UNIVERSITÀ DEGLI STUDI FIRENZE

DOTTORATO DI RICERCA IN SCIENZE DELLA FORMAZIONE E PSICOLOGIA

CICLO XXX

COORDINATRICE Prof.ssa Simonetta Ulivieri

Peer led models to prevent bullying and cyberbullying: how and for whom they can be effective

Settore Scientifico Disciplinare M-PSI/04

Dottoranda	**Tutore**
Dott.ssa *Zambuto Valentina*	Prof.ssa Menesini Ersilia

Coordinatrice
Prof.ssa Ulivieri Simonetta

Anni 2014/2017

Abstract

This dissertation aims to improve our knowledge of the effectiveness of peer-led models within the literature on anti-bullying programs.

Previous studies highlighted discordant positions on the effectiveness of involving peers in antibullying interventions (Ttofi and Farrington, 2011; Smith et al. 2012; Lee et al., 2015) and invited scholars to study this model more deeply in order to understand "*what works, for whom and under what circumstances.*" In order to answer to this issue, we hypothesized that recruitment of peer educators might influence the characteristics of the group of students, and, above all, the effectiveness of the entire program.

The First chapter describes the theoretical framework of the research. The social nature of bullying, what is known about antibullying interventions, and the evaluation and the characteristics and strengths of peer-led models within health psychology and prevention of risk behaviours.

In the Second Chapter we presented a pilot research on the characteristics of the peer educators in the *NoTrap!* anti-bullying program (edition 2011/2012). Specifically, we found that, compared with classmates (N= 406; males= 46%), peer educators (N= 118; males= 51%) have higher levels of victimization, perceived support from friends, and prosocial and defending behaviour.

In Third chapter we presented two studies from a unique research design carried out within the 2015/2016 edition of the NoTrap! program. Specifically, we used two different recruitment strategies (volunteering vs peer nomination) with a sample of classes with voluntary peer educators (N=500) and a group of classes with peer educators nominated by classmates (N=466). The two studies aimed to understand how peer educators were different in the two groups and how the different methods can affect the results of the intervention.

In study 1 we found that voluntary peer educators are more involved in victimization, whereas nominated ones are the most popular and accepted by classmates. In study II, we tried to answer the questions: "under which circumstances and for whom" is NoTrap! effective. A set of linear mixed-effect model (MIXED) procedures showed that the program was effective only in the "voluntary recruitment condition," in which there was a decrease of bullying and victimization, and a concurrent increase of defending behavior for the whole class (peer educators and their classmates). In the final chapter results are discussed highlighting their implications for future studies.

Table of Contents

Table of Figures

Index of Tables

CHAPTER 1

Introduction

Scholars in the area of developmental psychology agree that during adolescence, relationships between peers are of fundamental importance in influencing young people's development. Peers represent significant partners for adolescents and they are perceived as similar and capable of influencing desires, aspirations, and behaviors of other peers (Abdi & Simbar, 2013). Peer relationships are related to a sense of positive identity, sense of value, trust and self-esteem, and they are relevant for the development of affective skills that will enable the teenagers to better manage their emotional relationships throughout the course of their life (Gavazzi, Anderson, & Sabatelli, 1993; Kupersmidt & Coie, 1990).

Not always, however, relations within the peer group are predictive of positive development. Sometimes, in fact, the group creates negative dynamics, giving rise to bullying and cyberbullying problems. These phenomena do not involve simply the bully and the victim, but they have a social nature, involving several students who often witness and don't do anything to change the situation. Actions to counter these problems, therefore, need to address all the individuals involved, and use the group as a possible resource. From these assumptions it is clear that a model of intervention such as peer education, involving the teenagers directly as agents of change, can be considered a winning strategy to counteract bullying.

The present thesis is intended to provide a contribution to the ongoing debate on the effectiveness of "work with peers" in relation to the anti-bullying programs (Lee, Kim, & Kim, 2015; Palladino, Nocentini, & Menesini, 2012; Smith, Salmivalli, & Cowie, 2012; Ttofi & Farrington, 2011).

In the following paragraphs, the problem of bullying and cyberbullying will be deepened, highlighting the social and group nature of the problem, and putting attention on evidence-based interventions designed to prevent them. Subsequently, the Peer Education model will be presented, since it is considered by many scholars to be particularly useful in teenage prevention programs. After providing a definition of this intervention model, we will focus on how this model has been adopted in the area of anti-bullying interventions.

Subsequently, the objectives of this research project will be illustrated and an overview of the following chapters will be presented.

1.1 Bullying and cyberbullying

1.1.1 - Bullying and Cyberbullying - Definitions and Features

Starting from Olweus seminal studies in the 1980s, bullying behavior has gained increasing attention from both the public and from the international scientific community (Gredler, 2003). The term bullying refers to "those offensive and / or aggressive behaviors that a single individual or more people implement, repeatedly over time, to harm one

or more persons with the purpose of dominating the victim" (Fonzi, 1997). It is possible to distinguish certain specific conditions that are specific to bullying as compared to other types of aggression; they are: 1) intentionality, that is, the deliberate desire to cause harm to the other; 2) repetition of the attack over time; 3) imbalance of power between perpetrators and victims; this asymmetry, which is for the benefit of bullies, can have its roots in many aspects, such as, for example, greater physical strength, higher social cognitive abilities, or a more influential status in the group.

Over the last decades, the extension of bullying to virtual contexts has added a new element of complexity in the study of peer aggression. In fact, alongside the traditional way, kids today live and act more and more on the internet. Cyberbullying is defined as "an act or an aggressive behavior that is perpetrated through the use of electronic means by an individual or group, repeatedly, against a victim who cannot easily defend him or herself" (Smith et al., 2008, p. 376). Although this problem has received the attention of the scientific community in relatively recent times, the studies that deal with it are constantly increasing. The peculiarities of the context in which cyberbullying takes place implies that its connotations can be partially different from traditional bullying, although there is much overlap between the two phenomena (Kowalski & Limber, 2007).

When analyzing the typical features of traditional bullying and cyberbullying, for example, it is easy to see how the technological

context can impact these behaviors. The indirect nature of cyberbullying, for example, makes it difficult to assess the intentional nature or the reactive nature of the attack (Menesini & Nocentini, 2009). The fact that the relationship between the victim and the perpetrator is mediated by a screen also facilitates processes of disengagement in the cyberbullies (Slonje & Smith, 2008). In relation to the repetition of aggressive acts, in the virtual domain even a single episode, disclosed to thousands of attendees, can be potentially damaging to the victim, even without the repetition over time (Menesini & Nocentini, 2009). A new criterion, publicity, that is, the public nature (Menesini, Nocentini, Palladino, et al., 2012) has also been introduced to the scientific literature. The power imbalance, another characteristic of traditional bullying, assumes a new connotation in the virtual context. The electronic medium, in fact, does not necessitate any power mediated by physical strength or numerical or psychological supremacy; this does not mean that the disparity of power in this context, is diminished; on the contrary, asymmetry exists and can be derived from the anonymity of the aggressor and hence the difficulties of the victims to stop the aggression (Raskauskas & Stolz, 2007). Anonymity is, in fact, one of the elements that mostly distinguish cyberbullying. It can trigger de-sensibilization processes, because cyberbully think that he/she can be unpunished. This belief, in turn, can lead to justification and to a stronger expression of aggressiveness and inappropriate behaviors (Ybarra & Mitchell, 2004).

While being one of the most characteristic features of the phenomenon, it must be pointed out that anonymity is not always present in cyberbullying. In situations where online bullying is closer to traditional bullying, bullies and victims know each other and find themselves in the same dynamics as always, the only difference being that now bullies can use technological tools to better threaten and attack the victims. One last aspect that connotes cyberbullying is the pervasiveness of the phenomenon. In electronic bullying, assaults are not limited to school time, but continue at home and during the weekend (Bastiaensens et al., 2015; Thomas & Hamilton, 2006), thus causing the young victims considerable psychological discomfort.

1.1.2 - Bullying and cyberbullying as a group phenomenon

Over the last twenty years, in bullying literature attention has been shifted to the fundamental role played by the peer group in such dynamics, and in recent years this aspect has also been investigated in relation to cyberbullying. As far as face-to-face bullying is concerned, we should emphasize that this behavior occurs more often in the school context, and more frequently in the classroom. Peer group relations in school is distinguished by other types of social groups for a fundamental characteristic: peers do not choose each other but in class they are forced together regardless of their will. This means that the victim cannot easily escape his situation, as his/her peers cannot avoid taking a position, either fomenting or opposing bullying (Salmivalli, 2010). The classmates of the bully and of the victim can therefore be considered

real participants with different degrees of involvement in support of either party (Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). In fact, Salmivalli and collaborators (1996) have identified 4 different roles that children can undertake in the dynamics of classroom bullying:

   - assistants of the bully (7%) - those who are physically involved in the bullying, though they never take initiative directly;

   - reinforcers of the bully (20%) - those who explicitly encourage the bully and incite the episode;

   - defenders of the victim (17%) – a small minority of students who actively intervene helping the victim, openly opposing the bully or asking for help from an adult (Nickerson, Mele, & Princiotta , 2008).

   - Outsiders (24%) - passive bystanders; they form the so-called "silent majority." These students, although they generally have a pro-victim attitude (Boulton, Bucci, & Hawker, 1999; Menesini et al., 1997; Salmivalli & Voeten, 2004), for various reasons do nothing in the face of bullying episodes. Their silence is often interpreted by the bully as silent assent to their actions, thus reinforcing their behavior.

   In regards to the online context, according to a recent review (Allison & Bussey, 2016) bystanders have an even more crucial role in the cyberbullying phenomenon due to the public nature of the virtual context. It seems that 88% of US teenagers have reported witnessing an episode of cyberbullying on social media, although 91% of them ignored the problem (Lenhart et al., 2011). As with bullying, in

cyberbullying as well it is possible to identify the different roles of participants, i.e. those who are passive bystanders and those who defend the victim, either directly, by confronting the bully or comforting the victim (Bastiaensens et al., 2015; Desmet et al ., 2012). Bystanders can also side with the cyberbullies, encouraging or joining in on the bullying (Bastiaensens et al., 2014).

1.1.3 – Outsiders and defenders' characteristics

Focusing on passive bystanders, it is interesting to investigate what motivations can prevent these students from translating their pro-victim attitude into a behavioral aid. A first explanation could be sought in social psychology, and more specifically in the so-called "bystander effect". Latané and Darley (1970) have proposed a model describing the behaviors of bystanders in emergencies through a series of steps that may lead to defending the victim: (1) Observing the situation; (2) Interpreting it as an emergency; (3) Taking responsibility for the intervention; (4) Knowing the appropriate strategies for intervening; (5) Implementing the decision. According to this model, therefore, deficits in one of these phases could lead to a failure to implement defending behavior.

There are numerous studies in literature that have been trying to explain the behavior of passive bystanders in bullying by referring to Latané and Darley's model. In the online context as well, it is possible to find the bystander effect, although, given the recent attention to

cyberbullying, there are still few studies on this aspect (Allison & Bussey, 2016).

For the first passages, as already mentioned, in most cases traditional bullying is put into practice in the classroom, so it is difficult not to notice the episode (Salmivalli, 2010). Online, on the contrary, there are more difficulties in noticing and understanding the problem. We may hypothesize that the tendency to use various medium-specific distractions in multitasking, may increase the likelihood of not capturing the cyberbullying incidents. Dillon and Bushman (2015), however, did not find significant correlations between the use of multiple devices at one time and the probability of noticing the episode of cyberbullying. In any case, supposing that a bystander notices the situation, he/she may still have difficulties defining it as an emergency, especially if it is ambiguous. Teräsahjo and Salmivalli (2003) found that students often seem to underestimate the seriousness of certain bullying episodes, considering it a joke or blaming the victim. Attribution of responsibility to the victims is likely due to the fact that bullies often choose just one or two victims within the class to be tormented (Salmivalli, 2010). On the contrary, the presence of several victims may enhance the possibility that they support each other, and increase the likelihood that classmates do not attribute to them the cause of bullying, but rather to the aggressors (Garandeau & Cillessen, 2006). In addition, often the presence of other passive bystanders can inhibit defensive behavior due to diffusion of responsibility and collective ignorance. Individuals, in ambiguous situations, refer to the behavior of others around them to

have indications on how to act. Therefore, if others remain inactive, it is a sign that being passive is the correct behavior , and those who intervene are at risk of social embarrassment (Chekroun & Brauer, 2002).

Some research has highlighted the influence that class norms have on individual behaviors surrounding bullying. Pozzoli, Gini, and Vieno (2012), for example, investigated the relationship between peer and classroom injunctive norms, that are perceptions of which behaviors are typically approved or disapproved, and the descriptive norms, that are coded as the frequency with which a certain behavior is present in the group. The results of this study have shown that victim-oriented injunctive norms are positively associated with individual defending behaviors. Also, the descriptive norms are relevant, since the more defending behavior is present within the class, the more likely each student will put it into practice.

In regards to cyberbullying, the situation again becomes complicated. Cyberbullying is, in fact, characterized by a greater degree of ambiguity than traditional bullying, also because the victim's reactions are not directly visible (Holfeld, 2014; Shultz, Heilman, & Hart, 2014). In the online context, the effect of plural ignorance and of diffusion of responsibility can also be present, given the public nature of the context and the presence of a large audience.

Some indications have been revealed in studies that used the opposite approach, demonstrating that the probability of active intervention (in

favour of the cyberbully or of a cybervictim) depends on the behavior adopted by other bystanders (Anderson, Bresnahan, & Musatics, 2014), especially if the bullies and the victims are very good friends (Bastiaensens et al., 2014, 2015). Even when bystanders are able to recognize the emergency situation and attribute blame to the bully, they may not help the victim (Latané & Darley, 1970). In this regard, some studies have shown that bystanders often remain passive because they feel that the episode they are witnessing is not so serious (Huang & Chou, 2010; Van Cleemput, Vandebosch, & Pabian, 2014).

Another reason that may cause the attendants to not intervene may be "not knowing what to do" and how to cope with the situation (Gini, Albiero, Benelli, & Altoè, 2008). Nevertheless, a study by Camodeca and Goossens (2005b) has shown that passive bystanders and defenders do not differ in coping strategies that are considered most effective in fighting bullying.

On the other hand, unlike passive bystanders, defenders are characterized by some individual and socio-cognitive characteristics: they show a greater sense of self-efficacy (Gini et al., 2008), and a greater activation of the emotions of guilt and shame in the face of hypothetical bullying scenarios (Menesini & Camodeca, 2008). Most of the studies have also found that males are underrepresented among those who defend themselves against girls (Goossens, Olthof, & Dekker, 2006; Menesini et al., 2003; Salmivalli, 1999; Salmivalli et al 1996, Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1998).

From a social perspective, the social world of the defenders of victims looks differently as compared to the context of those involved in bullying (Porter & Smith-Adcock, 2011): firstly, defenders show a more secure attachment to their mother (Nickerson et al., 2008), and they are more popular in their peer group (Goossens et al., 2006; C Salmivalli, Huttunen, & Lagerspetz, 1997). However, it is unclear whether high status is a precursor, or rather, a consequence of defending behaviors (Salmivalli, 2010). Additionally, although their friend network appears to be smaller in comparison to that of bullies, defenders are less likely than any other role to be friendless (Salmivalli et al., 1997). In line with the hypothesis of homophilic behaviors (Kandel, 1978), Salmivalli and colleagues (1997) found that defenders tend to choose others inclined to defend as friends, while it is unlikely that they are friends of bullies. This aspect is particularly important if one considers that defending behaviors are highly influenced by the composition of the group of friends (Salmivalli et al., 1998). It seems that, unlike what happens to the bully and the victim, the typical behaviors of the defenders are predicted to a greater extent by their friendships with similar persons than by past conduct (Salmivalli et al. 1998). It has also emerged that even though bystanders are generally more popular, they do not receive reinforcement from their classmates in a comparable way as bullies do (Porter & Smith-Adcock, 2011).

In this regard, Salmivalli and Voeten (2004) found that the stability of defending behaviors can be influenced by anti-bullying class rules, and this is especially true for girls. The classroom environment,

therefore, could be considered as an important source of support and of motivation for defenders of the victims.

1.1.4 - Prevention of bullying and cyberbullying

Along with the increase of studies on the characteristics of face-to-face and online bullying, there has been a growing need to develop interventions to counteract these problems. Over time there has been a large variety of programs with the goal of addressing bullying and cyberbullying with different approaches, involving schools, families, and other meaningful contexts for boys and girls (Menesini, 2000, 2007). However, these interventions have not always been accompanied by rigorous evaluation.

The Society of Prevention Research (SPR) provided a set of standards of evidence to evaluating the effectiveness, efficiency and dissemination of prevention programs (Eisner & Malti, 2012; Flay et al., 2005; Gottfredson et al., 2015).

