

**UNIVERSITY OF SÃO PAULO
RIBEIRÃO PRETO COLLEGE OF NURSING**

JORGE LUIZ DA SILVA

**SOCIAL SKILLS TRAINING AS A COPING STRATEGY FOR BULLYING:
INTERVENTION AND EMPOWERMENT**

**RIBEIRÃO PRETO
2017**

JORGE LUIZ DA SILVA

**SOCIAL SKILLS TRAINING AS A COPING STRATEGY FOR BULLYING:
INTERVENTION AND EMPOWERMENT**

Thesis presented to the University of São Paulo at Ribeirão Preto, College of Nursing, to obtain the title of Doctor in Sciences, Public Health Nursing Graduate Program.

Concentration field: Assistance to Children and Adolescents

Supervisor: Prof. Ph.D. Marta Angélica Iossi Silva

**RIBEIRÃO PRETO
2017**

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Catalog Record

Silva, Jorge Luiz da

Social skills training as a coping strategy for bullying: intervention and empowerment. Ribeirão Preto, 2017.

80 p. : il.; 30 cm

Doctoral Thesis, presented to the Ribeirão Preto College of Nursing/USP,
Concentration field: Public Health Nursing

Supervisor: Marta Angélica Iossi Silva.

1. Bullying. 2. Intervention. 3. Prevention. 4. School Health.

DA SILVA, Jorge Luiz

Social skills training as a coping strategy for bullying: intervention and empowerment.

Thesis presented to the University of São Paulo at Ribeirão Preto, College of Nursing, to obtain the title of Doctor in Sciences, Public Health Nursing Graduate Program.

Approved in: / /

Thesis Committee

Prof. Ph.D. _____

Institution: _____

I dedicate this thesis to all people who believe in education as a path to human transformation.

Research funded by the Foundation for Research Support of the State of São Paulo (FAPESP). Processes 2013/22361-5 and 2015/01794-6.

ACKNOWLEDGEMENTS

To my parents who gave me life, provided the basis for my development, for their support and understanding concerning the importance of conducting this work for my training and professional future.

To all my professors who contributed to my training. Especially to those who were interested in the integral development of students, going beyond the mere transmission of content.

To the Prof. Dr. Andréa Maturano Longarezi, responsible for my initiation in scientific research, for believing and investing in my work. The trust that she always demonstrated was crucial to continuing my academic training.

To the Prof. Dr. Sálua Cecílio, for having welcomed me when I did not have a supervisor for my monograph, and for the excellent ethical training in research that she provided me.

To the Prof. Dr. Marina Rezende Bazon, for the dedication when supervising me during my Master's program, for the support, tolerance and, for the academic discipline that she encouraged me to develop.

To the Prof. Dr. Marta Angélica Iossi Silva for her professionalism, competence, and dedication. For the friendship and all the opportunities, stimulus, and credibility that she has provided for me.

To Delvita Pereira Alves and Ruth Estevão, whose mediations with the official educational organs provided the data collection for this study during the planned time frame.

To the Professors Dr. Luciane Sá de Andrade and Dr. Marina Rezende Bazon, who substantially contributed to the improvement of this study during the qualification exam.

To Wanderlei Abadio de Oliveira for the friendship, support, understanding and scientific partnership.

To Marilurdes Silva Farias for helping me during data collection and for her dedicated friendship.

To Felipe Fantine Maria for the personal, academic and professional support.

To Fellipe Soares Salgado for the encouragement and help during difficult moments.

To professors and employees of the Ribeirão Preto College of Nursing, especially to Shirley Figueiredo, secretary of the Public Health Nursing Graduate Program, for her constant help, to facilitation with bureaucracies and rendering them almost unnoticeable.

To the members of the Study, Teaching and Research Nucleus from the Primary Attention Program for School Health (Núcleo de Estudos, Ensino e Pesquisa do Programa de Assistência Primária à Saúde Escolar - PROASE), especially (in alphabetic order), Ana Beatriz, Ana Flávia, Diene, Flávia, Iara, Julliane and Lidiane for providing knowledge production from presentations and discussions, which contributed to the development of this study and to my academic and professional training.

I thank the University of Minho in Portugal, the Prof. Dr. Beatriz Pereira and all members of the Permanent Seminar on Physical Education, Leisure, and Health, especially (in alphabetic order), Inês, Marcela, Paulo and Sérgio for the reception, companionship, scientific exchanges, and friendship.

To Samara Pereira Oliboni for the happy moments shared in Portugal, for friendship and for exemplifying the responsibility and ethic in social interactions and professional work.

To Ida Mara Brunelli, whose commitment and dedication to international relations allowed a sandwich exchange internship to be conducted without bureaucratic barriers or entanglements.

To school directors, professors, and students who participated in the study.

To the Foundation for Research Support of the State of São Paulo (FAPESP), for financial support.

To all members from the Apostle Peter Spiritual Center, who warmly welcomed me, constituting a second family to me in this city.

To God and Spirituality, for omnipresent support.

Flores e espinhos

Nessa época do ano
Quando o frio vem chegando
E há menos flores que espinhos

Os dias perdidos
Vem a luz
Ainda éramos filhos
Éramos amigos

Até sermos engolidos
Pela vida sem brilho
Por nossos inimigos
Na rotina comum

E sou só um
Mas não sou um deles
Eu sou só um

E mesmo que pareça tolo
E sem sentido
Eu ainda brigo por sonhos
Eu ainda brigo
Eu ainda brigo

Herbert Vianna

RESUMO

SILVA, J.L. Treinamento de habilidades sociais como estratégia de enfrentamento do *bullying*: intervenção e empoderamento. 80f. Tese (Doutorado) - Escola de Enfermagem de Ribeirão Preto, Universidade de São Paulo, Ribeirão Preto, 2017.

O *bullying* escolar é um tipo de violência entre pares que envolve agressões intencionais, repetitivas e praticadas em uma relação de desigualdade de poder entre vítimas e agressores. É considerado um problema importante a ser investigado e enfrentado nas escolas por exercer efeitos negativos sobre os desenvolvimentos físico, emocional e social dos estudantes. A sua ocorrência se encontra relacionada a aspectos contextuais da instituição escolar e pessoais dos estudantes. Entretanto, esta investigação direcionou seu foco às características de natureza pessoal que tornam os estudantes vulneráveis à vitimização por *bullying*, no sentido de proporcionar àqueles em condição de vítima melhores condições para se autodefenderem e fazerem amigos para aumentarem o seu apoio social recebido diante das agressões que sofrem. Assim, o objetivo deste estudo foi verificar se a melhoria das habilidades sociais reduz a vitimização em estudantes brasileiros do 6º ano escolar que são vítimas de *bullying*. Trata-se de um estudo de intervenção realizado em seis escolas públicas da cidade de Ribeirão Preto, SP, Brasil. Participaram 78 estudantes vítimas de *bullying* que foram alocadas em dois grupos: intervenção (n=38) comparação (n=40). Os participantes dos dois grupos foram avaliados em relação à vitimização por *bullying* e ao desenvolvimento de habilidades sociais, antes e depois de finalizada a intervenção em habilidades sociais. As oito sessões, realizadas uma vez por semana, com duração de 50 minutos cada, enfocaram habilidades de civilidade, fazer amigos, autocontrole e expressividade emocional, empatia, assertividade e solução de problemas interpessoais. Os dados foram analisados estatisticamente mediante modelos de regressão de Poisson com efeito aleatório. Análises pré e pós-teste revelaram que os grupos intervenção e comparação apresentaram redução significativa na vitimização por *bullying*. Os participantes da intervenção diminuíram a dificuldade que apresentaram em praticar as habilidades sociais em nível estatisticamente não significativo. Como mudanças comportamentais demandam maior tempo para se efetivarem nas relações sociais, o pouco tempo existente entre a finalização da intervenção e a avaliação pós-teste pode ter influenciado o resultado. Entretanto, a tendência de melhora nas habilidades sociais das vítimas de *bullying* foi percebida por seus pares que as indicaram com maior aceitação social, maior capacidade de resolução de conflitos, mais simpatia e menor indicação de que possuíam poucos amigos, em comparação com a avaliação inicial (pré-teste). Apesar de não apresentarem diferença significativa, são resultados que demonstram progressos na posição social das vítimas. Embora não seja possível atribuir a diminuição da vitimização à intervenção realizada, são resultados que atestam a positividade do estudo e que, a longo prazo, podem ampliar sua magnitude ao ponto de tornarem-se significativos. Diante dos resultados, sugere-se que outros modelos de intervenção *antibullying* sejam testados na realidade nacional, com vistas à identificação daquelas mais efetivos. Recomenda-se que estudos futuros utilizem abordagens não focalizadas exclusivamente nos aspectos individuais dos estudantes. Intervenções em habilidades sociais podem ser mais eficazes se desenvolvidas em conjunto com outras que envolvam também a variedade de situações, contextos e sujeitos implicados no *bullying*, como os pares, equipe escolar e família.

Palavras-chave: *Bullying*. Habilidades sociais. Intervenção. Prevenção. Saúde escolar.

ABSTRACT

SILVA, J.L. Social skills training as a coping strategy for bullying: intervention and empowerment. 80f. Thesis (Doctoral) - Ribeirão Preto College of Nursing, University of São Paulo, Ribeirão Preto, 2017.

School bullying is a type of violence between peers involving intentional, repetitive aggressions, and practices in an unequal power relationship between victims and aggressors. It is considered an important problem to be investigated and coped with in schools, as it has adverse effects on the physical, emotional and social development of students. Its occurrence relates to contextual aspects of scholastic institutions and personal aspects of students from students. Thus, this investigation's focus is directed at personal characteristics that make students vulnerable to bullying victimization, in a sense to propitiate better conditions for victims in terms of self-defense and building friendships, to increase the social support received when coping with these aggressions. Thus, the objective of this study was to verify if the improvement of social skills reduces victimization of Brazilian students from the 6th school year who are bullying victims. We conducted an intervention study in six public schools from the city of Ribeirão Preto, SP, Brazil. Seventy-eight students, victims of bullying, participated in the study, and they were allocated into two groups: intervention (n=38) and comparison (n=40). Participants from both groups were assessed in relation to bullying victimization and the development of social skills, before and after a social skills intervention. The eight sessions, conducted once a week, with 50 minutes duration each, focused on civility skills, to build friendships, self-control and emotional expressivity, empathy, assertiveness and resolving interpersonal problems. The data were statistically analyzed through Poisson's regression models with random effects. Pre- and post-tests analyses revealed that intervention and comparison groups significantly reduced bullying victimization. Intervention participants presented decreased difficulty in practicing social skills at a non-significant statistical level. As behavioral changes require more time to be effective in social relationships, the limited time existing between the end of the intervention and the post-test assessment could have influenced the result. However, the tendency to increase the social abilities of bullying victims was perceived by their pairs as indicating they had better social acceptance, greater capacity for conflict resolution, more sympathy and less indication that they had few friends, in comparison to the initial assessment (pre-test). Despite not presenting significant differences, those are results demonstrating progress in the victims' social position. Although it is not possible to attribute the decrease in victimization to the intervention, those are results proving the positivity of the study that, in the long-term, may broaden its magnitude to a level that it can become significant. Considering the results, we suggest other anti-bullying intervention models to be tested in the reality of the national context, aiming to identify the most effective ones. We recommend future studies to use approaches not focused exclusively on individual aspects of students. Social skills interventions can be more effective if developed with other interventions, including a variety of situations, contexts, and subjects involved in bullying, such as peers, school teams, and family members.

Key-words: Bullying. Social Skills. Intervention. Prevention. School health.

RESUMEN

SILVA, J.L. Entrenamiento en habilidades sociales como estrategia de afrontamiento para el acoso escolar: intervención y empoderamiento. 80f. Tesis (Doctoral) - Escuela de Enfermería de Ribeirão Preto, Universidad de São Paulo, Ribeirão Preto, 2017.

