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Moral cognition and social competence
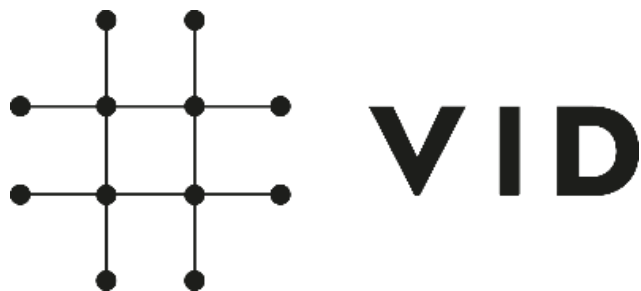
Promotion and prevention in school

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Moral cognition and social competence:

Promotion and prevention in school

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Thesis submitted

For the degree of Philosophiae Doctor (Ph.D.)

VID Specialized University, Oslo

2018

Acknowledgments

This academic journey has been a roller coaster; some progress has been achieved despite this, and some because of it. I would never have been able to accomplish this goal without self-discipline, patience, guidance, and support. Thus, this is the time to acknowledge those who provided helpful contributions.

First, thanks to the pupils, teachers, and principals who participated in this study. You have spent your time, resources, and engagement. Not least, thanks to Jan Arild Gundersen for preparing, coordinating and collaborating during the entire period. Your contributions are invaluable. Thanks to Knut Gundersen for being a mentor and a good colleague for many years and for providing us with the Social Perception Training program.

To my supervisors, Professor Frode Svartdal and Associate Professor Anita Gjermestad, thank you! You have both been critically important for the completion of this thesis. I would like to express my sincere gratitude to Frode, my main supervisor. Without your knowledge, guidance, and support and our constructively high-track communication, this would not have been possible to accomplish. Anita, your caring in-house presence and open door have been more important than you imagine, particularly at significant turning points.

Thank you to my fellow PhD candidates and colleagues at both VID and the Norwegian Centre for Learning Environment and Behavioural Research in Education.

During this journey, I also managed to grow a whole new family in a time-consuming process of renovating our house. Without the support and understanding of my wonderful wife, Jane, and my children, Jacob and Christian, I could never have done this.

Sandnes, April 2018   Johannes N. Finne

Summary

Background: Social competence is important to well-being and social and personal development. The lack of social competence is linked to bullying in school, young people's failure to qualify for work, and other types of externalizing and internalizing difficulties. A growing body of evidence has identified factors in the complex interplay between individuals and their environment that influence behavior, relationships, and development in young people. For instance, the role of social perception and moral cognition in behavior problems has received considerable focus in recent years. Although school is important for socialization and offers many possibilities for social and emotional learning and growth, few universal intervention programs focus explicitly on interpretive abilities and moral cognition.

Aims: The current thesis has two aims. The first aim is to evaluate whether a limited class-based intervention may facilitate the desired development in pupils. The second aim is to explore the link between changes in moral and perceptual abilities and social competence.

Methods: In Paper 1, we assess the Social Perception Training (SPT) program and its ability to improve pupils' social competence by considering perceptual abilities and moral cognition in a whole-class setting. Paper 2 examines whether the How I Think Questionnaire (HIT-Q) is valid for measuring cognitive distortions in children and adolescents in a Norwegian context. In Paper 3, we propose a model for targeting social and mental structures among pupils when bullying has been stopped.

Results: The evaluation of the SPT intervention indicated an overall positive change. In particular, the pupils' level of cognitive distortion showed a decrease equivalent to a moderate effect size. The pupils also reported improved peer relations and improved perceived emotional support from the teacher. Although this was an intervention at school, the increased social skills and reduced problem behaviors carried over to the home setting, as evaluated by parents.

Findings regarding the validation of the HIT-Q for use in Norwegian settings suggest that the instrument is a valid and reliable instrument for use among typical children and adolescents with rather low levels of cognitive distortions. The preferred six-factor model demonstrated excellent fit, and the psychometric properties were acceptable. Additionally, a reduced version of the HIT-Q, the HIT-16-Q, demonstrated an acceptable fit to a unidimensional construct, cognitive distortions, indicating that the HIT-16-Q may be suitable for use in Norway. A comparison of the full and reduced scales indicated that the psychometric

properties were comparable, further indicating little or no loss of information by using the reduced scale.

In the third paper, we propose a model of relational rehabilitation that aims to improve the class community to help victims (and other parties involved) recover after bullying stops. This model outlines a four-step process: 1. ensuring teacher authority; 2. redistributing social power in the class; 3. building a supportive class community; and 4. providing social and emotional learning to the entire class.

Conclusion: The results of the present thesis are promising for enhancing pupils' social competence. The findings suggest that the SPT can foster social competence by targeting social perception and cognitive distortions, even in a relatively limited 10-week school-based intervention. The results suggest that perceptions of relations with peers and teachers were positively affected. Additionally, in classes perceived as well functioning by pupils and among pupils with low levels of cognitive distortions, the SPT indicated a positive effect. The findings suggest that SPT may be useful for individuals and for their class climate and may have a reciprocal influence by promoting positive qualities in the learning environment and among pupils and teachers. Such benefits may justify the use of pupil-based classroom interventions to promote pupils' well-being and their future development.

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Oppsummering

Bakgrunn: Sosial kompetanse er viktig for livskvalitet og sosial og personlig utvikling. Mangel på sosial kompetanse er blant annet relatert til mobbing i skolen og unge personers utfordringer med å kvalifisere seg til arbeids- og samfunnsliv. Senere års forskning har gitt kunnskap om faktorer som har betydning i det komplekse samspillet mellom individer og deres omgivelser. Dette samspillet påvirker atferd og relasjoner samt barn og unges utvikling. For eksempel er det et økende fokus på barns evne til sosial persepsjon og moralsk resonnering i forståelsen av atferdsmessige og sosiale problemer. Selv om skolen er sentral i sosialisering av barn og unge og byr på mange muligheter for utvikling og vekst av elevers sosiale kompetanse, tilbys det få universelle program med særlig fokus på perseptuelle ferdigheter og moralsk resonnering.

Formål: Avhandlingen har to formål. Det første er å evaluere om en kortvarig klassebasert intervensjon kan fremme utvikling av elevenes sosiale kompetanse. Det andre formålet er å undersøke forholdet mellom endring av moralsk resonnering, perseptuelle ferdigheter og sosial kompetanse.

Metoder: Den første delstudien evaluerer programmet Sosial Persepsjonstrening (SPT) som en klasseintervensjon og i hvilken grad programmet kan bidra til å utvikle elevenes sosiale kompetanse ved å fokusere på perseptuelle ferdigheter og moralsk resonnering. Den andre delstudien undersøker om spørreskjemaet How I Think (HIT) er valid for å måle kognitive forvrengninger hos barn og unge i norsk kontekst. Den tredje delstudien, som er en teoretisk utledning, skisserer en modell for hvordan sosiale og mentale strukturer kan endres i en klasse når mobbingen er stoppet.

Resultater: Evalueringen av SPT (delstudie 1) indikerte en generell positiv endring i elevenes sosiale kompetanse. Spesielt interessant er det at elevenes nivå av kognitive forvrengninger ble redusert tilsvarende moderat effektstørrelse. Elevene rapporterte også at kvaliteten på relasjoner til medelever og emosjonell støtte fra lærer ble styrket. Selv om dette var en skoleintervensjon, rapporterte også foreldrene om økning i sosiale ferdigheter og reduksjon i problematferd hjemme.

Den psykometriske undersøkelsen av HIT (delstudie 2) viste at spørreskjemaet er reliabelt og valid for bruk i norsk kontekst, også blant elever der forekomsten av kognitive forvrengninger er lav. Den foretrukne seksfaktor-modellen fungerte utmerket og de psykometriske egenskapene var akseptable. I tillegg ble også en forkortet versjon av HIT, HIT-16-Q,

evaluert. Resultatene indikerte at også denne versjonen er valid og reliabel for bruk i Norge. En sammenligning av den komplette og den forkortede versjonen, indikerte tilsvarende psykometriske egenskaper for de to versjonene og at lite informasjon går tapt ved å bruke den forkortede HIT-16-Q.

I den tredje delstudien foreslås en modell for relasjonell rehabilitering. Fordi kognitive forvrengninger både er en forutsetning for og resultat av mobbing, er det avgjørende at dette adresseres i arbeidet med å rehabilitere enkeltelever og klassemiljø etter at mobbing er stoppet. Relasjonell rehabilitering har til hensikt å styrke klassemiljøet slik at skadelidende elever får bedret relasjonene til medelever og med det får fremmet sine utviklingsmuligheter. Modellen består av fire steg: 1. Sikre lærers autoritet; 2. omfordele sosial makt i klassen; 3. skape et støttende klassemiljø, og 4. tilby trening i sosial kompetanse for hele klassen.

Konklusjon: Avhandlingen viser lovende resultater i forhold til å øke elevers sosiale kompetanse. Funnene viser at SPT kan fremme sosial kompetanse ved å trene på sosial persepsjon og moralsk resonnering, selv med et relativt begrenset 10-ukers klassebasert program. Elevene vurderte at de fikk bedre relasjon til både medelever og lærere. Også i klasser som elevene i utgangspunktet vurderte som velfungerende og blant elever med lav forekomst av kognitive forvrengninger, viste resultatene at SPT hadde signifikant positiv effekt. Det kan derfor konkluderes med at SPT er et virkningsfullt program både for enkeltelever og klassemiljø. Programmets kvaliteter synes også å samstemme godt med de behov enkeltelever og klassemiljø ofte har i oppfølgingsarbeidet etter at mobbing er stoppet og i arbeidet med å forebygge videre skadevirkninger. For å kunne evaluere effekt fra intervensjoner som SPT, viser resultatene at HIT-Q er et valid og reliabelt instrument i norsk kontekst.

List of papers

This PhD consist of the following papers:

Paper 1

Finne, J. & Svartdal, F. (2017). Social Perception Training (SPT): Improving social competence by reducing cognitive distortions. *International Journal of Emotional education 9*(2), pp 44-58.

Paper 2

Finne, J. & Svartdal, F. (in preparation). The How I Think (HIT) Questionnaire: Measuring cognitive distortions in children and adolescents.

Paper 3

Finne, J., Roland, E., & Svartdal, F. (submitted). Relational rehabilitation: Reducing harmful effects caused by bullying.

Contents

1.   Introduction

The focus on social competence in children and youths has increased in recent years. For example, a major concern today is the growing number of young people who do not qualify for work due to the increasing share of jobs that demand a high level of social competence (Berg & Thorbjørnsrud, 2009; Deming, 2017). Another example is the high number of pupils who suffer from bullying, harassment, and loneliness (Averdijk, Eisner, & Ribeaud, 2014; Myers & Cowie, 2013; Breivik, Bru, Idsøe, Idsøe, & Solberg, 2017). In both of these examples, social competence is suggested to be a key factor for both understanding and targeting the problems. Social competence is an individual capacity developed through interaction with others. Many difficulties in adult life can be predicted by behavior as early as kindergarten, as shown in a longitudinal study by Jones, Greenberg, and Crowley (2015). These authors show that small differences early in life can accumulate to become great differences later in life in both negative and positive directions. Hence, we need to understand how we can equip young people with qualities and abilities that increase their current and future chances of promoting health and social and emotional well-being.

School is an important arena for prevention and promotion measures. In addition to fostering academic growth, schools play an important role in promoting health and social and emotional well-being. There are three primary reasons for this. First, schools provide access to large groups of children and youths. Second, schools are an important institution for socialization. Third, pupils spend a considerable amount of time at school in an environment that is geared toward learning and thus offers many opportunities for pupils to learn and apply newly learned adaptive skills with peers and adults. Through social and emotional learning, pupils may expand their understanding of and ability to handle social and emotional aspects of their lives in ways that enable them to appropriately address challenges and problems (Elias, Zins, Graczyk, & Weissberg, 2003).

Recent decades have provided a vast amount of research on preventive measures targeting problem behavior among children and youths. Evidence-based knowledge indicates that universal intervention programs can reduce problem behavior and increase social, emotional, and academic competencies in pupils (e.g., Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Sklad, Diekstra, Ritter, Ben, & Gravenstein, 2012; Weare & Nind, 2011). A growing body of knowledge further suggests a focus on perceptual abilities and moral cognition to understand and address aggression, bullying and other undesirable behaviors (e.g., Arsenio & Lemerise, 2004; Bandura, 1986, 1991; Crick & Dodge, 1994;

Gibbs, Potter, & Goldstein, 1995; Hawley, 2003; Thornberg, 2015; van der Velden, Brugman, Boom, & Koops, 2010). Overall, programs that include a social cognitive approach containing elements of cognitive behavioral therapy (CBT) have demonstrated the value of promoting social competence in pupils (e.g., Durlak et al., 2011; Lösel & Beelmann, 2003; Rajabi, Bakhshani, Saravani, Khanjani, & Bagian, 2017).

Most social situations are multifaceted, and observable behavior reveals only a small amount of information about what matters because people are interested in perceiving and inferring mental states (Anderson & Bushman, 2002; Funder & Ozer, 1983; Ostrov & Godleski, 2010). Behavior alone does not elucidate moral motivations because intentions can be positive or negative. Hence, researchers often include different measures of judgments, social experience, interactions, and behavior. Recent research has increased our understanding of both the limitations and emerging competencies in young people's morality and the developmental processes that may underlie them. This includes the role of social perception and cognitive distortions in creating and sustaining maladjustment and behavioral problems (e.g., Bandura, 1991, Crick & Dodge, 1994; Thornberg & Jungert, 2013; van der Velden et al., 2010). However, few universal intervention programs focus explicitly on interpretive abilities and moral cognition. Hence, the current thesis has two main aims. The first aim is to evaluate whether a limited class-based intervention may facilitate the desired development in pupils. The second aim is to explore the link between changes in moral and perceptual abilities and social competence. Paper 1 assesses the Social Perception Training (SPT) program and its ability to improve pupils' social competence by addressing perceptual abilities and moral cognition in a whole-class setting. Paper 2 examines whether the How I Think Questionnaire (HIT-Q) is valid for measuring cognitive distortions in children and adolescents in a Norwegian context. Paper 3 proposes a model for targeting social and mental structures among pupils when bullying has been stopped. Taken together, these papers suggest that the improvement of moral and perceptual abilities through a class-based intervention may serve both promotive and preventive purposes and validate an instrument measuring the development of moral abilities for use in Norway.

The following first presents the basis of the theoretical accounts of social competence and related research and then addresses the specific research questions pursued in this thesis in depth, emphasizing moral cognition. The introductory section on social competence includes past research that is directly relevant to the present thesis and previous research on particular mechanisms related to moral cognition that challenge prosocial behavior and interventions targeting such mechanisms. This broad approach was chosen to clarify how the

papers in this thesis are connected and how they contribute to the broad research field of social competence and school interventions.

2.   Theoretical and conceptual framework

This section highlights essential topics that constitute the theoretical foundation of the thesis. Because of the multifaceted nature of social competence, several research areas, such as social cognitive theory, social information processing, aggression, and moral cognition, necessitated inclusion. These research areas are relevant to understanding the concept of social competence and how we may promote the development of such competence and prevent future harm when, for instance, abusive relationships in school damage developmental conditions. Of particular interest are the theories of Albert Bandura, which will guide the current discussion. These theories cover the essential perspectives of this thesis, including the interplay between the individual and the environment as well as moral cognition.

In the current papers, the theoretical foundation necessary to answer the research questions is outlined. However, to ensure the inclusion of relevant complementary research in this thesis, literature searches were conducted for publications within the fields of social competence, social perception, class-based/universal interventions, aggression, morality, moral disengagement/cognitive distortions, and bullying. Searches were performed in Oria, ERIC, PsycInfo, and Google Scholar and included publications combining two or more of the topic words. Relevant publications are incorporated as complementary perspectives in the text that follows.

2.1.   Social cognitive theory

An important theoretical basis of this thesis is social learning theory and social cognitive theory (SCT) (Bandura, 1977a, 1986), which suggest that behavior evolves from an interaction between the individual and the social environment. Psychology provides many different approaches to the understanding and study of human social behavior, such as personality, development, learning, cognition, and social approach, all of which make important contributions to the understanding of social behavior and social competence. Importantly, many of these approaches are integrated into SCT. Personality is a system of dynamically interacting social cognitive and affective processes, as Mischel and Soda (1998) have emphasized. These personality variables have social foundations; that is, they develop

through experiences with the socio-cultural environment. Thus, they are labeled social cognitive (Cervone, Shadel, & Jencius, 2001).

SCT explains how individuals learn in social environments by observing the behavior of others and posits that human thought processes are central to understanding social behavior. This theory is based upon social learning and the behavioral approach to human action; however, it is more comprehensive because of its emphasis on the cognitive mediation of both environmental influence and social behavior (Bandura, 1986; 2001). For example, SCT includes motivational and self-regulatory mechanisms, which extend beyond learning and modifying behavior by reinforcing consequences. Moreover, in SCT, learning is viewed as knowledge acquisition through the cognitive processing of information. In other words, in SCT, the "social" part acknowledges the environmental origins of much of human thought and action, whereas the "cognitive" portion recognizes the influential contribution of cognitive processes to human motivation and action. Hence, this action-oriented, problem-solving approach appeals to professionals in applied settings.

2.1.1. Reciprocal determinism

An important precursor of SCT is the person-situation field theory introduced by Kurt Lewin (1951). Lewin emphasized the importance of the social environment as perceived by the individual and suggested that two pairs of factors determine behavior. The first pair is the person and the situation, and the second pair is cognition and motivation. Neither pair alone is sufficient to predict behavior. He summarized this in the following equation: $B = f(P, E)$, in which behavior (B) is a function of the person (P) and the environment (E). The relative magnitude of P and E and the relation between them have been discussed extensively (e.g., Funder & Ozer, 1983). For example, Mischel (1968) concluded that personality traits accounted for only a limited amount of behavioral variance.

Taking the interactionist approach one step further, SCT (Bandura, 1986) holds that triadic reciprocal causation, consisting of behavior, cognition (and other personal factors), and environmental influences all operate as interacting determinants of one another. This means that none of the three components can be understood in isolation as a single determinant of behavior. Although the study of reciprocal influence processes is a defining part of SCT, it is not unique. Indeed, Lewontin (2000) has compellingly argued that reciprocal transactions between organisms and the environment are a basic feature of biological life.

The triangular influences among the person, environment, and behavior do not

necessarily imply symmetry in the strength of the bidirectional influences. For example, although all three factors may be present at a particular time in a particular school class, this does not mean that they all exert an equal and simultaneous influence on the pupils. This implies that the strength of mutual influences between any of the three factors is not fixed in reciprocal causation. Thus, it is critically important to recognize that the relative influences of one, two, or three interacting factors on motivated behavior will vary for different activities, different individuals, and different circumstances. Bandura (1986) provides the following simple yet illustrative example:

> If people are dropped into deep water, they will all promptly swim however uniquely varied they might be in their cognitive or behavioral repertoires... On the other hand, if a person plays piano for his/her own enjoyment, such behavior is self-regulated over a long period of time by its sensory effects, and cognitive and environmental influences are involved in this process by a lesser extent... Finally, in deciding what book to check from the library, personal preferences hold the sway (p. 24).