From an important literature review and meta-analysis, it is clear that only a few anti-bullying studies respect these standards. Ttofi and Farrington (2011) published a meta-analysis conducted on more than 80 studies presenting 44 anti-bullying programs implemented from 1983 to 2009. Only the studies that evaluated the effectiveness of the programs were selected through a comparison of the experimental group with a control group. In general, regardless of the type of intervention adopted and the reference target (bullies, victims, peers,

teachers, or the entire school community), when compared to the control schools, anti-bullying programs are effective, and are capable of reducing bullying and cyberbullying respectively of about 20-23% and 17-20%. Another recent systematic review (Evans, Fraser, & Cotter, 2014) reported that 45% of studies did not show any effects on the bullying behavior and 30% did not show any effects on victimization. These reviews underscored the need to evaluate programs strictly and to work for more effective ones. As suggested by Eisner and Malti (2012), in order to design progressively more effective and efficient interventions, scholars should not focus solely on evaluating the whole project but evaluate the effectiveness of single components of such programs. In the same line, Smith, Salmivalli and Cowie (2012) call for future research aimed at understanding the factors that mediate and moderate the effectiveness of an intervention through the exploration of "*what works, for whom, and under which circumstances.*" In this regard, a recent meta-analysis (Lee et al., 2015) on 13 studies on school-based anti-bullying programs has set the goal of determining the most effective strategies included in the various interventions, also taking into consideration the budget and the ratio between costs and benefits. Generally, the authors divided the programs into four categories: (1) those based on the curriculum approach (video, lessons and written material included in normal school lessons); (2) those based on social skills training (cooperation, negotiation, impulsive behavior control, and coping strategies to resolve conflicts with peers); (3) those based on emotional training (teaching strategies to control emotional problems

such as anxiety, anger and depression); and finally those based on peer counseling / peer support. Based on the results of this study, Lee, Kim and Kim (2015) have come to the conclusion that a school-based anti-bullying program should primarily include the last two types of intervention, along with a substantial school policy against bullying. The authors have also found that interventions are more effective in secondary schools as compared to those involving primary school students. This result is not in line with previous studies. Yeager, Fong, Lee and Espelage (2015), for instance, found that up to grade 7, programmes are generally effective; but in 8th grade and beyond they had little if any effect. In this regard, Smith (2016) underlined that in adolescence, bullying can be associated with popularity and status, and this may explain the difficulty to counteract it at this age. Besides, adolescents are more resistant to exhortations from teachers than younger children.

With regard to cyberbullying prevention, there are still a few studies that have systematically tested the efficacy of the programs (Slonje, Smith, & Frisén, 2013). In general, it is possible to distinguish between:

1) programs designed to counter traditional bullying but that also have effects on cyberbullying, 2) recent ICT-mediated programs, which aim to contrast only cyberbullying, 3) and multicomponent programs that aim to counteract both online and school bullying as is the case with the Italian program *NoTrap!* (Nocentini, Zambuto, & Menesini, 2015).

In the previous paragraphs, the predominantly social nature of bullying has been highlighted. Fighting this phenomenon, therefore, implies taking into account the group and the relational nature of the problem.

The model of peer education, directly and actively involving teenagers as agents of change within their reference group, can therefore be considered a winning strategy to fighting bullying at the root. In the following paragraphs, therefore, this model of intervention will be presented in detail.

1.2 - Peer education

1.2.1 - Definition and characteristics

It is not easy to give a common definition of peer education. As Shiner (1999) says, this expression is like an "umbrella term" that includes all approaches in which educators and educatees share something that creates an affinity between them. This affinity may cover several aspects, such as age, social status, background, specific health problems, or common interests (Abdi & Simbar, 2013). However, in most cases the term "peer" is used as a synonym for "peers," as can be seen, for example, from the definition of peer education formulated by Boda (2001): "peer education is an educational method through which some members of a group are empowered, trained and reintegrated into their own group to carry out specific activities with the other peers. "

Although peer education saw its official debut in the 1960s, when peer-learning experiences began to emerge in the United States, we cannot consider it as a pedagogical novelty. Topping (1996), in fact, suggests how tutorial interventions were present since the Greek era. Returning to more recent times, since the early 1990s, peer education has been successfully adopted in various adolescent interventions focused on health problems (Abdi & Simbar, 2013), such as sexual education and prevention of HIV (Cai et al., 2008; Lazarus, Sihvonen-Riemenschneider, Laukamm-Josten, Wong, & Liljestrand, 2010; Mason-Jones, Flisher & Mathews, 2011; Peel & Warburton, 2009).), prevention of addiction and substance use (Roose, Cockerham-Colas, Soloway, Batchelder, & Litwin, 2014).

From an operational point of view, within peer education it is possible to establish different roles and tasks, and this may increase the difficulty of scholars in finding a unique definition (Menesini, 2002). To recall a few models:

• Peer tutoring: an educational practice in which people of the same age and who are not professional teachers help each other by teaching and learning in a more equalitarian way (Topping, 1996). In peer tutoring, a student takes on the role of the expert (tutor) and the other of a student (tutee).

• Peer collaboration: a method of learning in which learners need to learn something or solve a problem by helping each other, since no one

has more knowledge or skills than the others to achieve the goal or to perform the task assigned.

• Peer Counseling: This is a particular type of help relationship offered by peers, not professionals in the field, to those who feel they are in a state of discomfort and need. It includes both individual and group encounters and aims not to solve the problems of others, but rather to support peers in seeking their own solutions, helping them to "clarify their own thoughts and feelings and explore different choices and solutions." (D'Andrea & Salovey, 1996) Such intervention is typically achieved through the creation of specific listening-to-school centers, or through a telephone helpline, or, more recently, through specific online platforms (Nocentini et al., 2015).

• Peer Mediation: Menesini (2003) defines it as "a structured method of managing and solving interpersonal difficulties with the help of a team of mediators who typically work in pairs." During mediation, conflicting parties are helped to listen to each other, identifying common interests, creating possible solutions, evaluating these options on the basis of objective criteria and making an agreement (Dovigo, 2011). While the mediators are responsible for the conduct of the process, the parties maintain control over the results, as mediation is voluntary, and the mediators cannot impose a decision or force a solution in any way (Dovigo, 2011).

• Befriending models - (In Italian it is called "The model of the friendly operator"): this is a particularly suitable model for the last years of

primary school and those of secondary middle school. It implies the activation of a "flexible and multi-purpose figure who acts as a supporter to companions during normal class life" (Menesini, 2003). The friendly operator relates in a friendly and competent way to peers who need help and support. Menesini (2003) states that the typical tasks of this figure are:

- o Being able to help companions who have a problem;
- o Organizing games and other social activities for more isolated peers during the breaks in teaching;
- o Helping the kids with greater school and achievement difficulties
- o Being close to isolated, shunned or mistreated classmates.

As previously mentioned, Shiner (1999) considers that all these different approaches can be summarized under the broader term of "peer education", which can include both educational and peer support models. Cowie and Wallace (2001), however, propose a conventional subdivision into two major sub-classes: support models (such as peer counseling or befriending models), and educational types (tutoring, mentoring and peer education). The authors point out, however, that despite the differences in operational terms, all these interventions share the same basic model: various members of a larger group are formed to become agents of change in their reference group (Cowie & Wallace, 2001). Menesini (2002) also agrees with the authors who tend

to underscore the common schemes rather than distinguishing them. Menesini (2002) argues that the different labels given to the various models are useful in describing all the performances required to students, while in psychological terms the underlying competences and processes are in many respects similar.

In terms of beneficial effects, the potential strengths of peer-led models are manifold (Abdi & Simbar, 2013). Turner and Shepherd (1999), after analyzing literature, summarized the benefits with ten basic points: 1) peer education is cost-effective in terms of cost-benefit compared to other methods; 2) peers are a credible source of information; 3) Peer Education is a process of "empowerment" for all the students involved; 4) Peer education is a process of sharing information and advice that already exist among adolescents; 5) "Peers" are more successful than professionals in information transmission, because they are more easily identified by the rest of the class; 6) Peer educators act as positive models; 7) Peer education has advantages for those who are involved in the role of peer educators; 8) This type of training may be better received by the reference group, where other types of education are not accepted ; (9) Peer education can be used to educate those who are difficult to reach through conventional methods; 10) Peers can improve their learning through constant contact and interaction.

1.2.2 Peer education: reference theoretical models

As outlined in the previous paragraph, there are many reasons why peer education is potentially a more effective intervention than other education models making use of adults or experts working with teenagers. Below, I will present some theoretical assumptions that could support the value and effectiveness of the peer education method. It should be noted, however, that peer education, rather than the application of a specific theory, seems to be a method of intervention still in need of a theoretical framework, since there is no single approach capable of explaining exhaustively the complexity of the model (Turner & Shepherd, 1999).

A way of learning located in the area of proximal development

Vygotsky, in "Thought and Language" (1934), states that human learning presupposes a specific social nature and a process through which children gradually integrate the minds and the knowledge of those around them into intellectual life. According to the author, in fact, intellectual functioning is first formed in the collective context, in the form of relationships with others and only after it becomes mental function for the individual (Vygotskij, 1934). Vygotskij further develops this concept when he states that: "*in the cultural development of the child, every function appears two times: first in the social context, second, at the individual level. A competence first comes between two people, in the form of interpsychological category, after it appears within the child, as an intrapsychological category*" (Vygotskij, 1981, p. 163).

According to the author, it is important that students are not alone in dealing with the learning process, but are supported by a group they feel they belong to. It is only in the group that the subject can develop a "*proximal development zone*" defined as "*the distance between the current level of development as it is determined by autonomous problem solving and the level of potential development. This can be reached through problem solving under the guidance of an adult or in collaboration with more capable peers*"(Vygotsky, 1981, 127).

By experimenting with behaviors located in the proximal development zone, the second process of Vygotsky's theory can be realized. That is internalization, which occurs when the construction of new knowledge and 'Acquisition of higher processes" can be developed. The process of interiorization is stimulated, in fact, by the ability to reflect on what has been done, to confront themselves with others, to better clarify their positions by defending their point of view from the objections of others, to explain so that others can understand what they mean (Dixon - Krauss, 1998). According to Pellai, Rinaldin and Tamborini (2002), in the light of Vygotsky's theory, the peer education process could be schematized along the following phases: 1) peer educator training can be functional to the formation of a group of educators who are capable of enhancing and feeding the proximal development areas in the peer group; 2) the effectiveness of peer education should be to facilitate and promote internalization processes for the rest of the class.

The Action Research

Between 1942 and 1943, Lewin undertook studies with which he demonstrated the superiority of the method based on group decisions over the one based on the transmission of content, particularly in inducing the concrete and relatively long-lasting modification of attitudes. Lewin argued that authentic change consisted in a three phase process (Lewin, 1946):

- o *the unfreezing*, which consists in breaking the balance that sustains organizational stability, due to the awareness of the gap between the actual functioning of a system and the ideal situation; This can lead to motivation and willingness to change the status quo;
- o *transformation*, that is, the implementation of real change, accompanied by the learning of new practices and new behaviors;
- o *refreezing*, the stage where change is made permanent by integrating new practices with those already in use. At the end of the process, a new equilibrium can be reached.

The beginning of a change therefore means the destruction of balance in a community, followed by the decision to pursue a new goal that in turn determines the implementation of the processes required to reach it.

According to Lewin's theory some important factors for this process are (Visser, 2004):

- o making the community aware of any problematic situation;

- integrating the intervention program with existing models of interaction in the context;
- promoting the relationship with the agent of change;
- promoting a level of participation of community members, that in turn can be influenced by the meanings associated with the problematic situation and the intervention.

With the term "agent of change" we may identify the person or organization that presents or facilitates the process of change in the community (Visser, 2004). In light of this theory, therefore, peer education projects, using peers as agents of change within their own group, will have greater chances of success in starting the process that will break the existing rules and reconstruct a new, potentially better balance.

Piaget and the "intellectual rebuilding"

According to Franzese (2009), the theoretical roots of peer education also relied in the conceptual framework of Piaget. Piaget (1970) emphasized the importance of peer exchanges during the learning process. According to the author, peer interactions which take place during the learning process are a useful tool to start the child's intellectual rebuilding processes.

Indeed, children, having a peer role, using the same language, implement very direct relationships with each other and are motivated to reconcile the differences between themselves and others. According to Piaget, peer interactions enhance development since they place the

child in several significant cognitive conflicts. This cognitive conflictual state creates a sense of contradiction between what children believe and what the experiences stimulate. If the child becomes aware of this contradiction, the sense of turmoil and disequilibrium will lead to questioning their own beliefs and seeking new ones by implementing an intellectual reconstruction process.

This, according to the author, is stimulated by peer interaction and only later is carried out by the individual through symbolic manipulation of the world.

Thus, according to Piaget, children, from peer interactions, gain both social benefits, such as the development of communicative abilities and a more acute sense of perspective, and the need to re-examine the reality of their own cognitions and to consider the guidance of another in this process (Damon, 1984).

Peer education fully exploits the potentialities that peer interactions may have in facilitating the cognitive development of individual members of the group.

The theory of social learning and the model of perceived self-efficacy
Another fundamental psychological aspect in peer education concerns the theory of social learning and the concept of self-efficacy proposed by Bandura (1985).

According to this theory, learning can occur:
1. through direct experience;

2. indirectly, observing and shaping one's actions on those of others with which he/she identifies (modeling);

3. through training in skills related to the specific situation and self-assessment which in turn strengthens the confidence to be able to implement a given behavior.

Generally speaking, the modeling process depends on three determining conditions: (1) the characteristics of the model, with particular reference to social status and prestige, but also to the affective links that may exist with the observer; (2) the features of the observer referring to personality variables (availability, dependency, motivation, etc.); (3) the consequences of modelling and observing the behavior when imitating the model. When such consequences are positive (reinforcements), the observer will continue to use the behavior acquired, otherwise he/she will inhibit such behavior (Meazzini, 1978). Concerning perceived self-efficacy, Bandura provides the following definition: "belief in one's ability to organize and carry out the course of actions necessary to adequately manage the situations in order to reach the set goals. Efficiency beliefs affect the way people think, feel, find personal motivation, and act "(Bandura, 1985). It is possible to say that peer education projects are based on modeling processes and on the enhancement of the self-efficacy of students involved. First, the role that peer educators play within their own groups provides an important element of modeling for their peers (Pellai et al., 2002). Additionally, participating in such projects can help teenagers to demonstrate their

autonomy and responsibility, thus strengthening their sense of self-efficacy (Pellai et al. 2002).

Theory of reasoned action

The theory of reasoned action (Ajzen & Fishbein, 1980) provides a basic structure that aims to explain and understand how the behaviors of individuals are carried out. At the basis of this theory is the identification of three predictive factors:

- behavioral intention, which exercises direct and primary action towards a specific conduct, and which in turn is determined in a contemporary way by personal attitudes and subjective norms;

- the attitude towards behavior, that is, the attitude that an individual has in adopting or not adopting a specific conduct;

- the subjective norm, that is, the level of influence that the opinions of "other referents" (parents, friends, partners, colleagues, etc.) have on the specific behavior.

This influence is in turn given by the product of two variables: normative convictions, i.e. beliefs about what certain persons expect from a specific behavior, and the availability that the individual has in adapting his behavior to the expectations of others.

According to this model an individual's behavior is partly influenced by the prevailing social norms in a certain group or culture (Svenson & Bertinato, 1998). If an individual is convinced that his social environment positively perceives a certain conduct, it will be much more likely to change and adopt this behavior. This concept is particularly

relevant if we accept the hypothesis that peers are able to influence each other at a higher extent as compared to those who are outside the group (Svenson and Bertinato, 1998). Peer education could therefore be a means to modify the prevalent social norms within a given group, thus promoting a change in the individuals as well.

In summary, these first introductory paragraphs have allowed us to outline the peer education model. In the next paragraphs, the focus will be on how this model has been applied to a specific domain, bullying.

1.2.3 - Peer-led interventions to combat bullying

In previous paragraphs it has been shown that bullying is not a problem of single students, but rather the result of a social interaction in which all parties can play a decisive role in reinforcing or countering the bullying. The peer-to-peer intervention programs, therefore, could represent an effective strategy for preventing and contrasting this phenomenon, since they encourage students to fight bullying.

Given the growing popularity of peer education in other prevention areas (Abdi & Simbar, 2013), anti-bullying programs have also started to adopt this type of intervention in primary and secondary schools (Houlston & Smith, 2009; Menesini, Nocentini, & Palladino, 2012). Although potentially peer education seems very promising as an intervention strategy to counteract the phenomenon of bullying, its effectiveness is still controversial. On one side, some scholars argue that

instead of reducing bullying and victimization this approach might have iatrogenic effects and reinforce negative behaviors and bullying.

On the other side, other researchers have shown that peer support systems within anti-bullying programs can provide benefits not only for target recipients, but also for peer supporters themselves and for schools in general (Birnbaum, Crohn, Maticka-Tyndale, & Barnett, 2010; Cowie, Naylor, Talamelli, Chauhan, & Smith, 2002; Naylor & Cowie, 1999). Ttofi and Farrington (2011), in their meta-analysis of anti-bullying programs, stated that working with peers is associated with an increase in victimization. For this reason, authors suggest avoiding this type of intervention. In contrast, Lee, Kim-Kim and Kim (2015) have come to diametrically opposing conclusions. These authors have found greater effectiveness in school-based anti-bullying interventions that use the peer counseling/peer support component than in other types of programs that adopt alternative strategies. Smith, Salmivalli and Cowie (2012) also emphasized the need to be cautious about the interpretation of some of the results from the meta-analysis of Ttofi and Farrington. According to the authors, the term "working with peers" can include a wide variety of approaches, each potentially associated with a different level of effectiveness. Anti-bullying programs that use peer education can, in fact, differ for the peer educators' training, the attitudes of experienced trainers (more or less managerial), the material and / or activities used to enhance peer educators' skills. Programs may also differ for the specific task assigned to peer educators (i.e. support

services, mentoring, counseling, mediation and conflict resolution), or the level of autonomy granted to peer educators in these tasks (Thompson & Smith, 2011).

The choice of method generally depends on the project objective (Turner & Shepherd, 1999). Referring to the possible differences in peer education programs, the next section will focus on some of the issues related to the implementation of this scheme within an antibullying program.

1.2.4 - Peer educators: selection criteria and features

A peer educator is a member of a larger group that receives specific training and information to facilitate a positive change in the behaviors of a target group (Abdi & Simbar, 2013). Most authors agree on the social competence skills that should be enhanced in the specific training for these students. These skills can be defined as "*the ability to organize their own social behavior in order to obtain positive feedback from others in a variety of different contexts and in a manner consistent with the prevailing conventions and moral principles*" (Dodge & Murphy, 1984). The training of students should be based on the enhancement of communication abilities, on the promotion of acceptance and empathy, on the enhancement of problem solving, and of life skills in general. The training should also promote the development of self-esteem, self-reliance and increased relational skills and emotional management (Carbonare, Ghittoni, & Rosson, 2004).