El acoso escolar es un tipo de violencia entre pares que involucra agresiones intencionales, repetitivas y prácticas en una relación de poder desigual entre víctimas y agresores. Se considera un problema importante para ser investigado y manejado en las escuelas, ya que tiene efectos adversos en el desarrollo físico, emocional y social de los estudiantes. Su ocurrencia se relaciona con los aspectos contextuales de las instituciones escolares y los aspectos personales de los estudiantes. Por lo tanto, el enfoque de esta investigación está dirigido a características personales que hacen que los estudiantes sean vulnerables a la victimización por intimidación, en cierto sentido para propiciar mejores condiciones para las víctimas en términos de autodefensa y amistades, para aumentar el apoyo social recibido al enfrentar estas agresiones. Por lo tanto, el objetivo de este estudio fue verificar si la mejora de las habilidades sociales reduce la victimización de los estudiantes brasileños del sexto año escolar que son víctimas de intimidación. Realizamos un estudio de intervención en seis escuelas públicas de la ciudad de Ribeirão Preto, SP, Brasil. Participaron en el estudio 78 estudiantes víctimas de intimidación, asignados en dos grupos: intervención (n = 38) y comparación (n = 40). Los participantes de ambos grupos fueron evaluados en relación con la victimización por intimidación y el desarrollo de habilidades sociales, antes y después de una intervención de habilidades sociales. Las ocho sesiones, una vez a la semana, con una duración de 50 minutos cada una, se centraron en las habilidades de civilidad, para crear amistades, autocontrol y expresividad emocional, empatía, asertividad y resolución de problemas interpersonales. Los datos se analizaron estadísticamente a través de modelos de regresión de Poisson con efectos aleatorios. Los análisis previos y posteriores a las pruebas revelaron que los grupos de intervención y de comparación redujeron significativamente la victimización por intimidación. Los participantes en la intervención presentaron menor dificultad en la práctica de habilidades sociales a un nivel estadístico no significativo. Como los cambios de comportamiento requieren más tiempo para ser eficaces en las relaciones sociales, el tiempo limitado existente entre el final de la intervención y la evaluación posterior a la prueba podría haber influido en el resultado. Sin embargo, la tendencia a aumentar las habilidades sociales de las víctimas de intimidación fue percibida por sus parejas como indicando que tenían mejor aceptación social, mayor capacidad de resolución de conflictos, más simpatía y menos indicios de que tenían pocos amigos, en comparación con la evaluación inicial (prueba). A pesar de no presentar diferencias significativas, estos son resultados que demuestran progreso en la posición social de las víctimas. Aunque no es posible atribuir la disminución de la victimización a la intervención, éstos son resultados que demuestran la positividad del estudio que, a largo plazo, puede ampliar su magnitud a un nivel que puede llegar a ser significativo. Teniendo en cuenta los resultados, se sugiere que otros modelos de intervención anti-intimidación sean probados en la realidad del contexto nacional, con el objetivo de identificar los más efectivos. Recomendamos estudios futuros para utilizar enfoques no enfocados exclusivamente en aspectos individuales de los estudiantes. Las intervenciones de habilidades sociales pueden ser más eficaces si se desarrollan con otras intervenciones, incluyendo una variedad de situaciones, contextos y sujetos involucrados en la intimidación, como compañeros, equipos escolares y miembros de la familia.

Palabras clave: Bullying. Habilidades sociales. Intervención. Prevención. Salud escolar.

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LIST OF ABBREVIATIONS

CAAE	Certificado de Apresentação para Apreciação Ética (Certificate of Presentation for Ethical Appreciation)
EVAP	Escala de Agressão e Vitimização entre Pares (Aggression and Peer Victimization Scale)
FAPESP	Fundação de Amparo à Pesquisa do Estado de São Paulo (São Paulo Research Foundation)
P-R	Peer-Report
KIVA	Kiusaamista Vastaa (Against Bullying)
LILACS	Literatura Latino-Americana e do Caribe em Ciências da Saúde (Latin American and Caribbean Literature on Health Sciences)
PSYCINFO	Psychological Information Database
SCIELO	Scientific Electronic Library Online
OBPP	Olweus Bullying Prevention Program
PICO	Patient or Problem, Intervention, Control or Comparison, Outcomes
PRISMA	Preferred Reporting Items for Systematic Reviews and Meta-Analyses
SIGN	Scottish Intercollegiate Guidelines Network
SMHSC	Sistema Multimídia de Habilidades Sociais para Crianças (Multimedia System of Social Skills for Children)
S-R	Self-Report
SST	Social Skills Training
USP	University of São Paulo
WHO	World Health Organization

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1. INTRODUCTION

Throughout the last decade in Brazil, there has been an increase in studies directed to a particular type of school violence, identified as bullying, involving intentional repetitive aggressions, practiced in an unequal relationship of power between victims and aggressors (OLIVEIRA et al., 2016a; OLWEUS, 2013). Aggression can be physical, verbal or relational, for example, spreading rumors and socially isolating the victim (SAMPAIO et al., 2015). The World Health Organization indicates bullying is a generalized global issue (MATOS, 2012), with occurrence rates varying from 7% to 43% for victims and, from 5% to 44% for aggressors (COOK et al., 2010); and a general average of 26% (CRAIG et al., 2009). In Brazil, the National School Health Study indicated an average of 28%, with 7.2% as the occurrence for victims and 20.8% for aggressors (OLIVEIRA et al., 2016b).

Students can be involved in bullying situations as victims, aggressors, and bystanders. As to the victims, there are two identified profiles: typical victim (presents physical fragility aspect, timidity, submission, insecurity, low self-esteem and difficulties self-imposing) and the aggressive victim (reproduces the violence suffered by another more fragile victim, provokes situations and, reacts in fights, but the person lacks the ability of satisfactory self-defense). Aggressors can be leaders (who take initiative in aggressions) or followers (accompany another aggressor, but they do not start the aggression by themselves). The bystanders are divided into observing (observes aggressions but does nothing) and defenders (defends the victim) (FANTE, 2005).

In regard to subtle aggressions and those that normally occur away from adults, school authorities have difficulty identifying bullying. Bullying can occur over long periods and negatively affect the education, health and the quality of life of the involved students (typical victims, aggressive victims, aggressors and bystanders) (HARALDSTAD et al., 2011). In general, the typical victims and the aggressive victims can present unsafe sensations, negative feelings, decreased self-esteem, depression, low school performance and, in more severe cases, suicide (MURPHY; MURPHY; SHEVLIN, 2015; WILLIFORD et al, 2014). Regarding the aggressors, the literature indicates that, over time, aggressions practiced can increase in intensity and the severity to a point that they become actions that are infractions of rule or law, for example (SILVA et al., 2016a). The bystander condition can lead to impotence, fear and unsafety feelings. In addition, it can affect school performance because it generates this emotional stress, concentration problems and impedes the establishment of trust relationships with teachers (KUBSZEWSKI et al., 2014).

Nevertheless, victims constitute a more vulnerable group because they suffer aggressions directly and indirectly. A study conducted in the United States with a sample of 1,985 students from the sixth school year determined that victims presented higher levels of anxiety, solitude and depression levels compared to aggressors and bystanders (JUVONEN; GRAHAM; SCHUSTER, 2003). In Brazil, the National School Health Survey (Pesquisa Nacional de Saúde do Escolar - PeNSE), conducted in 2015 with 109,104 students from the ninth year of school of public and private schools of all national territory, identified that victims had more solitude, insomnia, fewer friends and, they were more absent in classes in comparison to non-victim students (SILVA et al., 2017). A meta-analysis of 29 studies identified that bullying victimization during infancy elevated the depression levels of children, a persistent result for 36 years after the victimization occurred, with a mean duration of 6.9 years (TTOFI et al., 2011a).

Therefore, considering how bullying negatively affects the healthy psychosocial development of children and adolescents, especially of victims, it is fundamentally important to comprehend better how it appears, occurs and is maintained over time. In recent times, it has come to be recognized that its occurrence is associated with contextual aspects (absence of school rules, limited supervision of students, large class sizes, high levels of social inequality in the community, within other aspects), as well as, to students' personal aspects (for example: anxiety, timidity, social isolation, low self-esteem and little-developed social skills) (SILVA et al., 2016b; OLIVEIRA et al., 2015; AZEREDO et al., 2015). Nevertheless, this investigation will direct its focus on personal characteristics that leave students vulnerable to victimization, in a sense to bring about better conditions in which victims can defend themselves and to build friendships in order to increase their social support.

As previously mentioned, typical bullying victims present personal characteristics related to the absence of self-defense abilities and not asking for help from fellow students and teachers, such as timidity, anxiety, low self-esteem and few friends (SILVA et al., 2016b; ALMEIDA; LISBOA, 2014). The other profile, aggressive victims, displays disorganized and impulsive behavior, ineffectively react in aggressions and lack the ability to resolve conflicts (FANTE, 2005). Aggressive victims are at higher risk of social rejection and developing psychosocial issues (HUSSEIN, 2013). However, the two profiles have one common characteristic, which is the absence of social skills.

Social skills represent “different classes of social behaviors from one person's repertoire, which contributes to social competence, favoring a healthy and productive relationship with others” (DEL PRETTE; DEL PRETTE, 2013, p. 31). Some examples of

classes of social skills are self-control and emotional expressivity (to control humor, to tolerate frustrations, to be calm, to express positive and negative emotions, among others); assertiveness (to express dislike, to deal with criticism, to make and reject requests, etc.); civility (educated ways of treatment, courtesy); empathy (to demonstrate respect for differences, to express comprehension of feelings or other's experience); to make friends (to ask personal questions, to compliment, to offer help, to initiate and sustain a conversation, etc.); solution of interpersonal issues (to think before making decisions, to identify and assess possible solutions, to assess the decision process, among others) and, academic abilities (to ask and answer questions, to participate in discussions, to pay attention) (DEL PRETTE; DEL PRETTE, 2013).

Social competence corresponds to the individual skill of using internal resources (thoughts and feelings) in combination with to external resources (social and cultural aspects) to reach a personal goal with positive consequences for self and for others (DEL PRETTE; DEL PRETTE, 2013). A socially skilled person has a good repertoire of social skills that reflects social competence, for example, in the coherence and functionality of the individual's social performance, to start and maintain friendships, to resolve interpersonal issues in a way to avoid generating more conflict and to maintain a good emotional control (DEL PRETTE; DEL PRETTE, 2013). Therefore, the improvement of social skills of victimized students is important to promoting more social competence in them, helping to reduce the vulnerability of being bullied by facilitating the construction of friendships, resolution of conflicts, emotional self-control and assertive coping strategies (SILVA et al., 2016b; TERROSO et al., 2016).

In other words, the improvement of social skills can promote the empowerment of students, as this is understood as a production and a strengthening process of a subject's autonomy and the self-capacity to transform reality. At the individual level, empowerment refers to "the skill of people to gain knowledge and control over personal forces, to act in a direction to improve their life situation. It relates to the increased capacity of individuals to feel influential in processes that determine their lives" (BAQUERO, 2012, p. 176). Therefore, it is a conception of the development of potentialities, the increase of information and the perception that, in the case of bullying, can promote recognition of rights and the production of answers capable of ending aggressions. Thus, interventions based on social skills are in line with this perspective on measuring their actions, when they direct and subordinate themselves to the knowledge, awareness and answering capacity of students, through the development of personal resources to mobilize assertive coping strategies.

Some educational periods that are labeled as school transitions are marked by changes requiring adaptive efforts on the part of students that can be facilitated by higher levels of social

abilities (FARMER; XIE, 2007). In the Brazilian reality, these periods correspond to cycle changes, from the fifth to the sixth year of school, and the ninth year of the elementary to the first year of high school. Bullying occurrences increase in school transition periods, especially in the sixth year of school, when students are 11 to 12 years, a period that also coincides with the beginning of adolescence characterized by many biological and psychosocial transformations (SANTOS; SOARES, 2016).

Therefore, in the transition to the sixth year, students need to deal with many changes in their body and cognitive development, to adapt to school changes, to the restructuring of school subjects, to new interaction patterns with many teachers and, also to relate with more unknown students, making new friendships (SILVA et al., 2014; FARMER; XIE, 2007). In this context, the absence of social skills of victims can impair the establishment of friendships, which is a form self-defense in the face of aggression and the general adaptation required during school transitions.

Interventions based on social skills have been developed in different countries and few of them follow the guidelines of the World Health Organization (WHO), which recommend the development of interventions directed at the prevention and reduction of school violence as part of promoting student health and quality of life improvement initiatives (ESPELAGE et al., 2013; KARASIMOPOULOU et al., 2012). This type of intervention was successful in reducing victimization in the United States (JENSON et al., 2007), a country where most of the anti-bullying programs produce minimal effects. In Australia, there was also a significant reduction in victimization for victims showing symptoms of anxiety (BERRY; HUNT, 2009). Although this still is a little-investigated theme, these studies indicate that improvement of social skills represents an important aspect to ground interventions intended to reduce bullying for student victims.

2. OBJECTIVES

2.1. General Objective

The objective of this study was to verify if the improvement of social skills reduces victimization in Brazilian students from the 6th school year who were victims of bullying.

