: 10.1039/scan/nsp007.
- Masten, C. L., Telzer, E. H., Fuligni, A. J., Lieberman, M. W. and Eisenberger, N. I. (2012) Time spent with friends in adolescence relates to less neural sensitivity to peer rejection. *Social Cognitive and Affective Neuroscience*, 7 106-114. doi: 10.1093/scan/snq098.
- Mendoza-Denton, R., Downey, G., Purdie, V. J., Davis, A. and Pietrzak, J. (2002). Sensitivity to status-based rejection: Implications for African-American students' college experience.

- Journal of Personality and Social Psychology*, 83(4), 896-918. doi: 10.1037//0022-3514.83.4.896.
- Menesini, E. and Camodeca, M. (2008). Shame and guilt as behavior regulators: Relationships with bullying, victimization and prosocial behavior. *British Journal of Developmental Psychology* 26 183-196. doi: 10.1348/026151007X205281.
- Menesini, E., Sanchez, V., Fonzi, A., Ortega, R., Rosario, O., Costabile A. and Lo Feudo, G. (2003). Moral emotions and bullying: A cross-national comparison of differences between bullies, victims and outsiders. *Aggressive Behavior* 29, 515-530. doi: 10.1002/ab.10060.
- Murray-Close, D. (2012). Psychophysiology of adolescent peer relations I: Theory and Research findings. *Journal of Research on Adolescence* 23(2) 236-259. doi:10.1111/j.1532-7795-2012.00828.x.
- Newcomb, A. F., Bukowski, W. M. and Pattee, L. (1993). Children's peer relations: A meta-analytic review of popular, rejected, neglected, controversial and average sociometric status. *Psychological Bulletin* 113(1), 99-128. doi: 10.1037/0033-2909.113.1.99.
- Newman, M. L., Holden, G. W. and Deville, H. Y. (2005). Isolation and the stress of being bullied. *Journal of Adolescence* 28, 343-357. doi: 10.1016/j.adolescence.2004.08.002.
- Newman, B. M. and Newmann, P. R. (2001). Group identity and alienation: Giving the we its due. *Journal of Youth and Adolescence*, 30(5), 515-538. doi:10.1023/A:1010480003929.
- Nilan, P. (1991). Exclusion, inclusion and moral ordering in two girls' friendship group. *Gender and Education*, 3 163-182. doi: 10.1080/0954025910030204.
- Novembre, G., Zanon, M. and Silani, G. (2014). Empathy for social exclusion involves the sensory-discriminative component of pain: A within-subject fMRI study. *Social Cognitive and Affective Neuroscience* 1 1-12. doi: 10.1093/scan/nsu038.
- Olweus, D. (1993). *Bullying at school: What we know and what we can do*. Malden, MA. Blackwell Publishing. doi: 10.1002/pits.10114.
- O'Really, J., Robinson, S. L., Berdhal, J. L. and Banki, S. (2014). Is negative attention better than no attention? The comparative effects of ostracism and harassment at work. *Organization Science* 1 1-20. doi: 10.1287/orsc.2014.0900.
- Osterman, K. F. (2000). Students' need for belonging in the school community. *Review of Educational Research*, 70(3), 323-367. doi: 10.3102/00346543070003323.
- Owens, L., Shute, R. and Slee, P. (2002). "You just stare at them and give them daggers". Non-verbal expressions of social aggression in teenager girls. *International Journal of Adolescence and Youth* 10, 353-372. doi: 10.1080/02673843.2002.9747911.
- Park, Y. and Killen, M. (2010). When is peer rejection justifiable? Children's understanding in two cultures. *Cognitive Development* 25 290-301. doi: 10.1016/j.cogdev.2009.10.004.
- Parker, J. G., Rubin, K. H., Erath, S. A., Wojslawowicz, J. C. and Buskirk, A. A. (2005). Peer relationships, child development and adjustment: A developmental psychological perspective. In, J. Wiley, D. Cicchetti and D. Cohen (Eds.), *Developmental Psychopathology: Risk, Disorder and Adaptation* (pp. 419-493). Città: Casa Editrice.
- Pellegrini, A. D. and Long, J. D. (2002). A longitudinal study of bullying, dominance and victimization during the transition from primary school through secondary school. *British Journal of Developmental Psychology* 20(2) 259-280. doi: 10.1348/026151002166442.
- Pharo, H., Gross, J., Richardson, R. and Hayne, H. (2011). Age-related changes in the effect of ostracism. *Social Influence*, 6(1) 22-38. doi: 10.1080/15534510.2010.525852.