Regardless of the features of training, there is still little research in the international scientific literature on the role of peer educators and their actual characteristics prior to training. Some studies have delved into the characteristics of a peer educator in health prevention programs. For example, Badura, Brack, Millard and Shah (2008) have come to the conclusion that, compared to other university students, those who want to become peer educators have higher levels of self-esteem, greater leadership skills, and less tendency to adopt risk behavior. At the same time, these students do not seem to be different from their colleagues in terms of personal values and temperament, which makes them a credible model for peers.

Other studies have sought to understand what should be the characteristics of peer educators in an anti-bullying program. Porter and Smith-Adcock (2011), for example, suggested involvement of victim's defenders as peer educators. The authors, in fact, through a brief review of some of the most famous works of this type, show that often the cause of the failure of such projects was the lack of identification and subsequent use of defenders in the role of peer educators. They add that allocating intervention programs solely to assist children with obvious problems, such as bullies and victims, may reduce the resources allocated to the children who, although not expressing an explicit need, would benefit from support. Defenders, in fact, need the same level of support as the other main protagonists of bullying. Also, it is possible

that helping the defenders may have indirect benefits for all the other students (Porter and Smith-Adcock, 2011).

The recruitment phase of peer educators is therefore considered one of the most critical aspects of peer education programs (Borgia, Marinacci, Schifano, & Perucci, 2005). Some projects identify educators through direct selection by adults (teachers or experts), who usually choose the more capable academic students, and those who have a regular school path (Campbell & Marino, 2009). Other programs, on the other hand, identify peer educators through the nomination procedure by their peers. In this case, the most popular, prosocial, or class-leading students will be chosen (Jackson & Campbell, 2009). An alternative way is for some classmates to voluntarily take the role of peer educator in the program. This is the case with *NoTrap!* (Menesini, Palladino, & Nocentini, 2015; Palladino, Nocentini, & Menesini, 2016), a school-based, universal prevention program to combat bullying and cyberbullying.

1.2.5 – The NoTrap! Program – an Italian peer-led model to counteract bullying and cyberbullying

NoTrap! is an Italian online school-based universal intervention for bullying and cyberbullying. It is designed for adolescents attending the 7th through 10th grades. It is a peer-led program, in which adolescents are, simultaneously, the target and the agents of the intervention. *NoTrap!* is theory-driven, based on psychological scientific literature. Each phase has been conceived in order to address a specific aim, and

to change specific mechanisms responsible for bullying and cyberbullying. In this regard, many authors (Pozzoli & Gini 2013; Ttofi & Farrington 2011) have underlined the social and group aspects of bullying; therefore, an ecological approach, targeting the multiple contexts that impact school-bullying, would seem to prove most effective in order to counteract these phenomena. Following this evidence, the *NoTrap!* program aims to involve the whole school and the community at different levels.

The *NoTrap!* program normally lasts 4 months (from January to May).

The program can be implemented in three main phases:

Launch event and awareness meeting

We divide this phase into two meetings that are carried out in parallel: the first one is for teachers and the second for students.

Teachers meeting: For each class, the program requests two representative teachers. At this stage, one training session is held with all the representative teachers of the schools, plus other teachers willing to take part. The meeting starts with an introduction on bullying and cyberbullying followed by an explanation of the *NoTrap!* program. In the second part of the meeting, teachers are invited to participate in some activities that peer educators will perform in class. In this way teachers will be ready to help their students when they start to work in the group-class. This means that teachers will assume a *scaffolding* role during the peer education phase.

Students meeting: In all classes involved, psychologists present the program and start raising awareness on bullying and cyberbullying by means of videos, discussions and role play activities. In particular, the following topics are addressed:

a) bullying and cyberbullying criteria and typologies. In this phase, we underline the continuity between the two phenomena, but also point out the differences implied by the specific contextual features of cyberbullying (e.g., anonymity, publicity) (Menesini et al. 2012). The defining criteria of the phenomena are emphasized to help students to clearly recognize a bullying or cyberbullying episode and to differentiate them from other similar situations (e.g., joke, fight);

b) victims' emotions and long term consequences of the situation. This aspect is useful to focus attention on the victim's suffering and to promote empathy towards the victims;

c) bystanders' responsibility. We discuss bystander roles in face-to-face and online contexts. Through videos and scenarios, we stimulate awareness and ask why bullies often act in front of classmates, and why bystanders do not help the victims. Then, we encourage reflection on what could be the consequences of bystanders' passivity (i.e., to reinforce bullying behavior and to aggravate the victim's pain and loneliness). We finally introduce some positive coping strategies useful for victims and bystanders to make students aware of their power when they see a bullying situation;

d) ICTs risks. We also focus on possible risks online and how we can prevent and cope with them.

At the end of this meeting, there is the peer educators' recruitment: we explain what the *NoTrap!* program is and what it means to be a peer educator. We then request four-five students in each class to self-select as peer educators, assuming a more involved role in the following phases of the program. Specifically, students who publicly raised their hand, showing their motivation to be included, were selected.

Peer educators training

In each school, peer educators attend a day - training (8 hours) all together. The training is designed to empower three areas of peer educators' competence. Each unit is composed of activities and practice (e.g., realization of posters, role play, games) and reflection. The three units of the training are:

a) Listening skills: the activities and discussions of this unit are intended to help students understand what we have to do when we listen to someone face-to-face and online. Students gradually become more aware of non-verbal language to communicate listening and empathic attitudes.

b) Emotional Competence and Empathy – At the end of the activities of this unit, peer educators should understand that everyone feels emotions but there are several ways to live and experience an emotion. In addition, they should know that there are no right or wrong emotions,

but simply some affective and behavioral reactions that are more functional than others. They should be aware that when the intensity level of an emotion is too high, we can lose control of our actions. Therefore, it is important to learn how to regulate our emotions. Finally, they should reflect on how the ability to understand others' emotions can improve our relationships;

c) Problem solving and coping strategies of bullying and cyberbullying: this unit has three main aims. The first one is to deeply consider the effects and the long-term consequences of bullying and cyberbullying situations; then peer educators explore all possible strategies in order to cope with this problem and to avoid its detrimental long-term consequences. They should understand that there is not a unique solution that always works for all victims in all situations. At this point, we explain the problem-solving technique: deeply exploring the advantages and disadvantages of each solution, choosing the best one, then selecting the most appropriate plan for that specific problem and for that specific person.

At the end of the three units, there comes the so-called "online training": peer educators visit the program web page, www.notrap.it, where they may register in the community. The virtual community of the web page is an online space in which peer educators can offer a peer support service for all adolescents asking for help. The community is accessible to students below 18 years of age, and psychologists and

adults normally moderate and supervise all the interactions in the community.

The workshops led by peer educators

In the weeks after the training, teachers and peer educators organize two workshops in class. Each workshop is about two hours long. Specifically, the peer educators lead two cooperative interventions in their group-class under their teachers' supervision. Classmates are divided into four or five subgroups, each with a peer educator. In every subgroup, each student has a specific role to perform in order to cooperate and complete the activity. A short manual is available for peer educators, in order to help them lead the two workshops. In particular, peer educators suggest some training activities to their classmates. The main activities are: understanding important relational concepts (i.e. empathy or problem-solving technique) and stimulating discussion and reflection among classmates.

Both workshops are focused on the victim and bystander points of view. The first one is aimed at thinking about which emotions can be elicited in a bullying or cyberbullying episode. Then the victim's emotions are explored deeply in order to promote empathic feelings towards the victims. The second workshop is focused on functional and positive coping strategies in order to counteract bullying and cyberbullying either as a victim or a bystander. The groups create posters, photos and other products, all of which are published on the *NoTrap!* Facebook page. At the end of the activities, the students present their posters to the other

classmates and together the class discusses the emotions they worked on and the solutions they found.

1.2.6 - NoTrap program – the peer education scheme as a *link* within a systemic mechanism

The systemic approach of NoTrap can be considered the principal reason for the success of this program. NoTrap aims to counteract or prevent the creation of maladaptive class-group dynamics that often are an easy context for bullying development. In an ecological perspective, in a classroom with bullying problems, negative dynamics are influenced by the interactions between many actors. These are: bullies and victims; assistants and reinforcers that support bullies and, sometimes, defend the victim; passive bystanders who indirectly reinforce bullies; teachers who can intervene or not when a bullying accident happens. When a teacher does not intervene, he/she legitimates these behaviours, thus increasing students' moral disengagement, and in turn the level of bullying (Campaert, Nocentini, & Menesini, 2017). Finally, students and teachers' attitudes and behaviours are influenced by the School policy on bullying.

In this perspective, NoTrap program aims to intervene on all of these levels and interactions. The teacher's meeting is focused on increasing knowledge of bullying, cyberbullying, and of the interventions that teachers can make when bullying occurs. At the end of this meeting, teachers should be able to recognize bullying dynamics in their classes. Besides they should become aware of the impact that their attitude

toward bullying might have on their students' attitudes. Finally, teachers are invited to integrate the School Policy with a protocol aimed to handle bullying emergencies.

NoTrap! intervenes directly also on victim and bystanders, and indirectly on bullies. The awareness meeting targeted to the whole class, and the two workshops carried out by peer educators, are focused to empowering victims and bystanders. Specifically, the awareness meeting allows stimulating students' reflection about bystanders' impact on bullying. This paves the way for the following workshops. For instance, in the first workshop, students work in depth on victim and bystanders' emotions. The workshop is finalized to develop empathy towards the victim. In the second workshop, students learn several strategies to cope with bullying from the point of view of the victim and of the bystander. Empowering victims and bystanders means reducing the power of bullies.

NoTrap! program invests on a systemic process of activation of all the actors involved in bullying dynamics. In this process, peer education is not the unique action. It can be considered as a link to facilitate experts' actions, and then to promote a change in the group. *NoTrap*'s peer educators, after the training, act in the area of proximal development with their classmates. They are members of the class, so they are more capable than experts to activate a process of change. But it is important to underline that in our program, we do not intend to give a professional role to peer educators. On the contrary, thanks to peer education, we

aim to promote a process of support and reciprocal influence that are typical of classmates' interactions.

In conclusion, NoTrap is the exemplification of a systemic intervention, in which peer education is a *joining link* between experts' actions and the change in class-group dynamics.

This does not mean that peer education is not important. On the contrary, it has to be well implemented, because the success of the whole program will depend on an adequate peer educator's work.

Overview of the Research Project

As in the previous paragraphs, in international scientific literature, there are contrasting opinions on the efficacy of anti-bullying programs that adopt a peer-led model.

This research project aims to address the Smith, Salmivalli and Cowie's call to study the different components of this approach more deeply in order to understand "*what works, for whom and under which circumstances.*" Specifically, we will focalize on the impact of strategies adopted to recruit peer educators.

In the Second Chapter there will be a pilot research on the peer educators of the *NoTrap!* anti-bullying program (edition 2011/2012). Specifically, we are going to investigate if students that voluntarily decided to become peer educators have specific features that differentiate them from their classmates, who did not take this role.

Finally, in the Third Chapter, the results of two studies of the same research design, carried out in the 2015/2016 edition of NoTrap Program, will be presented. Specifically, we empirically compared two different experimental conditions: a) classrooms in which some students voluntarily decided to become peer educators, and b) classrooms in which peer educators were nominated by classmates. Specifically:

- in Study I, we will investigate whether "volunteer peer educators", "peer educators nominated by classmates" and "all the

other students" (=no peer educators) have different individual and socio-relational characteristics.

- In Study II, we will evaluate whether the way in which peer educators have been recruited affected efficacy of NoTrap program.

CHAPTER 2

Introduction

In Chapter 1, we have seen that *Peer education* can be considered as an "umbrella term" used to describe all interventions in which educators and educatees share something that creates an affinity between them (Shiner, 1999). This affinity can involve several aspects (e.g. age, social status, social environment, specific health issues and common interests) (Abdi & Simbar, 2013). Turner and Shepherd (1999) affirmed that peer education is still a method in search of a psychological theoretical framework. At the same time the potential strengths of this method are multiple: for instance, peers are a credible source of information because students easily identify with each other. This kind of intervention is more cost-effective than other methods, as it utilizes an already established means of sharing information and advice and it has the potential to empower all people involved. For all these reasons, peer education seems to be a particularly effective method of interventions targeted towards adolescents. We know that adolescents are more likely to modify their behaviors and attitudes if they receive positive messages from peers (Wye & AILVL Hepatitis C Peer Education & Prevention Program, 2006). Therefore, peer-led interventions have been successfully applied for many years. (Abdi & Simbar, 2013).

In line with this trend, some anti-bullying programs have begun to adopt the peer-led model (Houlston & Smith, 2009; Menesini, Nocentini, & Palladino, 2012; Palladino, Nocentini, & Menesini, 2016). School bullying and cyberbullying are increasing problems in adolescent age. For many years, different intervention models have been developed with the aim of addressing and counteracting them. The majority of the intervention components consists of actions taken by adults (Salmivalli, 2001). The targets of these interventions are usually victims and perpetrators of bullying (Greene, 2003; Salmivalli, 1999), although bullying involves other participants. Both in the classroom and online, it is possible to find assistants, supporters, outsiders, and the victim's defenders (Bastiaensens et al., 2014; Christina Salmivalli, Lagerspetz, Björkqvist, Österman, & Kaukiainen, 1996). Hence, various authors (Salmivalli, 2001; Smith, Salmivalli, & Cowie, 2012) have recommended extending the focus of anti-bullying interventions in a peer-led perspective to include every participant, as targets but also as mediators of change.

Despite the attention given to the involvement of peers in anti-bullying interventions, the efficacy of peer education models is still controversial. Some studies (Birnbaum, Crohn, Maticka-Tyndale, & Barnett, 2010) have found that this model may simultaneously empower the educators and the target group. It could also improve the general social climate of the school. On the other hand, results of a meta-

analysis of anti-bullying programs (Ttofi and Farrington, 2011), are less encouraging. Specifically, authors suggested that working with peers is associated with an increase of victimization. In relation to this assertion, Smith, Salmivalli and Cowie (2012) underlined the need to be cautious in the interpretation of Ttofi and Farrington's results and of their policy implications. In fact, the expression "work with peers", can include a variety of approaches, each one associated with a different potential level of effectiveness. In regards to this, though all peer-led interventions share the same core model (Cowie & Wallace, 2001), it is possible to find differences among them in operative terms. For instance, some models differ in the duration of training, the trainers' attitude (more or less directive), the materials and/or activities used to empower peer educators' skills (i.e. use of videos, role playing). The programs could differ also in focus on the specific tasks of peer educators (i.e. support services, mentoring, counselling, mediation/conflict resolution) or in the level of autonomy of peer educators in these tasks (Thompson & Smith, 2011).

One of the most critical aspects related to the variability in peer-led models is the recruitment of peer educators (Borgia, Marinacci, Schifano, & Perucci, 2005). In some projects peer educators are directly selected by adults (teachers or experts). In this case students were chosen for their compliance with adult requests, their academic strength and regular school attendance (Campbell & Marino, 2009). Other

programs individuate peer educators via peer nominations. In this case, peer educators may be chosen for being more popular, prosocial, or self-confident leaders within the classroom (Jackson & Campbell, 2009). An alternative way is having peer educators voluntarily choose to assume this role. This is the case of the Italian program *NoTrap!* (Menesini, Palladino, & Nocentini, 2015; Palladino et al., 2016), a school-based universal intervention against bullying and cyberbullying. This program integrates an important component of peer-led involvement (Menesini et al., 2012, 2015).

Given the importance of the peer educators, we may ask who these students are. Also why, in contrast with their classmates, did they decide to assume this role? In scientific literature, there is little information about the role of peer educator. Some studies investigated features of peer educators in health prevention programs (Badura Brack, Millard, & Shah, 2008); others focalized on the characteristics that a peer educator should have (Porter & Smith-Adcock, 2011). To our knowledge, no previous study has investigated the characteristics of volunteer peer educators in an anti-bullying program.

2.1 Aims, Hypotheses or Research questions

The present study is aimed to describe the individual characteristics of the peer educators of the *NoTrap!* program who volunteered for this role. Specifically, we investigate if they are different from classmates for any specific reason. For this purpose, we will explore the following areas:

1- *Involvement in bullying.*

In the *NoTrap!* program, the decision to become peer educator is made immediately after a meeting aimed to increase awareness of bullying; that is why we hypothesize that the involvement in this event could influence the decision. For instance, it is possible that students become peer educators because they themselves had been targeted in the past, and can therefore understand the suffering of the victims. We know that experiences of social exclusion can make us more sensitive towards this problem and eager to do something in favour of the victims (Nordgren, Banas, & MacDonald, 2011). In addition, Van Cleemput, Vandebosch and Pabian (2014) found that adolescents that help cybervictims are more likely to have experienced this role in the past months. For these reasons, our first hypothesis is:

H1) Peer educators have experienced a higher level of victimization than their classmates. On the other hand, we know that the intervention is aimed to reduce bullying and to help the victims. We can hypothesize that bullies will be less motivated to become peer educators than their classmates; so our second hypothesis is

H2) Peer educators are generally not bullies.

Another possibility is that students who usually defend victims (*defender)* are more likely to become peer educators. This is because they have a natural inclination to prosocial behaviour and empathy

towards the victims (Caravita, Di Blasio, & Salmivalli, 2009; Gini, Albiero, Benelli, & Altoe, 2007). So, our hypothesis is:

H3) Peer educators have more peer-nominations such as "defenders of the victim", and a higher level of prosocial behaviour than their classmates.

2- *Perceived Social support*

"Perceived Social Support" can be defined as the individual perception of a set of general or specific supportive behaviours from people in their social network; this perception improves physical and mental well-being, and it may buffer when people are under stress (Malecki & Demaray, 2002). Social support may be offered by family, friends, or by a "significant other" (G D Zimet, Dahlem, Zimet, & Farley, 1988). In adolescents' social networks, the significant other may refer to a "special person," such as a boyfriend/girlfriend, an adult outside of the family (Canty-Mitchell & Zimet, 2000) or a best friend. We know that in late adolescence, the perceived social support from significant people and from friends, highly correlates with teenagers' perceived self-efficacy (Adler-Constantinescu, Beşu, & Negovan, 2013). Further, Demaray and Malecki (2003) found that students classified as victims, and bullies/victims perceive to receive less peer support then bullies and non-involved classmates; on the other hand, these students attribute more importance to social support than non-involved students do. Given these considerations, we can assume that the "perceived social support"

from peers may influence the decision to assume an active role in a program against bullying and cyberbullying. So, we hypothesize that:

H4) peer educators have a higher level of perceived social support from peers.