2.2. Specific Objectives

- ✓ To assess the bullying occurrences in students from the sixth year of Elementary School from five public schools to identify those who are victims;
- ✓ To develop an intervention with the victims based on social skills;
- ✓ To verify the intervention's effects on the social skills of intervention participants;
- ✓ To assess the intervention effects on the reduction of bullying victimization.

3. PAPER 1

SILVA, J.L OLIVEIRA, W.A.; MELLO, F.C.M.; ANDRADE, L.S; BAZON, M.R.; SILVA, M.A.I. Anti-bullying interventions in schools: a systematic literature review. **Ciência & Saúde Coletiva**. Rio de Janeiro, 2017. In press. (see Attachment A).

Anti-bullying interventions in schools: a systematic literature review

Abstract

This paper presents a systematic literature review addressing rigorously planned and assessed interventions intended to reduce school bullying. The search for papers was performed in four databases (LILACS, Psycinfo, Scielo and Web of Science) and guided by the question: What are the interventions used to reduce bullying in schools? Only case-control studies specifically focusing on school bullying without a time frame were included. The methodological quality of investigations was assessed using the SIGN checklist. A total of 18 papers composed the corpus of analysis and all were considered to have high methodological quality. The interventions conducted in the revised studies were divided into four categories: multidimensional or in the entire school, social skills training, curricular, and computerized. The review synthesizes knowledge that can be used to contemplate practices and intervention programs in the education and health fields with a multidisciplinary nature.

Keywords: Bullying; Violence; Adolescent; School Health.

Introduction

Bullying is violence perpetrated among peers and is considered to be a public health problem that affects the development and learning-teaching process of school-aged children and adolescents¹. Its main characteristics include: abuse that is repeated over time; intention to cause suffering in someone else; and imbalance of power between the parties². This type of violence is considered a social and group phenomenon in which the behavior of all those involved (victims, bullies and bystanders) influences both its continuity and its cessation³.

In terms of violence, bullying is identified all over the world. One study conducted in 40 countries in North America and Europe, shows that its occurrence rates ranged between 8.6% and 45.2% among boys and between 4.8% and 35.8% among girls⁴. In Brazil, the National School Health Survey (PeNSE) performed in 2012 revealed that 7.2% of the participants were

victims of bullying, while younger male African-descendant or indigenous individuals, whose mothers presented lower levels of education, were more likely to become victims. Bullies totaled 20.8% of the sample, while older male students, of African or Asian descent, whose mothers presented higher educational levels and studied in private schools, were more likely to become bullies⁵.

Regardless of prevalence rates, the consequences of bullying for students, school community and society, are of concern. The negative impact it has on the students' physical and mental health, such as anxiety, low self-esteem, depression, self-mutilation, loneliness, and suicide, are the most frequently reported^{6,7}. In regard to social development, bullying affects interpersonal relationships when a passive relationship is adopted or when aggressive behavior is used as an alternative to solving conflicts⁸. Risk behavior, such as delinquency or the use of alcohol or other drugs, is also associated with the phenomenon.^{9,10} PeNSE also identified an association between bullying and smoking. Being a victim may favor the consumption of alcohol or other drugs⁹, while being a bully may be related to indiscipline, and school failure or school abandonment⁵.

Given this context, and considering the prevalence and negative effects of bullying in Canada, for instance, the theme has been explored by public policies encouraging anti-bullying programs. Despite limitations, this approach encourages the consideration of alternatives available, such as in the field of social rights within a democratic regime, to reduce this phenomenon in schools.¹¹ The literature reports interventions conducted in many countries; however, few report positive results. In statistical terms, considering different sociocultural contexts, bullying decreases 20%, on average⁴.

In general, broader interventions that move beyond an individual approach, that is, those including the families of students and developed by intersectoral and multidisciplinary teams, are more effective. Additionally, the following aspects are considered to be essential: teacher training: actions to sensitize the public regarding the phenomenon; and individual and/or collective support provided to students involved in this type of violence⁴. In summary, more efficacious interventions cover the students' social, educational, familial and individual dimensions, considering different contexts and cultures¹².

Therefore, the identification of scientific literature addressing successful or unsuccessful anti-bullying interventions is essential to establishing what is effective and what is not effective in order to develop new intervention models according to each context. In this sense, this study's objective was to verify the effectiveness of rigorously planned and assessed interventions intended to fight school bullying.

Method

Study design

This systematic literature review was based on: 1) the establishment of a guiding question; 2) varied sources to locate studies; 3) establishment of inclusion and exclusion criteria; and 4) assessment of the methodological quality of the studies selected^{13,14}.

Databases and search strategies

The studies were searched on four databases: LILACS, PsycINFO, Web of Science, and SciELO. The PICO (Patient or Problem, Intervention, Control or Comparison, Outcomes) was used¹⁵ to establish the guiding question: “What interventions are implemented to decrease bullying in schools?”. The main key words related to the themes investigated were cross-searched: “bullying AND school AND intervention”; “bullying AND school based intervention”; “antibullying program AND school”. Equivalent key words in Portuguese were used in the SciELO database. Broader terms were intentionally used at this point to locate a greater number of papers and avoid some important study inadvertently being disregarded.

Inclusion and exclusion criteria

Only papers specifically focusing on school bullying and case-control studies, the data of which were assessed and compared before and after the intervention to ensure that changes verified in the experimental group were actually associated with the intervention rather than with any other condition or variable not included in the investigation, were included. No restrictions were imposed in regard to the year of publication, only in regard to the language, so that only papers written in Portuguese, Spanish or English would be included.

Exclusion criteria included: books, book chapters, editor’s letters, among other formats that are not submitted to rigorous, peer-reviewed assessment as occurs with scientific papers. Studies, with designs other than case-control, were also excluded, as well as papers that did not specifically address bullying.

Review Procedures

Two researchers searched bibliographic data in February 2015 based on the established inclusion criteria. The first stage concerning the selection of studies included reading and analyzing the titles and abstracts of all the papers initially selected. In the second stage, the full texts were read, which led to the exclusion of papers that did not meet the criteria. In the third

stage, the papers' main information was synthesized in a spreadsheet to guide the descriptive and critical analysis of papers.

The Scottish Intercollegiate Guidelines Network (SIGN) checklist was used to assess the methodological quality of case-control studies¹⁶. The instrument is composed of 11 questions, some of which are grouped into categories. In the assessment of papers, each question scores one, so that a paper can score one in the question concerning the research, six in the selection of participants, two for the measurement/assessment of results, one for the control of confounding variables, and one for the quality of statistical analysis. Studies are considered to present high quality when most or all the criteria are met, acceptable quality if more than half the criteria are met, and low quality if fewer than half the criteria are met¹⁶.

Results

The bibliographical search resulted in 901 papers, 369 of which appeared more than once. A total of 449 papers were excluded after applying inclusion and exclusion criteria, and another 65 papers were excluded after reading the full texts. The 18 papers that remained composed the *corpus* of the review. Figure 1 presents the flowchart with the identification, selection and steps for the inclusion of texts.

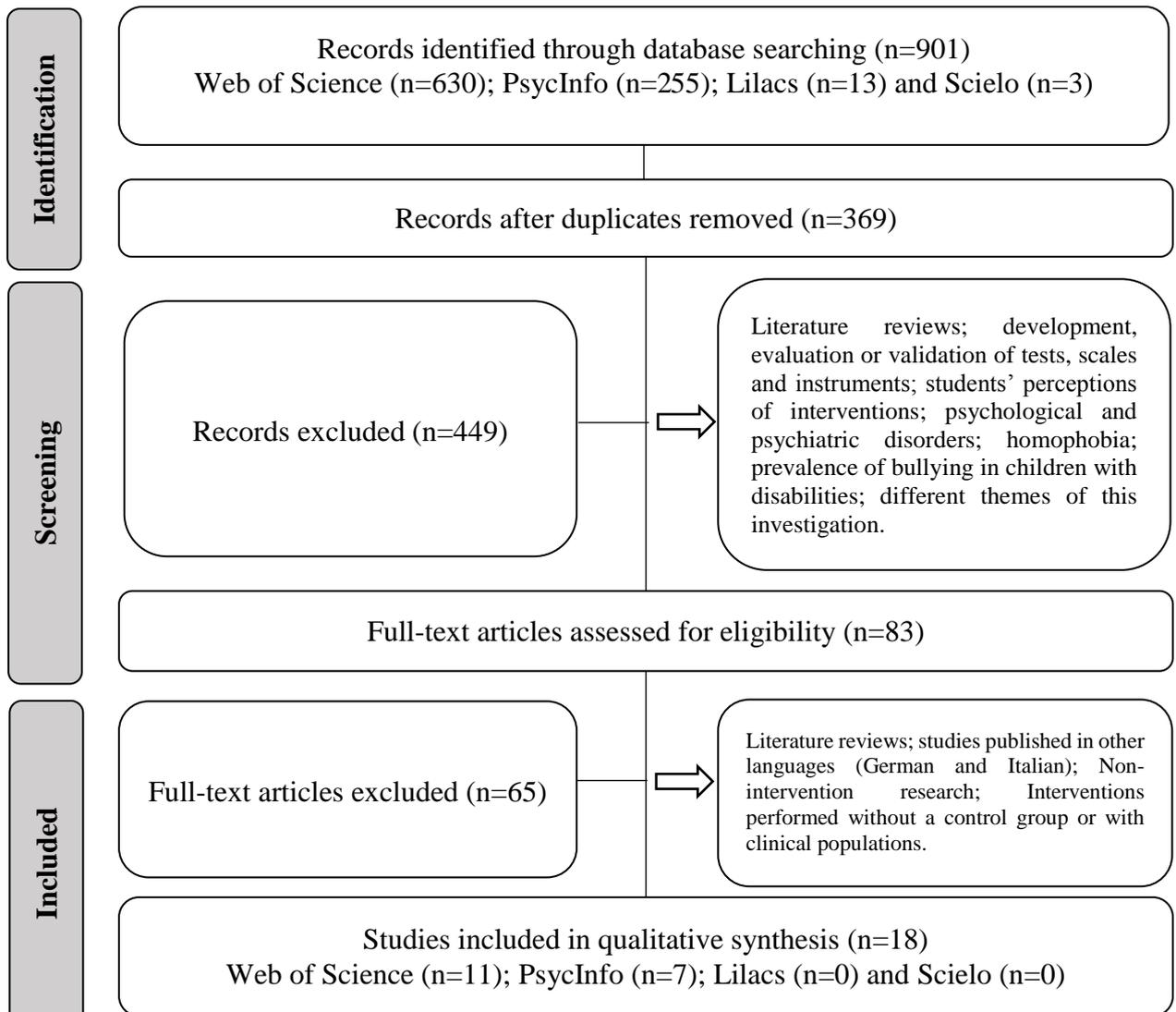


Figure 1 - PRISMA flowchart concerning the selection of papers

Table 1 presents a summary of the studies' main characteristics.

Table 1 - Characteristics of papers

Characteristics	n	%
Study		
<i>Publication year</i>		
1996-2000	3	16,7
2001-2005	3	16,7
2006-2010	4	22,2
2011-2014	8	44,4
<i>Country</i>		
United States	4	22,2
Finland	4	22,2
Japan	1	5,6
England	2	11,1
Belgium	2	11,1
Norway	1	5,6
Germany	1	5,6
Romania	1	5,6
Hong Kong	1	5,6
Canada	1	5,6
<i>Language</i>		
English	18	100
<i>Journal area</i>		
Psychology	13	72,2
Education	2	11,1
Health	3	16,7
Methodological		
<i>Sample size</i>		
Less than 50	1	5,6
50-149	5	27,8
150-500	2	11,1
500 a 1000	3	16,7
Over 1000	7	38,8
<i>Control Group</i>		
No treatment	18	100
<i>Follow-up</i>		
Yes	6	33,3
No	12	66,7
<i>follow-up period</i>		
Whitout follow-up	12	66,7
12 months	6	33,3
<i>Sample loss</i>		
Less than 5	3	16,7
5 a 10	1	5,6
11 a 20	3	16,7
Over 20	8	44,4
Uninformed	3	16,7

As presented in Table 1, the papers are evenly distributed over time, with the exception of the last five years, which showed an expressive increase in papers that reveals a growing interest in the investigation of interventions intended to prevent or fight bullying in schools. The United States, Finland and England were the countries with the largest number of papers. All studies were published in English, though less than half the papers (38.8%) originated English countries such as the United States, England or Canada.

The papers were published in 15 periodicals distributed in three fields of knowledge: Psychology, Education, and Health (Table1). A higher number of psychology journals and authors from the field of psychology suggest that these professionals have a greater interest in the development of anti-bullying interventions. Nonetheless, considering that it is a recurrent problem in schools, it should be more frequently investigated by those in education, that is, those who are more directly involved with it. Additionally, from an intersectoral perspective, the health field also needs to be included in this debate, especially in regard to primary health care services and actions that promote the health of students.