Bandura (1986, p. 24) summarizes this three-way interaction as follows:
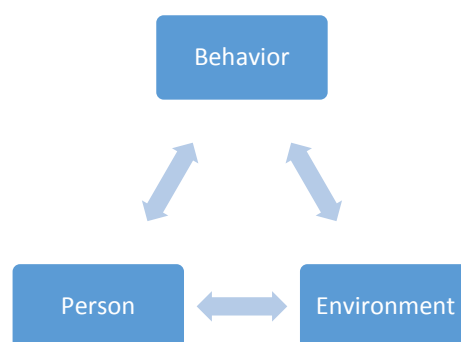
Fig. 1. Reciprocal determinism, Bandura, 1986

Thus, people can influence the environment by acting in certain ways, and the changed environment in turn influences people's subsequent behavior. SCT emphasizes the importance of cognition as a mediator of social interaction in general and as an element of personality.

2.1.2. Self-regulation

The human self-regulatory capability plays a central role in SCT, as it does in other prominent theories of self-regulation and motivation (Baumeister, Vohs, & Tice, 2007; Hollenbeck, Williams, & Klein, 1989; Locke & Latham, 2002). This includes the cognitive

evaluation (construal) of events that occur in the pupil's environment, the interpretation of these events, and how competent the pupil feels in responding in different ways (Lazarus, 1991). Human behavior is extensively motivated and regulated by the ongoing exercise of self-influence through three principal sub-functions (Bandura, 1991).

The first self-regulatory capability is *self-monitoring*, which includes a judgment of one's behavior in relation to personal standards and environmental circumstances. Much of young people's behavior is initiated and regulated by internal self-set standards and self-evaluative reactions to exerted behaviors. After personal standards have been set, the incongruity between a behavior and the standard against which it is measured activates self-evaluative reactions, which in turn serve to influence subsequent action. Even if there is no incongruity between self-standards and present performance, according to SCT, people may set higher standards for themselves and activate future behaviors to satisfy the new standards (Bandura, 1997).

Self-regulation also encompasses a *self-efficacy* mechanism (Bandura, 1977b, 1997), which plays a central role in SCT. Self-efficacy is the belief in one's capabilities to successfully organize and execute a particular action that is necessary to produce desired results. In concert with socio-cognitive determinants, self-efficacy influences human motivation, adaptation, and change. This domain-specific mechanism exerts its influence through cognitive, motivational, affective, and selection processes and is crucial for individual agency and power to act. A pupil with a strong sense of self-efficacy is motivated to perform and believes in his or her ability to overcome challenges (Bandura, 1997). For instance, helping a peer in distress, such as a victim of bullying, is risky; without a strong belief in one's ability to successfully intervene, the intervention will be inhibited (Thornberg & Jungert, 2013). The same self-regulative system is involved in *moral conduct*, which is thoroughly discussed below. Compared to the achievement domain, in the moral domain, the evaluative standards are more stable, the judgmental factors are more varied and complex, and the affective self-reactions are more intense (Bandura, 1991). Importantly, recent research has shown how moral conduct is moderated by self-efficacy (Pöyhönen, Juvonen, & Salmivalli, 2012; Thornberg & Jungert, 2013). Hence, a pupil may support a peer in a precarious situation if he or she is both morally engaged and possesses a high level of self-efficacy.

2.2.   Social information processing (SIP) model

In an attempt to explain and evaluate the social adjustment of young people, numerous studies have established the value of social information processing (SIP) models (see Crick &

Dodge, 1994, for a review). The SIP model (Crick & Dodge, 1994) is an important element in theoretical accounts of the understanding and development of social behavior. However, contributions to the model are introduced as new variables that may be important to SIP, such as moral (Arsenio & Lemerise, 2004) and emotional activation (Lemerise & Arsenio, 2000; Orobio de Castro, Merk, Koops, Veerman, & Bosch, 2005). Researchers claim that all steps in the process are affected by moral and emotions. The model is especially relevant for describing the nature of online SIP steps that affect children's application of domain-related knowledge during their real-time social interactions (Arsenio & Lemerise, 2004). The application of this model in several domains has aimed to explain the thinking of aggressive children (Crick & Dodge, 1996), rejected children (Crick & Ladd, 1993), and bullies and victims (Camodeca & Goossens, 2005) because there is a vital connection between children's social cognition and their behavior (Dodge, 2006). Importantly, Nelson and Crick (1999) demonstrated that the SIP model has predictive power not only for negative and aversive behavior but also for socially competent behavior. The findings of this study revealed that prosocial young adolescents employ specific social cognitive patterns that are likely to support their prosocial nature.

The six-step model proposes that to respond appropriately to social situations, social information must be processed in the following order: 1) encoding internal and external cues, 2) interpretation of cues, 3) goal selection, 4) response access or construction, 5) response decision, and 6) behavioral enactment.
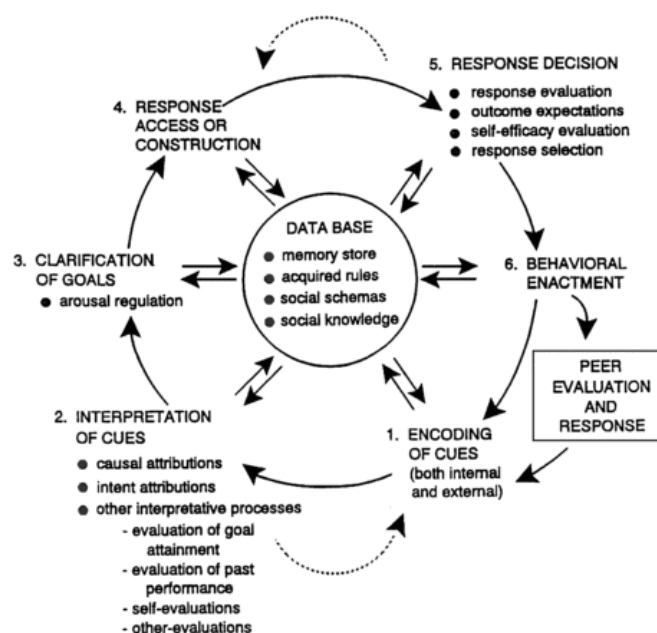

Fig. 2. Social information processing (SIP) model (Crick & Dodge, 1994). Printed with permission from the authors.

In the first two steps, children encode and interpret social cues; that is, children attempt to understand what occurred in this particular situation and why. In the third step, guided by the understanding (or misunderstanding) of the initial situation as well as previous experiences stored in long-term memory, children must clarify and select goals for the situation. Then, in the fourth and fifth steps, children generate possible responses to the situation and evaluate them in terms of their own self-efficacy for performing the response and the likely social, relational, instrumental, and other consequences of the response. Finally, in the last step, children apply the selected response. It is assumed that these steps occur very rapidly in real time, often at a non-conscious level, and they occur repeatedly during social transactions. Each step in this process interacts with the individual's *database* containing memories from prior experiences, scripts, working models, and social schemas in a bidirectional manner (Crick & Dodge, 1994). Past experiences and knowledge constitute latent mental structures and are stored in long-term memory. Research on social perception suggests that hostile attributional biases are products of well-developed schemas. For instance, aggressive behavior is linked to hostile world schemas (e.g., Dodge & Coie, 1987). Furthermore, a child's tendency to emphasize relational versus instrumental goals is influenced by the working model of the child's peers (Dodge & Rabiner, 2004). Decisions to engage in certain behaviors depend on how a child expects a particular response to affect future relationships with a peer; consequently, judgment is influenced by the child's working model of relationships. Hence, the SIP framework implies that children are active agents in their context (Bandura 1986; Crick & Dodge, 1994). Additionally, two criteria are hypothesized to be important when children evaluate responses before enactment: their own self-efficacy and whether they expect the response to lead to the desired outcome (Bandura, 1997; Camodeca & Goosens, 2008; Crick & Dodge, 1994). The child's behavior in a particular social situation is therefore hypothesized to occur as a function of the way the child processes social information in that situation.

The following example may illustrate the way the SIP model may be applied to an incident of aggression in school. Imagine that a pupil, John, who has a strong social position in his peer group, is aroused because he likes a girl but is uncertain about how she feels about him (*setting event or background variable*). During a break, the girl approaches him when he is hanging out with his peers at school, and he smiles at her. Simultaneously, one of the peers says that the girl likes his friend sitting next to him (*a potential social conflict situation*). He

immediately becomes aware of negative arousal[1] (*encoding of cues*) and notes that the girl is smiling at his friend and not at him as she passes them (*encoding cues*). John feels overlooked (*interpretation of cues*), views the event as disrespectful and thus threatening to his social status (*interpretation of cues*), and feels he needs to respond to maintain his position among his peers and improve his chances with the girl (*clarification of goals*). As he decides what to do, John recalls an event in which respect was maintained by answering a hostile provocation with an aggressive response (*response generation*). Because he has observed, experienced, and thought about this script many times, he recalls it quickly and automatically, and no alternatives come to mind (*response generation*). In the activated script, the aggressive response results in the infliction of harm on the provocateur and the maintenance of respect (*response generation).* Because the pupil believes it is acceptable to put someone down, especially when he is angry and provoked (*moral script*) and has successfully done so in the past (*social schema*), John chooses to tell a story about his friend attacking his reputation (*behavior enactment*). He is pleased because the others laugh, his friend leaves in shame after receiving awful comments, and he feels his position is maintained *(peer evaluation and response*).

Socio-cognitive abilities such as perspective-taking (Selman, 1980) and moral reasoning (Tisak, 1995) are gradually acquired and enhanced over time. Therefore, the SIP model represents not only a process model with regard to specific situations but also the way SIP abilities can influence and are important for social competence over time (Orobio de Castro et al., 2005). For example, cue interpretation requires a child to possess the prerequisite abilities of emotional awareness and understanding (necessary for labeling arousal and recognizing its antecedents) and perspective taking (necessary for comprehending the intentions of others). Hence, these abilities are crucial for the social adjustment necessary to behave in socially competent ways.

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[1] When people are aroused, they explain their arousal differently depending on previous experience, socialization, and context (Schachter & Singer, 1962). *Schachter's two-component* theory posits that diffuse psychological arousal catalyzes cognitive interpretation; some emotions are mediated by cognitive activity. That is, arousal may arise for one reason and then receive a different label, thereby producing a different reaction. Mandler's (1975) *Arousal-plus-mind theory* resembles this theory but locates the origin of arousal in the discrepancy or interruption. Arousal sets off cognitive interpretation depending on the type of expectation and its interpretation. Cognitive interpretation shapes not only the quality of one's immediate affect but also one's lasting mental representation of the event (Baumeister & Bushman, 2011).

2.3.   Social competence

Despite its usefulness in many contexts, the concept of social competence has proven difficult to define, and the array of traits and skills associated with the concept is both extensive and difficult to schematize (Waters & Sroufe, 1983). The term "social competence" can be understood in many ways, and different definitions reflect varying perspectives on this phenomenon. Significant definitions include "[the] effective response of the individual to specific life situations" (Goldfried & d'Zurilla, 1969, p. 158), "a judgment by another that an individual has behaved effectively (McFall, 1982, p. 1), and Waters and Sroufe's definition (1983, p. 81), "The competent individual is the one who is able to make use of environmental and personal resources to achieve a good developmental outcome". These definitions vary widely and emphasize different aspects. It may be difficult to create a single appropriate definition that covers all perspectives that could be included in the understanding of this construct.

In 1973, a panel of child development experts met to explore the construct of "social competence" with the intention of establishing an operational definition of this previously amorphous concept (Anderson & Messick, 1974). The panel suggested 29 facets of social competence that could serve as goals in early intervention programs; however, some facets were omitted. These suggestions are largely value-laden and represent behaviors that are socially appealing or virtuous, referred to by Anderson and Messick (1974) as "Boy Scout" or "Sunday School" approaches. Many problems regarding the general validity of the different facets are included in the construct. First, normative expectations of children's behavior are age dependent. Second, it may be difficult to distinguish among behaviors that are prized by many segments of society across a large number of situations and behaviors that are not necessarily universally admired or are differentially appropriate to different situations. This implies that behavior, for example, can be prized by many, but only in certain situations or can be adaptive in many situations but not widely valued. Third, the appreciation of a given behavior is dependent on how a person adjusts it to the specific situation and context. Some aspects of behavior should vary, for instance, in intensity, frequency, or persistence in different situations. Almost every type of behavior may be considered incompetent or competent given the situation and the social context. Hence, it is valuable to conceive of social behavior as occurring on many continua (Anderson & Huesmann, 2003; Gundersen, 2014). Appropriate behavior in a given situation will often be in the middle of the continuum rather than at the extremes. Hence, social competence can be viewed as an evaluative ability required to judge the appropriateness and need for specific social skills in specific contexts

and situations.

The extent to which behavior can be considered competent might largely depend on how this behavior is received in one's social context, and one's competence may be measured by one's social success. Elliott, Busse, and Gresham (1993) summarize this concept with the following definition: "Social competence is seen as the general capacity to integrate cognition, affect, and behavior in order to succeed with specific social tasks and to achieve positive developmental outcomes". The cognitive dimension includes children's interpretation of social cues, problem solving, and goal selection. The behavior dimension includes actions or social skills evaluated as positive or appropriate for achieving social goals. Finally, the emotional dimension is linked to one's values, attitudes, and motivation to be socially competent. Thus, there has been an increasing focus on how emotions affect both cognitive processes and behavior (e.g., Anderson & Huesmann, 2003; Lemerise & Arsenio, 2000; Thornberg & Jungert, 2013).

Goal-oriented approaches to understanding social competence suggest that one is socially competent to the degree that one successfully balances one's own goals and those of others. According to these approaches, subordination is undesirable, but dominance is inappropriate (Stump, Ratcliff, Wu, & Hawley, 2009). On this continuum, two aspects of social competence can be distinguished: prosocial and antisocial behavior (Junttila, Voeten, Kaukiainen, & Vauras, 2006). Prosocial behavior refers to socially desirable actions, such as helping, sharing, and comforting; these are behaviors society attempts to encourage in children during socialization. Manifestations of prosocial behavior, such as cooperating and participating in group activities, lead to acceptance by peers (Caprara et al., 2000; Coie, Dodge, & Kupersmidt, 1990) and promote learning processes (Durlak et al., 2011; Rubin, Bukowski, & Parker, 1998). Prosocial abilities, like aggression, has been evolutionarily important, and the natural patterns of helping and showing concern for others' welfare (particularly those that favor family and other kin) are part of human nature (Baumeister & Bushman, 2011; Silk & House, 2011). The other dimension of social competence is the absence of anti-social behavior, particularly the inhibition of impulsive, disruptive, and abusive behavior. Antisocial behavior has negative social outcomes that can be either intentional or unintentional and can be directed towards others or oneself (Anderson & Bushman, 2002; Bukowski, 2003). Hence, both promoting prosocial behavior and preventing antisocial behavior among students are of interest as separate or simultaneous efforts. In the following, aggression and moral disengagement are discussed as factors in antisocial behavior.

2.3.1. Social competence and aggression

Aggression is multiple determined, and a number of risk factors for the development of aggressive behavior have been identified (Anderson & Bushman, 2002). Eron (1994) traced the development of theories of aggression from frustration/drive models (e.g., Dollard, Doob, Miller, Mowrer, & Sears, 1939) to social learning models (e.g., Bandura, 1973) to the current social cognitive approaches (e.g., Bandura, 1986; Berkowitz, 1993). Although aggression is universal and biologically important, one may discuss the role of social learning in increasing or decreasing it (e.g., Berkowitz, 1993). Aggression is innate and natural, but people learn how to control their aggressive impulses. That is, during socialization, people learn to bring those natural impulses under control and follow the rules (Anderson & Huesmann, 2003; Bandura, 1973; Baumeister & Bushman, 2011).

Aggression is commonly defined as acts intended to hurt a target (e.g., Bandura, 1983; Coie & Dodge, 1998). This definition includes three important features (Baumeister & Bushman, 2011). First, aggression is a behavior and not an emotion or thought. Second, aggression is intentional (not accidental), and the intent is to harm. Third, the definition stipulates that the victim wants to avoid harm. We may distinguish among various forms of aggression in that both physical and verbal aggression can be expressed directly or indirectly. It is also common to distinguish between two different functions of aggression: reactive and proactive aggression (Anderson & Bushman, 2002).

Reactive aggression is seen as "hot-blooded", affective, impulsive, defensive, and retaliatory. Typically, this type of aggression is triggered by frustrations, provocations or threats that lead to anger, often accompanied by fear and high physiological arousal. For instance, there is a strong connection between anger problems in general and faulty attributions of the intent of others in the situation (e.g., Crick & Dodge, 1994; Dodge, 2006), suggesting a connection between the social cognitive model and social information processing. For instance, hostile cue interpretations can become an automatic cognitive process (Todorov & Bargh, 2002). Hostile attribution of intent, therefore, is an example of a "working model" of the world that is believed to be shaped by experience and to influence current social functioning (Dishion, French, & Patterson, 1995, Dodge & Rubiner, 2004). Evidence also suggests that individuals with higher levels of overall aggression generally misidentify emotions from facial expressions (McCown, Johnson, & Austin, 1986); more specifically, they inaccurately identify anger (Hall, 2006).

Proactive aggression is "cold-blooded" and is associated with a low level of physiological arousal and callous emotional traits. This type of aggression is calculated and

offensive and involves a goal-directed and purposeful attack or threat of attack against an individual. It does not require anger or provocation; rather, it is planned with a goal in mind, implying that the behavior is instrumental (Anderson & Bushman, 2002). Theoretically, proactive aggression has been explained in terms of social learning theory (Bandura, 1977a) and serves the purposes of obtaining a desired goal.

The association between aggression and social competence seems to depend in part on the reason underlying an aggressive act. Reactive aggressive children show more maladjustment than children who are aggressive for instrumental reasons (Bukowski, 2003). However, we cannot understand the social psychology of aggressive behavior without placing it in a developmental context of differing social cognitive processes at different ages (Coie & Dodge, 1998). According to Björkqvist, Österman, and Kaukiainen (1992), young children's aggression is predominantly physical. When verbal skills emerge, these skills may be used for peaceful interaction as well as for aggressive purposes. Further, efficient indirect aggression requires social intelligence, which makes it possible to hurt others by social manipulation (Kaukiainen et al., 1999). This form is also called relational aggression, and it seems to be more consistent with relational goals and social interactions than with physical dominance (Crick & Grotpeter, 1995).