3- *Sex differences*

Scientific literature has shown that males and females differ in their role involvement as victim, bully, or defender (Li, 2007; Salmivalli et al., 1996). Males are more likely to assume the role of bully or of assisting/reinforcing the bully. Females are more likely to be defenders of the victims.

Sex differences have also been found in regards to perceived social support (Furman, 1998; Malecki & Elliott, 1999): female students report higher levels of perceived social support than males.

For these reasons, we expect to find differences between males and females who decided to become peer educators. We have not an a-priori hypothesis about the aspects in which boys and girls will be different. Then, we can formulate the following wise research question:

- Could we found two different profiles for boys and girls who decide to become peer educators in relation to specific characteristics and motivational aspects?

2.2 Method

2.2.1- Participants and procedure

Participants of the study are students of the experimental group in the 3rd edition of the *NoTrap!* program (Menesini et al., 2015; Palladino et al., 2016), carried out during the school year 2011-2012.

As shown in recent publications (Palladino et al., 2016), the *NoTrap!* program can be considered an evidence-based intervention since it was able to significantly reduce online and traditional bullying and victimization.

At the implementation level, the program is carried out in two main phases (see paragraph 1.2.5 for a more detailed description):

(1) The first one is expert-led. It starts with the so-called "*awareness meeting*" launch phase of the program: psychologists work with all the students of the classes involved to reflect together on bullying and cyberbullying. At the end of this meeting, four or five students in each class autonomously decide to become peer educators. This means that they assume a more active role in the program. These self-selected students participate in a specific training course;

(2) The second phase is peer-led. The trained peer educators lead two cooperative activities in their group-class: one about empathic feelings, and the other about problem solving strategies. The two workshops focus on the point of view of the victim and of the bystander. In addition, peer educators give their support online, anonymously, to any

adolescents who may request help on the webpage of the program (www.notrap.it).

An invitation to participate in the third edition of *NoTrap!* was sent to high schools in Tuscany from the Province of Lucca and the Regional Office of the Ministry of Education in June 2011. Five high schools (scientific high schools, technical institutes, or vocational high schools) requested to participate as experimental groups. We asked the school staff to select classes in the first year (corresponding to 9th grade), which is an important developmental transition for students enrolled in the Italian school system (Menesini et al., 2015). In some schools the staff requested we extend the project to certain classes in the second and the third year (10th and 11th grades). For the purpose of this study we decided to select only students who participated at the "awareness meeting," because only they had the possibility to apply for the role of peer educator. Thus, the participants were 524 students aged 13-18 yrs (mean age= 14.72 DS=.97; males= 57%; 9th grade= 444, 10th grade= 56, 11th grade= 36). The sample was composed of two subgroups: "peer educators" (N= 118; males= 51%), and "other students" (N= 406; males= 46%), who participated in the project, but with a less active role. Self-report questionnaires were administered by trained research assistants during school time for the pre-test data collection (in November 2011). Consent procedure for research participation consisted first of an approval by the schools (principals and teachers) and explicit parental consent to take part in the evaluation procedure:

100% of the families agreed with their children's participation in the research.

2.2.2 - Measures

Bullying and Victimization

We used the *Florence Bullying-Victimization Scales (FBVSs)* (Palladino, Nocentini, & Menesini, 2015)[1] composed of two subscales: bullying perpetration and victimization. FBVSs consist of 20 items asking how often in the last couple of months had the adolescents experienced certain behaviours, either as perpetrators or victims (e.g. "I threatened someone"; "I was threatened"). A definition of bullying introduced the scale. Each item was evaluated along a 5-point scale from "never" to "several times a week." The two subscales consist of 10 items each. In the present sample, the CFAs had a good fit for both victimization ($X^2_{(30)}$=66.107, p<.001; CFI=.93; RMSEA=.046 , 90 Percent CI [.031-.061]) and bullying ($X^2_{(32)}$=75.978 , p<.001; CFI=.94; RMSEA=.050, 90 Percent CI [.035-.064]) scales. For each subscale, we saved the factor scores, and we used these in the follow-up analyses.

Defending behaviour

In order to analyse the propensity to take the role of victim defender, we used an item of the reduced version of the Italian Participant Role

---

[1] The FBVSs has been developed in 2011, but the measured has been published in 2015. Then it was available in the study of 2011/2012.

Questionnaire (Menesini & Gini, 2000; Salmivalli et al., 1996). It is based on peer nominations. Students were asked to nominate an unlimited number of classmates as victim defender (*Who are the boys or girls who try to stop the bullying that a schoolmate undergoes?"*). For each student, we computed the total nominations obtained, divided by the number of class students, in order to obtain a weighted score for each one, ranging from 0 to 1.

Prosocial Behaviour

We used a scale developed by 3 items of the Youth Self Report (Achenbach, 1991)): "I like to help others" (β= .589, SE = .038, p<.001), "I try to help others when I can" (β= .787, SE = .036, p < .001); "I am likely to help others when they need" (β= .754, SE = .036, p < .001), rated on 3-point scale. We saved the factor scores, to use in the follow-up analyses.

Perceived Social Support

We made use of the Italian version of *Multidimensional Scale of Perceived Social Support* (MSPSS) (Di Fabio & Busoni, 2008; Zimet, Powell, Farley, Werkman, & Berkoff, 2011; Zimet,, Dahlem, Zimet & Farley, 1988). This instrument was developed as a self-report measure of subjectively assessed social support. It consists of 3 subscales (four items each): family; friends, and special person support   In particular, we used only the friends' subscale (e.g. *I can count on my friends when*

things go wrong), because we were interested in investigating support received from peers. Each item was evaluated on a 7-point scale from "Very Strongly Disagree" to "Very Strongly Agree." In the present sample, the CFA showed a good fit ($X^2_{(1)}$=.0264, *p*=.608; CFI=1; RMSEA=.000 , 90 Percent CI [.00-.093]). We saved the factor scores for use in the follow-up analyses.

2.2.3 - Data Analyses

All the analyses were conducted separately for males and females, with Mplus 7.0 with a Weighted least squares estimation (WLS-MV) with missing data (Muthén & Muthén, 1998-2015).

First, we calculated point-biserial correlation coefficients between "being or not being a peer educator" and all the other variables.

To test the hypotheses, we used probit regression models. Specifically, for each subgroup, we tested a model in which the two peer educator conditions (being or not being a peer educator) were predicted based on victimization, bullying, defending behaviour, prosocial behaviour and perceived support from friends. As predictors, we used the weighted score of defending behaviour and the factor scores for all the other variables.

2.3 Results

Point-Biserial Correlation Coefficients and descriptive statistics of all variables in each group are reported on Table 2.1.

Table 2.1 - Point-Biserial Correlations with "being a peer educator" and Descriptive Statistics for male and female in "peer educators group"(P.E.) and "other students group" (O.S.)

		Male					Female				
		r_{pb} with *being a peer educator*	N	Mean of factor scores (S.E)	lower	upper	r_{pb} with *being a peer educator*	N	Mean of factor scores (S.E.)	lower	upper
Victimization	O.S.	.237	194	-.010 (.053)	-.072	.435	.168	142	-.004 (.054)	-.072	.485
	P.E.		55	.037 (.053)	-.072	.512		55	.027 (.053)	-.072	.374
Bullying	O.S.	.183	194	.030 (.126)	-.176	2.381	.012	140	-.085 (.126)	-.178	1.323
	P.E.		54	.168 (.125)	-.172	1.894		54	-.082 (.125)	-.172	.326
Perceived support from friends	O.S.	.193	176	-.364 (.348)	-3.839	1.404	.042	132	.404 (.343)	-1.969	1.404
	P.E.		47	.154 (.351)	-3.717	1.404		51	.323 (.345)	-3.839	1.404
Prosocial behaviour	O.S.	.256	187	-.089 (.193)	-821	.343	-.048	138	.086 (.188)	-.724	.343
	P.E.		53	-.111 (.194)	-.821	.343		53	.166 (.187)	-.821	.343
			N	Mean of weighed scores (ds)	lower	upper		N	Mean of weighed scores (ds)	lower	upper
Defender – peer nomination	O.S.	.049	236	.032 (.052)	.000	.052	.214	161	.054 (.068)	.00	.30
	P.E.		60	.036 (.053)	.000	.210		58	.084 (.094)	.00	.041

As we can see, for the male sample, variables with the strongest point-biserial correlation with "being a peer educator" are victimization (r_{pb}=.237), bullying (r_{pb}=.183), perceived support from friends (r_{pb}=.193) and prosocial behaviour (r_{pb}=.256). For females are victimization (r_{pb}=.168) and defender role (r_{pb}=.214).

Results from the probit analyses are reported on table 2.2 separately for the two genders.

Table 2.2 – Probit Regression loadings and R-Squares for males and females

	MALES		FEMALES	
	B (SE)	P	B (SE)	P
Vicimization	1.988 (.820)	.015	1.468 (.873)	.093
Bullying	.349 (.191)	.068	-.113 (.616)	.854
Prosocial behavior	.214 (.068)	.002	-.067 (.090)	.455
Social support	.815 (.389)	.036	-.175 (.361)	.627
Defender	.147 (1.568)	.925	2.729 (1.119)	.015
R^2	.164		.070	

Looking at the female sample, we found that defending behaviour predicts peer educator condition significantly, whereas only a trend was found for victimization. Being a female peer educator was related to a higher level of defending behaviours. The model explained 7% of variance for the female sample. In the male model, a higher level of victimization, prosocial behaviour, and perceived support from friends predict the probability of assuming the role of peer educator. The model explained 16% of variance for the male sample. Overall, female peer educators are characterized by their level of defending behaviours, and

male peer educators are characterized by involvement in victimization, perceived support from friends and prosocial behaviour.

2.4 - Discussion

The aim of this study was to analyse teenagers' characteristics that make them more motivated to become peer educators as compared to the rest of the class. Specifically, we aimed to understand if these teenagers differ from their classmates that do not take an active role in the anti-bullying program.

We firstly hypothesised that students more involved in bullying, either as victim or defender, were more likely to assume the role of peer educator. Our findings partially confirmed our hypotheses. Specifically, we found that adolescents with higher scores of victimization are likely to engage as peer educators. This is true for the male sample, whereas for the females we found only a trend. These results confirm our first hypothesis and are in line with findings by Van Cleemput, Vandebosch and Pabian (2014). These authors stated that adolescents who had experienced peer victimization may be capable of building a more accurate representation of social pain, which leads them to sympathize and help others. We may also hypothesize that for students who have an initial problem with peers, the project can represent a structured and empowering opportunity to react and escape from the status of victim. In addition, both for males and females, the probability of becoming a

peer educator is predicted by the natural inclination to help others. In male peer educators this translates into a higher level of prosocial behaviour. Instead, for female peers the propensity to help others is more related to the defending role during bullying episodes. In fact, girls with higher nominations as "defender of victim" have a greater probability of becoming a peer educator. We know that females are usually more involved as defenders compared to males (Salmivalli et al., 1996). Maybe, becoming a peer educator is seen as coherent with the role they usually play in bullying dynamics. In every case the explained variance of the model for the girl is low. This could be due to the low frequency of defending behaviour in bullying dynamics (17%). Further researches could investigate other variables that can better explain differences between girl peer educators and simply girl students, such as the pro-victim attitude or empathy.

Unexpectedly, we found a positive trend association between bullying and the role of peer educator in the male sample. This result led us to suppose that males who decide to become peer educators cannot be identified as traditional victims of bullying. Maybe, they could be classified as "bully-victims" or "reactive victims." In other words, children or teenagers who do not remain passive when they are bullied; who, on the contrary, react against their aggressors. Therefore, it is possible that, thanks to the *NoTrap!* Program, the bully-victims'

willingness to react to the bully can be converted into the positive actions of a more structured intervention against bullying.

For boys, another important variable able to predict peer educators' condition is the perceived social support from friends. In this regard, we can point out some considerations that need further investigation. We know that victims and bully-victims are more sensitive to peer social support (Demaray & Malecki, 2003). This sensibility could lead them to believe in a *peer-led model intervention.* To be a peer educator would allow them to give their support to classmates. In addition, we can suppose that victims who are supported are more resilient than those who feel alone. Social support could make them strong enough to assume an active role against bullying.

In conclusion, we found that both boys and girls are willing to become peer educators because they are usually involved in these problems at different levels. Boys who make this decision report experiences as victims. These boy victims might put much importance into prosocial behaviour and social support from peers, therefore they may feel highly responsible for the new role proposed in the *NoTrap!* program. Girls who assume the role of peer educators are defenders. The role of peer educator is devoted to helping victims. This may be the reason why girl defenders are motivated to become peer educators. For both boys and girls, "being a peer educator" may represent an opportunity to reinforce

their disposition to helping victims, and to learn more effective strategies to contrast bullying and cyberbullying.

The major methodological limitation of this study is the low number of the "peer educators" sample. This limits the power of the results and increases the risk of non-replicability. The reason is that the present study should be considered as a preliminary investigation of a larger ongoing research project. Specifically, in future studies we will evaluate the impact of the peer educators' recruitment methods (voluntary recruitment vs selection by classmates) and of the personal characteristics on the intervention effectiveness.

In conclusion, this is the first study which described the characteristics of volunteer peer educators in an anti-bullying program. This topic is extremely relevant within the literature on anti-bullying interventions, because it is related to the issue of variability of results related to the effectiveness of peer-led models (Birnbaum et al., 2010; Ttofi and Farrington, 2011; Smith, Salmivalli and Cowie, 2012). The topic of recruitment of peer educators, and consequently of their characteristics, constitutes a challenge for future researches within this field, with relevant implications in bullying prevention and intervention development.

CHAPTER 3

Introduction

In the first chapter, we argued that Peer Education can be very promising for antibullying programs. This model is widely used in health-interventions targeting adolescents. Besides, we know that bullying and cyberbullying are social phenomena, in which bystanders play a relevant role. In light of this, a model that invests in peers could be a winning strategy to change the dynamics of bullying.

Nevertheless, in the scientific framework there is a debate on the effectiveness of peer-led models in antibullying programs. On one side, some scholars assert that "*work with peers*" might have iatrogenic effects and reinforce bullying behavior (Ttofi & Farrington, 2011). On the other side, many authors (Lee, Kim-Kim and Kim, 2015; Birnbaum, Crohn, Maticka-Tyndale, & Barnett, 2010; Cowie, Naylor, Talamelli, Chauhan, & Smith, 2002; Naylor & Cowie, 1999) have come to diametrically opposing conclusions (see the paragraph 1.2.3 of this dissertation for a more detailed description of the debate). The different positions could be explained with what Smith, Salmivalli and Cowie (2012) affirmed: "*working with peers*" can include a wide variety of approaches, each one potentially associated with a different level of effectiveness.

Following this consideration, the following studies are aimed to address Smith, Salmivalli and Cowie's call to deepen the different

components involved in a peer education approach, in order to understand "*what works, for whom and under which circumstances*" within the NoTrap antibullying program (see section 1.2.5 of this dissertation). Specifically, in the following studies we focalized on Smith, Salmivalli and Cowie's last two questions. In regards to the first question (*what works?*), previous studies have already explored some possible mediation mechanisms that can explain the success of the program. A study by Palladino, Nocentini, and Menesini (2012) showed that in the experimental group the program predicted an increase over time in support seeking, in both informational and instrumental aspects (distal advice) and in the more emotional sense of getting help from people (close support). This increase is a mediational mechanism that explains how the program is able to decrease cybervictimization. Other mediation mechanisms could be explored, in order to understand how the program is able to reduce bullying and victimization.

As anticipated, the focus of this chapter is to understand "*for whom*" and "*under which circumstances*" a peer led model works.

Relatively to "*for whom*", it is important to underline that a peer-led model can be considered effective when it is able to generate a process of change in the whole group. In this regard, these kinds of programs could run the risk that the less active role of peer educators' classmates might have less effect on them than in peer educators. A peer-led model should pursue the objective of making peer educators able to transfer contents and skills to their reference group.

Finally, regarding "*under which circumstances*", we focalized on an understudied aspect of peer-led models, that is the strategy with which peer educators are recruited. Attention for this aspect sprang from the consideration that a voluntary peer educator could differ from another one who has been nominated by classmates. We do not know if one of these strategies is to be preferred over the others. It is possible that the effectiveness of a peer-led model is independent from peer educators' characteristics. On the other hand, the two strategies could influence not only the characteristics of peer educators, but also some key factors to intervention success. For instance, we can speculate that voluntary peer educators are more motivated to engage in their tasks. In this regard, in the pilot study presented in the second chapter of this dissertation, we found that students[2] who have volunteered to take on the role of peer educator are different from their classmates for higher levels of victimization, defending behaviour, perceived support from friends and prosocial behaviour. Therefore, voluntary peer educators could be particularly motivated to counteract a problem that involves them directly. Besides, a higher involvement in bullying could make them a more credible source of information for their classmates.

On the other hand, Jackson and Campbell (2009), found that the nomination procedure by the classmates generally leads to choosing the most popular, prosocial, or class-leading students. In accordance with the theory of social learning of Bandura, the modeling process could be

---

[2] 2011/2012 NoTrap! edition

influenced by the status and prestige of the model. Then, a popular peer educator could have much normative influence over his or her classmates. This means that nominated peer educators, thanks to their high social status, could be more likely to be agents of change within their class.