In regard to the studies' methodological characteristics (Table 1), sample sizes ranged from 28 to 297,728 subjects, while 38.8% of the studies included more than 1,000 subjects, considering both experimental and control groups. The studies' sample loss is small considering the sample sizes. Most studies did not implement follow up (66.7%) and those that did, implemented a 12-month follow up.

Assessment of the studies' methodological quality is presented in Table 2 and shows that all the studies met most of the criteria presented in the SIGN¹⁶ checklist and, therefore, are considered high quality studies.

Table 2 - Assessment of the studies' methodological quality

Study	SIGN ¹⁶						Total (maximum 11)
	Research question (maximum 1)	Selection of subjects (maximum 6)	Assessment (maximum 2)	Confounding (maximum 1)	Statistical analysis (maximum 1)		
17	1	6	2	1	0	10	
18	1	6	2	1	0	10	
19	1	6	2	1	0	10	
20	1	6	2	1	0	10	
21	1	6	2	1	1	11	
22	1	6	2	1	0	10	
23	1	6	2	1	0	10	
24	1	6	2	1	1	11	
25	1	6	2	0	0	9	
26	1	6	2	1	1	11	
27	1	6	2	1	0	10	
28	1	6	2	1	0	10	
29	1	6	2	1	0	10	
30	1	6	2	1	0	10	
31	1	6	2	1	0	10	
32	1	6	2	0	0	9	
33	1	6	2	1	1	11	
34	1	6	2	0	0	9	

As shown in the Table 3, the age of the participants ranged from 7 to 15 years old. Sexes were equally represented in most investigations and none of the studies exclusively addressed one sex, which is positive considering the possibility of assessing the results of interventions based on gender. In regard to the strategy used, most interventions were universally applied (i.e., to all students), while approximately one fifth of the papers addressed specific participants (victims). Cognitive-behavioral interventions also stood out. Most interventions (63.1%) were implemented in 10 sessions or fewer, and were applied in groups (89.9%), while the teachers were those responsible for conducting most of the intervention activities (72.2%).

Table 3 - Studies' characteristics

Characteristics	n	%
Participants		
<i>Age</i>		
7 a 9	4	22,2
7 a 16	2	11,1
10 a 12	4	22,2
10 a 16	2	11,1
13 a 15	6	33,3
<i>Sex (% male)</i>		
0 a 49	1	5,6
50 a 59	17	94,4
Intervention		
<i>Strategy</i>		
Universal	14	77,8
Selective	4	22,2
<i>Approach</i>		
Cognitive	4	22,2
Cognitive-behavioral	14	77,8
<i>Number of sessions</i>		
1 a 5	4	22,2
6 a 10	8	44,4
11 a 20	2	11,1
Over 20	1	5,6
Uninformed	3	16,7
<i>Duration</i>		
Up to one month	3	16,7
1 to 2 months	3	16,7
3 to 4 months	2	11,1
7 to 12 months	6	33,3
Over 12 months	1	5,6
Uninformed	3	16,7
<i>Design</i>		
Individual	2	11,1
Group	16	89,9
<i>Administration</i>		
Teachers	13	72,2
Researchers	4	22,2
Psychologists	1	5,6

Table 4 was prompted by the study developed by Ttofi and Farrington³ and presents the main characteristics of the interventions implemented in each of the studies included in this review.

Table 4 - Interventions components

Studies	Intervention components																			
	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20
17	-	-	-	✓	-	-	-	-	-	✓	✓	-	-	-	-	-	✓	-	-	-
18	-	-	-	✓	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	-	-
19	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-	-	-	✓	✓	✓	-
20	-	-	-	✓	-	✓	-	-	✓	✓	-	-	-	-	-	-	✓	-	-	-
21	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	✓	-	✓	✓
22	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	✓	-	✓	✓
23	-	-	✓	-	-	✓	✓	✓	-	✓	✓	-	-	✓	-	-	✓	✓	-	-
24	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	-	-	✓	-	✓	✓
25	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-	✓
26	-	-	-	✓	-	✓	-	-	-	-	-	-	-	-	-	-	-	-	-	-
27	✓	✓	✓	✓	✓	-	✓	✓	-	✓	✓	✓	-	-	-	-	✓	-	-	-
28	-	-	-	-	-	-	-	-	-	✓	✓	-	-	-	-	-	-	-	✓	✓
29	-	-	-	✓	-	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
30	-	-	-	✓	-	✓	✓	✓	-	-	-	-	-	-	-	-	-	-	-	-
31	-	-	-	-	-	✓	-	✓	-	-	-	-	-	-	-	-	-	-	-	-
32	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	-	✓	-	✓	-	✓	-
33	-	✓	-	✓	-	-	-	-	✓	-	-	-	-	-	-	-	-	-	✓	-
34	✓	✓	✓	✓	✓	✓	✓	✓	-	✓	✓	✓	✓	-	-	-	✓	✓	✓	-

Note. “1 = whole-school anti-bullying policy; 2 = classroom rules; 3 = school conferences providing information about bullying to pupils; 4 = curriculum materials; 5 = classroom management; 6 = cooperative group work among experts [e.g. among teachers, counselors and interns]; 7 = work with bullies; 8 = work with victims; 9 = work with peers [e.g. peer mediation; peer mentoring; peer group pressure as bystanders]; 10 = information for teachers; 11 = information for parents; 12 = increased playground supervision; 13 = disciplinary methods; 14 = non-punitive methods [e.g. ‘Pikas’ or ‘No Blame Approach’]; 15 = restorative justice approaches; 16 = school tribunals/ school bully courts; 17 = teacher training; 18 = parent training; 19 = videos; 20 = virtual reality environments/ computer games”³.

There is a variety of approaches, while most interventions adopted a multidimensional approach, with multiple components; slightly more than one third (38.9%) of the studies adopted a school-wide perspective, the focus of which is broader and involves varied activities directed to students, to the school staff, and families. In most cases, partnerships were established between researchers and the school staff (66.7%), seeking to implement interventions. Another aspect that stood out was that more than half of the studies included one component directed to the families; information was provided to the parents (55.6%). In some cases (27.8%), technology was included in the activities or activities were fully implemented with the use of computer resources (e.g., computer games).

The interventions reported by the studies can be assigned into four categories: multidimensional (school-wide), social skills training, bullying prevention integrated into the curriculum, and computer-based interventions. The main results of each study were synthesized and are presented according to type of intervention.

Multidimensional or school-wide interventions

The seven studies that adopted a multidimensional approach^{19,21,22,24,27,32,34} included a strategy that combined classroom rules, lectures addressing bullying, activities with bullies/victims/bystanders, information provided to parents, increased supervision, disciplinary methods, cooperation between researchers and the school staff, training of teachers, and technological resources. All studies using this modality addressed samples of more than 500 participants.

Three studies were conducted in Finland and all of them involve a program called Kiva (Kiusaamista Vastan/Against Bullying), which considers bullying to be a group phenomenon in which bystanders play an essential role, either encouraging bullies or standing up for the victims. It is developed through the implementation of activities within a universal scope, aiming to change group patterns, as well as through individual activities directed to specific cases. Other interventions involve the participation of students, parents and teachers. The Kiva program significantly reduced bullying ($p < 0.001$) in the 1st to the 9th grades, included in a study comprising 888 schools^{21,24} and in the 4th to 6th grade students ($p < 0.01$) of 78 schools addressed by another study²².

The other four investigations^{19,27,32,34} were based on the Olweus Bullying Prevention Program (ONPP), proposed by Dan Olweus. The objectives of the program were to promote a positive school environment and improve peer relationships at school, preventing and combating bullying. Bauer et al.²⁷ implemented and assessed this program among 6th to 9th

grade students of ten schools in the city of Seattle, the United States. The program presented mixed effects, varying according to the gender, ethnicity and socioeconomic status of participants; that is, it did not achieve a positive effect from a global point of view. This is similar to a study conducted by Stevens et al.³² in the city of Gante, Belgium, which addressed 10 to 16 years old students, which also found mixed effects in primary schools and no effect in secondary schools. On the other hand, significant effects were found ($p < 0.001$) among 1st to 9th grade students with the implementation of the same program in 42 schools in Bergen, Norway³⁴, and also in another study ($p < 0.001$) conducted with 7th grade students in four schools in Hong Kong¹⁹.

Interventions involving social skills training

Five papers reported interventions based on social skills training (SST)^{18,26,29,30,31}. In general, the meetings addressed problem-solving capacity, positive thinking, relaxation, body language, ability to making friends, and how to deal with bullies, among others. DeRosier^{29,30} implemented SST among 3rd year students who were considered to be anxious, were rejected by peers or were aggressive, in 11 schools in Wake County of North Carolina, the United States. The intervention decreased bullying episodes ($p < 0.05$) only among those considered aggressive. With the intention to lessen the bully status of 7th to 9th grade students from German schools, the study by Wolfer and Scheithauer¹⁸ was successful in decreasing the social influence of bullies and, therefore, opportunities to perpetrate aggressions ($p < 0.001$). These investigations were the only ones based on the training of social skills that clearly reduced bullying. Another two studies did not result in significant changes. One of them addressed 7th grade students (aged 12 years old on average) from a Japanese school²⁶ and the other study was conducted among victims aged 9 years and six months, on average, from four English schools³¹.

Bullying prevention integrated into curriculum

Curricular interventions regarding bullying refers to interventions that include all the students in a classroom and usually involve exposing content, collective discussions, role-playing, cooperative learning, and/or videos. Joronen et al.²⁰ implemented a role-playing program in a Finnish school in which 190 children, from the 4th and 5th grades, participated. The results showed significant improvement in regard to the occurrence of bullying ($p < 0.05$). Another intervention conducted with 10 to 16 year old students from 25 Belgium schools with the objective of improving the attitude of peers toward bullying and to mediate conflicts between bullies and victims, reports positive improvement, however not improvement that is

statistically significant³³. The third study was conducted in Ontario, Canada and intended to promote the strengths of 4th to 8th grade students. It identified decreased victimization over time, however, aggressions increased after the intervention ($p < 0.01$) in comparison to data collected in the control study²³.

Computer-based interventions

Two computer-based interventions were assessed^{25,28}. In one of them²⁸, 6th to 10th grade students from 25 schools in the United States participated in three computer sessions of 30 minutes duration each. These interventions aimed to decrease participation of students in bullying situations. Significant decrease was found among 6th to 8th grade students ($p < 0.01$) and among 9th to 10th grades students ($p < 0.001$). The second study²⁵ aimed to improve coping strategies of German and English students aged from 7 to 11 years old. This study also implemented three weekly 30-minute computer sessions. The results indicate that the intervention did not improve the students' knowledge concerning strategies to cope with bullying.

Discussion

The papers selected for this systematic literature review presented high methodological quality, which ensures greater reliability of results, despite the fact that some studies did not consider confounding variables, which may have interfered in the results. Additionally, most of the studies did not present the confidence intervals for the statistical analyses. In general, the effectiveness of the different interventions designed to prevent or fight bullying varied according to the type of intervention, sociocultural context and age of students. There were situations in which bullying did not decrease significantly^{25,26,27,31,32,33} and even increased after the intervention²³. In regard to age, interventions were more efficient among older students. Note, however, that most studies included samples composed of participants older than 10 years old, which restricts the interpretation of results. That is, results may be biased due to the large amount of studies addressing older children. Despite this limitation, one possible explanation for this result is the fact that older students have more developed cognitive skills; they are more likely to understand the harmful nature of bullying or they are more likely to make rational decisions, which perhaps makes them more skilled in defending themselves dealing with aggression⁴.

Even though multidimensional, school-wide interventions presented more positive results when compared to other approaches, note that the greatest effects were obtained with

the implementation of the Kiva project as opposed to the OBPP proposed by Dan Olweus, which reports the smallest effects. This result is possibly associated with the fact that the Kiva program was applied in a single sociocultural context (Finland), that is, with greater ethnic, cultural and economic homogeneity, as well as the fact that the implementation of the program was more faithful to its planning, an aspect assessed monthly in each school participating in the program²⁴. The OBPP in turn, was implemented and assessed in different contexts (in Belgium, United States, Hong Kong and Norway) without the same rigor in terms of assessing how closely the implementation was to the previous planning, such as was observed with the Kiva program. Thus, the mixed results presented by OBPP are perhaps related to the different ways each school implemented it, among other things. Generally, multidimensional interventions are conducted only by the school staff, without specific training to meet all the requirements recommended by the model, which because it is broader, is also more complex. Therefore, programs of this nature require monitoring and support to ensure they are implemented according to the way they were planned. In this sense, there are indications that cooperative work between researchers and the school staff is significantly related to decreased bullying³⁶.