Aggression is often equated with antisocial behavior (Anderson & Huesmann, 2003; Baumeister & Bushman, 2011; Crick & Dodge, 1996). Others have noted, however, that aggression is often both a social and an antisocial strategy in that people use it in an attempt to manage their social lives, such as by influencing the behavior of others to get their way (Bukowski, 2003; Tedeschi & Felson, 1994). Smith (2007) notes that although aggressive behavior may be socially undesirable, we should not necessarily confuse it with "socially incompetent" or "maladaptive" behavior. For instance, bullies may not have processing deficits; rather, they may be indifferent to the harm they cause to others and willing to manipulate others for their own gain (Sutton & Keogh, 2001). Menesini and colleges (Menesini, Sanchez, Fonzi, Ortea, Costabile, & Lo Feudo, 2003) proposed that the proactive aggressive acts of bullies are tied to their moral understanding of the consequences of behavior rather than reflecting deficits in social skills. Arsenio and his colleagues (Arsenio, Adams, & Gold, 2009) demonstrated that reactive aggression reflects social cognitive deficits, such as failing to read social cues and over-attributing hostile intentions. This is in contrast to proactive aggression, which reflects intentions to victimize and harass others. This distinction is important because the researchers showed that lower moral concerns (but higher verbal abilities) were associated with proactive but not reactive aggression. Further, this line of

research reveals connections between children's moral, emotional attribution, and aggressive behaviors and highlights the need for specificity (e.g., distinguishing between different types of aggression) in making connections between moral judgment and behavior.

Our perception of the world reflects an interplay between what is out there and what we bring to it. The social cognitive approach suggests that there are individual differences in knowledge structures that influence perceptions of intent, the construal of appropriate ways of responding, and decisions regarding likely outcomes. Thus, most of what a person brings into social interactions is cognition. Social cognitive models center on how SIP factors mediate and thus maintain different kinds of behavior over time. Therefore, they are suitable for understanding several significant facets of social behavior, such as socially competent (e.g., prosocial) behavior. Accordingly, antisocial and abusive behavior has been associated with deviant social information processing (Crick & Dodge, 1994) and social cognitive processes that activate moral disengagement (Bandura, 1991), as will be outlined in the following section. To understand the finer points of moral disengagement, the role of self-serving cognitive distortions (Gibbs, Potter, & Goldstein, 1995) is important. These powerful types of distorted thinking (i.e., hedonistic, self-centered, morally judgmental) are often socially supported and reinforced by the peer group (Gini, Pozzoli, & Hymel, 2014; Salmivalli, 2010).

2.4. Moral cognition

Knowledge and studies of moral reasoning would be of limited interest if people's moral thoughts and standards did not affect their behavior. However, the relationship between thought and action seems to be mediated through the exercise of moral agency (Bandura, 1986), leading us to examine how moral reasoning is connected to social information processing and subsequent behavior. As with the development of cognition and aggression, moral development is multiple determined; many processes shape children in becoming morally competent adults. Moral cognition, emotion, and behavior all interact and are woven together as children develop (Killen & Smetana, 2013). One important tenet of social cognitive theories is the idea that people's experiences throughout their lives lead them to memorize certain knowledge structures ("schemas" or "scripts," Huesmann, 1988; "database," Crick & Dodge, 1994) that affect their behavior in everyday situations. Such structures guide moral behaviors through self-regulatory psychological processes. Arsenio and Lemerise (2004) integrated the SIP model into domain theory, which assesses how people's socio-moral knowledge is organized into separable domains (e.g., moral, social

conventional, personal). Both theories begin with the premise that children's understanding of social situations has a strong influence on their subsequent behavior. According to social domain theory (Nucci, 2001; Turiel, 2008), children and adolescents develop and construct their social knowledge in different domains through their social experiences. Morality (individuals' concepts of justice, welfare, and rights) is seen as a distinct system or an organized domain of social knowledge that develops separately from concepts of social conventions and personal issues; these concepts are constructed from children's differentiated social interactions and social experiences (Smetana, 1995). These moral domain structures are developed in long-term memory through repeated experiences of social interactions that share the core features of "actions that cause others harm". If activated, these latent mental structures influence how children perceive, evaluate, and behave in various social situations (Arsenio & Lemerise, 2004).

Despite varying interpretations, most developmental scientists agree that morality refers to individuals' treatment of others, not (just) the self, and reflects individuals' intentions and motivations of action. The developmental course of morality is an evolutionary one regarding the adaptive mechanisms involved in moral development in humans. The assertion is that the emergence of cooperation requires specific mechanisms that balance self-interest with concern and respect for others (Killen & Smetana, 2013). Morals are considered rules that are independent of culture; that is, they are obligatory, universal, unalterable, and impersonal (see, e.g., Turiel, 1983; Smetana, 1995). However, Miller (2006) provides a review of the cultural variability of moral priorities. He argues that rather than variability in what individuals consider moral (justice, fairness, rights), there is cultural variability in the priority given to moral considerations (e.g., the importance of prosocial helping). Moral rules are considered in contrast to other types of social rules, such as conventions used to regulate social interactions within a group, which are determined by agreement, consensus, or institutional expectations. Thus, moral rules are not defined by cultural norms but are evaluated in terms of independent principles of justice, fairness, and rights (Nucci, 2001).

The core features of moral cognition are centered on considerations of the effects of actions on the well-being of others. A large amount of research has shown that children acquire morality through a social cognitive process; children make connections between acts and consequences (e.g., Bandura, 1991). Like performance standards, one's moral code develops through interactions with others (i.e., models). Usually, parents model the moral rules and regulations that are ultimately internalized by the child. Moral identity is seen as the core of morality and is tied to judgements of personal responsibility and integrity or the

realization that consistency (between judgment and action) is at stake in moral action (Killen & Smetana, 2013). Once internalized, one's moral code determines which behaviors (or thoughts) are sanctioned and which are not. Through a gradual process, children develop concepts of justice, fairness, and equality, and they apply these concepts to concrete, everyday situations (Nucci, 2001; Turiel, 2008). From this perspective, morality is developed through social interactions (with peers and adults) and is not imposed on individuals from outside. With age, children gradually develop the capacity for moral reasoning and acquire standards of moral conduct that help them to distinguish right from wrong and guide their behavior. Without such standards, negative behavior is more likely to occur.

2.4.1. Social cognitive theory of moral agency

Research on morality has devoted considerable attention to processes that explain the association between moral cognitions and actual behavior. In opposition to stage theories (e.g., Kohlberg, 1974; Piaget, 1932) and trait theories (e.g., Allport, 1937), Bandura's (1991) social cognitive theory of moral agency posits that human behavior is determined more by the situation and by one's interpretation of that situation than by the stage of development or by traits. This theory posits that an individual's ability to reason morally can be used to support or condemn transgressive conduct, which is regulated by two major sources of sanctions: social sanctions and internalized self-sanctions. Bandura (1991, 2002) argued that although moral reasoning and moral standards can serve as guides for moral conduct, behavior regulation involves more than just moral reasoning. Morality and moral reasoning are linked to behavior via several self-regulatory mechanisms that ultimately determine the willingness to engage in moral and immoral behavior and that selectively activate or disengage internal controls across situations, allowing for both positive and negative behavioral responses within the same set of moral standards. In general, individuals engage in moral behavior that gives them a positive sense of self-worth and avoid behaviors that violate their moral standards and lead to self-condemnation, guilt, and/or shame.

However, "good people can do bad things". To understand the possible gap between moral evaluations and actual behaviors, Bandura (1991) proposed his theory of moral disengagement. As outlined in his social cognitive theory of moral agency, Bandura (1991, 2002) describes moral disengagement as the social cognitive process through which the average person can commit horrible acts against others. In support of this theory, Bandura (1999; Bandura, Caprara, Barbanelli, Pastorelli, & Regalia, 2001) reviewed a large body of

social psychological research demonstrating the "disinhibitory power of moral disengagement" (Bandura et al., 2001, p. 126). A substantial body of evidence regarding the disinhibitory power of moral disengagement is shown in the perpetration of large-scale inhumanities (Bandura, 1990; Kelman & Hamilton, 1989) and in laboratory studies (Milgram, 1963; Zimbardo, 1969). More recently, a meta-analysis of 27 studies (Gini et al., 2014) found that overall moral disengagement was significantly related ($r = .28$) to aggressive behavior and bullying. In their study, Hymel, Rocke Henderson, and Bonanno (2005) found that moral disengagement accounted for 38% of the variance in reported bullying behavior.

2.4.2. Cognitive distortions

Bandura (1991) claimed that cognitive distortions are important in moral disengagement and argued that cognitive distortions may facilitate and maintain self-serving or deviant behaviors. Gibbs and colleagues (1995) distinguished between primary and secondary self-serving cognitive distortions in a four-category typological model, as supported in Paper 2. Primary distortions form bias stemming from self-centered attitudes, thoughts, and beliefs. *Self-centered distortions* are defined as attitudes in which individuals focus on their own opinions, needs, and rights to such an extent that the opinions and needs of others are never or minimally considered or respected. Such primary distortions may be the basic problem of individuals who exhibit irresponsible or antisocial behavior. Secondary cognitive distortions are pre- or post-transgression rationalizations that serve to neutralize conscience and guilt and thereby protect the individual's self-image when engaging in or witnessing antisocial behavior. Secondary distortions include blaming others, minimization/mislabeling, and assuming the worst. *Blaming others* implies misattributing blame to outside sources, especially another person or group, or a momentary aberration. *Minimizing/mislabeling* interprets antisocial behavior as harmless, acceptable, or even admirable by using deprecating or dehumanizing labels when speaking of others. *Assuming the worst* involves unwarrantedly attributing hostile intentions to others, seeing worst-case scenarios as inevitable in a range of social situations, or assuming that improving one's own or another's behavior is impossible. Secondary distortions reduce the stress of one's harm to others. Such empathic distress occurs because of cognitive dissonance between harmful actions and one's self-definition as a person who does not unjustifiably harm others (Bandura, 1991; Gibbs et al., 1995). For instance, when a pupil observes a peer suffering and does not offer help or support, the pupil needs to explain why this inaction is not a threat to his or her

self-definition as a caring person and a good friend.

Barriga, Hawkins, and Camelia (2008) suggest that cognitive distortions facilitate both internalizing and externalizing behavior, but they do so differentially. The cognitive distortions of internalizing individuals inaccurately debase the self in direct or indirect ways and may contribute to self-harm (Bornstein, Hahn, & Haynes, 2010; Quiggle, Garber, Panak, & Dodge, 1992), whereas the cognitive distortions of externalizing individuals have been described mainly as biased processing tendencies, such as attributing hostile intent to others (Crick & Dodge, 1994). Unlike their pro-social peers, children with behavioral problems focus more on negative elements in ambiguous situations while largely ignoring the emotional expressions, intentions or content of the other person's action. For example, they may view a compliment as an attempt to manipulate, may interpret offers of help as an attempt to demean them, and may consider a gift a bribe.

The interpretation of cues may also involve causal inferences (e.g., attributions of the intent of others). Hence, children often do not respond aggressively to consequences but to their perceptions of the intent of other people (Arsenio & Lemerise, 2004). Although bullies and victims behave differently due to differences in their reputation, values, and self-confidence, their social perception is more similar than usually believed in that they activate the same cognitive distortions when explaining the bullying (Camodeca & Goosens, 2005). However, Barriga and colleges (2008) state that bullies and victims mirror one another in their attribution of blame (blaming others versus personalizing) and appraisals of the impact they assign to their negative behaviors (minimizing versus catastrophizing).

The line of theorizing within the externalizing or antisocial domain has developed independently of theories that incorporate the concept of distorted thinking into internalizing phenomena such as depression and anxiety (Barriga et al., 2008). Beck (1963) proposed a model of dysfunctional automatic thoughts that reflected the underlying distorted belief system regarding the self, world, and future. Aligned with this, Abrahamson, Seligman, and Teasdale (1978) introduced the theory of learned helplessness, positing that a negative explanatory style consisting of internal, global, and stable attributions contribute to depressed mood states and related behaviors. The cognitive behavioral approach emphasizes a person's thinking as the prime determinant of emotional and behavioral responses to life events (Beck, 1976). According to Beck, information processing (or meaning construction) is central to cognitive models because it influences all emotional and behavioral experiences (Clark & Beck, 1999). For instance, the extent to which individuals pay attention to their past successes or failures and to signs of success or failure in the current situation matters. Hence, it is

difficult to maintain hope and optimism if one is plagued by self-doubt about one's ability to influence events and is convinced of the futility of making an effort.

2.4.3. Bullying

The theme of the third paper in the current thesis concerns bullying and relational rehabilitation when bullying has been stopped. Bullying is of particular interest in the context of the current thesis for several reasons. First, such behavior is common and occurs in most, if not all, school classes (Smith & Brain, 2000). Second, the prevalence and maintenance of such abusive behavior is related to the composition of prosocial and antisocial thoughts and behaviors in communities where abusive relational practice occurs. Third, this type of relational practice causes a great deal of harm to those involved because of mechanisms outlined in the theories discussed in this thesis (Averdijk et al., 2014; Breivik et al., 2017; Myers & Cowie, 2013). Social cognitive theories have been widely applied to the study of aggressive behavior in youths, including peer bullying. This framework suggests that individuals' cognitions and emotions about behavior or social situations play a central role in their aggressive acts (Anderson & Bushman, 2002; Bandura, 1986; Crick & Dodge, 1994). Further, these cognitions and emotions play a role when pupils determine their position as bystanders (i.e., when they witness bullying episodes and must decide whether to support the bully, defend the victim or do nothing) (Gini, Pozzoli, & Bussey, 2015; Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996; Thornberg & Jungert, 2013). Finally, cognitive distortions seem to be a central issue for all parties involved. The problems of both those who cause harm and those who are victimized are rooted in distorted thinking and may lead to the development and maintenance of undesirable patterns (Barriga et al., 2008; Camodeca & Goosens, 2005; Myers & Cowie, 2013). This understanding is important when providing efforts to prevent and terminate bullying and to help those involved recover from the effects of this relational practice.

Peter Paul Heinemann is often credited as the first to develop a theory of bullying in the late 1960s. He first described bullying [mobbing] in an article (Heinemann, 1969) and then in the book "Bullying: group violence among children and adults" based on observations in Swedish schoolyards (Heinemann, 1972). He argued that bullies are not deviant children per se but are ordinary children who partake in bullying in particular situations. Heinemann claimed that bullying represents a group's collective aggressiveness toward an individual or group of individuals who provoke or attract this aggressiveness. Thus, bullying was

understood as reactive aggression. Dan Olweus (1978) drew on Heinemann's theorizing but sought to distinguish between the various roles of those involved. He wanted to highlight the individuals who take the initiative and those who are largely responsible for the situations arising in the first place. Whereas Heinemann was interested in understanding how particular situations made bullying more likely to occur, Olweus shifted the focus and placed more emphasis on the behavioral characteristics of those involved (Roland, 1993). Today, most researchers hold that both Heinemann and Olweus were partly wrong. Bullying is now understood as a proactive type of aggression rather than a reactive one, and individual characteristics play a less important role than previously suggested. This viewpoint implies that a pupil is not just aggressive, passive or provocative but rather must navigate a range of power relations. The nature of this navigation may have profound implications for the extent to which the individual is involved in bullying. Therefore, in recent years, greater emphasis has been placed on group processes, the intentions that motivate bullying, and the relational implications of this phenomenon.

Bullying is considered a social psychological phenomenon and can be defined as a process in which a child in a less powerful position is repeatedly harassed or excluded by others (Roland, 2014; Salmivalli, 2010). This is a group process involving inclusion and exclusion. Pupils use these processes as strategies and tools to achieve their social goals by creating boundaries within the class. Prototypical bullies create a strong group of "us", ensuring the "spirit of the group" with fear and constructing a deviant victim (Hamarus & Kaikkonen, 2008). The bystanders' reluctance to intervene may be due to their understanding of the risks that ensue if they offer protection to victims and the pressure that they feel to conform to group norms. At the cost of "them", the advantage of "us" is justified by the perpetrators and bystanders through moral disengagement (Bandura, 1991; Gibbs et al., 1995; Gini et al., 2014). According to SCT (Bandura, 1986), moral disengagement is a critical reason why pupils do not always display moral agency as bystanders and intervene on behalf of the victim. A recent study (Thornberg, Wänström, Hong, & Espelage, 2017) found that high moral disengagement was associated with less defending behavior and greater passive bystanding at the individual level. A lack of intervention may, in turn, serve to reinforce the justifications given for the bullying in the first place, allowing the bullying to become legitimized and explainable in terms of the victim's deviant behavior. Thornberg (2015) showed in an ethnographic field study how pupils in peer groups could co-construct attributions that normalize and justify bullying and dehumanize and blame the victims. The importance of this group dynamic was demonstrated by DeRosier, Cillessen, Coie, and Dodge

(1994), who observed that peer groups encourage bullying by conferring reputations that become self-fulfilling prophecies.

The exercise of moral control is also weakened when it is obscured by the *diffusion of responsibility* (Darley & Latane, 1968). Responsibility can be diffused in three ways: by the division of contributions, in which each of the subdivided tasks seem harmless in itself; by group decision-making, which absolves any individual from feeling personally responsible; and by collective action, which provides some degree of personal anonymity while minimizing individual accountability (Janis, 1982; Kelman & Hamilton, 1989; Zimbardo, 1995).

Moral disengagement processes are learned through social interactions with others, but they can also develop into habits or dispositions and can occur at both the individual and collective levels (Bandura, 2002). Pozzoli, Gini, and Vieno (2012) found that disengagement mechanisms also operate at the class level and may explain the inter-class variation in bullying. This finding was confirmed in a more recent study (Thornberg, Wänström, Pozzoli, & Gini, 2017) that also showed a negative association between the quality of peer relationships in a class and the prevalence of victimization. It is important that ongoing bullying in a school classroom creates social and mental structures that are likely to persist under the surface even if a successful intervention stops the manifest behavior. Hence, as argued in Paper 3, efforts to improve prosocial behavior in school classes must focus on relational praxes and peer ecology rather than the individual victim alone.

2.5. Class-based interventions

Two perspectives may aid in the understanding of why efforts to enhance pupils' prosocial capabilities are important in school. First, all types of aggressive and antisocial behaviors in school tax the resources of school personnel and organizational focus and can result in serious consequences for all parties involved. Second, the school is an important setting in which children acquire, develop, and refine the skills that are essential for establishing and maintaining interpersonal relationships. As a microcosm of society, school exposes pupils to numerous social interactions. Because most children and adolescents attend school, the school environment is an ideal setting for implementing interventions that aim to reduce the risk of developing externalizing or internalizing difficulties. The difficulties that many pupils experience in acquiring and using interpersonal skills (i.e., those related to interacting with others) and intrapersonal skills (i.e., those related to coping with their own

thoughts and feelings) place these pupils at high risk for negative outcomes in multiple areas of functioning (i.e., psychosocial, academic, and vocational) (Caprara, Barbaranelli, Pastorelli, Bandura, & Zimbardo, 2000; Jones et al., 2015). Meta-analyses of social competence interventions have reported a significant positive effect for several outcomes that are important for healthy development, such as aggressive and disruptive behavior, academic behavior, positive social behavior, and emotional distress (Domitrovich, Durlak, Staley, & Weissberg, 2017; Durlak et al., 2011; Sklad et., 2012).

Prevention programs are commonly divided into three levels based on the degree of risk among the participants: universal, selected, and indicated (Gordon, 1983; Greenberg, Domitrovich, Weissberg, & Durlak, 2017). The first level encompasses universal interventions, which are designed to be used among the general pupil population without regard for individual risk level. Selected and indicated programs target specifically selected pupils who have one or more risk factors or are already experiencing problems. Most of these programs are delivered to the selected children outside of their regular classrooms (either individually or in groups), although some are used in regular classrooms but target the selected children.