In light of the above considerations, it is interesting to see if volunteers, peer educators, and peer educators nominated by classmates differ in relation to individual and socio-relational characteristics. Besides, it is interesting to empirically compare the effectiveness of peer educators recruited voluntarily to those selected through their classmates' nominations, to determine what reduces levels of bullying and victimization, and what increases defending behavior in their classes. Specifically, we are interested in understanding whether the effectiveness involves the whole class or only the peer educators.

3.1 - The present studies

In the present studies we aim to investigate the impact of peer educators' recruitment strategy on the effectiveness of the NoTrap antibullying program.

Starting from this general research goal, we defined an experimental design in which we randomly assigned the classes involved in the NoTrap! program to one of the experimental conditions:

a- classrooms in which students voluntarily decide to become peer educators (Voluntary recruitment condition - VR);

b- classrooms in which peer educators are nominated by their classmates (Nomination recruitment Condition – NR).

Given the design, we split the research goals into two objectives that were translated into two different studies:

STUDY I: This study aims to investigate whether "voluntary peer educators", "peer educators nominated by classmates" and "all the other students" (=no peer educators) show different individual and socio-relational characteristics. More specifically, we investigated the differences between the three groups in relation to the level of victimization, of bullying, of defending behaviour, and of their sociometrical status and acceptance by peers.

STUDY II: This study aims to understand "*under what circumstances and for whom*" the NoTrap program is effective. Specifically, first we evaluated whether recruitment has any effect on the effectiveness of the program (*under what circumstances)*. At the same time, we evaluated whether the role played by the students in the intervention (peer educators vs all the other classmates) impacts the effectiveness of the program (*for whom).* This will allow us to discern whether the NoTrap! program is effective for the whole class or only for peer educators, and if this trend differs in the two experimental conditions.

The effectiveness of the program was measured as a longitudinal change in the main behavioral outcomes: victimization, bullying and defending behavior.

Specifically, our goals are: (2a) to test whether the experimental condition (VR and NR) moderates the effectiveness of the NoTrap Program in reducing victimization and bullying, and in increasing defending behavior; (2b) to test whether the longitudinal change in the target outcomes can be moderated by the role students played in the intervention (peer educators vs their classmates); (2c) to test a potential interaction between the experimental condition (VR and NR) and the role students played in the intervention (peer educators and their classmates); 2d), to measure the effect sizes of the effects (pre-post change), comparing VR with NR method groups, and/or comparing peer educators and their classmates in each experimental condition when the interaction is significant.

3.2 Methods

3.2.1 - Participants and Procedure

1079 students of 49 classes of 15 Secondary Schools in Tuscany participated in the NoTrap! Program in the 2015/2016 school year. More specifically, there are 442 middle school students (the 7° and 8° grades), and 637 high school students (9° and 10° grades). Participants' age ranged from 12 to 18 years old (means=14 years, ds=1.34). 77% of students belong to the Italian ethnic majority, and 44% are females.

Schools were selected using a self-selection inclusion process, and the classes were selected by the school staff.

We randomly assigned the classes to two experimental conditions: (a) 24 classes in which peer educators were invited to voluntarily assume this role (volunteer recruitment – VR; 553 students) and (b) 25 classes in which peer educators were nominated by classmates (recruitment by classmates' nomination – NR; 526 students) (see figure 3.1).

Figure 3.1 - Flowchart of the recruitment and retention of participants in the evaluation

1079 students
classes= 49
Secondary Schools= 15

Random Assignment

Volunteer recruitment (RV condition)
Baseline n= 553
Classes n= 24

Recruitment by classmates' nomination – (NR condition)
Baseline n= 526
Classes n= 25

Exclusion of 4 classes (recruitment by teachers selection -n=74)

Volunteer recruitment (RV condition)
Baseline n= 518
Classes n= 22
Absent, refusing = 59

Recruitment by classmates' nomination – (NR condition)
Baseline n= 487
Classes n= 23
Absent, refusing = 67

Study I: Analyzed

Volunteer recruitment (RV condition)
Analized n= 459
Classes n= 22

Recruitment by classmates' nomination – (NR condition)
Analized n= 420
Classes n= 23

Follow up

Completed n= 516
Absent, refusing or left school=88

Completed n= 465
Absent, refusing or left school=88

Study II: Analyzed

Analyzed n= 428
Classes n=22

Analyzed n= 377
Classes n=23

For both experimental conditions, after the first data collection, and at the end of the *students meeting* (see paragraph 1.2.5 of this dissertation), the NoTrap! trainers explained the meaning of being a peer educator in the program. Then, in VR condition the trainers requested for volunteers to assume the role of peer educators. Specifically students who publicly raised their hand were selected. In NR condition, each student wrote on a paper the name of a classmate he/she wanted to candidate to assume this role (anonymously);

students who received the highest number of nominations became peer educators (if they were willing to take on this role). For both conditions, the number of peer educators for each class ranged from three to seven. This number depends on the total number of students for each classroom, and on the effective number of volunteers (in the VR condition) or nominated peers (NR condition) we had accumulated by the end of the recruitment phase. In a few cases the teachers did not accept their assigned recruitment strategy, and they wanted to choose the peer educators themselves. This is why, for the present studies, we excluded 4 classes (2 classes for the VR condition and 2 for the NR condition) in which peer educators' recruitment was highly influenced by teachers. For this reason in the final analyses only 1005 participants were retained (see figure 3.1).

Data were collected in the two following waves: November 2015 (T1, wave 1, before starting the NoTrap! program) and May-June 2016 (T2, wave 2, after the end of the two peer-led activities). The questionnaires were administered in class by trained research assistants during school time.

Preliminary informed consent, consisting of initial approval by the School Principal and the class council, was requested. Once permission was gained from schools, information letters were sent to all students and to their parents, explaining the study, the intervention aims, and requesting parents for their children's participation. 96% of the target sample received parents' approval to participate in the study and in the

intervention. Our final sample consists of a total of 966 students. Summarizing, for the present study we have 4 subgroups (see table 3.1) generated by the intersection of the following two conditions: *Experimental condition (Classrooms with volunteering peers and classrooms with nominated ones) AND Peer educator condition* vs the rest of the class (see table 3.1).

Table 3.1 – *Participant distribution*

		Experimental Condition	
		VR condition	NR condition
Peer educator role's condition	Peer educator	Volunteer peer educators N=101, 57% females, 50% middle school	Nominated Peer educators N=75, 36% females, 41% middle school
	Other students	Volunteer peer educators' classmates N=399, 39% females, 51% middle school	Nominated Peer educators' classmates N=391, 45% females, 34% middle school

Overall, 879 students filled out the questionnaires at T1 and 797 at T2 (respectively 87 at T1, and 176 at T2, were students that were not at school on the day of the survey administration at T1 or T2).

For STUDY I, we used data from the first data collection. Specifically, we compared the three subgroups: (1) Volunteering peer educators, (2) Nominated peer educators, and (3) "All the other students", that are the total of classmates from the two experimental groups not involved as

peer educators. Excluding absent students at T1, we had 97 volunteering peer educators, 70 nominated peer educators and 712 classmates - "all the other students".

For STUDY II, we used longitudinal data derived from both data collections. We compared changes over time in the two experimental groups (VR classes and NR classes) and in the peer educators vs the other students condition.

3.2.2 - Measures

Bullying and Victimization

The Florence Bullying-victimization Scales (FBVSs) (Menesini, Nocentini, & Calussi, 2011; Palladino, 2013) were used (see the second chapter of this dissertation for details on the scales and their psychometric properties). In each set of data collection, the scales present acceptable internal consistency. Specifically, for victimization at T1 Cronbach's alpha is .77, and at t2 it is .79. For bullying at t1 it is .74, at t2 it is .77.

Defending behaviour

In order to analyse the propensity to assume the role of victim defender we used an item of the Italian reduced version of the Participant Role Questionnaire (Menesini & Gini, 2000; Salmivalli et al., 1996). It is based on peer nominations. Students were asked to nominate an unlimited number of classmates as victim defenders (*Who are the boys or the girls who try to stop the bullying that a classmate is*

undergoing?"). For each student, we computed the total nominations obtained, divided by the number of class students, in order to assign a weighted score for each one. The estimate ranged from 0 to 1.

Sociometric Status

In order to measure popularity and unpopularity levels, we used two items based on peer nominations. Students were asked to nominate an unlimited number of classmates as popular or unpopular (*Who are the most popular girls and boys in your classroom?; Who are the least popular girls and boys in your classroom?).* For each student, we computed the total nominations obtained, divided by the number of class students, in order to assign a weighted score for each one. The estimate ranged from 0 to 1.

Likeability

In order to measure peer acceptance and rejection, we used two items based on peer nominations. Students were asked to nominate an unlimited number of classmates they liked most and least (*Who are the boys and the girls that you like the most? - who do you enjoy the most or with whom do you spend your time?; Who are the boys and the girls who you like the least - do you not enjoy or spend your time with?).* For each student, we computed the total nominations obtained, divided by the number of class students, in order to assign a weighted score for each one. The estimate ranged from 0 to 1.

3.3 STUDY I

3.3.1 - Overview of the Analyses

Analyses were conducted in SPSS. Preliminary analyses were carried out to test for non-normal data distribution.

Multivariate analysis of variance (MANOVA) was carried out with a between design, with the group condition (volunteering peers vs nominated peers vs all the other students), sex, and school grade (middle vs high school) as between-subjects variables. Outcome measures were victimization, bullying, defending behavior, popularity, unpopularity, acceptance and rejection. When multivariate results were significant, univariate analyses were considered. If significant, these were followed by post hoc comparisons with the Bonferroni corrections.

3.3.2- Results

Given the non-normal distribution of some data, we applied a logarithmic transformation to correct them, specifically to victimization and bullying variables, and we used the transformed variables in all the subsequent analyses.

Descriptive statistics are reported in table 3.2.

Multivariate tests showed a significant effect of group factor (Wilks' λ=.948; $F_{(14, 1582)}$ = 3.040; $p<.001$; partial $\eta2$ = .026).

Univariate tests showed a significant effect of group for victimization, popularity, acceptance and a trend for the effect on defending behavior (table 3.2).

Table 3.2 - Descriptive statistics and tests between subject effects for STUDY I

		N	M	ds	F
VICTIMIZATION	Volunteer Peers	94	1.12	.13	
	Nominated Peers	65	1.08	.08	
	Other students	650	1.08	.10	$F_{(2,797)}=4.092; p=.017$
	tot	809	1.08	.10	
BULLYING	Volunteer Peers	94	1.06	.08	
	Nominated Peers	65	1.10	.12	$F_{(2.797)}=1.665; p=.190$
	Other students	650	1.07	.09	
	tot	809	1.08	.09	
DEFENDING ROLE	Volunteer Peers	94	.088	.09	
	Nominated Peers	65	.10	.09	$F_{(2.797)}=2.896; p=.056$
	Other students	650	.07	.09	
	tot	809	.08	.09	
POPULARITY	Volunteer Peers	94	.13	.15	
	Nominated Peers	65	.20	.20	$F_{(2.797)}=9.221; p=.001$
	Other students	650	.11	.16	
	tot	809	.12	.16	
UNPOLULARITY	Volunteer Peers	94	.08	.14	
	Nominated Peers	65	.07	.12	$F_{(2.797)}=2.442 ; p=.88$
	Other students	650	.10	.16	
	tot	809	.10	.16	
ACCEPTANCE	Volunteer Peers	94	.20	.11	
	Nominated Peers	65	.23	.12	$F_{(2.797)}=5.511; p=.004$
	Other students	650	.18	.12	
	tot	809	.19	.12	
REJECTION	Volunteer Peers	94	.06	.09	
	Nominated Peers	65	.07	.08	$F_{(2.797)}=1.269; p=.282$
	Other students	650	.08	.09	
	tot	809	.07	.09	

In particular, post hoc tests with the Bonferroni correction showed that volunteer peers had a significantly higher level of victimization than all the other students. On the other hand, nominated peers had the highest level of popularity compared both to volunteer peers and all the other students. They also had higher levels of acceptance and defending behavior than all the other students.

3.4 STUDY II

3.4.1 - Overview of the Analyses

Analyses were conducted in SPSS with linear mixed-effects models (MIXED) with full-information maximum likelihood (ML) estimation (West, 2009). MIXED procedure handles more complex situations, in which experimental units are nested in a hierarchy such as, for instance, family, classrooms, schools.

Analyses were carried out in three steps. Firstly, preliminary analyses were conducted in order to deal with non-normal distribution of some data, with missing data (*attrition analyses*), and to test the Baseline Equivalence of the two experimental groups. Secondly, we tested the moderator role of experimental conditioning for the estimation and the prediction of longitudinal development of victimization, bullying and defending behavior (aim 2a). Thirdly, we tested whether peer educators vs non peer educators' role would moderate the estimation and the prediction of longitudinal development for all outcomes (aim 2b); then we tested the interaction between the experimental condition (VR and

NR) and the role students played in the intervention (peer educators and their classmates) (aim 2c); Effect sizes of pre-post changes were calculated in order to get information on the strength of the Intervention effect in the different experimental subgroups (aim 2d).

A more detailed description of the strategy of analyses will be reported below.

Preliminary Analyses

Given the non-normal distribution of some data, we applied a logarithmic transformation to victimization and bullying variables, and we used the transformed variables in all the subsequent analyses.

A*ttrition Analyses* were carried out in order to evaluate whether adolescents with missing data at T2 differ significantly from adolescents with T1 and T2 data. Information on the type of attrition is important for the proper interpretation of a longitudinal data analysis (Twisk & de Vente, 2002). Attrition analyses were carried out in order to evaluate differences in the experimental group assignment, and on measures collected at T1.

Finally, in order to test the comparability of the two experimental groups (Baseline Equivalence), we analyzed the differences in the pre-test evaluations (Flay et al., 2005). Specifically, we performed a set of multilevel mixed models on the target variables of our study (victimization, bullying, defending behavior). The models used were 3-level random-intercept models (individuals within classrooms, within

schools). A random-intercept model was fit to account for within-subject, within classrooms, within-schools correlations. The fixed-effect portion of the model treated outcomes as a function of the experimental group condition (Classrooms with volunteering peer educators and classrooms with peer educators nominated by classmates). We used an alpha level of .05 for all statistical tests.

Aims 2a, 2b, and 2c - Intervention Effects: Moderator Role of Experimental condition and of Peer educator's role condition

To test the moderator role of Experimental Condition (2a), and of Peer educator's role condition (2b), and of the interaction of these two conditions (2c) in the estimation and the prediction of longitudinal change of victimization, bullying and defending behavior, we carried out three separate linear mixed-effect model (MIXED) procedures, one for each outcome. The models used were 4-level (measurement occasion within individual, within classrooms, within schools) random-intercept models. A random-intercept model was fit to account for within-subject, within classrooms, within-schools correlations. The fixed-effect portion of the model treated outcomes as a function of *time, experimental group condition* (Classrooms with volunteer peer educators and classrooms with peer educators nominated by classmates), *peer educator's role condition* (peer educators and all the other students), and the interactions between these variables. Specifically, for each outcome, we entered, step by step, the following interaction: *time* interacting with *group*, *time* interacting with *peer educator's role*, and a three-way

interaction (*time*group*peer educator's role*). In order to obtain the most parsimonious model, for each outcome, we kept only significant interactions in the final model. The random-effect portion of the model considers the random effects of subjects, classrooms, and schools. As a second step, significant moderation interactions were followed up, by examining the outcome variables of each group across time.

Aim 2d - Intervention Effects: Effect sizes

Finally, in order to answer to the aim 2d, Effect sizes of pre-post change were calculated as Standardized Effect Sizes in a Mixed/Multilevel Model, where standard deviations were derived from the standard errors of the estimated marginal means (Hedges, 2007). Specifically, we calculated the two experimental groups Effect sizes, and, when significant, the Effect sizes of the four subgroups generated from the interaction between experimental condition and the peer educator's role (volunteering peer educator vs their classmates vs nominated peer educators vs their classmates).

3.4.2 - Results

Preliminary Analyses

Table 3.3 reported means and standard deviations of the target variables for the two waves of data collection (Pre and Post Intervention), differentiating the two *Experimental Conditions*, and the *Peer Educator's role Condition.*

Table 3.3 – Descriptive statistics for the Total sample and differentiated for Experimental Conditions and Peer Educator's Role Condition

		Experimental Condition 1: Classrooms with volunteers peer educators M (SD)			Experimental Condition 2: Classrooms with peer educators nominated by classmates M (SD)		
		Volunteers Peer educators	Volunteers Peer educators' classmates	Total	Nominated Peer educators	Nominated Peer educators' classmates	Total
Victimization	T1	N=88	N=333	N=421	N=70	N=323	N=393
(N=814)		1.1165 (.132)	1.0846 (.102)	1.0913 (.110)	1.0865 (.077)	1.0749 (.090)	1.0770 (.088)
	T2	N=80	N=303	N=383	N=67	N=295	N=362
(N=745)		1.0900 (.124)	1.0627 (.098)	1.0684 (.104)	1.0904 (.119)	1.0741 (.117)	1.0771 (.117)
Bullying	T1	N=88	N=332	N=420	N=71	N=326	N=397
(N=817)		1.0581 (.077)	1.0667 (.078)	1.0649 (.078)	1.0982 (.118)	1.0785 (.097)	1.0821 (.101)
	T2	N=80	N=303	N=383	N=66	N=294	N=360
(N=743)		1.0359 (.058)	1.0485 (.064)	1.0459 (.063)	1.0814 (.114)	1.0745 (.091)	1.0758 (.096)
Defending Behaviour	T1	N=92	N=392	N= 484	N= 79	N=378	N=457
(N=941)		.0882 (.087)	.0587 (.076)	.0644 (.079)	.1057 (.099)	.0884 (.103)	.0914 (.102)
	T2	N=92	N=392	N=484	N=79	N=381	N=460
(N=944)		.1403 (.119)	.0956 (.101)	.1041 (.106)	.1403 (.135)	.0956 (.107)	.1032 (.114)

In regards to "*Attrition analysis*", no significant differences were found for group assignment, gender and grade (middle school and high school). In particular, the interaction between attrition by experimental group was not significant in relation to victimization ($F_{(1, 807.258)}$=.094; p=.760), to bullying ($F_{(1, 816.853)}$=3.178; p=.075), and to defending behavior ($F_{(1, 904.792)}$=.276; p=.600). Overall, findings showed that there is no significantly different probability of attrition caused by the study condition. Therefore, it seems reasonable to assume that missing data across time are randomly distributed and not related to our outcome variables, thus easily ignorable (Missing at Random- MAR). Consequently, for the present study, we used all the information available across time.