Despite these problems, a greater amount of components in the multidimensional interventions may explain the greater efficacy of this intervention in decreasing bullying, when compared to the other interventions analyzed in this study. Such efficiency is probably due to the fact it addresses the complex nature of this phenomenon, in terms of subjects, contexts and circumstances involved in aggressions, as well as in the activities included in the intervention^{2,24}. For instance, the intervention considers that bullying is also associated with extra-school aspects; thus, families of students are included in an effort to fight and prevent bullying. This is one strong aspect of this modality that is significantly related to decreased acts of aggression¹¹. Another important characteristic of this type of intervention is increased supervision on the part of adults on the school premises where aggressions are more likely to occur, especially external areas, entry ways, corridors, courtyards and sports areas; poor supervision has been associated with an increased number of aggressions within the school³⁶. In general, the more extensive this type of intervention, the more efficacious it is³⁶.

In terms of sociocultural differences, note that the larger effects of the programs that include interventions in the entire school occur in European countries, as opposed to what happens in the United States, a country in which not only this modality, but most interventions, achieve only minimum effect². It is likely that specific characteristics of the school contexts under study or of American culture, in general, interfere in the quality of the results of interventions conducted in this country. Therefore, interventions should take into account the

sociocultural context and consider the particularities of each place and culture, as revealed by the studies addressed in this review. The success obtained by a given intervention in a given context or school does not ensure success in another context or school.

The analysis of characteristics concerning planning, execution and assessment of the interventions involving the entire school that were analyzed in this review enables us to identify some limitations that may have influenced the results, in addition to the aspects previously discussed. The first limitation is the fact that most studies used only self-reported instruments, which are not sufficient or precise in detecting behavioral changes, especially because they may imply biases of perception and memory². Another aspect is the lack of theoretical references supporting the planning, development and assessment of interventions. Additionally, many of school-wide interventions disregard geographical changes that may occur in the contexts under study, as well as certain characteristics of the participants' subgroups, which may impact the results, such as race/ethnicity and sexual orientation³. The objective to involve all students regardless of their participation in bullying (victims, bullies or bystanders) may equally impact the results because usually only a small percentage of students are directly involved with the problem²⁸. Therefore, investment in multidimensional interventions adjusted to the profiles of individuals participating in bullying is needed in order to focus on the aspects that seem to be the most problematic for each subgroup and to achieve more promising results.

As opposed to the school-wide approach, other programs conceive more focused interventions. Some promoted anti-bullying actions only within the classroom or aimed to help students to develop social skills and conflict resolution. In regard to interventions directed to the improvement of social skills, only two programs achieved statistically positive results^{18,29,30}. This may be explained by the understanding that bullying is a group phenomenon that involves victims, bullies, bystanders, teachers, school staff, and parents, and is also influenced by characteristics of the contexts in which it occurs, such as the classroom or the entire school³.

From this perspective, interventions addressing only one of those involved (victims, bullies or bystanders) are less likely to work, as was the case with the interventions focusing on social skills analyzed, above, in this review. Social skills-based interventions may be more effective among victims, as these individuals in general present deficits in terms of socialization and social relationships³⁵. Additionally, in terms of methodology of social skills training, one has to consider difficulties of the recipients of the program in generalizing the skills learned for real daily situations. Hence, the success of this type of intervention is also linked to broader factors arising from the school context and from the way the in which an intervention is implemented. Role-playing techniques may help to overcome this difficulty¹⁷.

One of the studies addressing a computer-based intervention reports no significant results, even though advancements in bullying investigations indicate that certain responses are more appropriate and efficient in regard to interrupting the cycle of aggressions. It is possible that the results of such limited significance from the computer-based program are due to the method itself or to the fact that, even though appropriate strategies were presented, they may be inefficient when used with chronically victimized children or adolescents who face difficulties in their interpersonal interactions. For instance, the way victims respond to bullies may either stop aggression or reinforce it, an outcome that mainly depends on how skillful s/he is in convincing the bully that s/he is no longer as vulnerable as the bully thought².

The mixed results achieved by the curricular interventions follow in the same direction of those related to social skills training because these seem to disregard aspects of other actors involved in the problem and of the contexts in which bullying occurs. These proposals are generally more attractive to education managers because they require fewer financial and human resources. The results, however, indicate that these are not particularly effective in preventing/fighting bullying, which, considering it is a sociocultural phenomenon, is the rule among peers. This may be another reason many programs achieve results that are not so encouraging, as this aspect is not taken into account. A possible approach in this context would be intervening with bystanders, seeking to change the way they respond to the aggression they witness, such as how the Kiva project addresses the problem, which considers bullying in the group context, focusing on working with peers from a multidimensional perspective, involving the entire school. The three studies addressing the Kiva project analyzed in this review, presented statistically significant results.

Final Considerations

The interventions analyzed in this review varied in regard to results and some of them presented positive effects, while others did not. One of these even verified increased frequency of bullying after the program was implemented. School-wide multidimensional interventions were the ones that obtained the best results, suggesting that broader interventions are more efficacious in fighting bullying, perhaps because they consider it to be a complex phenomenon that goes beyond the dyadic relationship between bully and victim.

It is important to highlight that only studies conducted outside Brazil were included in this review, in accordance with the established criteria, which impeded concrete and specific reflection concerning the Brazilian context. Future literature reviews could consider the specificities of Brazilian papers addressing bullying interventions, especially in regard to

qualitative approaches applied to the assessment of intervention processes and results. In regard to the production of papers in Brazil, it is important to make efforts to carry out national interventions based on experimental or quasi-experimental models with a view to compare results with interventions developed in different sociocultural contexts, to more objectively assess data from the Brazilian context and compare it to data collected in international contexts.

Finally, the identification of intervention models associated with the prevention or reduction of school bullying promoted by this literature review may have practical implications to the extent it may guide the planning and operationalization of intervention programs. Despite acknowledging that interventions need to be more effective, it is important to highlight that even small effects, as seen in some investigations, need to be valued because decreased school violence is always desirable, as any decrease positively impacts the psychosocial development of students.

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4. PAPER 2

SILVA, J.L.; OLIVEIRA, W.A.; ZEQUINÃO, M.A; LIZZI, E.A.S.; PEREIRA, B.O.; SILVA, M.A.I. Results of social skills interventions intended to reduce school bullying: a systematic review with meta-analysis. **Temas em Psicologia**. Ribeirão Preto, v. 26, n. 1, 2018. In press. (see Attachment B).

Results of social skills interventions intended to reduce school bullying: a systematic review with meta-analysis

Abstract

Bullying, a public health problem, affects social relationships, school performance and students' health. The objective of this literature review was to verify whether interventions addressing social skills reduce victimization and/or aggression resulting from bullying. The following databases were consulted: LILACS, PsycINFO, Scielo, SCOPUS and Web of Science. The random-effects model and DerSimonian-Laird method were used. Six studies that met the inclusion criteria were selected, the methodological quality of which was assessed using the Downs and Black scale. Results indicated that interventions addressing social skills reduced bullying and victimization, however, at non-significant levels. Interventions addressing social skills may be more effective if developed together with other types of intervention which may include a wide range of situations, contexts, as well as the different individuals involved in the bullying incident, such as school staff and family.

Keywords: bullying, social skills, intervention, meta-analysis.

Introduction

Relationship problems experienced among peers at school are a reality experienced by many children and adolescents. A severe problem in this context is that conflict situations marked by violence and bullying are the most frequent form of violence in the school environment (Olweus, 2013). This phenomenon represents a type of violence perpetrated among peers that occurs in the face of intentional and repetitive abusive behavior within an unequal relationship of power in which students may take part as victims, bullies, victim/bully and/or bystanders (Silva, Oliveira, & Longarezi, 2008).

The average prevalence of school bullying in North America and Europe identified by a cross-sectional study conducted in 28 countries addressing a sample of 123,227 students was approximately 40% (Due et al., 2005). The occurrence of bullying in Brazil was mapped by the National School Health Survey (PeNSE), which determined in its second edition, conducted in 2012, that 28% of a sample of 109,104 students from public and private schools spread throughout all the Brazilian states took part in bullying situations (Oliveira et al., 2015). The presence of bullying leads students to perceive the school environment as an unsafe place (Skrzypiec, Slee, Murray-Harvey, & Pereira, 2011).

These data reveal a troubling context for professionals in the fields of education, psychology and health, as well as for those developing public policies in different areas, considering that in addition to its high prevalence, bullying negatively affects students' education, psychosocial development, and health conditions. That is, bullying is associated with depression, anxiety, loneliness, transgressive behavior, lack of discipline, school failure and abandonment, use of alcohol and other drugs, self-mutilation, and suicide (Benedict, Vivier, & Gjelsvik, 2015; Silva & Bazon, 2014; Silva, Silva, Pereira, Oliveira, & Medeiros, 2014).

The literature reports that poor social skills are one of the causes of bullying, so that children and adolescents with this characteristic are more vulnerable to abuse (Stan & Beldean, 2014). Social skills represent "the different social class behaviors of an individual's repertoire, which contribute to social competence, promoting a healthy and productive relationship with others" (Del Prette & Del Prette, 2013, p. 31). Some examples of social class behaviors are communication skills, civility, assertive coping skills, and empathy, among others. Social competence has an evaluative meaning because it corresponds to the individuals' ability to use internal resources (thoughts and feelings), together with external resources (social and cultural aspects), in order to achieve a personal goal with positive consequences for themselves and others (Del Prette & Del Prette, 2013).

Victims of bullying lack proper social skills, characterized by social isolation and inefficient coping strategies such, as: crying or ignoring bullies (Fox & Boulton, 2005). In general, these strategies indicate that a victim is not socially competent, as they signalize to bullies that they lack self-defense abilities, which contributes to intensified violence (Crawford & Manassis, 2011). Therefore, improved social skills, especially assertiveness, represent an important aspect to ground interventions intended to reduce victimization (Silva et al., 2016). There is no consensus in the literature in regard to bullies, but there are indications that these individuals do not effectively deal with interpersonal challenges and an improvement in their social skills, especially empathy, may decrease bullying (Stan & Beldean, 2014).

Despite the potential of interventions focused on social skills to prevent and reduce victimization and abusive behavior within the school environment, as reported by studies, there are no literature reviews addressing the effectiveness of intervention programs addressing social skills as a means to decrease school bullying. The identification of successful and also unsuccessful anti-bullying initiatives is essential to devising new proposals or reproducing the most effective ones. Hence, this study's objective was to verify whether social-skills interventions reduce victimization and/or abusive behavior.

Method

Study design

This is a systematic literature review with meta-analysis. A systematic review consists of a rigorous synthesis of studies addressing a given topic, in which there is an attempt to avoid biases that may occur in the selection and analysis of papers. The general principles are: variety of databases, establishment of inclusion and exclusion criteria, and assessment of the studies' methodological quality. A meta-analysis was included in this systematic review because it is an appropriate statistical technique that combines the results of different studies (Galvão & Pereira, 2014).

Databases and bibliographic search

Papers addressing the topics under study were found in October 2015 in four international databases (LILACS, PsycINFO, SCOPUS and Web of Science) and one Brazilian electronic library (SciELO). The following terms were cross-searched: *Bullying AND Social Skills; Bullying AND Social Skills Training* and their equivalents in Portuguese. The following guiding question was used: "What are the results presented by social-skills interventions implemented in schools to reduce school bullying?" The establishment of this question was based on the PICO (Patient or Problem, Intervention, Control or Comparison, Outcomes) strategy (Santos, Pimenta & Nobre, 2007).

Inclusion and exclusion criteria

Only scientific papers were included in this review so that others texts such as letters to the editor, books, book chapters, theses and dissertations were discarded. Additionally, only studies specifically addressing bullying, rather than other types of violence (e.g., homophobic abuse), were selected. Another inclusion criterion was discussing social skills interventions with experimental or quasi-experimental designs, the results of which were compared to

students who did not take part in the intervention (control group). Hence, before and after studies not including a control group were excluded because these would not permit comparisons with other subjects with similar characteristics, an aspect that hinders the interpretation of data (Ttofi & Farrington, 2011). Restrictions were not imposed in regard to year of publication, though only papers written in English, Spanish or Portuguese were included.