Conley and Durlak (2017) suggest delivering social competence interventions using two different approaches: promotion and prevention. Promotion programs focus on enhancing the positive side of adjustment by developing skills, competencies, resources, and environmental support that help pupils meet developmental challenges (Seligman & Csikszentmihalyi, 2000). Prevention programs aim to reduce the incidence of certain specific problems, such as conduct problems, moral disengagement, and the negative effects of bullying.

In practice, there may be considerable overlap between promotion and prevention programs (Conley and Durlak. 2017). For example, many promotion programs have been able not only to increase students' skills and resources but also to reduce future problems (i.e., these programs both promote and prevent). Similarly, many successful prevention programs emphasize the development of various skills and resources to prevent future problems (i.e., these programs prevent by promoting). In the current thesis, the Social Perception Training (SPT) program is highlighted as both a promotion program (Paper 1) and a prevention program (Paper 3).

Universal promotion and prevention programs have practical and cost advantages over selected or indicated programs because they target all children and are usually relatively inexpensive compared to other forms of intervention (Greenberg et al., 2017). They reach all

pupils at a school or in a class, have relatively low costs and are often quite easy to implement (Lösel & Beelmann, 2003). Further, cost-benefit analyses (Farrington & Welsh, 2008) point to the feasibility of the early developmental prevention of antisocial behavior and the promotion of social competence. Evaluating the cost-benefit of school interventions, Belfield and colleagues (Belfield, Bowden, Klapp, Levin, Shand, & Zander, 2015) examined the economic value of six social and emotional learning (SEL) programs and found that all the interventions demonstrated benefits that exceeded the costs of running them, often by considerable amounts. In this setting, many of the common barriers to individual or group-based efforts, such as stigma, cost, time and location, may be reduced (Barrett & Pahl, 2006; Domitrovich, Bradshaw, Greenberg, Embry, Poduska, & Ialongo, 2010).

Social competence may be a critical factor to target universal promotion or prevention interventions conducted in schools for at least four reasons (Domitrovich et al., 2017). First, social competence is associated with social, behavioral, and academic outcomes that are important for healthy development. Second, social competence predicts important life outcomes in adulthood. Third, it can be improved with feasible and cost-effective interventions. Finally, improved social competence plays a critical role in the behavior change process.

2.5.1. Cognitive-behavioral therapy

Most SEL interventions contain elements of cognitive-behavioral therapy (CBT). The fundamental principle of CBT is that individual cognitive processes play a primary role in the growth and survival of an individual's emotional and behavioral responses (Rajabi et al., 2017), which meshes well with the current theoretical foundation. Children who demonstrate cognitive distortions or negative, dysfunctional thoughts often falsely attribute the causes of certain events or situations. Patterns of thinking, including general ideas, assumptions, and schemas (beliefs about the self, others, and the world), develop over time based upon individuals' experiences of interacting with their social environment (Bandura, 1986; Beck, 1976; Barriga et al., 2008).

For instance, the experience of being a victim may equip a student with a unique cognitive bias that prepares him or her for failure (Rajabi et al., 2017). Poor cognitive strategies, such as ruminating and catastrophizing, are related to increased depression levels, whereas cognitive re-evaluation is associated with decreased depression levels (Garnefski & Kraaij, 2014). In contrast, there is good evidence that techniques that develop positive traits

and build positive subjective experiences work, both in therapy and, perhaps more importantly, in promotion and prevention (Seligman & Csikszentmihalyi, 2000).

CBT uses problem-focused cognitive and behavioral strategies guided by empirical science and derived from theories of learning and cognition (Garnefski & Kraaij, 2014; Rajabi et al., 2017). This approach utilizes cognitive and behavioral strategies to help pupils identify and replace maladaptive behaviors, emotions, and cognitions with more adaptive ones. Such interventions focus on decreasing maladaptive behaviors and increasing adaptive ones by modifying their antecedents and consequences in ways that lead to new learning. An important focus is cognitive restructuring to help pupils become aware of the connections between their thoughts, emotions, and behaviors. Cognitive restructuring consists of intervention strategies to help pupils recognize, evaluate, and effectively respond to dysfunctional, negative, or distorted thoughts (Weaver & Himle, 2017). SEL programs provide children with direct instruction and replacement behaviors and skills that address a broad spectrum of knowledge, attitudes, and skills that are required to behave in a prosocial manner (Greenberg et al., 2017). One such SEL program, Social Perception Training (SPT), targets the core issues that are emphasized in the current thesis and in the first and third paper.

2.5.2. Social Perception Training (SPT)

SPT (Gundersen, Strømgren, & Moynahan, 2013) is a universal classroom-based intervention for grades 1-10. It is intended to last approximately ten weeks with a one-hour session per week and is delivered by regular teachers. The program consists of an introduction and program overview followed by nine topics: (1) emotional awareness; (2) open and hidden rules; (3) cultural differences; (4) setting events (background variables); (5) the complex interaction between thoughts, feelings, body signals, and behavior; (6) interpretation of others' intent; (7) cognitive distortions; (8) timing; and (9) consequences (if-then relations). For further program descriptions, see the program manual (Gundersen et al., 2013) and Paper 1.

Throughout the intervention, pupils are encouraged to actively participate in learning activities. Pictures, discussions and role-play are used to clarify how these different topics and factors affect oneself and others during social interactions. The discussion of a variety of hypothetical and real-life situations may lead to better understanding and generalization and may gradually provide students with the ability to understand themselves, others, and the social interplay of different aspects of everyday life. In addition, the introduction of terms and

concepts may provide students with language for understanding, discussing, and solving social incidents. SPT is characterized by a psycho-educational approach, which involves reflecting on one's thinking style from a meta perspective. Explicit awareness of one's thinking is emphasized during the course, including the important role of automatic thoughts that may lead to incorrect conclusions. A social cognitive orientation toward intervention emphasizes learning, thinking, and reasoning. This approach meshes well with the basic educational agenda of schools, which includes providing knowledge acquisition and cognitive development.

3. Research questions and methodology

The present thesis 1) systematically investigates whether SPT can improve pupils' social competence, 2) examines the validity of the How I Think Questionnaire (HIT-Q) for measuring cognitive distortions in children and adolescents in Norway, and 3) proposes a model of relational rehabilitation targeting social and mental structures among pupils when bullying has stopped. Through three papers, the present thesis extends past research on social competence, moral disengagement, and bullying. The following pages introduce the rationale behind each of the three papers, outline the methodological approach, and discuss some methodological considerations.

3.1. Paper 1: Social Perception Training (SPT): Improving social competence by reducing cognitive distortions

A growing body of knowledge emphasizes the role of social perception and cognitive distortions in creating and sustaining behavioral problems (e.g., Bandura, 1991, Crick & Dodge, 1994; van der Velden et al., 2010). Hence, to prevent difficulties and promote positive developmental, interpretive abilities and moral cognition may be appropriate targets for promotion and prevention efforts. However, despite desirable outcomes (Sklad et al., 2012), most individual-level programs are trainer-intensive and hence are expensive and challenging to implement. This contrasts with universal programs, which are framed positively and provided independently of individual risk status, thus minimizing their potential for stigmatizing participants. As a result, such programs may be more readily accepted and adopted. Hence, SPT in a whole-class setting would be appropriate for these purposes.

In collaboration with local authorities and the principals of all schools in a community in southern Norway, the SPT was provided to all pupils in the 6th and 9th grades. Given the

hypothesis that perceptual abilities, moral cognition, perceptions of relationships, and the appropriateness of such interventions vary across ages, two age groups were included in the study. The intervention was implemented and delivered in a real-world setting for several reasons. First, the outcome of an intervention relies heavily on the implementation process (Fixsen, Naoom, Blase, Friedman, & Wallace, 2005). For a program to be valuable at school, it needs to be easily adopted and integrated into the existing organizational framework. Second, the program should be delivered by regular teachers. Because evidence indicates that regular teachers produce lower effect outcomes than researchers and program developers do (Wilson, Lipsey, & Derzon, 2003), at least in the short term, it was desirable for the regular teacher to deliver the program to measure the reliable effect of the intervention. A third reason for the use of a real-world delivery setting is that in such settings, the value of topics learned may be made evident beyond the intervention sessions themselves. When a teacher models the social and emotional skills promoted in a program such as SPT, he or she will likely be effective in imparting these skills to the pupils in everyday life at school and will thereby influence the learning climate over time. In Norway, there is limited access to promotive and preventive class-based interventions for use in schools. The SPT is a good candidate, but it has not previously been evaluated in Norway or abroad. Hence, the research questions of Paper 1 are as follows. 1. To what extent can SPT improve social competence when delivered in a regular setting as a whole-class intervention addressing social perception and cognitive distortions? 2. Of additional interest is whether the outcome of SPT varies as a function of age. Research indicates that social competence interventions tend to be more effective for younger children than for older ones (Langeveld, Gundersen, & Svartdal, 2012; Wilson et al., 2003). However, programs with a high degree of complexity may be favorable for older children (Manger, Eikeland, & Asbjørnsen, 2003). Hence, the second research question of Paper 2 is formulated as follows: Is SPT more efficient at one class level than another?

3.2. Paper 2: The How I Think (HIT) Questionnaire: Measuring cognitive distortions in children and adolescents

As argued thoroughly above, cognitive distortions play a crucial role in a number of undesired behaviors in most pupils at school, such as bullying, bystander inaction, interruption, and disobedient behavior (Barriga et al., 2008; Hymel et al., 2005; Thornberg et al., 2017; van der Velden et al., 2010; Vaaland, Idsoe, & Roland, 2011). Such cognitions are targeted in school interventions. Thus, reliable and valid assessments are needed to measure

the core message in these interventions.

The translated version of the HIT-Q scale has been used in previous studies in Norway, and adequate psychometric properties have been assumed but not assessed. Continued use of the scale would benefit from a formal assessment of the psychometric properties of the Norwegian translation of the HIT-Q, which is the first aim of the current study.

The second aim of this study was to explore the possibilities for reducing the number of items on this rather extensive 54-item instrument. A reduced version of the scale would be advantageous in applied settings because the long 54-item questionnaire is demanding of respondents and those administering and scoring the questionnaire. Furthermore, because cognitive distortion scales are often administered with scales measuring other constructs, shorter instruments with psychometric qualities comparable to those of the full scales contribute to an overall reduction in survey length and should be used if possible (Rogelberg & Stanton, 2007; Stanton, Sinar, Balzer, & Smith, 2002). Therefore, this study tested a reduced version of the scale, HIT-16-Q (Ara, 2015).

The research questions for the second paper were as follows. 1. Is the HIT-Q valid for use in Norwegian settings? 2. Given that different studies have demonstrated an acceptable fit to different factor solutions, is the factor structure of the HIT-Q acceptable, and does it demonstrate comparable fit to the preferred six-factor solution? 3. A reduced version of the HIT-Q is preferable in applied settings; thus, does the HIT-16-Q demonstrate psychometric properties comparable to those of the full scale? 4. In regular schools, a low level of cognitive distortions is common. Therefore, instruments used to measure cognitive distortions in such settings should be able to detect changes even when the occurrence of cognitive distortions is low. Does the HIT scale detect changes even in cases of low levels of cognitive distortions?

3.3 Paper 3: Relational rehabilitation: Reducing the harmful effects of bullying

The prevalence of bullying has been rather stable; approximately 6% of the pupils in Norwegian schools at any given time suffer from bullying (Wendelborg, 2018). Many prevention programs have been implemented to relieve this problem, but studies suggest that bullying is not decreasing (Breivik et al., 2017; Hamarus & Kaikkonen, 2008). Positive effects of school-based anti-bullying programs have been identified, but the gains have often been short term (e.g., Ertesvåg, Roland, Vaaland, Størksen, & Veland, 2010; Ferguson, Miguel, Kilburn, & Sanchez, 2007). Surprisingly, very little research has focused on strategies

that schools can use to support victims' recovery and reduce the effects of wounds that most likely will remain even if the bullying stops (Boulton, Smith, & Cowie, 2010; Breivik et al., 2017; Myers & Cowie, 2013; Tharaldsen, Slåtten, Hancock, Bru, & Breivik, 2017). Because bullying is a psychosocial phenomenon designed for relational attack, it not only causes harm to the victim but will affects the class community, as emphasized in the social cognitive approach. When pupils experience bullying, they may change their perceptions of social situations, themselves, and their peers. This alteration may be important for understanding mental health problems in all parties involved: victims, bystanders, and perpetrators. Moral disengagement seems to be a prerequisite for the creation of abusive relationships; in turn, abusive relationships create moral disengagement in the community in which they occur. Hence, to alleviate the bullying problem, efforts focusing on relational practices and moral disengagement seem appropriate.

When pupils experience good proximal relationships in a classroom, they are not only productive in healing wounded mental health, from which victims often suffer, but are also affirmative for the bullies and bystanders. Based on recent research on both the mechanism of and harm related to bullying, there is a lack of relational intervention once bullying has been stopped. Therefore, a goal of the third paper was to outline a possible initiative to promote a supportive class community and improve significant relationships through which vulnerable pupils may recover. The research question for the third paper is as follows: Based on existing theories and research, how can a relational approach address the harms caused by bullying?

3.4. Methodological approach

To address the research aims, two studies and one theoretical outline are included. Due to the nature of the research questions posed in Paper 1, an experimental approach was an evident choice. This study applied a cluster-randomized crossover design. Paper 2 addressed validation, examining a core measurement applied in the current intervention using the same sample as in Paper 1. The third paper drew upon current research literature with the aim of furthering the work on the learning environment and bullying in school by proposing a model of relational rehabilitation in classes affected by bullying.

3.4.1. Sample and procedure

The intervention was conducted at all regular schools in a municipality in southern Norway. Of the participants, 199 pupils in 6th grade (age 11 years) were from nine classes in

four primary schools, and 200 pupils in 9th grade (age 14 years) were from nine classes in two secondary schools. The sample included in Paper 1 comprised 332 pupils, and 324 pupils were included in Paper 2.

Before the implementation, local school teachers were provided with two days of face-to-face training in delivering SPT based on the program manual (Gundersen et al., 2013). Additionally, guidance from the local program coordinator was provided during the intervention period.

The parents, teachers, and pupils received extensive written and oral information about the SPT program and the investigation. Information letters, consent forms, and questionnaires for parents and pupils were circulated before the program was implemented. A local project coordinator, together with teachers and principal from each school, provided information at parent meetings at each school and in each class before the pre-test and intervention. The teachers collected the consent forms and, subsequently, the questionnaires from the parents whose children participated in the study. Before the pre-test, the classes were randomly assigned to intervention in the fall of 2014 or the spring of 2015. The 6th- and 9th-grade classes were distributed equally to receive SPT in either the fall or the spring. All the informants filled out questionnaires in September (pre-test), December (mid-test), and May (post-test). The parents completed the pre-test questionnaires at the school meeting and completed the mid-test and post-test questionnaires at home within two weeks after the intervention and delivered them to their children's teacher. The pupils completed their questionnaires at school, supervised by their main teacher.

3.4.2. Measurements and material

Self-reported cognitive distortions. The How I Think questionnaire (HIT-Q) (Gibbs, Barriga, & Potter, 2001) is a 54-item self-report questionnaire designed to measure self-serving cognitive distortions. Participants respond on a 6-point Likert-type scale (*disagree strongly* to *agree strongly*), with higher scores reflecting higher levels of cognitive distortions. Most of the HIT items (39) measure different types of cognitive distortions: (1) being self-centered (nine items; e.g., "Getting what you want is the only important thing"); (2) blaming others (10 items; e.g., "If someone leaves a car unlocked, they are asking to have it stolen"); (3) minimizing/ mislabeling (nine items; e.g., "Everybody lies. It's no big deal"); (4) and assuming the worst (11 items; e.g., "You should hurt people first before they hurt you"). The remaining 15 items address anomalous responses or are positive fillers. The HIT-Q has been

determined to exhibit good validity (Barriga, Gibbs, Liau, & Potter, 2001; Nas, Brugman, & Koops, 2008; Plante, Daigle, Gaumont, Charbonneau, Gibbs, Barriga, 2012). Furthermore, the HIT-Q demonstrates high test-retest reliability, good internal consistency and acceptable construct validity (Barriga & Gibbs, 1996). In the present study, Cronbach's alphas (pre-test) ranged from .59 to .75 for the HIT subscales and .89 for the complete scale.

The self-reported learning environment was assessed with a slightly modified version of scales developed and previously documented at the Norwegian Center for Learning Environment and Behavioral Research in Education (Bru, Boyesen, Munthe, & Roland, 1998). The scales were constructed to assess pupils' perceptions of *relationships between classmates* (4 items, e.g., "My classmates like to be with me"), *teachers' emotional support* (5 items, e.g., "I feel that the teachers care about me") and 5 items assessing *well-being and safety at school* (e.g., "I feel safe at school"). The items had a four-step scoring format: *Disagree strongly, disagree a little, agree a little*, and *agree very much*, scored as 0-3. Reliability coefficients for the three subscales at pre-test were α = .84, .80, and .82, respectively.

Parent-reported social skills and problem behavior. The Social Skills Rating System (SSRS) (Gresham & Elliott, 1990) is a standardized norm-referenced scale. The validity of the SSRS has been demonstrated in several studies (e.g., Gresham & Elliott, 1990; Ogden, 2003). The parent questionnaire measures children's and adolescents' social skills and problem behaviors, with one version for parents of pupils in primary school (1st-7th grade) and one for parents of students in secondary school (8th-10th grade). The SSRS items are grouped into six subscales: cooperation, assertion, self-control, responsibility, and internalized and externalized problem behavior. The rating scale for each item was originally a 3-point scale, but Ogden (2003) increased it to four (1=*never*, 2=*sometimes*, 3=*often*, 4=*very often*); that scale was used in the present study. At the pre-test, the internal reliability was α = .87 and .87 for the 6th grade and .88 and .82 for the 9th grade for social skills and problem behavior, respectively.

Teacher-reported classroom performance. The Social Skills Improvement System-Rating Scales (SSIS-RS) (Gresham & Elliott, 2008) is a revised version of the SSRS. The class-wide version was used for teachers, which consists of four items (*pro-social behavior, learning motivation, math skills* and *reading skills)* rated on a 5-point scale (1 - 5, where 5 describes higher ability on the item). This instrument has been translated into and validated in Norwegian (Gamst-Klaussen, Rasmussen, Svartdal, & Strømgren, 2016).

3.4.3. Analyses

Data analyses were conducted using different statistical packages. SPSS v. 23 was used to perform descriptive analyses and determine internal consistency (Papers 1 and 2) and for the ANOVA (general linear model) in the first paper. The effect size partial eta squared, η^2 (Lakens, 2013), was computed for all the measures. In the overall analyses, the potential effects of age and gender were assessed. Contrast analyses were run to compare predicted means (i.e., within groups between pre-test and post-test and between groups at midway). Prior to the analysis, missing data analyses were performed. Following standard procedures, analyses indicated that data were missing completely at random (Fielding, MacIennan, Cook, & Ramsey, 2008). The missing rates were under 1%, and missing data were replaced using an Expectation-Maximization (EM) algorithm (Little & Rubin, 1987). The attrition rate between the pre- and post-tests was 7.5%, which may have affected the results. The main conclusions were identical for analyses with or without missing data replacement.