Finally, no significant differences were found for victimization ($F_{(1, 37.191)}$= .396; p=.245), bullying ($F_{(1, 49.153)}$=3.936; p= .053) and defending behavior $F_{(1, 37.001)}$= 1.518; p=.226) between the two experimental groups in the Pre-Test. This means that classrooms with volunteer peer educators are comparable to classrooms with peer nominated educators, and further supports the assignment at *random*.

Aims 2a and 2b - Intervention Effects: Moderator Role of Experimental condition and of Peer educator's role condition

A significant interaction "*Experimental Condition*" by *time* has been found in all the outcomes (see table 3.4). Another significant interaction, - *peer educator's condition* by *time*- has been found for defending behavior, but not for victimization or for bullying (table 3.4).

Table 3.4 - Mixed Model predicting behavioral outcomes of victimization, bullying and defending behaviour

	Victimization			Bullying			Defending behaviour		
	df	*B* (SE)	*p value*	*Df*	*B* (SE)	*p value*	*df*	*B* (SE)	*p value*
Intercept	87.464	1.080 (.010)	0.000	185.784	1.048 (.008)	.000	41.416	.137 (.016)	.000
time	766.441	0.024 (.005)	0.000	731.078	.017 (.004)	.000	942.194	-.056 (.008)	.000
Experimental Condition	54.189	0.015 (.010)	0.151	60.655	.029 (.008)	.001	39.190	.000 (.021)	.992
Peer educator's Role Condition	838.184	-0.022 (.008)	0.006	828.054	.000 (.007)	.978	1789.134	-.040 (.006)	.000
Time by Experimental Condition	**767.472**	**-0.025 (.008)**	**0.001**	**731.751**	**-011 (.006)**	**.048**	**946.078**	**.027 (.006)**	**.000**
Time by Peer educator's Role Condition	767.692	-.003(.010)	.736	721.371	-.013(.007)	.084	**942.459**	**.020 (.008)**	**.013**
Residual Variance		**.005 (.000)**	**.000**		**.003 (.000)**	**.000**		.005 (.000)	.000
Subject: random intercept		**.005 (.000)**	**.046**		**.004 (.000)**	**.023**		.001 (.000)	.000
Classroom: random intercept		**.000 (.000)**	**.000**		**.000 (.000)**	**.000**		.004 (.001)	.000
School: random intercept		.000 (.000)	.249		.	.		.000 (.001)	.891

Note. Statistically significant results (p < .05) from the deviance tests for the fixed effects and from the Wald tests for the random effects are in boldface.

This means that, with regards to victimization and bullying, in the two experimental conditions the whole class (both peer educators and all the other students) follow the same trend (aim 2b). Specifically, victimization and bullying significantly decrease over time only in classrooms with volunteer peer educators (and 3.6).

Table 3.5 - Mixed Model predicting victimization in the two experimental groups

		Victimization				
		VR Condition			NR Condition	
	df	B (SE)	p value	df	B (SE)	p value
Intercept	14.624	1.06(.009)	<.000	19.639	1.08(.007)	<.000
time	377.740	.03(.004)	<.000	392.167	-.000(.006)	.949
Residual Variance		.006(.000)	<.000		.006(.000)	<.000
Subject: random intercept		.004(.001)	<.000		.004(.001)	<.000
Classroom: random intercept		.000(.000)	.375		.000(.000)	.975
School: random intercept		.000(.000)	.898		.000(.000)	.898

Table 3.6 - Mixed Model predicting bullying in the two experimental groups

		Bullying				
		VR Condition			NR Condition	
	Df	B (SE)	p value	df	B (SE)	p value
Intercept	30.621	1.048(.004)	<.000	31.651	1.076(.007)	<.000
time	384.841	.017(.004)	<.000	350.887	.005(.005)	.252
Residual Variance		.002(.000)	<.000		.004(.000)	<.000
Subject: random intercept		.003(.000)	<.000		.006(.001)	<.000
Classroom: random intercept		.000(.000)	.157		.000(.000)	.093
School: random intercept		.000(.000)	.		.000(.000)	.

In regards to defending behavior, it significantly increases over time for the whole class (volunteers peers and their classmates) in VR condition; whereas, in NR condition, it increases only for nominated peer educators, not for their classmates (table 3.7).

Table 3.7 - Mixed Model predicting defending behavior in the four subgroups

|				Defending Behaviour								
	Volunteer peers			Volunteer peers' classmates			Nominated Peers			Nominated Peers' classmates		
	df	B (SE)	p value	df	B (SE)	p value	df	B (SE)	p value	df	B (SE)	p value
Intercept	27.082	.146(.015)	<.000	14.149	.098(.012)	<.000	27.307	.135(.021)	<.000	23.423	.097(.016)	<.000
time	96	-.055(.010)	<.000	392.073	-.037(.004)	<.000	75	-.030(.012)	.016	737.142	-.008(.132)	.132
Residual Variance		.005(.001)	<.000		.004(.000)	<.000		.005(.001)	<.000		.006(.000)	<.000
Subject: random intercept		.003(.001)	.001		.001(.000)	<.000		.001(.001)	.271		.000(.000)	.132
Classroom: random intercept		.003(.002)	.028		.003(.001)	.026		.008(.002)	.004		.005(.002)	.
School: random intercept		.000(.000)	.		.000(.001)	.822		.000(.000)	.		.000(.000	.

Aim 2c - Intervention Effects: Effect sizes

Comparing the two experimental conditions, Effect sizes showed stronger pre-post changes in classrooms with volunteer peer educators for all the expected outcomes, compared to nominated recruitment conditions (respectively, a decrease of .14 vs no decrease (.00) for victimization; a decrease of .21 vs no decrease (.04) for bullying; and an increase of .14 vs no increase (.04) for defending behavior) (figure 3.2).

Figure 3.2 - Victimization and Bullying across time distinguishing between the two Experimental Conditions
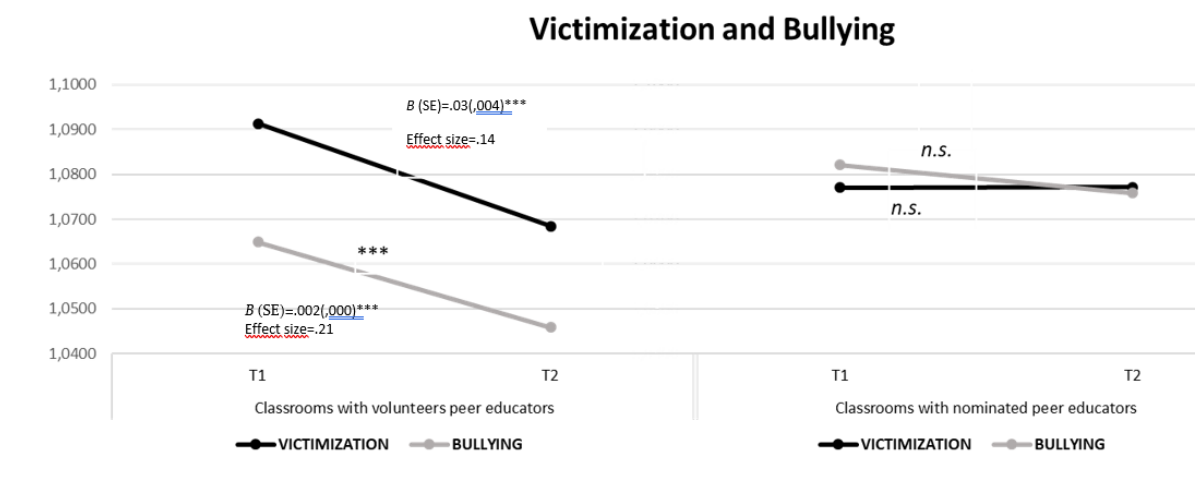
Regarding defending behavior, following the significant interaction found in the previous analyses (*experimental condition*time*, and *peer educator condition*time*), we compared the effect sizes of four subgroups: volunteer peer educators, their classmates, nominated peer educators and their classmates. Effect sizes showed that volunteer peer educators reported the strongest increase (.37); nominated peer educators and classmates of volunteer peer educators reported very similar effect sizes (respectively .16 and .14). Finally, for classmates of nominated peer educators there was no increase (.03) (figure 3.3).

Figure 3.3 - Defending Behavior across time distinguishing between 4 subgroups
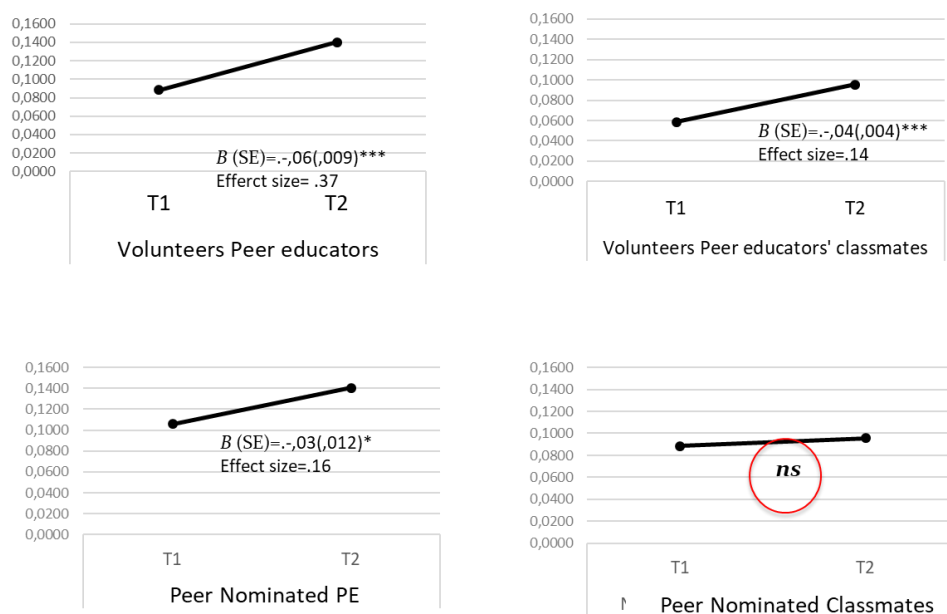
3.5 Discussion

The two studies presented in this chapter contribute to the scientific debate over the effectiveness of peer-led models applied to an antibullying program. Specifically, they provide focus on an

understudied aspect: how the way in which peer educators are recruited could influence the program.

The first study gave us a first indication on this aspect: different recruitment strategies lead to groups of peer educators with different characteristics. As we expected, when peer educators are nominated by classmates, the most popular and accepted students are chosen. This result is in line with a previous study (Jackson and Campbell, 2009). It is interesting to notice that classmates seem to be able to identify the positive leaders in their class. In fact, nominated peer educators are higher than all the other students in the defending behavior score. It could be interesting to investigate whether students would nominate the most popular classmates as peer educators also in classroom in which high status is associated with aggressive or bullying behavior.

In line with our pilot study (see chapter two of this dissertation) voluntary peer educators are higher in victimization. In the previous chapter we discussed the possible interpretation of this result. Further research could uncover more characteristics that may distinguish victims that decide to take on the role of peer educators from victims that do not make the same decision.

The second study provides evidence that the strategy chosen to recruit peer educators may moderate the effectiveness of the intervention. We found that the NoTrap program has been effective in reducing victimization and bullying and in increasing defending behaviour only in the classrooms with voluntary peer educators. These

findings give us important insight on *under which circumstances* the peer-led models work or not in antibullying programs.

Further research could reveal which mediation mechanisms make voluntary peer educators more effective than nominated ones. We can speculate that the first ones have higher motivation for their task. A voluntary decision is intrinsically linked with higher motivation. Besides, early study results confirmed that voluntary peer educators have been victimized in the past. This characteristic could make them more sensible to the program and more engaged with the program's aims and tasks. Thanks to their direct involvement in bullying, they could be also higher in empathy toward victims and possibly have knowledge of useful coping strategies to escape from victimization. These two mechanisms stay at the base of NoTrap's activities (see paragraph 1.2.5). Another possible mediation variable may reside in the way in which voluntary peer educators are perceived by classmates. A student who has been a victim could be seen as a reliable source of information in an anti-bullying program.

Finally, regarding "*for whom"* the intervention is effective, we found that in voluntary recruitment condition, it has been effective for the whole class. On the contrary, the nominated peer educators are not able to be agents of change for their classmates. In fact, while they increased the defending behaviour score, they seem not to be able to transfer this change to their classmates. The lack of increase of defending behaviour throughout the whole class could be the mediation mechanism that does

not allow the decrease of bullying and victimization in "peer nomination condition." Further studies could investigate this hypothesis.

In conclusion, the findings of the two studies reported in this chapter allow us to give an important contribution to the debate on the effectiveness of "*working with peers*" in an anti-bullying program. The recruitment phase is a crucial step. Adopting a voluntary recruitment vs a peer nomination one, could lead to different levels of effectiveness for the entire intervention program. This implied that the step of peer selection and recruitment has to be well thought and designed, to pursue different outcomes. According to our results, it seems that in an anti-bullying program, voluntary recruitment must be preferred.

Future research could further investigate this point, understanding why this happens and analyzing whether this is also true for other health interventions that adopt a peer-led model.

CHAPTER 4

General Discussion

The general aim of the present dissertation was to contribute to the scientific debate on the effectiveness of the "*working with peers*" approach to preventing problems with bullying. Specifically, we aimed to address the Smith, Salmivalli and Cowie call (2012) to study the different components of this approach more deeply, in order to understand "*what works, for whom and under which circumstances.*"

Thanks to our direct involvement in the implementation of the NoTrap program, we had a privileged opportunity to confront to this issue. Our first research question was generated from the observation of how NoTrap's participants behave during an apparently insignificant phase of the program: the moment in which we asked them to become peer educators. It was interesting to notice how some students immediately raised their hands, whereas most of them did not. Our attention was captured by the contrasting decision of the students. We asked ourselves: who are the students who express their willingness to become peer educators? In what way are they different from their classmates? These questions inspired the pilot study presented in the second chapter of this dissertation. We found that students that become peer educators are more involved in bullying, either as victims or defenders.

These findings, associated with results on the effectiveness of the NoTrap program (Palladino et al., 2016), generated new research questions. Contrarily with what Ttofi and Farrington claimed (2011), in our program "*working with peers*" was effective and works. Given this positive result, we began to hypothesize that the way in which peer educators are recruited could be one of the reasons for NoTrap's success. In order to address this research aim, we developed a design allowing to compare the effectiveness of two different peer educators' recruitment procedures. In the third chapter of this dissertation we described the two studies that we carried out for this purpose. Findings confirmed that the recruitment procedure (volunteering vs peer nominated) can make a difference not only in the characteristics of peer educators, but, above all, in the effectiveness of the whole program.

4.1 Dissertation's contribution to the literature

Who are the students that take the role of peer educators in an anti-bullying program?

The first contribution of the present dissertation has been to fill the gap in the scientific literature about understanding characteristics of voluntary peer educators. Previous studies had speculated on the characteristics that a peer educator should have in order to be a good agent of change (Porter & Smith-Adcock, 2011). Porter and Smith-Adcock, for instance, suggested involvement of defenders as peer educators. Other studies focused on the skills that should be increased

within the peer educators' training (Carbonare, Ghittoni, & Rosson, 2004). Finally, some authors investigated the characteristics of students that are nominated by classmates or by teachers as peer educators (Jackson & Campbell, 2009; Campbell & Marino, 2009). The second chapter of this dissertation and the first study of the third chapter contributed to this topic. We explored the characteristics of students that want to become peer educators. In both studies we found that these students have higher scores of victimization than their classmates. This finding shed new light on the figure of the peer educator. In fact, the decision to take on this role seems not to be casual, but rather driven by direct involvement in bullying.

Further research questions remain open. We are going to discuss all of them in detail in paragraph 4.3.

How can a peer-led model be effective in an anti-bullying program?

The second study of the third chapter allows us to give a clear answer to the debate on the effectiveness of a peer-led model in an anti-bullying program (Ttofi & Farrington, 2011; Smith, Salmivalli & Cowie, 2012; Lee, Kim-Kim and Kim, 2015; Birnbaum, Crohn, Maticka-Tyndale, & Barnett, 2010; Cowie, Naylor, Talamelli, Chauhan, & Smith, 2002; Naylor & Cowie, 1999). Specifically, we found that the effectiveness of a peer-led model could be strongly moderated by the way in which peer educators are recruited. In the 2015-2016 edition of the NoTrap program, bullying and victimization decreased significantly only in classes with voluntary peer educators. On the contrary, no changes

happened in classes in which peer educators were nominated by classmates. From this result we can conclude that "*working with peers*" is not enough to make an intervention effective. As anticipated by Smith, Salmivalli and Cowie (2012), the concrete differences between different models and implementation procedures can make the difference between an effective program or an ineffective one. Specifically, particular attention should be given to the recruitment phase. Our findings suggest that voluntary recruitment brings more positive results and can be considered a strategy for a more effective program.

For whom can the peer-led model be effective?

The last contribution of the present dissertation is related to another important matter of peer-led models: are they effective for the whole target group or only for peer educators? This is a legitimate question if we think that peer educators and "non peer educators" are involved in the model and can benefit differently from the program:

- The intensity of treatment is higher for peer educators. In fact, they attend a training carried out by experts.

- Peer educators have a more active role in the program. They lead the activities with their reference group. Whereas the rest of the class benefits and is involved in activities led by the peer educators.