Extraction of data

Studies were initially selected by reading their titles and abstracts, taking into account inclusion and exclusion criteria, after which, the full texts were then analyzed. An instrument was developed with the objective to extract the following data: author(s), year of publication, country of origin, sample size (intervention and control groups), subjects' ages, characteristics of the intervention, main results, and limitations.

Assessment of methodological quality

The studies' methodological quality was assessed using the scale developed by Downs and Black (1998) to assess intervention studies. It is an instrument composed of 27 questions divided into five dimensions: study's description (objective, outcome, inclusion criteria, type of intervention, confounding factors, variability of results, intervention's adverse effects, type of intervention, sample loss, and statistical probability), external validity (sample representativeness and how appropriate was the setting in which data was collected), internal validity (blind procedures, how appropriate data analysis was, participants' adherence, and measures' accuracy), selection bias (recruitment of subjects, sample loss, randomization and adjustment for confounding factors) and the study's statistical power. Each question scores one if its criterion is met, so that the instrument's total score is 27 points; the higher the score, the better the study's methodological quality.

Statistical analysis

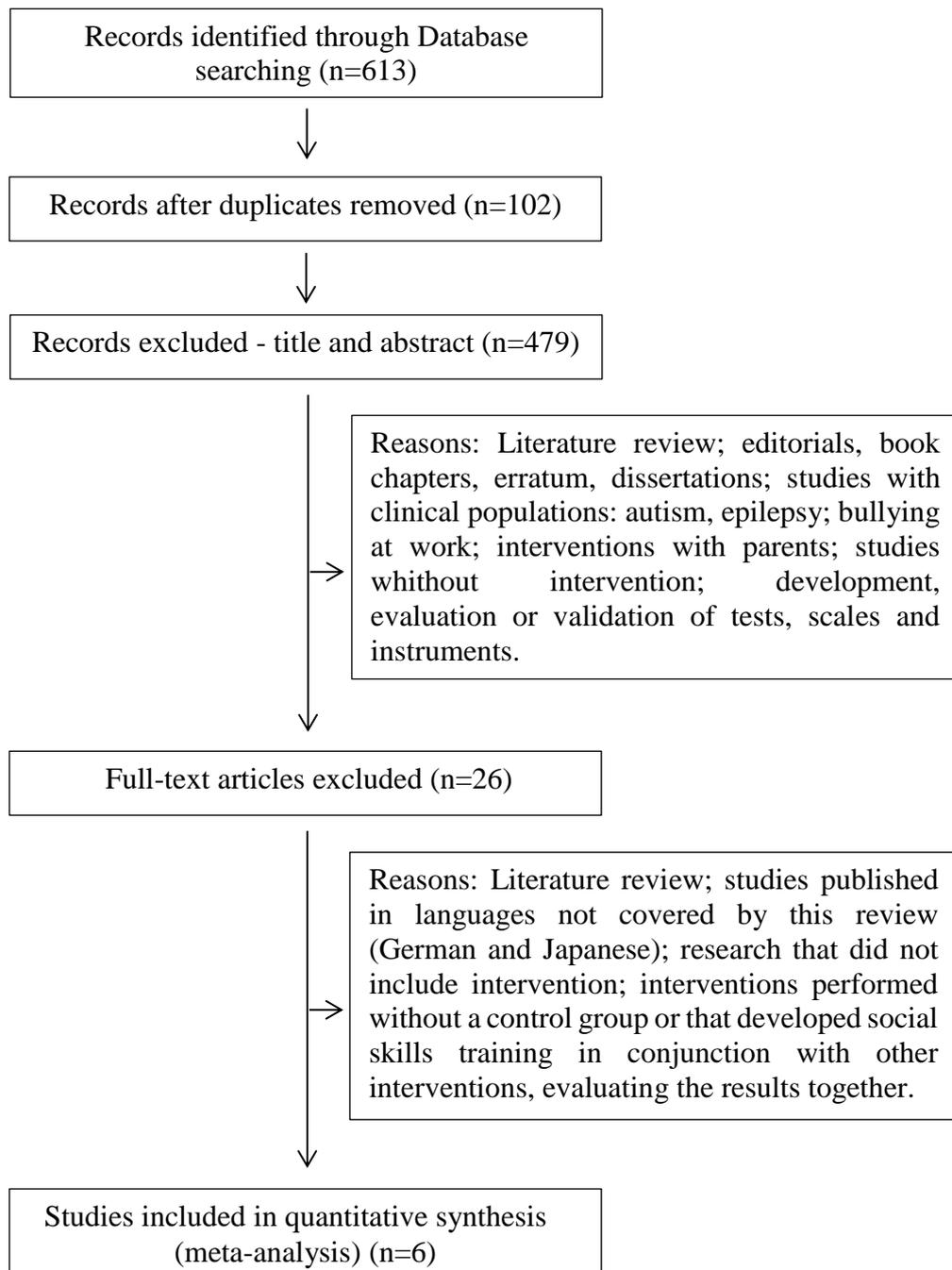
The random effect model and the DerSimonian-Laird method were used to perform the meta-analysis, assuming that the effect of interest is the same for all the studies and that differences between them are due to sample errors only (variability within the studies). Viechtbauer's (2010) metaphor package, written for the R statistical software (version 3.1.3), was used to calculate the differences between the means of the experimental and control groups before and after the social skills interventions were implemented. The results are graphically

displayed using Forest Plots. Cochran's Q test and I-square were used to assess the studies' heterogeneity and magnitudes. According to I^2 , heterogeneity was considered low if close to 25%, moderate if close to 50%, and high when close to 75% (Higgins & Thompson, 2002). The level of significance was established at 5%.

Results

The bibliographic search resulted in 613 publications, but only six of these met the inclusion criteria (Figure 1).

Figure 1 - Flowchart concerning the studies' selection process



In regard to the six studies included in this review (Table 1), the oldest was published in 2003 and the most recent was published in 2014. All the papers were written in English, though the studies related to them were conducted in different sociocultural contexts: Australia, United States, England, Italy, Japan and Romania. Sample sizes ranged from 28 to 381 subjects who were assigned to intervention and control groups. Two studies addressed children only; another two addressed adolescents only; the other two studies included both populations, as the participants' ages were from 8 to 16 years old. Half the interventions was developed with victims, bullies and bystanders, while two studies addressed only victims and the remaining study addressed bullies only.

Table 1 - Characteristics of the studies selected for the systematic review and meta-analysis

Study	Year	Country	Sample	Age	Research Design	Target
Ando, Ando, & Simons-Morton	2007	Japan	104	12-13	Quasi-Experimental	Agression
Baldry & Farrington	2004	Italy	237	10-16	Experimental	Agression and victimization
Berry & Hunt	2009	Australia	46	12-15	Experimental	Victimization
Fox & Boulton	2003	England	28	9-11	Quasi-Experimental	Victimization
DeRosier	2004	United States	381	8-11	Experimental	Agression and victimization
Stan & Beldean	2014	Romania	231	10-14	Quasi-Experimental	Agression e victimization

The main results of each study are presented as follows.

Ando, Ando and Simons-Morton (2007) assessed one social skills intervention program structured into four weekly sessions that addressed problem-solving, stress management, and communication. A total of 104 Japanese, 7th grade students (victims, bullies and bystanders) from the city of Tokyo, were assigned to the intervention (n=52) and control (n=52) groups. Among other objectives, the program was intended to decrease bullying. The results indicated abusive behavior was reduced, as also occurred in the control group, while no statistical significance was found in favor of social skills training.

Aiming to improve social skills and promote a better understanding of the negative consequences of bullying and violence, the program developed by Baldry and Farrington (2004) included a sample of 237 children and adolescents from three schools from Rome, Italy. The students (victims, bullies and bystanders), aged between 10 and 16 years old, were randomly distributed between the intervention (n=131) and control (n=106) groups. The intervention was

implemented in the course of three weekly sessions lasting three hours each. The participants received a booklet with content that was addressed in the meetings. The results reveal that the intervention's positive effects increased with age, and victimization and aggressions decreased significantly ($p < 0.05$) only among older students. In the case of younger students, victimization even worsened in the experimental group.

The intervention developed by Berry and Hunt (2009) focused on the individuals' characteristics with the potential to increase one's vulnerability to bullying (victims), such as: anxiety, low self-esteem, and inadequate coping strategies. The activities developed in eight weekly sessions with a duration of one hour each were intended to reinforce personal competencies, increase the use of assertive coping strategies in bullying situations, and reduce the victims' levels of anxiety. The study sample was recruited in seven schools in the city of Sydney, Australia and was composed of 46 male students from the 7th to the 10th grade, whom experienced bullying and reported symptoms of anxiety; the students were randomly assigned to the intervention ($n=22$) and control ($n=24$) groups. The results show that the intervention significantly reduced victimization ($p < 0.001$).

Fox and Boulton (2003) developed social skills training that was implemented in four English schools and included 15 students aged nine years and six months, on average. The participants were victims of bullying and the program was designed to improve their social skills in order to reduce their vulnerability to bullying. The skills addressed during the eight weekly meetings with a duration of one hour were: problem solving, positive thinking, relaxing, body language, making friends, and dealing with abusive individuals. The results concerning victimization did not reveal statistically significant differences after the intervention when compared to the control group ($n=13$).

DeRosier (2004) assessed the effects of a social skill training program developed with children (victims, bullies, and uninvolved individuals) attending the 3rd grade and previously identified as being anxious, rejected by peers, or aggressive. Eight weekly one-hour group sessions each addressed social skills, emotional regulation and the identification of negative thoughts. The children were randomly distributed between the intervention ($n=187$) and control ($n=194$) groups. Eleven schools from Wake County in North Carolina, USA participated in the study. The intervention decreased the occurrence of bullying at a significant level ($p < 0.05$) only for children who were initially identified as aggressive.

The study conducted by Stan and Beldean (2014) was intended to develop the students' social skills and, consequently, decrease the occurrence of bullying. For that, an intervention was designed to enable students to identify negative thoughts, to improve emotional regulation

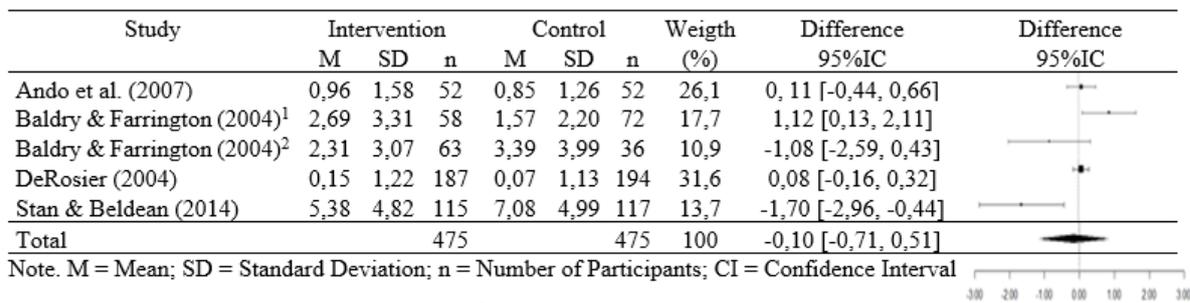
and assertiveness. A total of 231 students (victims, bullies and bystanders) from the 5th to the 8th grade from two schools in the city of Cluj-Napoca, Romania: 117 were assigned to the experimental group and 114 to the control group. Weekly sessions, totaling 18 hours, were implemented. The results indicate that victimization and aggressions decreased among those in the intervention group, however, not at significant levels when compared to the control group's results.

In regard to the assessment of the methodological quality of the selected studies, the scale developed by Downs and Black (1998) indicated a median score of 22, within a score ranging from 19 to 24 points, while the total possible score is 27 (Table 2). The most frequently found weaknesses were: confounding factors were not reported; intervention's adverse effects were disregarded; sample losses were not reported; participants and evaluators were not blind; lack of randomization; lack of adjustment for confounding factors; and the study's statistical power was not reported.