In Paper 2, the HIT-Q was examined by analyses performed in the SEM (structured equation modeling) module in Stata 14.2 (www.stata.com) using confirmatory factor analyses (CFA). CFA is a type of SEM that deals specifically with measurement models, which examine the relationship between observed measures or indicators (e.g., test items) and latent variables or factors. This multivariate statistical procedure is used to test how well the measured variable represents the number of constructs and hence requires a priori specification of the factor models (Brown, 2015). Each of the suggested factor models (Barriga et al., 2001) and the reduced version consisting of 16 items from the four cognitive subscales were tested (Ara, 2015). Model fit was assessed with standard fit indices (Brown, 2015). It is important to determine how well a measurement generalizes across groups of individuals. If an instrument is intended to be administered in a heterogeneous population, it should be established that its measurement properties are equivalent in subgroups of this population (e.g., subgroups of different genders and ages). To assess measurement invariance across gender and age groups, configural, metric, and scalar invariance were assessed across the groups using standard procedures that measure χ^2 differences in increasingly restrictive models (Brown, 2015; Byrne, 2008; Gregorich, 2006).

3.5. Methodological considerations

There are numerous considerations to discuss when performing an intervention study in schools. For example, missing data may be of interest because they may produce biased

results. However, analyses did not reveal any bias due to this attrition, and no tendency was found indicating that attrition or missing values were associated with the pre-scores. Generalizability is also of interest but is discussed specifically as it relates to each paper, along with other specific methodological considerations. Nevertheless, some general concerns should be addressed in the current thesis, particularly the following three issues. First, because the data in the first study did not reveal significant between-groups differences, other factors may serve as alternative explanations. Second, regarding the construct validity, the HIT-Q is designed to measure delinquent adolescents, which was not the population in the current study. Finally, the use of effect size should be discussed.

3.5.1. Threats to validity

A randomized controlled evaluation study (RCT) is considered the gold standard of experimental design and is viewed as superior to other study designs because it can measure the effects of an intervention (Shadish, Cook, & Campell, 2002). Quasi-experimental designs may be a feasible alternative but have some limitations because of their vulnerability to factors not under experimental control (Kazdin, 2003; Messick, 1995). The intervention study in Paper 1 was designed as a cluster-randomized crossover design, and group differences at the midpoint test were intended to demonstrate the program effect by comparing the intervention and control groups. However, such differences did not occur except on one HIT subscale. Hence, the primary analyses of the present project focused on pre-test-post-test differences. Pre-test-post-test designs are widely used in behavioral research, primarily to measure changes resulting from experimental treatments (Dimitrov & Rumrill Jr., 2003).

 The fact that the current results are based on pre-post, within-subjects comparisons implies that our conclusions must be regarded with some caution. In pre-post comparisons, particularly in comparisons performed over rather long intervals, factors other than the intervention may serve as confounding variables and may suggest alternative explanations, thereby threatening internal validity. Factors that can influence the findings from pre- and post-test research designs in evaluation studies include regression to the mean, maturation, history and test effects (Marsden & Torgerson, 2012; Shadish et al., 2002).

In the context of the present investigation, the finding that the pupils in the control group tended to demonstrate improved scores similar to those of the pupils in the intervention group is of particular interest. This "effect" can be attributed to many variables. For instance, the *regression to mean effect* is a likely candidate. However, the pre-scores indicated a high

level of social competence and perceived learning environment and a low level of cognitive distortions and problem behavior. The regression to mean effect would most likely lead the pupils in the opposite direction of the current findings. The *test-retest effect* is another candidate. As noted in Paper 1, this is unlikely for two reasons: First, because of the high test-retest reliability for both the HIT-Q (Barriga & Gibbs, 1996) and the SSRS (Gresham & Elliott, 1990) and second, because the scales used in this study are so comprehensive and diverse that it is difficult to extract any particular information about the respondent. A third potential explanation is the possibility that *other interventions* performed between the points of measurement may have caused the positive change among the control group pupils. However, no such interventions have been identified.

A final potential variable to be discussed in the current thesis, *maturation,* is of particular interest. Participants, especially young ones, may change simply because of development. Such changes may be confused with changes due to intervention (Kazdin, 2003). However, given the well-documented finding that cognitive distortions normally increase as children and youths get older (Barriga et al., 2001; Nas et al., 2008; Obermann, 2013; Paciello, Fida, Tramontano, Lupinetti, & Caprara2008; Plante et al., 2012), it is noteworthy that the HIT scores demonstrated a reduction in cognitive distortions regardless of age. Further, the normative expectation of perceived emotional support from the teacher declines gradually with increasing age (Bru, Stornes, Munthe, & Thuen, 2010; Ertesvaag, 2009; Reddy, Rhodes, & Mulhall, 2003). However, such decreases were not observed during the year of intervention. The present data did indicate a reversed trend to some degree, and it is reasonable to conclude that the intervention effects outperformed these age-related normative trends. These results appeared in concert with significant positive changes in the parents' reports of their children's social skills and problem behaviors. Hence, all these variables can most likely be excluded as explanations for the positive changes in the control group in the current study, leading to a diffusion of treatment effect as a likely explanation.

3.5.2. Diffusion of treatment effect

Because the pupils in the intervention and control groups attended the same schools, it is likely that the diffusion of treatment effects played a role in creating positive change in the control group in the current study (Gundersen & Svartdal, 2010; Kazdin, 2003). Diffusion of treatment effects imply that improvements caused by the intervention in the treatment groups are also observed in the control groups because elements of the treatment are found in both

conditions. In the present context, it is reasonable to distinguish between two variants of the problem of diffusion of treatment interventions: (1) primary and (2) secondary sources of diffusion (Gundersen & Svartdal, 2010).

(1) The quality of program implementation is of great importance for the evaluation of intervention effects. Meta-analyses of the effectiveness of school-based programs demonstrate that inadequately implemented interventions have little or no effect (e.g., Wilson & Lipsey, 2007). Improper implementation may cause a reduced effect because the control group may change in a positive direction. The current intervention was conducted in a regular school setting and was delivered by regular teachers. The teachers received training in the program before the program was delivered, and because they taught both control classes and intervention classes, it is likely that their SPT training inadvertently diffused to the control classes as well. There is also evidence that programs delivered by researchers or program developers produce higher effects than those delivered by regular teachers under routine conditions (Wilson et al., 2003). Several variables may explain this link, such as the attention given to program fidelity.

(2) Diffusion of treatment effects may also occur even when the intervention is properly implemented. Some factors increase the likelihood of "secondary" diffusion. When randomizing school classes at the same school to both control and intervention groups, it is probable that pupils under different conditions will interact during the study period. The pupils receiving the intervention may – implicitly or explicitly – have conveyed clues and information about the intervention that, in turn, affected the participants in the control classes. As argued, from a social cognitive perspective, it is likely that changed behavior affects interactions with others and, in turn, influences the behavior of social partners. For instance, if pupils in the intervention group demonstrate extensive improvement and thus act as role models for pupils in the control group, it is possible that the pupils under the control conditions will change their behavior accordingly. Further, the information given to the parents before the intervention may have influenced the parents' perception of changes in the pupils in both the SPT and control groups. Altogether, it is likely that the positive changes observed in the control groups are due to diffusion of treatment effects, even though the exact mechanisms may be difficult to pinpoint.

3.5.3. Construct validity of the HIT-Q

Validation combines scientific inquiry with a rational argument to justify (or nullify)

score interpretation and use. Messick (1995) states that the question of validity in tests or rating instruments is a question of whether the validity indicators lie within acceptable judgmental or statistical limits. Regarding construct validity, it may be challenging to infer from indicators to constructs measuring morality and social perception (for example, from what we have observed to how we label what we have observed) (Shadish et al., 2002). This implies that validity also depends on the degree to which test scores reflect the theoretical construct of interest (Brown, 2015). It was originally suggested that the HIT-Q (Barriga et al., 2001) distinguished among the four different types of cognitive distortions. However, validation studies conducted in Western countries have found inconsistent results regarding the factorial structure of the questionnaire. Some studies (e.g., Fernandez, Rodriguez, Barriga, & Gibbs 2013; Nas et al., 2008) support the preferred structure, whereas another study suggested a need to distinguish between cognitive distortions that referred to overt and covert behaviors (Plante et al., 2012). Furthermore, a Swedish study (Wallinius, Johansson, Larden, & Dernevik, 2011) that included samples of both adolescents and adults suggested considering cognitive distortions as a single construct that reflects a global tendency to distort the interpretation of experiences. It has been suggested that criminal cognitions over time consolidate into a holistic "criminal mind" (Samenow, 2012), and previous studies (e.g., Palmer & Hollin, 2004) indicate that there may be a difference in the composition of self-serving cognitive distortions between adolescent and adult groups. Because different types of antisocial behavior may be related to only certain types of distortions (Barriga et al., 2001), it may be of particular interest to capture these distinctions in individuals with low levels of cognitive distortions.

Compared to other studies, the HIT scores in the current studies are low, indicating that the participants were involved in different types of antisocial behavior only to a limited extent. A priori, it was reasonable to question the extent to which the sample would limit the model fit because the present sample consisted of relatively young pupils from regular schools. However, Nas and colleagues (2008) showed a better fit for the sample of regular adolescents compared to the delinquent sample. Additionally, Fernandez and colleagues (2013) showed a good fit for the preferred factor solution in their non-delinquent sample, which consisted of participants of similar age as those in the current sample. Nonetheless, in the validation of the HIT-Q for use in Norway (Paper 2), fit for the preferred model was excellent. Examining convergent and divergent validity, all correlations were in the expected direction, although they were somewhat low. The rather low convergent and divergent validity may be due to the low occurrence of cognitive distortions. The link between cognitive

distortions and prosocial and antisocial behavior may be less pronounced at a lower level of distortion. However, the current results demonstrated that the scale can detect minor changes in cognitive distortions, even at a low level of occurrence, which is important when the scale is used among pupils at regular schools. In sum, the study produced indicators of satisfactory construct validity.

Some concerns should also be discussed regarding the reduction of the HIT-Q scale. Despite the accuracy of the long 54-item questionnaire, it places high demands on respondents and those administering and scoring the questionnaire. To be effective, however, the survey must be completed, and the inevitable cases of nonresponse must be reduced to a minimum. A reduced version may limit the level of nonresponse and thereby the biases related to this problem and may thus be advantageous in applied settings. Furthermore, because cognitive distortion scales are often administered with scales measuring other constructs, shorter instruments with psychometric qualities comparable to those of the full scales contribute to an overall reduction of survey length and should be used if possible (Rogelberg & Stanton, 2007).

3.5.4. Measuring effect size

An effect size is a standardized, scale-free measure of the relative size of the outcome of an intervention (Lakens, 2013). It is particularly useful for quantifying effects measured on unfamiliar or arbitrary scales and for comparing the relative sizes of effects from different studies. This is critical information that cannot be obtained solely by focusing on a particular significance level because there is no straightforward relationship between a p-value and the magnitude of an effect (Durlak, 2009). A small *p*-value can relate to a low, medium, or high effect. With a sufficiently large sample, a statistical test will almost always demonstrate a significant difference. For example, if a sample size is 10,000, a significant *p*-value is likely to be found even when the difference in outcomes between groups is negligible and may not justify the use of an expensive or time-consuming intervention over another, less costly one. The level of significance by itself does not predict effect size. Unlike significance tests, effect size is independent of sample size (Sullivan & Feinn, 2012). Moreover, there is no straightforward relationship between the magnitude of an effect and its practical value (Hill, Bloom, Black, & Limpsey, 2008). Depending on the circumstances, an effect of lower magnitude on one outcome can be more important than an effect of higher magnitude on another outcome.

There are various methods for estimating and testing treatment effects, including ANOVA and ANCOVA. Decades of literature have explored and compared pre-post analysis methods, both in theory and in application. Some researchers argue for ANCOVA as the preferred approach due to a possible reduced within-group error variance (e.g., Dimitri & Rumrill Jr, 2003). However, this method is not impervious to bias, and ANOVA may be as reliable and appropriate as ANCOVA (O'Connell et al., 2017). In Paper 1, the effect size partial eta squared, η^2, was computed, as is customary when performing the ANOVA (Lakens, 2013).

It is common to refer to Cohen's (1988) comments regarding power analysis that classify "small," "medium," and "large" magnitudes for different effect sizes. A general guideline for interpreting the value of η^2 in a repeated-measures design is that an η^2 of .02 is small, whereas .13 is moderate and .26 is large (Cohen, 1988; Lakens, 2013). This would suggest that the effect size of 0.10 in the current study, which at first glance might be misconstrued as a "small" effect if one automatically invokes Cohen's original conventions, could be an important outcome in some research areas. For example, changing moral cognition in pupils may be challenging yet valuable, particularly as they age. Hence, effect size should be interpreted with respect to empirical benchmarks that are relevant to the intervention, target population and outcome measure being considered and in the context of prior research and in terms of practical value (Durlak et al, 2011; Hill et al., 2008; Sklad et al., 2012). The term *practical value* reflects the extent to which there has been a meaningful change in the participants' lives. Outcomes that are more difficult to change may have more practical value, so a lower effect size for one outcome can be more important than a higher one for another outcome.

Importantly, methodological features such as the general research design, assessment methods, and the type of outcomes examined often influence the magnitude of obtained effects (Wilson & Lipsey, 2001). For example, one-group pre-post designs and control group designs are not directly comparable because the standards for judging the magnitude of effect are influenced by these designs. Comparisons of the effect sizes from quasi-experimental and randomized designs should be made in light of prior research (Durlak, 2009). Sometimes randomized and quasi-experimental designs in child outcome research yield different effect sizes, and sometimes they do not (cf. Wilson & Lipsey, 2001). Hence, the current results must be regarded with some caution.

3.6. Ethical considerations

Ethical considerations should cover all aspects of the research process, including planning, performing and reporting. The research was conducted in accordance with the general rules and standards prescribed by The National Committee for Research Ethics (NESH, 2016). Two central principles are participation based on informed voluntary consent and confidentiality. The publications included in the present thesis adhere to the ethical guidelines for scientific publications established by the American Psychological Association (2010). The Norwegian Center for Research Data approved the project and the specific procedures for providing information and receiving consent from parents and pupils (ref. # 39271). Participation was voluntary and based on informed consent. Because the intervention was defined as a pedagogical measure, all pupils received the intervention, but the pupils and their parents were free to withdraw at any time from participation in data collection.

4. Summary of results

4.1. Paper 1

Finne, J. & Svartdal, F. (2017). Social Perception Training (SPT): Improving social competence by reducing cognitive distortions. *International Journal of Emotional education 9*(2), pp 44-58.

The main aim of this study was to evaluate the effectiveness of the SPT in a whole-class setting for 6th- and 9th-graders at a regular school trained by regular teachers. The results indicated an overall positive change. In particular, the pupils' level of cognitive distortions showed a decrease ($\eta^2 = .15$) equivalent to a moderate effect size. The pupils also reported improved peer relations and improved perceived emotional support from the teacher. Although the intervention was conducted at school, increased social skills and reduced problem behaviors carried over to the home setting, as evaluated by parents. Although studies indicate that outcomes from social competence interventions are age-related, no such age effects were observed in the current results.

Because research consistently reports that pupils' perceived support from teachers decreases throughout the school years, a limited increase in this measure in the current study may be of importance. Together with moral cognition and peer relations, pupil-teacher relations are critical to the learning environment and to individual well-being at school.

The current study was the first evaluation of this program and indicates that the SPT is a promising and cost-effective intervention program suited for a whole-class setting.

4.2. Paper 2

Finne, J. & Svartdal, F. (in preparation). The How I Think (HIT) Questionnaire: Measuring cognitive distortions in children and adolescents.

We had two purposes for this study. The first was to assess the psychometric properties of the Norwegian translation of the How I Think Questionnaire (HIT-Q). The second was to explore the possibility of reducing the number of items of the 54-item HIT-Q because a reduced version would be advantageous in applied settings.

According to CFA, the full HIT-Q scale demonstrated excellent fit to the suggested six-factor model, and the reduced 16-item scale (HIT-16-Q) demonstrated acceptable fit to a unidimensional model measuring cognitive distortions. The internal consistency of the full scale was excellent, but subscale consistency was somewhat lower compared with some previous studies. The test-retest reliability for both the full and the reduced scales was very good. Convergent and divergent validity were observed in the expected direction, although with somewhat low correlations. Both scales were able to detect changes in cognitive distortions at a low level of occurrence. Importantly, multi-group CFA of the full scale indicated full measurement equivalence, indicating that mean scores of the HIT-Q can be compared across the gender and age groups included in this study. We conclude that both the HIT-Q and the HIT-16-Q are appropriate for use in Norway.

4.3. Paper 3

Finne, J., Roland, E., & Svartdal, F. (submitted). Relational rehabilitation: Reducing harmful effects caused by bullying.

In the third paper, we propose a model of relational rehabilitation that aims to improve the class community to help victims (and other parties involved) recover after bullying stops. This model consists of four steps:
(1) Ensure teacher authority;
(2) Address the power structure among pupils because the former bullies may possess

negative control in the class and hinder prosocial changes;

(3) Replace abusive relationships with stimulating and supportive relationships for the former victim because bullying creates moral disengagement in the affected community, including the perpetrators and the bystanders;

(4) Provide social and emotional learning interventions to the whole class.

Currently, no class-based efforts to repair wounds from bullying exist. We suggest that a relational rehabilitation initiative may be a constructive contribution for this purpose.

5.   General discussion

The main aims of this thesis were to evaluate the effect of SPT as a universal social competence program implemented in a whole-class setting, to validate the HIT-Q for use in Norway and to propose a model for relational rehabilitation in classes exposed to bullying, in which SPT may play a crucial role.

The first paper addresses SPT as a promotion program through which the pupils improved their social competence by reducing their cognitive distortions, suggesting that this class-based intervention may be a feasible and cost-effective effort. The third paper proposes a model with which victims and classes suffering from bullying experiences may recover through a four-step process. This model suggests that relational rehabilitation efforts, including a SEL program such as SPT, may prevent further harm and promote positive development. In the second paper, the HIT-Q is validated for use in Norway. The instrument, particularly the reduced version, might be useful for measuring cognitive distortions when examining the effects of cognitive-behavioral programs such as the SPT. Taken together, the findings of the current thesis may be important for understanding and addressing social competence in schools by targeting interpretive abilities and moral cognition.

The current thesis reveals numerous issues that can be discussed in depth. For instance, moral cognition, prosocial behavior, and aggression may vary as a function of gender, but this link does not appear as robust as previously theorized (Baumeister & Bushman, 2011; Ostrov & Godleski, 2010). However, regarding cognitive distortions, the results in Paper 1 are similar to those of other studies (e.g., Fernandez et al., 2013), indicating higher levels of cognitive distortions among boys than among girls. Further, it seems that cognitive distortions as a construct, as demonstrated by the invariance tests of the HIT-Q in Paper 2, are more suitable for older boys than for girls and younger pupils in the current sample. Although this issue may be of great interest, it is briefly discussed in Paper 2 because

an appropriate examination is limited due to the current sample size.