- Pittman, L. D. and Richmond, A. (2007). Academic and psychological functioning in late adolescence: The importance of school belonging. *Journal of Experimental Education*, 75(4) 270-290. doi: 10.3200/JEXE.75.4.270-292.
- Riva, P., Wesselmann, E. D., Wirth, J., Carter-Sowell, A. R. and Williams, K. D. (2014). When pain does not heal: The common antecedents and consequences of chronic social and physical pain. *Basic and Applied Social Psychology*, 36(4), 329-346. doi: 10.1080/01973533.2014.917975.
- Rosen, P. J., Milich, R. and Harris, M. J. (2009). Why's everybody always picking on me? Social cognition, emotional regulation and chronic peer victimization in children. In M. J. Harris (Ed.). *Bullying, rejection and peer victimization: A social cognitive neuroscience perspective* (pp. 79-100). New York, NY: Springer.
- Ruggieri, S., Bendixen, M., Gabriel, U. and Alsaker, F. (2013a). Do victimization experiences accentuate reactions to ostracism? An experiment using cyberball. *International Journal of Developmental Science*, 7 25-32. doi: 10.3233/DEV-1312114.
- Ruggieri, S., Bendixen, M., Gabriel, U. and Alsaker, F., (2013b). The impact of ostracism on the well-being of early adolescents. *Swiss Journal of Psychology*, 72(2) 103-109. doi: 10.1024//1421-0185/a000103.
- Rutland, A. and Killen, M. (2015). A developmental science approach to reducing prejudice and social exclusion: Intergroup processes, social cognitive development and moral reasoning. *Social Issue and Policy Review*,(1) 121-154. doi: 10.1111/sipr.12012.
- Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, K. and Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behavior* 22 1-15. doi: 10.1002/(SICI)1098-2337(1996)22:1<1::AID-AB1>3.0.CO;2-T.
- Salmivalli, C. and Peets, K. (2008). Bullies, victims and bully-victims relationships. In K. Rubin, W. Bukowski and B. Laursen (Eds). *Handbook of peer interactions, relationships and groups* (pp. 322-340). New York, NY: Guilford Press.
- Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior* 15 112-120. doi: 10.1016/j.avb.2009.08.007.
- Saylor, C. F., Nida, S. A., Williams, K. D., Taylor, L. A., Smith, W., Twyman, KA. ... Ultimo Autore. (2012). Bullying and ostracism screening scales (BOSS): Development and Application. *Child's Health Care*, 41(4), 322-343. doi: 10.1080/02739615.2012.720962.
- Scheithauer, H., Alsaker, F., Wölfer, R. and Ruggieri, S. (2013). Cyberball: A reasonable paradigm for research in developmental science? *International Journal of Developmental Science*, 7 1-6. doi: 10.3233/DEV-13000071.
- Sebastian, C., Viding, E., Williams K. and Blakemore, S. (2010). Social brain development and the affective consequences of ostracims in adolescence. *Brain and Cognition*, 72 143-145. doi: 10.1016/j.bandc.2009.06.008.
- Sijtsema, J. J., Shoulberg, E. K. and Murray-Close, D. (2011). Physiological reactivity and different forms of aggression in girls: Moderating role of rejection sensitivity and peer rejection. *Biological Psychology*, 86 181-192. doi: 10.1016/j.biopsycho.2010.11.007.
- Slonje, R. and Smith, PK. (2008). Cyberbullying: Another main type of bullying? *Scandinavian Journal of Psychology*, 49 147-154. doi: 10.1111/j.1467-9450.2007.00611.x.

- Stenseng, F., Belsky, J., Skalicka, V. and Wichstrom, L. (2014). Preschool social exclusion, aggression and cooperation: A longitudinal evaluation of the need to belong and the social reconnection hypotheses. *Personality and Social Psychological Bulletin* 1,1-11. doi: 10.1177/0146167214554591.
- Stenseng, F., Belsky, J., Skalicka, V. and Wichstrom, L. (2015). Social exclusion predicts impaired self regulation: A 2-year longitudinal panel study including the transition from preschool to school. *Journal of Personality*, 83(2) 212-220. doi: 10.1111/jopy.12096.
- Sticca, F., Ruggieri, S., Alsaker, F. and Perren, S. (2013). Longitudinal risk factors for cyberbullying in adolescence. *Journal of Community and Applied Social Psychology* 23, 52-67. doi: 10.1002/casp.2136.
- Stormshak, E. A., Bierman, K. L., Bruschi, C., Dodge, K. A., Coie, J. D. and The Conduct Problems Prevention Group. (1999). The relation between behavior problems and peer preference in different classroom contexts. *Child Development*, 70(1) 169-182. doi: 10.1111/1467-8624.00013.
- Sutton, J., Smith, P. K., Swettenham, J. (1999). Social cognition and bullying: Social inadequacy, or skilled manipulation? *British Journal of Developmental Psychology* 17(3), 435-450. doi: 10.1348/026151099165384.
- Twenge, J. M., Baumeister, R. F., Tice, D. M. and Stucke, T. S. (2001) If you can't join them, beat them: Effects of social exclusion on aggressive behavior. *Journal of Personality and Social Psychology*, 81(6) 1058-1069. doi: 10.1037//0022-3514.81.6.1058.
- Twyman, K. A., Saylor, C. F., Saia, D., Macias, M. M., Taylor, L. A. and Spratt, E., (2010). Bullying and ostracism experiences in children with special health care needs. *Journal of Developmental and Behavioral Pediatrics*, 31(1) 1-8. doi: 10.1097/DBP.0b013e3181c828c8.
- Underwood, M. K. and Ehnrenreich, S. E. (2014). Bullying may be fueled by the desperate need to belong. *Theory into Practice*, 53 265-270. doi: 10.1080/00405841.2014.947217
- Wang, J., Iannotti, R. J., Luk, J. and Nansel, T.R. (2010). Co-occurrence of victimization from five subtypes of bullying: Physical verbal, social exclusion, spreading rumours, and cyber. *Journal of Pediatric Psychology*, 35(10) 1103-1112. doi: 10.1093/jpepsy/jsq048.
- Wesselmann, E. D., Bagg, D. and Williams, K. D. (2009). "I feel your pain". The effects of observing ostracism on the ostracism detection system. *Journal of Experimental Social Psychology*, 45 1308-1311. doi: 10.1016/j.jesp.2009.08.003.
- Wesselmann, E. D., Nairne, J. S. and Williams, K. D. (2012). An evolutionary social psychological approach to studying the effects of ostracism. *Journal of Social Evolutionary and Cultural Psychology*, 6(3), 309-328. doi: 10.1037/h0099249.
- Wesselmann, E. D., Ren, D. and Williams, K. D. (2015). Motivations for responses to ostracism. *Frontiers in Psychology*, 6 1-5. doi: 10.3389./fpsyg.2015.00040.
- Wesselmann, E. D., Wirth, J.H., Pryor, J. B., Reeder, G. D. and Williams, K. D. (2013). When do we ostracize? *Social Psychology and Personality Science*, 4(1) 108-115. doi: 10.1177//1948550612443386.
- Will, G. J., Crone, E. A., van den Bos, W. and Güroğly, B. (2014). Acting on observed social exclusion: Developmental perspectives on punishment of excluders and compensation of victims. *Developmental Psychology*, 49(12) 2236-2244. doi: 10.1037/a0032299.
- Williams, K. D. (1997). Social ostracism. In R. M. Kowalski (Ed.), *Aversive interpersonal behaviors* (pp. 133-170). New York, NY: Plenum.
- Williams, K. D. (2001). *Ostracism: The power of silence*. New York, NY: Guilford.