Table 2 - Criteria to assess the studies (n=6) (Downs & Black, 1998)

Sub-scales	Hits	(%)
Reporting		
Is the hypothesis/aim/objective of the study clearly described?	100	100
Are the main outcomes to be measured clearly described?	100	100
Are the characteristics of the patients included in the study clearly described?	100	100
Are the interventions of interest clearly described?	100	100
Are the distributions of principal confounders in each group of subjects to be compared clearly described?	33,3	33,3
Are the main findings of the study clearly described?	100	100
Does the study provide estimates of the random variability in the data for the main outcomes?	100	100
Have all important adverse events that may be a consequence of the intervention been reported?	33,3	33,3
Have the characteristics of patients lost to follow-up been described?	33,3	33,3
Have actual probability values been reported(e.g. 0.035 rather than <0.05) for the main outcomes except where the probability value is less than 0.001?	100	100
External validity		
Were the subjects asked to participate in the study representative of the entire population from which they were recruited?	66,7	66,7
Were those subjects who were prepared to participate representative of the entire population from which they were recruited?	66,7	66,7
Were the staV, places, and facilities where the patients were treated, representative of the treatment the majority of patients receive?	100	100
Internal validity - bias		
Was an attempt made to blind study subjects to the intervention they have received?	0,0	0,0
Was an attempt made to blind those measuring the main outcomes of the intervention?	0,0	0,0
If any of the results of the study were based on “data dredging”, was this made clear?	100	100
In trials and cohort studies, do the analyses adjust for diVerent lengths of follow-up of patients, or in case-control studies, is the time period between the intervention and outcome the same for cases and controls?	100	100
Were the statistical tests used to assess the main outcomes appropriate?	100	100
Was compliance with the intervention/s reliable?	100	100
Were the main outcome measures used accurate (valid and reliable)?	100	100
Internal validity - confounding (selection bias)		
Were the patients in diVerent intervention groups (trials and cohort studies) or were the cases and controls (case-control studies) recruited from the same population?	100	100
Were study subjects in diVerent intervention groups (trials and cohort studies) or were the cases and controls (case-control studies) recruited over the same period of time?	100	100
Were study subjects randomised to intervention groups?	33,3	33,3
Was the randomised intervention assignment concealed from both patients and health care staV until recruitment was complete and irrevocable?	33,3	33,3
Was there adequate adjustment for confounding in the analyses from which the main findings were drawn?	33,3	33,3
Were losses of patients to follow-up taken into account?	100	100
Power		
Did the study have sufficient power to detect a clinically important eVect where the probability value for a diVerence being due to chance is less than 5%?	33,3	33,3

In order to assess the effects of the social skills interventions implemented to decrease bullying, the results of this systematic review were analyzed in the meta-analysis by using the random effects model and the DerSimonian-Laird method. The Forest Plots inserted in Figures 2 and 3 present the analysis of the effects of interventions in regard to aggressions and victimization compared to other students who did not take part in the interventions (control group). The horizontal lines represent the average difference for each study between the experimental and control group after the intervention, with their respective confidence intervals (CI95%). Data located at the right of the vertical line indicate that the intervention was successful in reducing bullying and the combined effect of all the studies is represented by the diamond on the line denoted Total.



Heterogeneity: $Q = 14,11$, $df = 4$ ($p = 0,007$); $I^2 = 71,75\%$
 Test for overall effect: $Z = -0,3193$ ($p = 0,74$)

Figure 2 - Forest Plot for the mean differences concerning decreased aggressive behavior after social skills interventions

The results presented by Figure 2 show non-significant effects of interventions intended to decrease episodes of aggression, with combined mean difference: -0.10 (CI95%: $-0.71, 0.51$). Heterogeneity was found among studies; that is, high variability was found ($I^2 = 71.75\%$), which justified the DerSimonian-Laird test.

Study	Intervention			Control			Weight (%)	Difference 95%IC	Difference 95%IC
	M	SD	n	M	SD	n			
Baldry & Farrington (2004) ¹	3,66	4,36	59	1,85	2,62	71	15,	0,39 [-1,02, 1,80]	
Baldry & Farrington (2004) ²	3,64	4,89	64	2,79	2,48	38	21,3	-0,48 [-1,58, 0,62]	
Berry & Hunt (2009)	15,91	7,05	22	12,58	5,98	24	3,5	-5,04 [-8,64, -1,44]	
DeRosier (2004)	0,31	1,10	187	0,26	1,12	194	42,0	0,12 [-0,11, 0,35]	
Fox & Boulton (2003)	29,47	8,16	15	33,56	20,15	13	0,3	0,73 [-12,89, 14,35]	
Stan & Beldean (2014)	7,79	6,18	115	7,57	4,98	117	17,0	-0,14 [-1,48, 1,20]	
Total			462			457	100	-0,19 [-0,89, 0,52]	

Note. M = Mean; SD = Standard Deviation; n = Number of Participants; CI = Confidence Interval

Heterogeneity: $Q = 9,18$, $df = 5$ ($p = 0,10$); $I^2 = 45,52\%$

Test for overall effect: $Z = -0,5259$ ($p = 0,59$)

Figure 3 - Forest Plot for the mean differences concerning reduced victimization after social skills interventions.

In Figure 3, Cochran's Q test was performed to verify the heterogeneity of the results obtained by the interventions intended to decrease victimization and reveals a combined mean difference of -0.19 (CI95% -0.89, 0.52), with 5 degrees of freedom, without statistical significance. Heterogeneity was low among the studies ($I^2 = 45.52\%$). Joint comparison of the studies shows that the social skills interventions did not significantly reduce victimization.

Discussion

This study's objective was to verify whether the interventions focused on social skills reduced bullying victimization and/or bullying aggression. The small number of studies with an experimental or quasi-experimental design ($n=6$) identified in the databases shows that the interventions focusing on social skills to prevent or decrease bullying are seldom developed with more rigorous methodological designs. This is perhaps explained by the divergent results reported by studies with similar design or by indications reported in the literature that school-wide interventions involving students, families, teachers and the remaining members of the school community achieve more promising results because they include a variety of situations, contexts and subjects implicated in bullying (Olweus, 2013).

Hence, focal interventions directed to specific groups, such as students, the preferred population of social skills programs, are seldom implemented because they present less-positive results (Ttofi & Farrington, 2011). The fact the studies addressed in this review are relatively recent is perhaps due to these reasons, once school-wide interventions, such as the one proposed by the Olweus Bullying Prevention Program (OBPP), were developed in the 1980s (Olweus, 2013); the oldest study addressing social skills identified in this review was published in 2003.

The interventions presented sufficient methodological quality. All met more than 70% of the 27 characteristics assessed, ensuring greater reliability of results, even though some

studies did not take into account confounding variables that could have interfered in their results, did not report sample losses or randomization effects, and most did not present the study's statistical power.

Another relevant aspect is the variety of sociocultural contexts (different countries) in which the interventions were implemented; that is, success achieved by a given intervention in a given context does not ensure similar results will be achieved in another context, due to existing differences (Napolitano, Espelage, Vaillancourt, & Hymel, 2010). One example of such an aspect is the OBPP, which presents divergent results depending on the country in which it was implemented. Greater success was achieved in European countries, while almost null effect was found in the United States, a country in which most anti-bullying interventions achieve lesser results (Ttofi & Farrington, 2011).

In general, an analysis of all the studies selected shows that the effectiveness of interventions varied among situations. In some cases, bullying (victimization or aggressions) did not decrease significantly (Ando et al., 2007; Fox & Bouton, 2003), while in other cases, it decreased significantly (Baldry & Farrington, 2004; Berry & Hunt, 2009; DeRosier, 2004; Stan & Beldean, 2014).

The meta-analysis concerning the effects of interventions addressing social skills to reduce victimization did not show significant differences, though some studies did report a decrease. The literature shows that victimization should decrease when interventions designed to improve the social skills and competence of students are implemented, considering that this type of intervention is supposed to improve social skills, assertiveness, and behaviors that tend to lead to social isolation (Fox & Boulton, 2003; Stan & Beldean, 2014).

This apparent contradiction - the lack of a significant decrease in victimization - may be explained when we consider that bullying is a group phenomenon influenced by the characteristics of the contexts in which it occurs, such as within classrooms or in the entire school, restricting any real possibility of a child or adolescent overcoming by themselves a behavior that is widely accepted or encouraged by peers (Wölfer & Scheithauer, 2014). Hence, even assertive responses to abusive behavior may not be effective in a context in which violence is considered the rule.

In terms of the methodology of interventions addressing social skills, the difficulty in generalizing recently learned skills in real routine situations is an aspect that has already been acknowledged (Silva et al., 2016). Role-play techniques have been suggested as a strategy to overcome this difficulty, as students have a chance to experience a closer proximity to real situations they face in their school context during the intervention (Leadbeater & Hoglund,

2006), which is not always an easy task if bullying is considered the rule among peers. Additionally, grouping individuals with similar characteristics (only victims or only bullies) may negatively impact the development of activities, impairing the intervention's results.

In any case, reduced victimization, even if modest, should be valued as it is a sign of the possible success of this modality of intervention. An important step to be taken consists of improving interventions to more precisely identify whether a small reduction occurs due to methodological problems or to the planning of interventions or due to the reasons previously mentioned. As already discussed, even broader interventions, such as school-wide programs, present divergent results, depending on the context. Future studies can help to clarify these issues.

The meta-analysis results concerning the effect of the interventions on specifically decreasing bullying was not significant for the experimental groups in comparison to the control groups. A similar result is reported by another meta-analysis conducted by Ttofi and Farrington (2011), which assessed the effectiveness of different interventions in reducing bullying: interventions focused on social skills did not report significant a decrease of aggression episodes.

Therefore, bullying may not be linked to the development of social skills. This result is in agreement with some studies in which bullies are not identified as having poor social skills (Napolitano et al., 2010; Thunfors & Cornell, 2008). Note, however, that the literature addressing the social skills of bullies presents divergent results. Studies adopting non-experimental designs report a decrease of up to 50% in abusive behavior or a lack of significant effects (Kõiv, 2014).

Even though the small number of interventions addressing this topic is a factor that limits more precise identification of the effects on bullying, when individually analyzed, some interventions present significant results. The decrease presented by these studies on abuse may be partially explained by the decision to include in the interventions groups of students with different behaviors toward bullying. Such a decision may have avoided bullies, that is, those who more frequently practice abusive behavior having their aggressive behavior against each other being reinforced, as well as may have offered an opportunity to these individuals to have greater contact with peers who represented a model of pro-social behavior (Napolitano et al., 2010). Among the papers under analysis, the three studies that individually presented a statistically significant decrease of abuse (Baldry & Farrington, 2004; DeRosier, 2004; Stan & Beldean, 2014) adopted mixed intervention groups.

Another possible explanation is that the newly learned social skills may have enabled the manifestation of non-aggressive responses in the social relationships among students, especially bullies, so that they were more easily accepted by their peers (Leadbeater & Hogg, 2006). A similar result was found in a non-experimental study conducted by Murrieta, Ruvalcabra, Caballo and Lorenzo (2014), which reports a significant decrease of direct abuse ($p < 0.01$) and relational abuse ($p < 0.05$) in the group of abusers.

Another piece of information that draws attention in the analysis of the revised studies is that the interventions obtained the most extensive effects among older students. Most of the revised studies, however, focused on samples composed of participants aged older than 10 years, which restricts the interpretation of this specific result, as it may be biased by the amount of studies addressing older individuals. Despite this limitation, a potential explanation would be the fact that older students present more developed cognitive skills, which enable them to understand, learn and put social skills into practice, as well as to assess the harmful nature of bullying. Another possibility is that, in the case of older students being victims, they are more physically developed or would be able to make more rational decisions, which perhaps enables them to defend themselves more efficiently and deal with abusive behavior more effectively when interacting with peers (Baldry & Farrington, 2004).

One limitation identified in the studies is a lack of follow up, considering that some behavioral changes require time to develop. Hence, improved skills may impact other aspects of the lives of students and social relationships until they play an effective role in the situations of violence they experience or practice. Hence, other dimensions of the students' lives directly connected to social skills, such as a broader network of peers, may positively impact bullying situations over time, resulting in lower levels of violence among students (Fox & Boulton, 2003).

Another limitation of the studies analyzed in this review is that participants were not differentiated as to their status as victims, bullies or bystanders. As important as it is to identify significant decreases in victimization or abuse, it is also important to verify the mobility of children and adolescents among the different conditions, that is, to verify how many are no longer bullies or victims. This is relevant information because the amount of victims may significantly decrease but not necessarily be accompanied by a significant decrease in victimization. The reason is that, even though there may be fewer victims, these may experience more intensive abuse. The same applies to the number or frequency of abusive episodes. Future studies can attempt to fill in this gap.

The small sample sizes hinder the generalization of results because none of the studies was developed with a representative sample, while some were pilot studies. Investigations with larger samples are needed, as well as studies developed in Brazil, since no Brazilian study was identified in the databases used. Another limitation is the grouped analysis of the interventions' effects for boys and girls. Because abuse and responses to intimidation are equally modulated by issues related to the sex of the individuals (Sentse, Kretschmer, & Salmivalli, 2015), there is a need to attain a deeper understanding of the effects of interventions on the social skills of boys and girls in regard to bullying. Future studies can also advance in this direction, incorporating the differences between sexes in the analysis of results.