Given these premises, we can affirm that an effective peer-led model must overcome these differences. A peer led intervention is considered

effective when it is able to generate a process of change in the whole group. Therefore, one key component of this project is how peer educators are able to transfer the contents and the skills that they learned during the training to their classmates.

In the second study of the third chapter, we evaluated whether the role played by the students in the intervention moderates the effectiveness of the program. We found that in the voluntary condition the program is effective in reducing bullying and victimization for the whole class. On the contrary, the program is ineffective both for peer educators and for the rest of the class in the "nomination recruitment condition".

Besides, defending behavior increases in the whole class, but only in the voluntary condition, whereas in the "nomination condition" it is effective only for peer educators. These findings highlight that, under the right volunteer condition, NoTrap is effective both for peer educators and for their classmates.

4.2 Strengths and Limitations

Strengths and limitations of the present dissertation need to be acknowledged.

As a general conclusion, the studies have the merit of approaching the debate on the peer-led model from an original point of view. Attention to the impact of peer educators recruitment is an unexplored area of research in literature particularly within anti-bullying programs.

Another general strength of the studies is the attention to the measures we use. In order to measure bullying and victimization, we opted for the traditional approach of self-report scales. In our experience, classmates are not reliable in identification of bullies and victims. This is maybe due in the difficulty in noticing all the bullying behaviours that a classmate acts or receives. The verbal and indirect forms of bullying are often interpreted like a joke by bystanders. Besides, adolescents are often reluctant to declare who of their classmates takes a negative role like being a bully or a victim. Therefore, self-report scales can be considered better than peer-rating in order to measure bullying and victimization. On the other hand, we decided to use peer-nominations in order to measure defending behaviour. We made this decision as in this case classmates could be a more reliable source of information than a self-report scale. Defending is a positive behaviour, therefore social desirability could bias the validity of a self-report scale.

Strengths and limitations can be found in each of the three studies of this dissertation.

In regard to the first study (chapter 2), the major strength is that we take account of multiple variables that explain the differences between peer educators and their classmates. We investigated individual (victimization, defending and prosocial behaviour) and contextual factors (social support from peers). We also checked for sex differences.

Despite all these strengths, we have to use caution since the small number of peer educator samples limits the power of the results and

increases the risk of non-replicability. The first study of the third chapter is an attempt to overcome this limitation. In fact, we replicated the analysis with a new data sample, with similar results. We also added new socio-relational variables, such as popularity and acceptance.

Finally, one of the major strengths of the last study is the methodological and data analysis approach we used. MIXED procedure handles complex situations, in which experimental units are nested in a hierarchy, such as classrooms and schools. Attempting to understand the individual's behavior in the absence of group contexts can severely limit the ability to explain the object of study (Heck, Thomas, & Tabata, 2012). Specifically, we used 4-level (measurement occasion within individual, within classrooms, within schools) random-intercept models.

On the other hand, the most important methodological limitation of the third study is the absence of a control group. We know that standards of evidence normally require a control condition. In order to overcome this limitation, we randomly assigned participants to two experimental conditions, although we are aware that a control group would have strengthened our results.

4.3 Further research directions

As anticipated in paragraph 4.1, the present dissertation opens new directions of research investigation.

We found that voluntary peer educators are more involved in victimization than classmates and nominated peer educators. It would

be interesting to study this aspect more in depth. For instance, it is not clear whether students that decided to become peer educators are a "particular kind of victim," different from the traditional ones. They could be the so-called "escaped victim," who were victims in the past but not in the present (Smith, Talamelli, Cowie, Naylor, & Chauhan, 2004). Future research could compare victims who decide to become peer educators to the ones that do not take this role. Some possible areas to be investigated could be related to "how often and for how long they were victimized?"; "what kind of attacks did they suffer?"; "Which coping strategies did they use to cope with bullying?"

Another interesting research question is related to the motivation that supports peer educators in undertaking their role. Do they intend to help others or to reach a higher social status within their class?

Furthermore, in the third chapter we compared two recruitment strategies. We did not consider a possible third recruitment method: teacher's nomination. Future studies could investigate the characteristics and effectiveness of peer educators chosen by teachers.

Further studies can also create a bridge between the first and the second study in the third chapter. Specifically, we do not know whether the characteristics of voluntary peer educators could mediate their effectiveness in the program.

Other mediation and moderation mechanisms could be further explored. First of all, the role of defending behaviour at class level. We

might argue that this is the reason why the program was not effective in the "nominated recruitment condition."

In addition, the way classmates perceive peer educators could have a moderating effect on the success of the program. Interviews and focus group could be conducted with classmates in order to understand how they perceive students who voluntarily became peer educators vs. the ones that are nominated for this role. It is possible that classmates perceive the voluntary peer educator's motivation and engagement, and then they in turn are motivated to follow their example. On the contrary, nominated peer educators' are perceived as lacking motivation for this role and for their task. This could impact negatively on classmates engagement in the program workshops.

Finally, it would be interesting to replicate the research design of the present dissertation, within other anti-bullying programs that use a peer-led model, in order to generalize findings and results about recruitment strategies and mechanisms of change in the group class. Furthermore, we could explore whether our results are also applicable to other kinds of health prevention programs.

References

Abdi, F., & Simbar, M. (2013). The Peer Education Approach in Adolescents-Narrative Review Article. *Iranian Journal of Public Health*, *42*(11), 1200–1206.

Adler-Constantinescu, C., Beşu, E.-C., & Negovan, V. (2013). Perceived Social Support and Perceived Self-efficacy During Adolescence. *Procedia - Social and Behavioral Sciences*, *78*, 275–279. https://doi.org/10.1016/j.sbspro.2013.04.294

Ajzen, I., & Fishbein, M. (1980). Understanding attitudes and predicting social behavior. *EnglewoodCliffs NY Prentice Hall*. doi:Z

Albiero, P., Matricardi, G., Speltri, D., & Toso, D. (2009). The assessment of empathy in adolescence: A contribution to the Italian validation of the "Basic Empathy Scale". *Journal of Adolescence*, *32*(2), 393–408. doi:10.1016/j.adolescence.2008.01.001

Allison, K. R., & Bussey, K. (2016). Cyber-bystanding in context: A review of the literature on witnesses' responses to cyberbullying. *Children and Youth Services Review*, *65*, 183–194. doi:10.1016/j.childyouth.2016.03.026

Anderson, J., Bresnahan, M., & Musatics, C. (2014). Combatting Weight-Based Cyberbullying on Facebook with the Dissenter Effect. *Cyberpsychology, Behavior and Social Networking*, *17*(5), 281–286. doi:10.1089/cyber.2013.0370

Badura Brack, A., Millard, M., & Shah, K. (2008). Are peer educators really peers? *Journal of American College Health : J of ACH*, *56*(5), 566–568. doi:10.3200/JACH.56.5.566-568

Bandura, A. (1985). *Social foundations of thought and action: A social cognitive theory.* (Prentice Hall College Div, Ed.) (1st ed.).

Barlińska, J., Szuster, A., & Winiewski, M. (2015). The role of short- and long- term cognitive empathy activation in preventing cyberbystander reinforcing cyberbullying behavior. *CyberPsychology, Behavior & Social Networking*, *18*(4), 241–244. doi:10.1089/cyber.2014.0412

Bastiaensens, S., Vandebosch, H., Poels, K., Van Cleemput, K., DeSmet, A., & De Bourdeaudhuij, I. (2014). Cyberbullying on social network sites. An experimental study into bystanders' behavioural intentions to help the victim or reinforce the bully. *Computers in Human Behavior*, *31*(1), 259–271. doi:10.1016/j.chb.2013.10.036

Bastiaensens, S., Vandebosch, H., Poels, K., Van Cleemput, K., DeSmet, A., & De Bourdeaudhuij, I. (2015). "Can I afford to help?" How affordances of communication modalities guide bystanders' helping intentions towards harassment on social network

sites. *Behaviour & Information Technology*, *34*(4), 425–435. doi:10.1080/0144929X.2014.983979

Birnbaum, M., Crohn, K., Maticka-Tyndale, E., & Barnett, J. P. (2010). Peer-led interventions to reduce HIV risk of youth: A review. *Evaluation and Program Planning*, *33*(2), 98–112.

Boda, G. (2001). *Life Skill e peer education: strategie per l'efficacia personale e collettiva,*. (La -nuova Italia, Ed.). Milano.

Borgia, P., Marinacci, C., Schifano, P., & Perucci, C. a. (2005). Is peer education the best approach for HIV prevention in schools? Findings from a randomized controlled trial. *Journal of Adolescent Health*, *36*(6), 508–516. doi:10.1016/j.jadohealth.2004.03.005

Boulton, M. J., Bucci, E., & Hawker, D. D. S. (1999). Swedish and English secondary school pupils' attitudes towards, and conceptions of, bullying: Concurrent links with bully/victim involvement. *Scandinavian Journal of Psychology*, *40*(4), 277–284. doi:10.1111/1467-9450.404127

Brack, A. B., Millard, M., & Shah, K. (2008). Are peer educators really peers? *Journal of American College Health*, 56(5), 566-568. Doi: 10.3200/JACH.56.5.566-568

Browne, M. W., & Cudeck, R. (1993). Alternative ways of assessing model fit. In K.A. Bollen & J. S. Long (Eds.), *Testing structural equation models* (pp. 136-162) Newbury Park, CA:Sage

Cai, Y., Hong, H., Shi, R., Ye, X., Xu, G., Li, S., & Shen, L. (2008). Long-term follow-up study on peer-led school-based HIV/AIDS prevention among youths in Shanghai. *International Journal of STD & AIDS*, *19*(12), 848–850. doi:10.1258/ijsa.2008.008129

Camodeca, M., & Goossens, F. a. (2005a). Aggression, social cognitions, anger and sadness in bullies and victims. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *46*(2), 186–97. doi:10.1111/j.1469-7610.2004.00347.x

Camodeca, M., & Goossens, F. a. (2005b). Children's opinions on effective strategies to cope with bullying: the importance of bullying role and perspective. *Educational Research*, *47*(1), 93–105. doi:10.1080/0013188042000337587

Campaert, K., Nocentini, A., & Menesini, E. (2017). The efficacy of teachers' responses to incidents of bullying and victimization: The mediational role of moral disengagement for bullying. *Aggressive Behavior*, *43*(5), 483–492. https://doi.org/10.1002/ab.21706

Campbell, J. M., & Marino, C. a. (2009). Brief report: Sociometric status and behavioral characteristics of peer nominated buddies for a child with autism. *Journal of Autism and Developmental Disorders*, *39*(9), 1359–1363. doi:10.1007/s10803-009-0738-z

Canty-Mitchell, J., & Zimet, G. D. (2000). Psychometric properties of the multidimensional scale of perceived social support in urban adolescents. *American Journal of Community Psychology*, 28(3), 391-400. doi: 10.1023/A:1005109522457

Caravita, S. C. S., Di Blasio, P., & Salmivalli, C. (2009). Unique and interactive effects of empathy and social status on involvement in bullying. *Social Development*, 18(1), 140-163. doi: 10.1111/j.1467-9507.2008.00465.x

Chekroun, P., & Brauer, M. (2002). The bystander effect and social control behavior : the effect of the presence of others on people ' s reactions to norm violations. *European Journal of Social Psychology*, *32*(February 2000), 853–867. doi:10.1002/ejsp.126

Collaboration, C. (2001). Guidelines for the preparation of review protocols.

Cowie, H., Naylor, P., Talamelli, L., Chauhan, P., & Smith, P. K. (2002). Knowledge, use of and attitudes towards peer support: a 2-year follow-up to the Prince's Trust survey. *Journal of Adolescence*, *25*(5), 453–467. doi:10.1006/jado.2002.0498

Cowie, H., & Wallace, P. (2001). Peer support in action - From bystanding to standing by. *British Journal of Educational Psychology*, *71*, 673–674.

Cunningham, C. E., Vaillancourt, T., Rimas, H., Deal, K., Cunningham, L., Short, K., & Chen, Y. (2009). Modeling the bullying prevention program preferences of educators: A discrete choice conjoint experiment. *Journal of Abnormal Child Psychology*, *37*(7), 929–943. doi:10.1007/s10802-009-9324-2

D'Andrea, V. J., & Salovey, P. (1996). *Peer counseling : skills, ethics, and perspectives* (2nd ed.). Palo Alto Calif.: Science and Behavior Books.

Dalle Carbonare, E., Ghittoni, E., & Rosson, S. (2004). *Peer educator : istruzioni per l'uso*. Angeli.

Damon, W. (1984). Peer education: The untapped potential. *Journal of Applied Developmental Psychology*. doi:10.1016/0193-3973(84)90006-6

Demaray, M. K., & Malecki, C. K. (2003). Perceptions of the frequency and importance of social support by students classified as victims, bullies, and bully/victims in an urban middle school. *School Psychology Review*, *32*, 471–489.

DeSmet, A., Bastiaensens, S., Van Cleemput, K., Poels, K., Vandebosch, H., Cardon, G., & De Bourdeaudhuij, I. (2016). Deciding whether to look after them, to like it, or leave it: A multidimensional analysis of predictors of positive and negative bystander behavior in cyberbullying among adolescents. *Computers in Human Behavior*, *57*, 398–415. doi:10.1016/j.chb.2015.12.051

Desmet, A., Bastiaensens, S., Van Cleemput, K., Poels, K., Vandebosch, H., & De Bourdeaudhuij, I. (2012). Mobilizing bystanders of cyberbullying: An exploratory study into behavioural determinants of defending the victim. *Studies in Health Technology and Informatics*, *181*, 58–63. doi:10.3233/978-1-61499-121-2-58

DeSmet, A., Van Ryckeghem, D., Compernolle, S., Baranowski, T., Thompson, D., Crombez, G., … De Bourdeaudhuij, I. (2014). A meta-analysis of serious digital games for healthy lifestyle promotion. *Preventive Medicine*, *69*, 95–107. doi:10.1016/j.ypmed.2014.08.026

Dillon, K. P., & Bushman, B. J. (2015). Unresponsive or un-noticed?: Cyberbystander intervention in an experimental cyberbullying context. *Computers in Human Behavior*, *45*, 144–150. doi:10.1016/j.chb.2014.12.009

Di Fabio, A., & Busoni, L. (2008). Misurare il supporto sociale percepito: Proprietà psicometriche della Multidimensional Scale of Perceived Social Support (MSPSS) in un campione di studenti universitari. *Risorsa Uomo: Rivista di Psicologia del Lavoro e dell'Organizzazione*, 14(3), 339-350.

Dodge, K. A., & Murphy, R. R. (1984). The assessment of social competence in adolescents. In *Adolescent behavior disorders: Foundations and contemporary concerns* (pp. 61–96). Lexington, MA: Lexington Books.

Dovigo, F. (2011). *Guida alla mediazione e conciliazione professionale*. (Carocci, Ed.). Roma.

Eisner, M., & Malti, T. (2012). The future of research on evidence-based developmental violence prevention in Europe - Introduction to the focus section. *International Journal of Conflict and Violence*, *6*(2), 166–175.

Evans, C. B. R., Fraser, M. W., & Cotter, K. L. (2014). The Effectiveness of School-Based Bullying Prevention Programs: A Systematic Review. *Aggression and Violent Behavior*, *19*(5), 532–544. doi:10.1016/j.avb.2014.07.004

Flay, B. R., Biglan, A., Boruch, R. F., Castro, F. G., Gottfredson, D., Kellam, S., … Ji, P. (2005). Standards of evidence: Criteria for efficacy, effectiveness and dissemination. *Prevention Science*, *6*(3), 151–175. doi:10.1007/s11121-005-5553-y

Fonzi, A. (1997). *Il bullismo in Italia : il fenomeno delle prepotenze a scuola dal Piemonte alla Sicilia : ricerche e prospettive d'intervento*. Firenze: Giunti.

Franzese, C. (2009). La peer education. *SYNERGY*, *5*(1), 15–29.

Furman, W. (1998) The measurement of friendship perceptions: Conceptual and methodological issues. In W. M. Bukowski, A. F. Newcomb, & W.W. Hartup (EDS), *The company they keep: Friendship in childhood and adolescence* (pp. 41-65). Cambridge: Campridge University Press.

Garandeau, C. F., & Cillessen, A. H. N. (2006). From indirect aggression to invisible aggression: A conceptual view on bullying and peer group manipulation. *Aggression and Violent Behavior*, *11*(6), 641–654. doi:10.1016/j.avb.2005.08.004

Gavazzi, S., Anderson, S. A., & Sabatelli, R. M. (1993). Family Differentiation, and Adolescent Adjustment in a Clinical Sample. *Journal of Adolescent Research,* (8), 205–225.

Gini, G. (2006). Social cognition and moral cognition in bullying: what's wrong? *Aggressive Behavior*, *32*(6), 528–539. doi:10.1002/ab.20153

Gini, G., Albiero, P., Benelli, B., & Altoè, G (2007). Does empathy predict adolescents' Bullying and defending behaviour? *Aggressive Behaviour*, 33(December 2005), 467-474.