- Williams, K. D. (2007a). Ostracism. *Annual Review of Psychology*, *58*, 425-452. doi: 10.1146/annurev.psych.58.110405.085641.
- Williams, K. D. (2007b). Ostracism: The kiss of social death. *Social and Personality Psychology Compass* *1*(1) 236-247. doi: 10.1111/j.1751-9004.2007.00004.x.
- Williams, K. D. (2009). Ostracism: Effects of being excluded and ignored. In M. Zanna (Ed.), *Advances in Experimental Social Psychology*, (pp. 275-314). New York, NY: Academic Press.
- Williams, K. D., Cheung, C. K. and Choi, W. (2000). Cyberostracism: Effects of being ignored over the internet. *Journal of Personality and Social Psychology*, *79*(5), 748-762. doi: 10.1037//0022-3514.79.5.748.
- Williams, K. D., Govan, C. L., Croker, V., Tynan, D., Cruickshank, M. and Lam., A. (2002). Investigations into differences between social and cyber ostracism. *Group Dynamics, Theory, Research and Practice*, *6*, 65-77. doi: 10.1037/1089-2699.6.1.65.
- Williams, K. D. and Nida, S. A. (2009). Is ostracism worse than bullying? In M. J. Harris (Ed.). *Bullying, rejection and peer victimization: A social cognitive neuroscience perspective* (pp. 279-296). New York, NY: Springer.
- Williams, K. D. and Nida, S. A. (2011). Ostracism: Consequences and coping. *Current Directions in Psychological Science* *20*(2), 71-75. doi: 10.1177/0963721411402480.
- Williams, K. D. and Zadro, L. (2005). Ostracism: The indiscriminate early detection system. In K. D. Williams, J. P. Forgas and W. von Hippel (Eds.). *The social outcast: Ostracism, social exclusion, rejection, and bullying*. New York, NY: Psychology Press.
- Wolke, D., Woods, S., Bloomfield, L. and Karstadt, L. (2000). The association between direct and relational bullying and behaviour problems among primary school children. *Journal of Child Psychology and Psychiatry*, *41*(8), 989-1002. doi: 10.1111/1469-7610.00687.
- Wyer, N.A. (2008). Cognitive consequences of perceiving social exclusion. *Journal of Experimental Social Psychology*, *44* 1003-1012. doi: 10.1016/j.jesp.2008.03.002.
- Wölfer, R. and Sheithauer, H. (2013). Ostracism in childhood and adolescence: Emotional, cognitive and behavioral effects of social exclusion. *Social Influence*, *8*(4) 217-236. doi: 10.1080/15534510.2012.706233.
- Zadro, L., Boland, C. and Richardson, R. (2006). How long does it last? The persistence of the effects of ostracism in the socially anxious. *Journal of Experimental Social Psychology*, *42*, 692-697. doi: 10.1016/j.jesp.2005.10.007.
- Zadro, L., Williams, K. D. and Richardson, R. (2004). How low can you go? Ostracism by a computer is sufficient to lower self reported levels of belonging, control, self-esteem and meaningful existence. *Journal of Experimental Social Psychology*, *40*, 560-567. doi:10.1016/j.jesp.2003.11.006.

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