With the expansion of neuroscience research more generally, there has been an outpouring of interest in the biological basis of thinking about intentionality and morality. For instance, Decety and colleges (Decety, Michalska, & Kinzler, 2012) use fMRI techniques to examine differences in brain activation in moral judgements and demonstrate that moral judgements entail an integrated neural response involving both emotion and cognition. However, the current thesis does not follow this path. Additionally, the roles of teachers and classroom interactions in shaping collective moral (disengagement) and attitudes have been investigated from many different viewpoints, as we did in the third paper, leaving this topic only briefly addressed in the following. Another obvious candidate for discussion is implementation. As noted above, the outcome of an intervention relies heavily on the implementation process, and this process may be as important for the outcome as the program itself (Fixsen et al., 2005). As discussed in terms of methodological considerations, the quality of the current program's implementation may be related to the likely diffusion of treatment effects. However, relevant implementation issues in the current context are not discussed here, not due to relevance but due to the focus of the thesis.

Four topics will be discussed below: the integration of the SIP model and moral cognition, moral disengagement and relational practices, addressing disturbing age-related trends, and finally, class-based interventions.

5.1.   Integrating the SIP model and moral cognition

SIP (Crick & Dodge, 1994) and social domain theories (Turiel, 1983, Nucci, 2001) have followed mostly independent paths in their examinations of the social cognitive mediators of young peoples' aggression and prosocial behavior (Arsenio & Lemerise, 2004). A major foundation of the SIP model is that skillful processing is hypothesized to lead to behavior that is judged as competent, and deviant processing is hypothesized to lead to deviant behavior (Crick & Dodge, 1994). As Arsenio and Lemerise (2001) argue, a problem with this assertion is that using incompetent behavior as a criterion for incompetent social cognition is tautological: incompetent social cognitions are defined in terms of their association with incompetent behavior. The researchers thus call for a more theoretical way of determining whether a particular set of social cognitions is competent independent of an empirical association with incompetent behavior. However, findings (e.g., Arsenio, Adams, & Gold, 2009) suggest that proactive aggression is characterized by disruption in certain morally

relevant values rather than by any clearly inaccurate social cognitions. Crick and Dodge (1994) propose that moral issues guide the evaluation of the response in the sense that if children think that a certain response is "right" and "fair", they are likely to perform it. However, children differ in what they consider "right" and "fair". Hence, some authors (e.g., Sutton, Smith, & Swettenham, 1999) claim that the lack of social competence in children when behaving in an antisocial way may not lie in social deficits or in deviant perception but in the moral values that guide their behavior.

The current discussion may also be rooted in the lack of consensus of what constitutes "social competence". As discussed above, social competence may include a wide range of factors, and there is no clear consensus in the field regarding how to define this construct. For instance, the SIP model includes the judgement of others, including adults and the wider peer group, excluding abusive behavior as a potential competent act. Given a narrower definition of social competence limited to personal goals, competent social cognition can produce incompetent (bullying) behaviors. As noted, different definitions reflect varying dimensions of the phenomenon. For instance, although bullying is an anti-social and aggressive act, it is often carried out in a social way and in a social setting (Sutton et al., 1999), and social intelligence may actually be a prerequisite for efficient proactive and indirect aggression (Kaukiainen et al., 1999). This implies that competent social information processing can result in incompetent behavior, a conclusion that may be questioned (Crick & Dodge, 1999).

It is evident that anti-social and aggressive children may have deficiencies in social information processing (e.g., Crick & Dodge, 1996). However, the distinction between reactive and proactive aggression is important. Reactive aggression has been linked to interpretative abilities and, to some extent, to a lack of social competence. Proactive aggression has been linked to biases in the response-generation and response-evaluation steps, including the belief that aggression is a relatively easy and effective way to obtain desirable outcomes. As previously noted in the current thesis, for proactive aggressive children, the problem may lie in the values of the individual rather than in the accuracy of the cognition (Menesini et al., 2003; Sutton & Keogh, 2001). Thus, in the response-generation and response-evaluation steps of SIP, integration with moral domain theory may be most fruitful (Dodge & Rabiner, 2004). However, we can also imagine that the decision to engage in certain behaviors depends on how a child expects a particular response to affect future relations with a peer, and this judgment is influenced by the child's working model of relationships.

Both aggressive and non-aggressive children demonstrate moral knowledge about

intentions and fairness, yet some children violate moral standards by deliberately choosing to harm others for instrumental gains (proactive aggression). Nucci (2001) describes this phenomenon as follows: "Knowing the good is not always sufficient to motivate someone to do the good. For moral action to take place, the individual must also want to do what is moral, rather than engage in actions that lead to other goals" (p. 196). For instance, a child's own beliefs about what constitutes moral versus immoral behavior will lead certain responses to be discarded, even in situations where the child is otherwise motivated to enact them (Dodge & Rabiner, 2004).

Although moral cognition models are essential for identifying the moral asymmetry in proactive aggression ("my welfare is important, but yours is not"), Arsenio and Lemerise (2004) argue that neither SIP nor domain models can provide a compelling psychological explanation of how children arrive at and maintain this view. Although the emphasis on active mental operations during social interactions was the hallmark of processing theory, several theoretical issues remained. For instance, the moral domain was not emphasized among the latent mental structures (Dodge and Rabiner, 2004).

A recent examination of the relationship between emotions and judgement emphasizes the role of intuitions over judgments (e.g., Haidt, 2007). Haidt's social intuitionist view draws on both evolutionary theory and moral neuroscience to argue that responses to moral events are primarily affective, intuitive, and automatic, whereas moral judgements, when they occur, reflect post-hoc rationalizations (Killen & Smetana, 2013). He argues that although moral deliberations may have a role in morality, the cognitive system is an evolutionarily newer and more limited adaption that is restricted to override intuitive responses (Haidt, 2007). However, processes that appear automatic in adulthood may be so because they have been deliberated and negotiated during childhood and adolescence, thus becoming habitual over time (Turiel, 2008; Barriga et al., 2008; Camodeca & Goosens, 2005; Myers & Cowie, 2013).

Arsenio and Lemerise (2004) combined the SIP model and domain models into a single integrated model to explain the magnitude of moral cognition in social information processing, and this integration seems to be a crucial contribution. As argued above, according to social cognitive theory (Bandura, 1986, 1991, 2002), the relationship between thought and action is mediated through the exercise of moral agency, including self-regulatory mechanisms and moral disengagement. Gini and colleges (2014) performed a meta-analysis of 27 studies of the relationships between moral disengagement and different kinds of aggressive behavior among school children and adolescents and found that moral disengagement is a significant correlate of aggressive behavior in young people. This

correlation is larger than those of other predictors of bullying and aggression, such as hostile attribution, emotional knowledge, social competence, and social problem-solving (Cook, Williams, Guerra, Kim, & Sadek, 2010; Orobio de Castro, Veerman, Koops, Bosch, & Monshouwer, 2002; Trentacosta & Fine, 2010). Altogether, the evidence supports the magnitude of moral cognition as a mediator of social behavior. Further, the integration of morality into SIP models may be valuable in concert with the social cognitive approach.

5.2. Moral disengagement and relational practice

We may consider bullying an amplified and distorted version of the exclusion mechanisms that can be a part of the way children relate to each other. When bullying and exclusion occur in school, most pupils are not only aware of it but also witness it (Caravita, Di Blasio, & Salmivalli, 2009; Craig, Pepler, & Atlas, 2000; Salmivalli, 2010). Although these pupils do not engage in aggression per se, they are willing to let it happen. An important question, then, is why bullying occurs when the majority think it is wrong, and why they do not intervene and support the victim. Social contagion, the diffusion of responsibility, friends' expectations and other group mechanisms may partly explain the pervasiveness of behaving in discordance with one's morality (Darley & Latane, 1968; Salmivalli & Voeten, 2004). However, these explanations do not convey the whole picture.

Moral disengagement may also play a crucial role. The way in which the maintenance of bullying may be a function of moral disengagement is related to at least three mechanisms. First, the relationship between witnessing, moral disengagement, and bullying may be cyclical; the more children are exposed to bullying, the more they are able to disengage from moral self-actions, increasing the likelihood of more bullying (Hymel & Bonanno, 2014). Consistent with attribution theory, when an individual is bullied and no one intervenes, the observer can be driven to think that the victim probably deserves to suffer (dispositional attribution). In other words, non-action on the part of bystanders may suggest to observers that the victim is responsible for the bullying (Gini, Pozzoli, Borghi, & Franzoni, 2008). Second, the behavioral reactions of the surrounding peer group can have a direct impact on their perceived sense of safety (ibid). More bullying might lead to a decreased sense of safety and a greater need to stay close to the bullies, thus increasing the likelihood of more bullying. Researchers have demonstrated that moral, societal, and psychological orientations coexist within individuals and are brought to bear when evaluating both straightforward and complex events. Children focus on moral concerns in some situations but are also concerned with

group functioning and conventions (the societal domain) or with autonomy, safety and other personal goals (psychological domain) in other situations. Some situations reflect aspects of all these domains, such as the situation of the bystander. In these cases, pupils may give priority to one consideration while weighing multiple factors (Killen & Smetana, 2013).

A third mechanism may be pluralistic ignorance (Juvonen & Galvan, 2008). When no one challenges the behavior of the bullies, pupils come to (falsely) perceive that others approve of it. Pupils tend to perceive the most common type of behavior as normative. Before a bystander is likely to take action in such ambiguous situations, he must first define the event as critical and decide that intervention is the proper course of action (Latane & Darley, 1968). Such misinterpretation of group norms prevents pupils from intervening. Witnessing bullying events may directly affect the way in which pupils behave toward peers, including those being bullied. Bullying may create anxiety, even among those not directly involved, and may lead to even more bullying depending on the reactions of those present. The risk of becoming the target of bullying may prevent bystanders from intervening, especially if they do not expect support from teachers (Atlas & Pepler, 1998). Reluctance to intervene may also become more pronounced with advancing school years, especially if teachers are observed not helping, making the situation worse or even bullying students themselves (Rigby & Bagshaw, 2003). At the same time, teachers may be less likely to intervene if students do not report that bullying is occurring (Novick & Isaacs, 2010). A lack of intervention may, in turn, serve to reinforce the justifications given for the bullying in the first place, allowing the bullying to become legitimized and explainable in terms of the victim's deviant behavior (DeRosier & Mercer, 2009; Thornberg, 2010).

In summary, moral disengagement caused by cognitive distortions serves pupils' justifications for contributing to bullying or avoiding intervening by supporting desired self-cognition. However, it is important to recognize that selective moral disengagement operates not only at the individual level but also, with an even more profound and pervasive impact, at the broader level of the class community (Gini et al., 2015; Pozzoli et al., 2012; Thornberg et al., 2017). When a peer group adopts moral disengagement mechanisms, they can cause devastating harm (Boulton et al., 2010; Myers & Cowie, 2013). For example, displacement and the diffusion of responsibility (Latane & Darley, 1968) are not just cognitive denial machinations; they are built into the very structure of social systems to obscure personal accountability. Dehumanization is a key mechanism that operates by nullifying the self-restraints that operate through feelings of empathy and compassion. Moral disengagement through social imperatives involves an affirmative, proactive process and not a defensive,

denial-oriented process (Bandura, 1991). These various psychosocial maneuvers are not just "techniques." They are, as discussed above, grounded in self-regulatory processes. Hence, an abusive relational practice may turn into a long-established style for all parties involved because it affects children's attributional styles and their working models of peers.

The hierarchical quality of peer groups has been studied in terms of bullying and victimization as well as in terms of status, prejudice, and group identity (Hawley & Willieford, 2015; Killen & Smetana, 2013). Abusive bullying relationships are damaging for both the target and the perpetrator. On the surface, the bullies appear to win through the abuse of their power over others. This provides rewards for continuing to engage in these kinds of behavior, but in the longer term, the outcomes are not good (Green & Price, 2017). As Pörhölä (2016) argues, these individuals fail to achieve integration into their peer community; as a result, they fail to develop positive peer interaction skills because their apparent popularity is based on fear rather than genuine liking. Because they have previously gained social power by bullying others, the risk that they will repeat the same strategy is high. Hence, the effects of school bullying can persist into young adulthood (Cowie & Myers, 2016; Isaacs, Hodge, & Salmivalli, 2008). Several studies have shown that, to a large extent, both bullies and victims have a history of these roles at earlier levels of education (Bauman & Newman, 2013; Chapell, Hasselman, Kitchin, & Lomon, 2006; Myers & Cowie 2013). Hence, as we argue in Paper 3 regarding relational rehabilitation, it is important to reconstruct the class community as a prosocial one and to provide socio-cognitive skills as relational-repair mechanisms. These conditions may facilitate opportunities for all pupils, regardless of their former roles, to practice interaction skills and develop along with age-related expectations. Therefore, pupils should be provided with safe strategies for supporting vulnerable peers and behaving in a prosocial manner.

Nevertheless, as discussed in Paper 1, given the importance of reciprocal determinism in the social cognitive approach (Bandura, 1986), many of the most pronounced issues that foster a positive peer culture and individual well-being are targeted by the SPT. Even when peer relations and social skills are at high levels and cognitive distortions are at a relatively low level, improvement is possible among pupils in middle and secondary schools. Thus, it is possible to promote social competence and class community to prevent future harm to pupils.

5.3. Addressing disturbing age-related trends

During childhood and adolescence, moral judgements reflect a wide range of moral

issues, including concerns for other's welfare, equal treatment of others, and concepts of rights. The literature demonstrates that as children develop, they begin to take more contextual factors into account (Killen & Smetana, 2013). When making moral judgments and decisions, pupils consider a broad range of concerns, including judgments about the self (e.g., personal goals regarding safety and belonging), social conventions, group identity, and group functioning. However, even when children understand and apply moral concepts, competing nonmoral considerations may be highly salient and important, making moral decisions potentially difficult. The context of development also influences whether moral principles are inhibited or facilitated. Aggression, like other behavior problems in children, is not static. Problems can emerge at different developmental periods, and similar problems can manifest in varying forms at different ages (Björkqvist et al., 1992; Bukowski, 2003). In the current context, three disturbing age-normative trends among young people make it appropriate to promote the positive development of pupils and the class community instead of waiting for problems to occur and then preventing further negative actions.

The first trend is that the prevalence of more covert, indirect forms of bullying appears to increase throughout the school years (Lagerspetz, Björkqvist, & Peltonen, 1988; Yeager, Fong, Lee, & Espelage, 2015) as pupils' cognitive capabilities develop. Adolescents may resolve differences between themselves and their peer group by changing their behavior to match the group's norms. This might explain why norms have a greater effect in higher grades. Hence, group norms affect pupils more at later years goes, and the teacher might be less powerful regulators of older children's behavior than peer group norms (Salmivalli & Voeten, 2004).

The second trend is that moral disengagement and cognitive distortions in general increase until they peak somewhere in the teens and then decrease into adulthood, somewhat dependent on the level of cognitive distortions (Barriga et al., 2001; Gini et al., 2014; Nas et al., 2008; Obermann, 2013; Paciello et al., 2008; Plante et al., 2012). Specific to the domain of bullying, "pro-bullying" attitudes among pupils follow the same tendency (Smith, 2001 in Salmivalli & Voeten, 2004), and this combines with an age-related decrease in sympathy for the victim (Gini et al., 2008). Nevertheless, anti-bullying attitudes clearly outweigh pro-bullying attitudes (Boulton, Bucci, & Hawker, 1999), and most pupils have intentions to help or support victims rather than to join in the bullying (Cowie, 2011, Salmivalli, 2010). However, there are large differences among classrooms in the extent to which pupils reinforce the bully or defend the victim. These differences can partly be explained by classroom norms, i.e., the shared standards regarding behaviors that are rewarded and sanctioned by peers in the

classroom (Salmivalli & Voeten, 2004).

The third trend is that pupils' perceptions of emotional support from teachers decrease with age (Anderman, 2003; Bru et al., 2010; Ertesvåg, 2009). Bauman, Meter, Nixon, and Davis (2016) found that older youth may be more likely than younger children to perceive telling an adult as a sign of disloyalty and dependence. Judgments become more complex when pupils must consider competing claims, goals, and needs for how to distribute fundamental resources, such as safety and a sense of belonging. As children grow older, they are more able to coordinate competing concerns and complex moral considerations (Killen & Smetana, 2013). However, as Jambon and Smetana (2014) argue, this understanding does not in itself determine children's evaluations of particular social situations. Hence, some contextual factors may change the application of moral concepts to different situations involving threats to the self.

Together, these findings argue for the promotion of positive development to prevent the negative trends that are likely to occur. In Paper 1, the results indicated that three of these trends were addressed. In Paper 3, we discussed how these trends may be targeted after bullying has been stopped. Because these trends are independent of abusive relations, they are not outperformed by terminating the bullying. However, to improve the class community, these trends need to be reversed over time.

5.4.   Class-based interventions

School is an important social arena and a place for establishing and maintaining social relations. During the school years, peer relations increasingly become the primary context of social interaction, learning and development. Given that cognitive distortions in social interaction may be detrimental, SPT aims to train pupils to acquire a better understanding of different aspects of social perception and cognition to prevent or reduce the occurrence of cognitive distortions (see Paper 1). This allows for the prevention of problems that otherwise would go unnoticed and untreated, such as internalizing problems, and may help to reduce the number of pupils who ultimately end up with higher levels of need. This is especially relevant in light of studies showing the value of enhancing the social-behavioral and learning environment of young children to foster positive child development and alter effects on health, relationship, and employment in adulthood (Jones et al., 2015). For instance, longitudinal analyses reveal that moral disengagement is already operating in the early years of life (Bandura, Barbaranelli, Caprara, & Pastorelli, 1996), and it contributes to social

discordance in ways that are likely to lead individuals down dissocial paths. High moral disengagers experience low guilt over injurious conduct and are less prosocial. Aligned with this understanding, Menard and Huizinga (1994) concluded in their longitudinal study that a weakening of moral beliefs generally precedes the onset of mild forms of delinquent behavior in early adolescence. However, once both have occurred, delinquent behavior itself has a stronger influence on moral beliefs than moral beliefs have on subsequent behavior. The weakening of moral beliefs and delinquent behavior seem to have a reciprocal consolidating effect on each other over time, creating a negative developmental pathway toward more serious forms of delinquency (Green & Price, 2017). Similarly, the role of the victim may precede behavioral styles that are difficult to change and may persist into adulthood (Cowie & Myers, 2016; Isaacs et al., 2008). When pupils are constructed as victims, they are placed in a position that may compromise their ability to develop constructive coping strategies. Instead, they often use emotional coping strategies and avoidance to manage bullying, causing the cycle of victimization to continue (Cowie, 2011; Thornberg, 2015). Thus, it seems important to break the negative spiral and promote the positive development of core issues. A peer community that engages in prosocial relationships may facilitate such a goal.