Gini, G., Albiero, P., Benelli, B., & Altoè, G. (2008). Determinants of adolescents' active defending and passive bystanding behavior in bullying. *Journal of Adolescence*, *31*(1), 93–105. doi:10.1016/j.adolescence.2007.05.002

Goossens, F. A., Olthof, T., & Dekker, P. H. (2006). New Participant Role Scales : Comparison Between Various Criteria for Assigning Roles and Indications for Their Validity, *32*(September 2004), 343–357. doi:10.1002/ab

Gredler, G. R. (2003). Olweus, D. (1993).Bullying at school: What we know and what we can do. Malden, MA: Blackwell Publishing, 140 pp., 25.00. *Psychology in the Schools*, *40*, 699–700. doi:10.1002/pits.10114

Greene, M. B. . b. (2003). Counseling and climate change as treatment modalities for bullying in school. *International Journal for the Advancement of Counselling*, *25*(4), 293–302. https://doi.org/10.1023/B:ADCO.0000005528.59128.32

Heck, R. H., Thomas, S. L., & Tabata, L. N. (2012). *Introduction to Multilevel Models with Categorical Outcomes*. *Multilevel Modeling of Categorical Outcomes Using IBM SPSS*. https://doi.org/10.4324/9780203808986

Holfeld, B. (2014). Perceptions and attributions of bystanders to cyber bullying. *Computers in Human Behavior*, *38*, 1–7. doi:10.1016/j.chb.2014.05.012

Houlston, C., & Smith, P. K. (2009). The impact of a peer counselling scheme to address bullying in an all-girl London secondary school: a short-term longitudinal study. *The British Journal of Educational Psychology*, *79*(Pt 1), 69–86. doi:10.1348/000709908X293878

Huang, Y., & Chou, C. (2010). An analysis of multiple factors of cyberbullying among junior high school students in Taiwan. *Computers in Human Behavior*, *26*(6), 1581–1590. doi:10.1016/j.chb.2010.06.005

Hu, L. T. % Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structurenanalysis: Conventional criteria versus new alternatives*. Structural Equation Modeling*, 6(1), 1-55. doi: 10.1080/10705519909540118

Jackson, J. N., & Campbell, J. M. (2009). Teachers' peer buddy selections for children with autism: Social characteristics and relationship with peer nominations. *Journal of Autism and Developmental Disorders*, *39*(2), 269–277. doi:10.1007/s10803-008-0623-1

Jolliffe, D., & Farrington, D. P. (2006a). Development and validation of the Basic Empathy Scale. *Journal of Adolescence, 29*, 589-611.

Juvonen, J., & Galván, A. (2008). Peer influence in involuntary social groups: Lessons from research on bullying. In M. J. Prinstein, K. A. Dodge, M. J. (Ed) Prinstein, & K. A. (Ed) Dodge (Eds.), *Understanding peer influence in children and adolescents.* (pp. 225–244). Guilford Press.

Kandel, D. B. (1978). Homophily, Selection, and Socialization in Adolescent Friendships. *American Journal of Sociology*, *84*(2), 427–436. doi:10.1086/226792

Kowalski, R. M., & Limber, S. P. (2007). Electronic bullying among middle school students. *The Journal of Adolescent Health : Official Publication of the Society for Adolescent Medicine*, *41*(6 Suppl 1), S22–30. doi:10.1016/j.jadohealth.2007.08.017

Kupersmidt, J. B., & Coie, J. D. (1990). Preadolescent Peer Status, Aggression, and School Adjustment as Predictors of Externalizing Problems in Adolescence. *Child Development*, *61*(5), 1350–1362. doi:10.1111/j.1467-8624.1990.tb02866.x

Latané, B., & Darley, J. M. (1970). The Unresponsive Bystander: Why doesn't he help? In *The Unresponsive Bystander* (pp. 1–67). doi:10.2307/2063973

Lazarus, J. V, Sihvonen-Riemenschneider, H., Laukamm-Josten, U., Wong, F., & Liljestrand, J. (2010). Systematic review of interventions to prevent the spread of sexually transmitted infections, including HIV, among young people in Europe. *Croat Med J*, *51*(1), 74–84. doi:10.3325/cmj.2010.51.74

Lee, S., Kim, C.-J., & Kim, D. H. (2015). A meta-analysis of the effect of school-based anti-bullying programs. *Journal of Child Health Care*, *19*(2), 136–153. doi:10.1177/1367493513503581

Lenhart, A., Madden, M., Smith, A., Purcell, K., Zickuhr, K., Rainie, L., & Project, A. L. (2011). Teens , Kindness and Cruelty on Social Network Sites. *PewResearchCenter*, 1–86. doi:378

Lewin, K. (1946). Action Research and Minority Problems. *Journal of Social Issues*, *2*(4), 34–46. doi:10.1111/j.1540-4560.1946.tb02295.x

Li, Q. (2007) New bottle but old wine: A research of cyberbullying in schools. *Computers in Human Behavior*, 23(4), 1777-1791.

Machackova, H., Cerna, A., Sevcikova, A., Dedkova, L., & Daneback, K. (2013). Effectiveness of coping strategies for victims of cyberbullying. *Cyberpsychology: Journal of Psychosocial Research on Cyberspace*, *7*(3). doi:10.5817/CP2013-3-5

Malecki, C. K., & Demaray, M. K. (2002) Measuring perceived social support: Development of the child and adolescent social support scale (CASSS). *Psychology in the Schools*, 39(1), 1-18. doi: 10.1002/pits.10004

Malecki, C. K., & Elliott. S. N. (1999). Adolescents' ratings of perceived social support and its importance: Validation of the student social support scale. *Psychology in the Schools*, 36(6), 473-483.

Mason-Jones, A. J., Flisher, A. J., & Mathews, C. (2011). Who are the peer educators? HIV prevention in South African schools. *Health Education Research*, *26*(3), 563–71. doi:10.1093/her/cyq064

McMahon, T. J., Ward, N. L., Pruett, M. K., Davidson, L., & Griffith, E. (2000). Building Full-Service Schools: Lessons Learned in the Development of Interagency Collaboratives. *Journal of Educational and Psychological Consultation*, *11*(1), 65–92. doi:10.1207/S1532768XJEPC1101_5

Meazzini, P. (1978). *La conduzione della classe*. (Giunti, Ed.). Firenze.

Menesini, E. (2000). *Bullismo : che fare? : Prevenzione e strategie d'intervento nella scuola*. Firenze: Giunti.

Menesini, E. (2002). L'AIUTO TRA PARI: PERCORSI OPERATIVI E MODELLI TEORICI. *Scuola E Città*, *3*, 42–57.

Menesini, E. (2007). *Bullismo: le azioni efficaci della scuola : percorsi italiani alla prevenzione e all'intervento*. Gardolo: Erickson.

Menesini, E., & Camodeca, M. (2008). Shame and guilt as behaviour regulators: Relationships with bullying, victimization and prosocial behaviour. *British Journal of Developmental Psychology*, *26*(2), 183–196. doi:10.1348/026151007X205281

Menesini, E., Codecasa, E., Benelli, B., & Cowie, H. (2003). Enhancing children's responsibility to take action against bullying: Evaluation of a befriending intervention in Italian middle schools. *Aggressive Behavior*, *29*(1), 1–14. doi:10.1002/ab.80012

Menesini, E., Eslea, M., Smith, P. K., Genta, M. L., Giannetti, E., Fonzi, A., & Costabile, A. (1997). Cross-national comparison of children's attitudes towards bully/victim problems in school. *Aggressive Behavior*, *23*(4), 245–257. doi:10.1002/(SICI)1098-2337(1997)23:4<245::AID-AB3>3.0.CO;2-J

Menesini, E., & Gini, G. (2000). Il bullismo come processo di gruppo. Adattamento e validazione del Questionario Ruoli dei Partecipanti alla popolazione italiana. *ETA' EVOLUTIVA*, *66*, 18–32.

Menesini, E., & Nocentini, A. (2009). Cyberbullying definition and measurement: Some critical considerations. *Zeitschrift Für Psychologie/Journal of Psychology*, *217*(4), 230–232.

Menesini, E., Nocentini, A., & Calussi, P. (2011). The measurement of cyberbullying: dimensional structure and relative item severity and discrimination. *Cyberpsychology, Behavior and Social Networking*, *14*(5), 267–74. doi:10.1089/cyber.2010.0002

Menesini, E., Nocentini, A., & Palladino, B. E. (2012). Empowering students against bullying and cyberbullying: Evaluation of an Italian peer-led model. *International Journal of Conflict and Violence*, *6*(2), 314–321.

Menesini, E., Nocentini, A., Palladino, B. E., Frisén, A., Berne, S., Ortega-Ruiz, R., … Smith, P. K. (2012). Cyberbullying definition among adolescents: a comparison across six European countries. *Cyberpsychology, Behavior and Social Networking*, *15*(9), 455–63. doi:10.1089/cyber.2012.0040

Menesini, E., Palladino, B. E., & Nocentini, A. (2015). Online and School based intervention to prevent cyberbullying among adolescents. In *Cyberbullying: From Theory to Intervention* (p. 240). Taylor & Francis Group.

Naylor, P., & Cowie, H. (1999). The effectiveness of peer support systems in challenging school bullying: the perspectives and experiences of teachers and pupils. *Journal of Adolescence*, *22*(4), 467–479.

Nickerson, A. B., Mele, D., & Princiotta, D. (2008). Attachment and empathy as predictors of roles as defenders or outsiders in bullying interactions. *Journal of School Psychology*, *46*(6), 687–703. doi:10.1016/j.jsp.2008.06.002

Nocentini, A., Zambuto, V., & Menesini, E. (2015). Anti-bullying programs and Information and Communication Technologies (ICTs): a systematic review. *Aggression and Violent Behavior*. doi:10.1016/j.avb.2015.05.012

Nordgren, L. F., Banas, K., & MacDonald, G. (2011). Empathy Gaps for Social Pain: Why People Underestimate the Pain of Social Suffering. *Journal of Personality and Social Psychology*, *100*(1), 120–128. https://doi.org/10.1037/a0020938

Palladino, B. E., Nocentini, A., & Menesini, E. (2012). Online and offline peer led models against bullying and cyberbullying. *Psicothema*, *24*(4), 634–639.

Palladino, B. E., Nocentini, A., & Menesini, E. (2015). Psychometric properties of the Florence CyberBullying-CyberVictimization Scales. *Cyberpsychology, Behavior and Social Networking*, *18*(2), 112–9. doi:10.1089/cyber.2014.0366

Palladino, B. E., Nocentini, A., & Menesini, E. (2016). Evidence-based intervention against bullying and cyberbullying: evaluation of the Noncadiamointrappola! program through two independent trials. *Aggressive Behavior*, *42*(2), 194–206. doi:10.1002/ab.21636

Peel, N. M., & Warburton, J. (2009). Using senior volunteers as peer educators: What is the evidence of effectiveness in falls prevention? *Australasian Journal on Ageing*, *28*(1), 7–11. doi:10.1111/j.1741-6612.2008.00320.x

Pellai, A., Rinaldin, V., & Tamborini, B. (2002). Educazione tra pari: prospettive teoriche e modelli. *Animazione Sociale* , (10), 77–88.

Piaget, J. (1970). *Genetic epistemology*. (Columbia Univ Pr, Ed.).

Porter, J. R., & Smith-Adcock, S. (2011). Children Who Help Victims of Bullying: Implications for Practice. *International Journal for the Advancement of Counselling*, *33*(3), 196–205. doi:10.1007/s10447-011-9121-9

Pozzoli, T., Gini, G., & Vieno, A. (2012). The Role of Individual Correlates and Class Norms in Defending and Passive Bystanding Behavior in Bullying: A Multilevel Analysis. *Child Development*, *83*(6), 1917–1931. doi:10.1111/j.1467-8624.2012.01831.x

Prezza, M., Trombaccia, F. R., & Armento, L. (1997). La scala dell'autostima di Rosenberg: traduzione e validazione italiana [The Rosenberg Self-Esteem Scale: Italian translation and validation]. *Bollettino Di Psicologia Applicata*, *223*, 35–44.

Price, D., Green, D., Spears, B., Scrimgeour, M., Barnes, A., Geer, R., & Johnson, B. (2014). A Qualitative Exploration of Cyber-Bystanders and Moral Engagement. *Australian Journal of Guidance and Counselling*, *24*(01), 1–17. doi:10.1017/jgc.2013.18

Raskauskas, J., & Stoltz, A. (2007). Involvement in traditional and electronic bullying among adolescents. *Developmental Psychology*. Roose, R. J., Cockerham-Colas, L., Soloway, I., Batchelder, A., & Litwin, A. H. (2014). Reducing barriers to hepatitis C treatment among drug users: an integrated hepatitis C peer education and support program. *Journal of Health Care for the Poor and Underserved*, *25*(2), 652–62. doi:10.1353/hpu.2014.0096

Rosenberg, M. (1965). Rosenberg Self-Esteem Scale. *New York*, ? doi:/S0034-98872009000600009

Salmivalli, C. (1999). Participant role approach to school bullying: implications for interventions. *Journal of Adolescence*, *22*(4), 453–459. doi:10.1006/jado.1999.0239

Salmivalli, C. (2001). Peer-led intervention campaign against school bullying:Who considered it useful, who benefited? *Educational Research*, 43, 263-278. doi: 10.1080/00131880110081035

Salmivalli, C. (2010). Bullying and the peer group: A review. *Aggression and Violent Behavior*, *15*(2), 112–120. doi:10.1016/j.avb.2009.08.007

Salmivalli, C., Huttunen, A., & Lagerspetz, K. M. J. (1997). Friendship networks and bullying in schools. *Scandinavian Journal of Psychology*, (38), 305–312. doi:10.1111/j.1749-6632.1996.tb32541.x

Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, K., & Kaukiainen, A. (1996). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behavior*, *22*, 1–15.

Salmivalli, C., Lagerspetz, K., Björkqvist, K., Österman, K., & Kaukiainen, A. (1998). Bullying as a group process: Participant roles and their relations to social status within the group. *Aggressive Behavior*, *22*(1), 1–15. doi:10.1002/(SICI)1098-2337(1996)22:1<1::AID-AB1>3.0.CO;2-T

Salmivalli, C., & Voeten, M. (2004). Connections between attitudes, group norms, and behaviour in bullying situations. *International Journal of Behavioral Development*, *28*(3), 246–258. doi:10.1080/01650250344000488

Shiner, M. (1999). Defining peer education. *Journal of Adolescence*, *22*, 555–566.

Shultz, E., Heilman, R., & Hart, K. J. (2014). Cyber-bullying: An exploration of bystander behavior and motivation. *Cyberpsychology*, *8*(4).

Slonje, R., & Smith, P. K. (2008). Cyberbullying: Another main type of bullying?: Personality and Social Sciences. *Scandinavian Journal of Psychology*, *49*(2), 147–154. doi:10.1111/j.1467-9450.2007.00611.x

Slonje, R., Smith, P. K., & Frisén, A. (2013). Computers in human behavior the nature of cyberbullying , and strategies for prevention. *Computers in Human Behavior*, *29*(1), 26–32. doi:10.1016/j.chb.2012.05.024

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *49*(4), 376–85. doi:10.1111/j.1469-7610.2007.01846.x

Smith, P. K., Salmivalli, C., & Cowie, H. (2012). Effectiveness of school-based programs to reduce bullying: a commentary. *Journal of Experimental Criminology*, *8*(4), 433–441. doi:10.1007/s11292-012-9142-3

Smith, P. K., Talamelli, L., Cowie, H., Naylor, P., & Chauhan, P. (2004). Profiles of non-victims, escaped victims, continuing victims and new victims of school bullying. *The British Journal of Educational Psychology*, *74*(Pt 4), 565–81. https://doi.org/10.1348/0007099042376427

Svenson, G., & Bertinato, L. (1998). European guidelines for youth AIDS peer education.

Terasahjo, T., & Salmivalli, C. (2003). "She Is Not Actually Bullied." The Discourse of Harassment in Student Groups. *Aggressive Behavior*, *29*(2), 134–154. doi:10.1002/ab.10045

Thomas, C. R., & Hamilton, J. (2006). Evidence-Based Practice for Conduct Disorder Symptoms. *Journal of the American Academy of Child & Adolescent Psychiatry*, *45*(1), 109–114. doi:10.1097/01.chi.0000184928.33799.60

Thompson, F., & Smith, P. k. (2011). The use and effectiveness of anti-bullying strategies in schools. *Research Brief DFE-RR098*, 1–220.

Thornberg, R., & Jungert, T. (2013). Bystander behavior in bullying situations: basic moral sensitivity, moral disengagement and defender self-efficacy. *Journal of Adolescence*, *36*(3), 475–83. doi:10.1016/j.adolescence.2013.02.003

Topping, K. J. (1996). The effectiveness of peer tutoring in further and higher education: A typology and review of the literature. *Higher Education*, *32*(3), 321–345. doi:10.1007/BF00138870

Ttofi, M. M., & Farrington, D. P. (2011). Effectiveness of school-based programs to reduce bullying: A systematic and meta-analytic review. *Journal of Experimental Criminology*.

Turner, G., & Shepherd, J. (1999). A method in search of a theory : peer education and health promotion, *14*(2), 235–247.

Van Cleemput, K., Vandebosch, H., & Pabian, S. (2014). Personal characteristics and contextual factors that determine "helping," "joining in," and "doing nothing" when witnessing cyberbullying. *Aggressive Behavior*, *40*(5), 383–396. doi:10.1002/ab.21534

Vygotskij, L, S. (1934), *Myšlenie i rec'.* Socekgiz, Moskva e Leningrad (trad. it. *Pensiero e linguaggio*, Laterza, Bari 1990).

Vygotskij, L, S. (1978 [1987-1997]), *Mind in society. The development of higher psychological processes*; trad. it. *II processo cognitivo*, Boringhieri, Torino 1981.

Visser, M. J. (2004). Implementing peer support in schools: using a theoretical framework in action research. *Journal of Community & Applied Social Psychology*, *14*(6), 436–454. doi:10.1002/casp.788

Wye, S.Q., & AIVL Hepatitis C Peer Education & Prevention Program, (2006). *A Framework for peer education by drug-user organizations*. Canberra: Australian Injecting & Illicit Drug Users League

Ybarra, M. L., & Mitchell, K. J. (2004). Online aggressor/targets, aggressors, and targets: a comparison of associated youth characteristics. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *45*(7), 1308–16.

Zimet, G.D., Dahlem, N. W., Zimet, S. G., & Farley, G. K. (1988). The multidimensional scale of perceived social support. *Journal of Personality Assessment*, 52(1), 30-41. doi.org/10.1207/s15327752jpa5201

Zimet, G. D., Powell, S. S., Farley, G.K., Werkman, S., & Berkoff, K. A. (1990). Psychometric characteristics of the multidimensional scale of perceived social support. *Journal of Personality Assessment*, 55, 610-617.