Most teachers are aware that promoting social competence and mental health is part of their responsibility and role (Graham, Phelps, Maddison, & Fitzgerald, 2011). A considerable body of research emphasizes that teachers have a crucial role in promoting social competence and a stimulating the learning environment and in preventing behavioral, social, and mental problems. It is obvious and strongly recommended that such issues of social competence promotion and problem prevention in schools should be endorsed, continued, and expanded (Weare & Nind, 2011). An encouraging outcome of pupil-based classroom interventions is their positive benefit in terms of teachers' efficacy beliefs, perceptions, and burnout tendencies (Domitrovich et al., 2016). This positive impact may be a secondary effect of the program's impact on pupils caused by the teacher's exposure to the intervention context. One reason for this effect may be that such programs lend authority to teachers and may shape a frame within which the teacher can create a positive learning environment. When a teacher models the social and emotional skills promoted in a program such as SPT, he or she will likely be effective in imparting these skills and newly learned terms to the pupils in everyday life at school and will thereby influence the learning climate over time.

Language instruction and the introduction of useful terms provide an avenue for explaining problem-solving and a relational concept. Certain groups of words are applied to understandings of the antecedents and consequences of behavior, such as "background

variables," "others' intent," "thinking errors"[2], and "if-then." This contributes to cue-interpretation skills through which children develop a vocabulary for interpreting the behavior of others. A psycho-educational approach to moral reasoning may also contribute to the understanding of cognitive distortions as mechanisms that legitimize undesirable behavior. Hypothetical and real-life scenarios in which characters resolve problems prosocially expose children to new alternatives for handling social situations without aggression, selfishness, or unfairness. Additionally, discussion of these scenarios may develop comprehension and critical thinking skills. Finally, such scenarios could be used to clarify the consequences of aggression or other kinds of antisocial behavior and help pupils anticipate and interpret different environmental responses to different kinds of behavior more clearly.

One interesting aspect of the current results is that age effects were not observed in the outcome variables. Prior results indicate that social competence interventions tend to be more effective for younger children than for older ones (Langeveld et al., 2012; Wilson et al., 2003). One explanation for this finding has been that social competence and behavioral problems are more stable in older children than in younger ones (Sørlie, Hagen, & Ogden, 2008). Research has also suggested that programs with a high degree of complexity (multimodal programs) are particularly favorable for older children, whereas less-complex programs (monomodal) have a strong impact on younger children (Manger et al., 2003). Programs such as SPT may appear quite advanced and abstract for younger pupils and thus may work better for older children and youths. Hence, it is interesting and important to note that age effects were not observed for the outcome variables in Paper 1.

The current results indicate that pupils benefit from the SPT program regardless of the level of cognitive distortion. Further, it is reasonable to hypothesize that SPT targets cognition and related behavior at both extremes – internalizing and externalizing. Internalizing and externalizing behavior have a similar antecedent – distorted cognition - but with different functions at each extreme of the continuum (Anderson & Huesman, 2003; Barriga et al., 2008; Gundersen, 2014). As noted by many researchers (e.g., Crick & Dodge, 1994, Menesini et al., 2003), children engage in different types of aggressive and abusive behaviors, only some of which are related to so-called social skills deficits. In fact, proactive aggressors, such as bullies, suffer less from inaccurate social reasoning than from comfort with using aggression to obtain desirable relational and psychological outcomes, even when it requires victimizing and harming others. Regarding the consideration of social competence, bullies

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[2] "Thinking errors" is a commonly used synonym of cognitive distortions that is appropriate for everyday communication among pupils.

and their prosocial peers apparently have the same goal: they want to be liked and accepted. However, they seem to define competence in different ways. For the perpetrators, achieving their personal goals is the key factor that defines an act as competent. Social cognitive approaches that include CBT-based principles, such as the one used in the present work, may thus target both those who cause the harm and those who receive the harm. As argued in Paper 3, when victimization desists over time and victims can replace emotionally oriented coping styles with more adaptive coping styles, the impact of risk factors caused by bullying may be reduced (Pörhölä, 2016). Those affected by bullying may look less like stable victims and begin to exhibit the adjustment profile of those without a history of victimization, demonstrating a pattern of positive adjustment (e.g., Rajabi et al., 2017). However, without access to social support, this change might be challenging, suggesting the importance of reciprocity among pupils, their behavior, and the environment in determining pupils coping. Regarding relational rehabilitation, the likelihood of peacefully reconstructing a prosocial class community may facilitate opportunities for all pupils, regardless of their former roles, to practice interaction skills and develop according to age-related expectations. Therefore, pupils should be given strategies for supporting vulnerable peers and behaving in a prosocial manner.

SPT provides terms and knowledge that are useful in everyday communication and may facilitate a climate of prosocial relational practice in the class community. Because this type of reciprocal influence seems to promote positive qualities in the learning environment, pupils, and teachers, the benefits may justify the use of pupil-based classroom interventions.

5.5.   Further research

The results of the present thesis are promising for enhancing pupils' social competence. We found significant positive effects, interpreted as small to moderate, in the evaluation of the SPT intervention. As a universal initiative including pupils with already low levels of cognitive distortions, such results may be considered satisfactory. However, further studies should be conducted with more comprehensive implementation conditions for the intervention classes and better control conditions. Additional research is required to examine the long-term improvement of participants undergoing SPT and to explore the components responsible for a positive outcome. Further, such studies should focus on how different facets of the SPT can affect different outcomes. As knowledge on this topic accumulates, it will be possible to develop a clearer understanding of the strengths and weaknesses of the SPT

program and to improve the current program for use in different settings targeting different problems. An important direction for further research would be to examine different links between current factors. For example, studies could test whether pupils' use of moral disengagement to explain peer rejection of an aggressive in-group peer is influenced by enhanced understanding of social interplay. Further, knowledge about the intersection of personal goals and moral disengagement related to inclusion and exclusion and how this link may be positively affected would be of interest.

Regarding the validation of the HIT-Q, overt and covert problem behaviors appear to have different developmental trajectories, and covert behavior has a later onset (Tremblay, 2010). Covert behavior may have been less pronounced in the current sample. Hence, future studies should include participants with a somewhat larger age span than those in the present study. It would be informative if studies of the HIT-Q also included a delinquent sample to examine the discriminative abilities demonstrated in previous studies. Future research should also include a self-report measurement assessing constructs comparable to the HIT-Q to validate convergent validity. Finally, the HIT-16-Q should be evaluated as a separate scale.

The third paper proposes a model for relational rehabilitation. This model is currently only a theoretical construct, and it requires further examination and evaluation.

This paper has discussed the school setting as a possible arena for the delivery of social competence training and the recovery of social, emotional, and mental wounds produced at school. Future research should investigate a more appropriate delineation between the responsibility of the school and other public services that may also provide efforts for parents and/or for children in settings outside the school to strengthen the effects of school interventions.

5.5.   Practical implications

It is not always possible to determine the practical benefits of different types of change, but it is worth attempting to capture the full meaning of research findings. The current thesis suggests that the SPT can foster social competence by targeting social perception and cognitive distortions, even in a relatively limited 10-week school-based intervention. The results of the intervention study suggest that perceptions of relations with peers and teachers are positively affected. Interpreted in the context of prior research and in terms of potential practical value (Durlak et al, 2011; Hill et al., 2008; Sklad et al., 2012), the current data suggest an even more prominent impact than might appear at first glance. Both pupils' well-

being at school and their long-term developmental pattern may be positively influenced through interventions such as the one discussed in this study.

A great number of pupils suffer from bullying at any given time. In addition, a great number of pupils are affected negatively because of abusive relationships at school. Given that bullying, exclusion, and other relational and personal problems exist, efforts to reduce the harm they cause may be of great importance in the everyday praxes of schools. As a universal effort, SPT may target or prevent issues that otherwise would be unnoticed and untreated and that, over time, could accumulate into greater problems, such as disqualifying for the labor market. Hence, in addition to promoting the desired development of pupils, the SPT may be appropriate for rehabilitating individuals and classes exposed to abusive relationships.

The present thesis also includes a validation of the HIT-Q for use in Norwegian settings. Our findings confirmed the results of previous studies and concluded that the instrument is appropriate for use among typical children and adolescents with rather low levels of cognitive distortions. This may be of great importance given that schools should focus more on moral issues and cognitive restructuring when facilitating pupils' development.

The current thesis provides information for applied settings that may enhance the practice of education professionals working with children and adolescents.

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Paper 1

Finne, J.N. & Svartdal, F. (2017). Social perception training (SPT): improving social competence by reducing cognitive distortions. *The International Journal of Emotional Education*, 2017, 9 (2), 44-58.

Social Perception Training:
Improving social competence by reducing cognitive distortions

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Social Perception Training (SPT) is a program focused on changing the perceptual and cognitive processes involved in suboptimal social interactions. It is administered with whole class of pupils over ten weeks. No previous studies have evaluated its efficacy. The present study investigated the outcome benefit of the program in 18 primary and secondary classes in a Norwegian municipality (aggregated N = 332), using multi-informant instruments administered in a pre-post research design. Pupils reported on cognitive distortions and the learning environment, parents on social skills and problem behaviour, and teachers on classroom performance. Results indicate overall positive differences, especially for pupils' cognitive distortions. Increased social skills and reduced problem behaviours were also reported, as well as improved peer relations and perceived emotional support from teachers. Overall SPT appears to be a promising and cost-effective intervention program.

Keywords: Social competence training, intervention, SPT, cognitive distortions

Introduction

In recent years, a considerable number of Social and Emotional Learning (SEL) programs have been introduced. They are designed to promote social and emotional competencies, and decrease behaviour problems, in children and adolescents (Durlak, Weissberg, Dymnicki, Taylor, & Schellinger, 2011; Sklad, Diekstra, de Ritter, & Ben, 2012; Wilson, Lipsey, & Derzon, 2003). In schools, great efforts have been made to improve the psychosocial climate and enhance the learning environment. For example, the universal PALS program (School-Wide Positive Behavior Support; Arnesen, Ogden, & Sørlie, 2006) is widely implemented in Norway, and has been shown to be effective in reducing problem behaviour and increasing the quality of the learning environment (Sørlie & Ogden, 2007). Individual-level interventions, such as Aggression

Replacement Training (ART) (Goldstein, Glick, & Gibbs, 1998), have been found to be effective in improving social skills and reducing problem behaviour (Barnoski & Aos, 2004; Gundersen & Svartdal, 2006).

Despite desirable outcomes (Sklad et al., 2012), most individual-level programs are trainer-intensive, and hence expensive and challenging to implement. Such programs are limited to the individuals selected to participate, at the risk of pupils being stigmatized, and may lack the support needed for generalization of training effects (Goldstein & Martens, 2000).

These considerations indicate that universal, preventive programs have practical and cost advantages over focused, corrective and individual-level programs, as they target all children and are relatively inexpensive to implement (Greenberg, Domitrovich, Weissberg, & Durlak, 2017). However, SEL interventions vary significantly in application and mission, making it difficult to compare interventions due to differences in student groups and outcomes measured using different metrics over different time horizons (Belfield et al., 2015). Still, Belfield and colleagues found, when examining the economic value of six different SEL programs, that all interventions demonstrated benefits that exceed the costs running them, often by considerable amounts.

Universal programs are framed positively and provided independently of individual risk status, minimizing their potential to stigmatize participants. As a result, they may be more readily accepted and adopted (Domitrovich et al., 2010). This allows for the prevention of problems that otherwise would go unnoticed and untreated, such as internalizing problems, and may help to reduce the number of pupils who ultimately end up with higher levels of need.

The current study evaluated one such program – called Social Perception Training (SPT; Gundersen, Strømgren, & Moynahan, 2013). SPT is implemented as a ten-session program in a whole-class setting, with regular teachers as facilitators, and is based on principles similar to the ART program (Goldstein et al., 1998). To our knowledge, no prior studies have evaluated SPT. Because SPT relies heavily on the roles of social perception and cognitive distortions in creating and sustaining behavioural problems, we first examine these topics in relation to the aims and purposes of SPT.

Social competence and social perception

Social competence is seen as the general capacity to integrate cognition, affect, and behaviour in order to succeed with specific social tasks and to achieve positive developmental outcomes (Elliott, Busse, & Gresham, 1993). Socially competent individuals possess several interrelated sets of cognitive, affective, and behavioural competencies. It has been suggested that there are five core competency clusters: self-awareness, self-management, social awareness, relationship skills, and responsible decision-making (Greenberg et al., 2017). Being socially and emotionally competent is important in its own right, and has also been found to predict and be related to many other elements in positive developmental outcomes. These include children's ability to forge friendships and their lifelong mental well-being, higher levels of self-worth and academic achievement, and lower levels of loneliness, bullying, aggression, depression (Durlak et al., 2011; Sklad et al., 2012).

SPT heavily relies on principles of social perception, how individuals integrate available social information with prior expectations and cognitions to form impressions of social situations and other people, how we classify and explain social events, and how these processes, in turn, affect behaviour (Fiske & Taylor, 2013). For example, "misunderstanding" and "wrong reaction" are often produced by inappropriate encoding of cues and biased interpretations of social signals (Camodeca & Goossens, 2005). Behavioural adjustment in children is associated with two broadband factors, internalizing behaviours (e.g., withdrawal, depression, shyness, and anxiety) and externalizing behaviours (e.g., aggression and delinquent behaviour) (Barriga, Hawkins, & Camelia, 2008). Although conceptually separate, it is well established that these forms of behaviour problems co-vary and co-develop in individuals over time (Bornstein, Hahn, & Haynes, 2010). Theories that aim to explain the origin, development, and maintenance of antisocial behaviour have often underlined the importance of self-serving distortions in social cognition (Bandura, 2002; Crick & Dodge, 1996). Cognitive distortions, also named thinking errors, are inaccurate ways of attending to, or conferring meaning on, experience and thus may contribute to responses that are emotionally and behaviourally problematic (Barriga, Gibbs, Potter, & Liau, 2001).

Gibbs, Potter, and Goldstein (1995) introduced a four-category typology of self-serving cognitive distortions linked to the way children adjust. (1) *Self-centeredness* which is the primary distortion, and three secondary distortions rooted in this primary distortion, namely (2) *minimizing/mislabelling* the severity and the consequences of the behaviour, or referring to others using belittling or dehumanizing labels; (3) *assuming the worst*, that is, attributing hostile intentions to others and considering a worst-case scenario for a social situation; and (4) *blaming others*, which is the attribution of blame to people and factors outside oneself.

Barriga and colleagues (2008) suggest that cognitive distortions facilitate both internalizing and externalizing behaviour, but differentially. Cognitive distortions of internalizing individuals inaccurately debase the self in direct or indirect ways, and may contribute to self-harm (Bornstein et al., 2010; Quiggle, Garber, Panak, & Dodge, 1992), whereas cognitive distortions of externalizing individuals have been described mainly as biased processing tendencies, such as attributing hostile intent to others (Crick & Dodge, 1994). Children with behavioural problems (unlike pro-social peers) focus more on negative elements in ambiguous situations while largely ignoring the emotional expressions, intentions or content of the other person's actions. For example, a compliment can be seen as an attempt to manipulate, help can be interpreted as an attempt to demean, and a gift can be seen as a bribe.

The social information processing (SIP) model (Crick & Dodge, 1994) is an important element in theoretical accounts of the development of social behaviour. The five-step model proposes that, in order to respond appropriately to social situations, social information must be processed in an orderly fashion, namely, encoding of internal and external cues, interpretation of cues, goal selection, response access or construction, and response decision. It has been hypothesized that during the first two steps, children arrive to a mental representation of the social situation confronting them (Crick & Dodge, 1994). They focus on particular cues in the situation, encode those cues, and interpret them. Relevant knowledge, as in schemata or scripts, is recalled from memory and used as a guide for interpreting and understanding the present social situation. Interpretation of cues may also involve causal inferences, e.g., attributions of intent of others. Hence, children

often do not respond aggressively to consequences, but to their perceptions of the intent of other people (Arsenio & Lemerise, 2004). Although bullies and victims behave differently due to differences in reputation, values, and self-confidence, their social perception is more similar than usually thought. Both interpret ambiguous situations as hostile (Camodeca & Goossens, 2005). Furthermore, aggressive and depressed young people appear to agree to some extent that others are out there to harm them. Nonetheless, they mirror one another regarding attribution of blame (blaming others versus personalizing) and appraisals of the impact they assign to their negative behaviours (minimizing versus catastrophing) (Barriga et al., 2008). Thus, to prevent difficulties and to promote positive development, interpretative abilities may be appropriate targets for prevention or intervention efforts.

Social Perception Training

SPT is a universal classroom-based intervention for grades 1-10, intended to last for approximately ten weeks, with one session per week, and is delivered by regular teachers. Throughout the intervention, pupils are encouraged to take an active part in learning activities, such as role-play, games, and interpreting visual illusions. The principles of SPT are built on Aggression Replacement Training (Goldstein et al., 1998; Gundersen, Olsen, Finne, Strømgren, & Daleflod, 2015). Given that cognitive distortions in social interactions may be detrimental, SPT aims at training pupils to acquire a better understanding of different aspects of social perception and cognition to prevent or reduce the occurrence of cognitive distortions. By introducing nine different topics, the program seeks to increase the pupils' ability to receive and interpret social information. Furthermore, the program introduces terminology to facilitate a common understanding and use of concepts in everyday life at school. It is likely that enhanced social awareness (e.g., taking the perspectives of and empathizing with others from diverse backgrounds and cultures) have a positive impact on pupils' tolerance of diversity and difference.

The SPT manual secures adherence to the program by using a fixed structure, illustrating social situations by role-playing, games and active participation, and presents the ten sessions constituting the program and its sequence (see Table I). Pictures, discussions and role-play are used to clarify how these different subjects and factors affect our selves and others in social interaction. Using a variety of situations may lead to better understanding and generalization, and may gradually provide a capacity to think before judging and acting (Gundersen et al., 2013).

The current study

The present study investigated the outcome effect of a ten-session SPT universal intervention program (Gundersen et al., 2013) on pupils (*N* = 332) in 6th and 9th grade participating in a in a whole-class setting led by regular teachers. To assess change associated with the intervention, four translated and validated instruments measuring cognitive distortions, social skills, problem behaviour, classroom performance, and learning environment were administered, using multiple informants (pupils, parents, and teachers).

Table I. The ten sessions of Social Perception Training

1. The first session provides for program overview and group formation, and introduces the ideas of perception and optical illusions.
2. The second session presents emotional awareness, with the ability to communicate based on emotions, as a key to social adjustment. Emotional awareness includes the ability to interpret the feeling of others as well as to identify and express one's own basic feelings.
3. The third session presents open and hidden rules. Hidden rules, norms, and codes may vary across cultures and settings and are often challenging to identify, since they are the unspoken clues that individuals use to indicate membership of a group.
4. The related topic of cultural differences is introduced in the fourth session. A primary aim of this session is to increase pupils' awareness of cultural differences as a function of ethnicity, geography, gender, age, etc. This may challenge the stereotyping and overgeneralization of such differences and instead promote tolerance of diversity and difference.
5. In the fifth session, setting events – background variables that indirectly alter an interaction – are discussed. Environmental (e.g., crowded conditions, noise, heat), social (e.g., previous negative social interaction, losing a game), and physical setting events (e.g., pain, hunger) arouse sensitivity in positive or negative ways, even if they are not directly connected to the situation.
6. Session six provides knowledge of the complex interaction between thoughts, feelings, body signals and actions. For instance, aggressive behaviour is hypothesized to be elicited by an aversive "trigger" stimulus that is followed by both physiological arousal and distorted cognitive responses, which result in the emotional experience of anger (Goldstein et al., 1998).
7. The seventh session introduces interpretation of others' intent. Children tend to respond with aggression or withdrawal if they regard the peer as acting with hostile intent, but they will be more likely to act prosocially or assertively if they perceive the peer to be acting with a benign intent or accidentally.   8. Session eight helps pupils to identify cognitive distortions. This topic is important in SPT because such errors are inaccurate ways of attending to or conferring meaning on experience and may contribute to responses that are emotionally and behaviourally problematic (Bandura 2002; Gibbs et al., 1995).
9. The topic of session nine is timing. To apply social skills to real-life situations, children should be sensitive to social norms, situations, and interpersonal cues regarding appropriate behaviour.
10. Finally, the last session is about consequences, or if-then relations. The aim is to increase participants' understanding of alternative choices and the consequences of those choices.

The study was designed as a pre-post study, with nine classes receiving the SPT intervention in the autumn semester, and nine other classes in the spring semester. All scales were administered before the autumn intervention (pre-test), then within two weeks after the autumn intervention (midway), and finally within two weeks after the spring intervention (post-test). This design allowed for group comparisons halfway through the intervention when some classes had completed the intervention whereas others had not, as well as comparison of developments in classes over the three probes. As is well known, however, the midway group comparison may be problematic as this comparison is vulnerable to diffusion and secondary diffusion effects (e.g., Gundersen & Svartdal, 2010). All classes at all schools (except for one school) were from the same class levels, sharing teachers (primary diffusion) as well as interacting outside classes (secondary diffusion). For this reason, we expected that the overall changes observed in the autumn intervention groups would to some extent also appear in classes not receiving the intervention, making a meaningful group comparison at

this stage problematic. Hence, the primary analyses of the present project focused on pre-test post-test differences.

As the SPT intervention focuses on cognitive distortions and social adjustment, pre-test post-test differences should be particularly salient in measures addressing those domains. Such differences would potentially be informative of intervention efficacy, as research demonstrates that cognitive distortions tend to increase until they peak some time in the teenage years and then decrease into adulthood (Barriga et al., 2001; Nas, Brugman, & Koops, 2008; Obermann, 2013; Paciello, Fida, Tramontano, Lupinetti, & Caprara, 2008; Plante et al., 2012). Participants in the present study should, therefore, deviate from this pattern if the SPT intervention worked as intended by demonstrating no increase or even a decrease in cognitive distortions.

Intervention efficacy should also be reflected in pupils' perceptions of their relationships with the teacher. The teachers' relationship with their pupils is important for both social-emotional and academic development (Sakiz, Pape, & Hoy, 2012). Research has consistently demonstrated a decrease in pupils' perception of teacher emotional support during the school years (Anderman, 2003; Bru, Stornes, Munthe, & Thuen, 2010; Ertesvåg, 2009; Reddy, Rhodes, & Mulhall, 2003). Hence, an increase or even a status quo in perceived teacher support would be indicative of an intervention effect.

Although the internal validity of a test-retest design is vulnerable to threats from a number of factors such as history, regression to the mean, and maturation (e.g., Kazdin, 2003), positive changes on the measures in primary focus in the SPT intervention would still represent convincing evidence of intervention efficacy. Studies have suggested that younger children benefit more than older ones from social-competence interventions (Langeveld, Gundersen, & Svartdal, 2012; Wilson et al., 2003), and that girls demonstrate a higher level of social competence and a lower level of behavioural problems than boys (e.g., Gresham & Elliott, 1990; Ogden, 2003). Hence, the roles of gender and age (6th vs. 9th grade) were assessed in the present study.

Method

Participants. Participants were in 6th and 9th grade classes, and recruited from all regular schools in a Norwegian municipality, in total 399 pupils. Of these, 199 pupils from 6th grade (age 11), were from nine classes in four primary schools, and 200 pupils from 9th grade (age 14) from nine classes in two secondary schools. Since the intervention was defined as pedagogical, all pupils were recipients, but pupils and their parents were free to participate in data collection. In total, 359 parents (90%) gave informed consent for their child, as did pupils, to participate in the study. The attrition rate between pre- and post-tests was 7.5%. We found no tendency for attrition to be related to levels of prosocial behaviour or gender. However, it was somewhat higher among 9th graders. The sample included in the evaluation comprised 332 pupils, 49.5% girls and 54.8% boys from 6th grade.

Procedures and ethics: Prior to implementation, local school teachers were given two days of face-to-face-training to deliver SPT based on the program manual (Gundersen et al., 2013). Also, guidance from the local program coordinator was provided during the period of intervention.

Parents, teachers, and pupils received extensive written and oral information about the SPT program and the investigation. Information letters, consent forms, and questionnaires to parents and pupils were circulated before program implementation. A local project coordinator, together with teachers and the principal from each school, gave information at parent meetings at each school and in each class before pre-test and intervention. The teachers collected consent forms, and subsequently questionnaires from the parents whose children participated in the study. Before pre-test, classes were randomly assigned to intervention in autumn 2014 or spring 2015. The 6th and 9th grade classes were distributed equally to receive SPT either in the autumn or the spring. All informants filled out questionnaires in September (pre-test), December (mid-test), and May (post-test). Parents filled out the questionnaire for pre-test at the school meeting, while the mid-test and post-test questionnaires were filled out at home within two weeks after intervention and delivered to their respective teacher. Pupils filled out their questionnaires at school, supervised by their main teacher.

The Norwegian Centre for Research Data approved the project (NSD ref. #39271). Participants received no economic compensation for participating in the study.

Instruments

Self-reported Cognitive Distortions. How I Think (HIT) (Gibbs, Barriga, & Potter, 2001) is a 54-item self-report questionnaire designed to measure self-serving cognitive distortions. Participants respond on a 6-point Likert-type scale (*disagree strongly* to *agree strongly*), with higher scores reflecting higher levels of cognitive distortions. Most of the HIT items (39) measure different types of cognitive distortions: (1) self-centered (nine items; e.g., 'Getting what you want is the only important thing'); (2) blaming others (10 items; e.g., 'If someone leaves a car unlocked, they are asking to have it stolen'); (3) minimizing/ mislabeling (nine items; e.g., 'Everybody lies. It's no big deal'); (4) and assuming the worst (11 items; e.g., 'You should hurt people first before they hurt you'). Of the remaining 15 items, eight address anomalous responding (AR) (e.g., 'Sometimes I get bored') and seven are positive fillers (e.g., "When friends need you, you should be there for them"). The positive-filler items are not scored but are used to counterbalance the negative content of the distortion items. The HIT has been evaluated to exhibit good validity (Barriga et al., 2001; Nas et al., 2008; Plante et al., 2012), even in Norwegian (Finne & Svartdal, in preparation). Furthermore, HIT demonstrates high test-retest reliability, good internal consistency and acceptable construct validity (Barriga & Gibbs, 1996). In the present study, Cronbach's alphas (pre-test) ranged from .59 to -.75 for the HIT subscales, and was .89 for the complete scale.

Self-reported learning environment. Self-reported learning environment was assessed by slightly modified versions of scales developed and previously documented at the Norwegian Centre of Learning Environment (Bru, Boyesen, Munthe, & Roland, 1998; Thuen & Bru, 2000). The scales were constructed to assess pupils' perceptions of *relationships between classmates* (4 items, e.g., "My classmates like to be with me"), *teachers' emotional support* (5 items, e.g., "I feel that the teachers care about me"), *well-being and safety at school* (5 items e.g., "I feel safe at school"). The items had a four-step scoring format; 'Disagree strongly,' 'Disagree a little,' 'Agree a little,' and 'Agree very much,' scored as 0-3. Reliability coefficients for the three subscales at pre-test were α = .84, .80, and .82, respectively.

Parents reported social skills and problem behaviour. The Social Skills Rating System (SSRS) (Gresham & Elliott, 1990) is a standardized norm-referenced scale. The validity of the SSRS has been demonstrated in several studies (e.g., Gresham & Elliott, 1990, Demaray et al., 1995; Gamst-Klaussen, Rasmussen, Svartdal, & Strømgren, 2016; Ogden, 2003). The parent questionnaire measures children's and adolescents' social skills and problem behaviours, using one version for parents of pupils in primary school (1-7 grade) and one for secondary school (8-10 grade). The SSRS items group into six subscales, namely co-operation, assertion, self-control, responsibility, and internalized and externalized behaviours. The rating scale for each item was originally a 3-point scale, but Ogden (2003) increased this to four (1 = never, 2 = sometimes, 3 = often, 4 = very often), also used in the present study. At pre-test, the internal reliability was α = .87 and .87 for the 6th grade, and .88 and .82 for the 9th grade, for social skills and problem behaviour, respectively.

Teacher-reported classroom performance. Social Skills Improvement System-Rating Scales (*SSIS-RS)* (Gresham & Elliott, 2008) is a revised version of the SSRS. We used the class-wide version for teachers, consisting of 4 items (*Pro-social behaviour, learning motivation, math skills* and *reading skills)* on 5-point scales (1-5, where 5 describes higher ability). This instrument is translated into and validated in Norwegian (Gamst-Klaussen et al., 2016).

Statistical analyses

In the statistical analyses, we first performed overall ANOVAs with repeated measures (pre-test, mid-test, post-test), with the factors age (6th vs. 9th grade) and gender as predictors. Bonferroni-corrected contrast analyses then tested the predicted pre-test vs. post-test differences. The effect size partial eta squared, η^2, was computed for all measures. A general guideline for interpreting the value of η^2 in a repeated measures design is that a η^2 of .02 is small, while .13 is moderate, and .26 is large (Läkens, 2013).

Results

The mean overall HIT score decreased from 2.13 (pre-test) to 1.96 (mid-test), and 1.90 (post-test), $F(2, 492) =$ 30.68, $p < .0001$, $\eta^2 = .11$, indicating an overall positive reduction in cognitive distortions. The effect of age was not significant, $F(1, 246) = 2.06$, $p = .15$, but the effect of gender was, $F(1, 246) = 7.69$, $p < .01$, with boys demonstrated overall higher HIT scores than girls. None of the interaction effects was significant. As seen in Table II, all HIT subscales demonstrated significant pre-post changes in accordance with the overall HIT scores, with small to moderate effect sizes. Overall, these results demonstrate a reliable reduction in the self-reported HIT measure.

The ANOVA of the 'Learning environment' scale demonstrated positive change, from 2.53 (pre-test), 2.53 (mid-test) to 2.59 (post-test), $F(2, 488) = 4.62$, $p = .010$, $\eta^2 = .02$. The overall effect of gender was significant, $F(1, 244) = 4.05$, $p = .045$, with boys rating the learning environment as slightly better than girls. The effect of age was also significant, $F(2, 488) = 27.32$, p <.0001, reflecting the fact that 6th graders perceived their learning environment as significantly better than did 9th graders. Only the 'Relationships between classmates' subscale showed a significant positive change (see Table II). Although the 'Emotional

support from teachers' subscale did not show a main effect, it interacted significantly with age ($F(1, 244) = 2.82$, p <.01), reflecting an increase among 9th graders but not among 6th graders. Overall, these results demonstrate a significant but small effect on overall learning environment, and an age-dependent positive change in emotional support from teachers.

The ANOVA indicated no significant changes in the way teachers experience pupils in their class prior to and after the intervention. No effect of age emerged, but the girls received higher overall scores ($F(1, 277) = 9.39$, p < .005), indicating that girls received better evaluations from their teachers than did boys. None of the interactions were significant.

The parents' data indicated a significant enhancement in pupils' social skills in the expected direction, ($F(2, 656) = 26.76$, $p < .0001$, $\eta^2 = .08$). All subscales demonstrated significant pre-post changes, with small to moderate effect sizes. There was a significant reduction on the problem behaviour scale ($F(2, 656) = 30.46$, $p < .0001$, $\eta^2 = .09$), with a somewhat larger change for the externalized compared to the internalized subscale. Parents did not report significant differences due to gender or age. None of the interactions were significant.

Discussion

The primary finding of this study is that SPT is associated with a significant positive difference from pre- to post-test, with a decrease in cognitive distortions and problem behaviour, and increase in social skills and perceived learning environment. Effect sizes were small to moderate for most scales. The positive differences were marked in self-report measures and parents' ratings, but not in teachers' ratings. Notably, reliable and positive differences were observed in the measures addressing the core message of the SPT intervention, that is, cognitive distortions, regardless of the pupils' age. Cognitive distortions have been found to increase until they peak somewhere in teenage and then decrease into adulthood (Barriga et al., 2001; Nas et al., 2008; Obermann, 2013; Paciello et al., 2008; Plante et al., 2012). However, the marked reductions observed in the present study indicate an opposite development, and hence seem to reflect a beneficial effect of the intervention. Because cognitive distortions are egocentric, a reduction may imply greater prosocial perception, facilitating tolerance of diversity and difference.

Motivation research consistently connects teachers' emotional support with pupils' motivation, engagement and behaviour, which in turn are related to greater academic effort (Sakiz et al., 2012). Hence, the difference in pupils' perception of teachers' emotional support in the present study may be important. Consistent with international research (Anderman, 2003; Reddy et al., 2003), representative Norwegian samples indicate that pupils' perceptions of teacher support decrease with age, year after year (Bru et al., 2010; Ertesvåg, 2009). Importantly, we did not observe such a decrease in the present data. If anything, the present results tend to demonstrate a reversed trend.

Even though the intervention was carried out at school, positive effects also appeared in the home setting, as evaluated by parents. Generalizations of changes to settings beyond the intervention context is a primary goal of SEL programs, and role-play, discussion and reflection on real-life situations are likely to enhance such generalization. Children are more likely to generalize behaviour when receiving reinforcement

for employing new skills outside the training context (Goldstein & Martens, 2000), and the present results indicate good generalization to the home setting even without a parent-focused initiative.

Table II. Results from analyses of variance (ANOVAs) for overall scales and subscales (all measures).

	Pre-test	Post-test	Pre-post changes		
	M (SD)	*M (SD)*	d*f*	*F*	η^2
Pupil-reported					
HIT overall	2.13 (.52)	1.90 (.60)	1/246	43.16 **	.15
Assuming the worst	2.04 (.63)	1.81 (.69)	1/246	26.54 **	.10
Self-centered	2.07 (.60)	1.85 (.65)	1/246	25.20 **	.10
Minimizing/mislabeling	2.13 (.61)	1.83 (.66)	1/246	48.54 **	.17
Blaming others	2.05 (.60)	1.80 (.72)	1/246	25.52 **	.09
Learning environment	2.53 (.43)	2.59 (.39)	1/244	6.55*	.03
Relationships between classmates	2.52 (.51)	2.63 (.47)	1/244	15.82**	.06
Emotional support from teachers	2.47 (.51)	2.50 (.51)	1/244	1.63	.01
Well-being and safety at school	2.59 (.48)	2.62 (.46)	1/244	1.14	.01
Teacher-reported					
Prosocial	4.18 (.82)	4.19 (.83)	1/277	.00	-
Motivation	4.04 (.92)	4.11 (.93)	1/277	2.19	-
Reading	3.90 (.93)	3.91 (.92)	1/277	.01	-
Math	3.88 (.96)	3.88 (1.01)	1/277	.00	-
Parent-reported					
SSRS skills	2.91 (.31)	3.01 (.32)	1/328	46.53**	.12
Cooperation	2.61 (.42)	2.74 (.45)	1/328	46.54**	.12
Assertion	3.00 (.46)	3.05 (.42)	1/328	5.86*	.02
Self-control	2.88 (.40)	3.02 (.40)	1/328	47.55**	.13
Responsibility	3.14 (.37)	3.23 (.40)	1/328	23.71**	.07
SSRS-problem behaviour	1.66 (.35)	1.55 (.33)	1/328	53.29**	.14
Externalized behaviour	1.57 (.39)	1.46 (.36)	1/328	49.43**	.13
Internalized behaviour	1.74 (.42)	1.64 (.40)	1/328	27.14**	.08

It is noteworthy that the positive intervention outcome was achieved despite the fact that teachers with limited experience led the sessions, and that the intervention lasted only 10 hours. Programs implemented by teachers often demonstrate less effect than those introduced by researchers or supervised students (Wilson et al., 2003). Further, it is axiomatic that pupils must receive a sufficient dosage for an intervention to achieve an effect (Durlak et al., 2011). However, the crucial variable here may not be the number of sessions taught per se, but rather how well acquisition of cognitive and social skills are maintained throughout everyday life at school.

Limitations.

Since the present results were based on pre-post within-subjects comparisons, the conclusions must be regarded with some caution. In pre-post comparisons, and particularly in comparisons over rather long time-intervals, other factors may serve as alternative explanations. In the present case, maturation and history are likely candidates (Kazdin, 2003). Maturation is of particular interest. As children grow older, their social knowledge is likely to change as a function of experience, both quantitatively and qualitatively (Crick & Dodge, 1994). Maturation during the school year is, therefore, a possible explanation for at least part of the positive difference observed in the present study. However, given the well-documented finding that cognitive distortions normally increase as children and youths get older (Barriga et al., 2001; Nas et al., 2008; Obermann, 2013; Paciello et al., 2008; Plante et al., 2012), it is noteworthy that the HIT data demonstrated a reduction in cognitive distortions regardless of age. Hence, we suggest that the expected maturation increase in cognitive distortions was more than counter-balanced by the reduction associated with the intervention. It is also noteworthy that the most salient pre-post changes were observed in measures directly related to the core contents of the SPT intervention. Repeated testing may in itself constitute a form of intervention, creating beneficial effects through increased awareness of topics and problems conveyed by item contents information. We believe that the latter explanation is unlikely, not only because of the high test-retest reliability for both the HIT (Barriga & Gibbs, 1996) and SSRS (Gresham & Elliott, 1990), but also because the scales used in this study are so comprehensive and diverse that it is difficult to extract any particular information for the respondent.

Two additional limitations are worth mentioning. First, program implementation was not strictly controlled. Proper implementation control is important, and especially so when interventions are carried out by leaders with limited experience. Second, given that the sample was taken from schools in one municipality only, and further that the sample size was rather small, generalizability of the results must be undertaken with caution.

Conclusion

This study investigated whether SPT, a universal social competence program implemented in whole-class settings, has beneficial effects for pupils and their learning environment. Our findings indicate that SPT decreases cognitive distortions and problem behaviour, and increases social skills and the quality of peer relations. This suggests that SPT can foster social competence by targeting cognitive distortions providing a

relatively limited whole-class intervention over ten weeks. Further studies should be conducted under more controlled implementation conditions, and preferably apply a randomized controlled design with separate control schools, and with a focus on how different facets of SPT can affect different outcomes. As knowledge in this area accumulates, it will be possible to develop a clearer understanding of the strengths and weaknesses of the current SPT program, and hence how it can be improved.

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Paper 2

Finne, J. & Svartdal, F. (in preparation). The How I Think (HIT) Questionnaire:
Measuring cognitive distortions in children and adolescents.

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Paper 3

Finne, J., Roland, E., & Svartdal, F. **(submitted).** Relational rehabilitation: reducing harmful effects caused by bullying.

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