Final Considerations

The interventions analyzed in this review present divergent results in regard to decreased bullying, while only some of them individually present positive and significant effects. The meta-analysis, however, did not reveal statistical significance. One limitation of this review is the high level of heterogeneity found among the studies addressing abuse, even though only studies with the same methodological design were included and the meta-analysis used a random effect model along with the DerSimonian-Laird test to analyze random effect, which considers the variation in each study, as well as differences among studies in the analysis of the effect of interest. Therefore, it is important to highlight that these specific results should be carefully interpreted, avoiding generalizations. Considering the relevance of this topic, the need to perform further studies using experimental or quasi-experimental designs and larger samples, especially those implemented in Brazil, is reinforced in order to overcome the aforementioned limitations and obtain more robust results.

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5. PAPER 3

SILVA, J.L.; OLIVEIRA, W.A.; BRAGA, I.F.; FARIAS, M.S.; LIZZI, E.A.S.; FAGUNDES, M.G.; PEREIRA, B.O.; SILVA, M.A.I. The effects of a skill-based intervention for victims of bullying in Brazil. **International Journal of Environmental Research and Public Health**. Basel, v. 13, n. 10, p. 1042-52, 2016. (see Attachment C).

The effects of a skill-based intervention for victims of bullying in Brazil

Abstract: This study's objective was to verify whether improved social and emotional skills would reduce victimization among Brazilian 6th grade student victims of bullying. The targets of this intervention were victimized students; a total of 78 victims participated. A cognitive-behavioral intervention based on social and emotional skills was held in eight weekly sessions. The sessions focused on civility, the ability to make friends, self-control, emotional expressiveness, empathy, assertiveness, and interpersonal problem-solving capacity. Data were analyzed through Poisson regression models with random effects. Pre- and post-analyses reveal that intervention and comparison groups presented significant reduced victimization by bullying. No significant improvement was found in regard to difficulties in practicing social skills. Victimization reduction cannot be attributed to the program. This study contributes to the incipient literature addressing antibullying interventions conducted in developing countries and highlights the need for approaches that do not exclusively focus on the students' individual aspects.

Keywords: bullying; social and emotional skills; school transition; school-based intervention

1. Introduction

School bullying refers to acts among peers characterized by intention, repetitiveness and imbalance of power among students [1]. These acts can be physical (e.g., hitting, kicking, pushing), verbal (e.g., calling names, swearing at the victim, laughing), or relational (e.g., socially isolating the victim, spreading rumors, or manipulating relationships) [1,2]. Children and adolescents can become involved with bullying as bullies, victims, reactive-victims, or bystanders [3]. The rates at which this phenomenon occurs range among countries: between 7% and 43% refer to victims and from 5% to 44% refer to bullies [4]. Rates in Brazil range from 7% to 22% for victimization and from 17% to 21% for aggression [2,5]. The presence of

bullying in the school context hinders learning and the healthy development of students [5], while also collaborating to create a perception that school is not a very safe place [6]. Bullies and victims can present higher rates of depressive symptomatology [7], anxiety [8], insecurity [9], loneliness [5], learning problems [10], juvenile delinquency [11], and suicidal ideation [12]. The negative effects of bullying indicate the need to develop interventions to prevent or reduce the occurrence of this phenomenon in schools.

The international literature shows that various antibullying programs have been implemented, such as whole-school antibullying programs [13,14], curriculum interventions [15,16], and social skills training [17,18]. A meta-analysis including 44 studies reports that the success of interventions varies. The average decrease in aggression is 23%, while victimization has been reduced by 20%, though only some programs presented significant results [19]. The most efficacious elements of interventions intended to decrease victimization include strict disciplinary methods, training for parents, meetings, videos and cooperative group work for students, as well as programs of greater duration and intensity directed to children and teachers [19]. Another two meta-analyses identified very few effects to have practical relevance [20,21].

Due to the inexpressive results presented by most antibullying interventions, some researchers have drawn attention to the need to implement programs that indirectly approach the phenomenon [22,23]. Indirect approaches include programs in which the prevention or reduction of bullying occur by promoting social and emotional skills and encouraging pro-social behavior that favors non-violent social interactions with peers and adults through conflict resolution and establishing friendships, for instance [24]. This type of intervention was successful in decreasing the frequency of physical aggression [25] and victimization [26] in the United States, a country where most antibullying programs are less successful than those implemented in European countries.

From another perspective, since only a small number of students are directly involved in bullying, the inexpressive results of most interventions may be related to the fact that they include all students [27]. Recently, a recommendation was made to implement programs exclusively directed to either bullies or victims, focusing on promoting skills among children and adolescents [28]. Lack of appropriate social skills is one of the predictors of victimization [4]. Social skills represent classes of behaviors individuals use to successfully complete a social task [29]. Bullying victims present a lack of appropriate social skills, such as social isolation and inefficient coping strategies such as crying and ignoring the bully [30]. These strategies, in general, signal to bullies that the victims lack self-defense skills, which combine with violence to become even more intensified [31].

Therefore, improved social skills, especially assertiveness, represent an important aspect upon which to ground interventions intended to reduce bullying among victims [17,18]. There are few studies addressing selective interventions directed to victims of bullying [32]. A study developed in English schools identified that the training of social skills improved the self-esteem of children, though victimization was not significantly reduced [18]. A significant reduction of victimization was reported by a study implemented in Australian schools addressing male adolescent bullying victims who presented symptoms of anxiety [33]. The components of the program developed in Australia that may have ensured its success were social skills, the objective of which was to help children establish supporting friendships and develop assertive coping strategies. The focus on emotional skills using strategies to control anger and frustration is another aspect to highlight, as it may have contributed to the intervention's success, as well as increased the focus on anxiety [33]. In Brazil, there are no studies with this type of approach.

Internationally, the interventions with the best results are those addressing the entire school [19]. One of the lines of this approach considers bullying a group phenomenon and, for this reason, focuses on students not involved with bullying, or bystanders, because they can either defend the victim or reinforce the bullies' behavior [14]. Having peers willing to stand up for them is very important for victims; however, victims also need to have self-defense skills and must be able to establish friendships to improve the social support they receive, which may be facilitated by the improvement of social skills. Competent social skills are more needed in some periods of school life, such as when transitioning between school cycles or levels within the organization of the educational system, so social competence is important to properly cope with changes that occur in this period [34].

Studies have shown that behavioral problems, lack of discipline and bullying become more frequent during school transitions because students have to relate to a larger number of unknown peers and make new friends and form new social groups [1,35]. A greater concern over social status during this period may encourage aggressive behavior as a way to achieve self-affirmation and become popular among peers [14,36]. A lack of appropriate social skills among victims can hinder self-defense, the establishment of friendships and social adaptation during school transitions. Hence, even though victimization tends to decrease between the ages of eight and 16 years old, a peak usually occurs in the 6th grade [37]. Such violence can negatively affect the quality of victims' school experiences and the relationships they establish with their peers [34].

This study was developed in Brazil, a developing country in Latin America. With a pre- and post-test format, this investigation focuses on students who were victims of bullying. Mixed groups, however, were included in the intervention; that is, bystanders were also included. The reason for including bystanders is because there are indications that victims lack appropriate social skills, so gathering participants with similar difficulties into the same group may be counter-productive [38]. Hence, the intention was to allow victims to interact and make friends with non-aggressive students so that they would establish connections during the intervention and form a larger network of social support. We also expected that the bystanders would offer social support to the victims during the school routine.

This study's objective was to verify whether improved social and emotional skills would reduce victimization among Brazilian students who were victims of bullying attending the 6th grade (first year of the equivalent to middle school in Brazil). This is the first investigation addressing the impact of an intervention based on the development of social and emotional skills on a population of Brazilian student victims of bullying. Its results can improve knowledge concerning this phenomenon in this sociocultural context and can also indicate possibilities in the design of preventive measures and the combat of bullying.

2. Materials and Methods

2.1. Participants

A total of 522 6th grade students (first year of the equivalent to middle school in Brazil) attending six schools from a Brazilian city were invited and 411 consented to participate. Among a total of 285 students assessed in the pre-test and considered to be either victims or bystanders, 203 consented to participate in the study's second stage that involved the intervention. Thirteen boys and two girls withdrew from the study and were excluded from the final sample, which was finally composed of 188 students assigned to intervention (41.5%) and comparison (58.5%) groups.

Participants were assigned to intervention and comparison groups within their own schools. The 18 6th grade classrooms were distributed into these two conditions in order to obtain comparable samples, so that the nine classrooms composing the intervention group and the nine classrooms composing the comparison group presented similar amounts of victims, bullies and bystanders. All the victims and bystanders from the intervention group were invited to take part in the intervention and all those who agreed were included. The students were assigned to the groups according to an average proportion of 40%–50% of victims and 50%–60% of bystanders. The same occurred for sex, as there were more girls than boys. Some

participants, however, withdrew from the study so that the proportion of female participants in the final sample was 72.1% in the intervention group as opposed to 58.8% in the comparison group, a difference that was not, though, statistically significant ($p = 0.07$). Altogether, 78 victims (41.5%) and 110 bystanders (58.5%) participated. From the total number of victims, 40 (51.3%) were typical victims and 38 (48.7%) were reactive-victims.

The average age in the intervention group was 11.28 years old and in the comparison group it was 11.21 years old ($p = 0.441$). The ethnic composition of the groups was similar ($p = 0.566$). The intervention group included: mixed race individuals (48.8%), Caucasians (38.4%), Afro-descendants (8.1%) and others (4.7%), while the comparison group included: mixed race participants (43.1%), Caucasians (42.2%), Afro-descendants (8.8%), and others (5.8%). Both those who participated in the survey, but not in the intervention, ($n = 82$) and bullies ($n = 126$) did not present significant differences regarding their distribution in classrooms (intervention and comparison), suggesting that those taking part in the intervention belonged to classrooms with similar characteristics.

This study's focus was students who were victims of bullying. The participation of bystanders was an extra component in the intervention, the objective of which was to promote interaction with the victims as pro-social peers and encourage the establishment of friends (victims and bystanders) to increase the amount and quality of social support and help provided to victims. Even though the characteristics of bystanders were considered when forming the groups, only results concerning the victims are presented. The study was approved prior to implementation by the Institutional Review Board at the University of São Paulo at Ribeirão Preto, College of Nursing (Protocol CAAE: 39462414.0.0000.5393) (see Attachment D). Parents and legal guardians authorized the participation of students by signing consent forms (see Appendices A and B).

2.2. Intervention

The students participated in a behavioral cognitive intervention based on social skills [29]. The eight weekly sessions, which lasted 50 min each, were led by a clinical psychologist (this paper's primary author) on the schools' premises during school hours. The groups were composed of eight to 10 participants mixed by gender (female and male) and condition (victim and bystander).

The sessions addressed content and activities related to civility, the ability to make friends, empathy, self-control, and emotional expressiveness, assertiveness and interpersonal problem-solving capacity. Content and activities were developed according to guidelines

established by the program [29] in order to ensure a reliable application of the intervention. The structure of the sessions was based on cognitive-behavioral techniques, such as: role-play, dramatization, positive reinforcement, modeling, feedback, videos, and homework assignments. Each meeting was organized around three points in time: (1) beginning - the participants commented on the homework assignments, received feedback, orientation and support from the group and coordinator, then a brief summary from the previous meeting was presented; (2) middle - activities programmed for the meeting were performed; (3) final - homework would be assigned and feedback on the meeting was provided by the participants and coordinator.

Homework involved practicing learned skills in different situations, real daily contexts different from that of the intervention group. Additionally, homework reports and feedback reinforced the skills learned and enabled assessing and designing new strategies if the initial attempt had not been successful. These strategies were intended to provide support to students in implementing social skills. The groups were assessed once more after the intervention (post-test).

The intervention took place between March and May 2015, at the beginning of the school year, which in Brazil starts in February and ends in December. The pre-test occurred in the first week of March and the post-test assessment took place in the first week of June (seven days after the intervention ceased) for both the intervention and comparison groups.

2.3. Measurements

2.3.1. Self-Report (S-R)

Escala de Agressão e Vitimização entre Pares - EVAP (Aggression and Peer Victimization Scale) [39]. EVAP is an 18-item instrument that takes approximately 5 min to be completed. The participants checked the frequency with which they practiced direct or indirect aggressive behavior or were targets of such behaviors. For instance: “I pushed, punched and/or kicked other students”; “I was pushed, punched and/or kicked by other students”; “I cursed at other students”; “I was cursed at by other students”. Answers are provided on a Likert scale (1 = never; 2 = almost never; 3 = sometimes; 4 = almost always; 5 = always). Therefore, the scores for the eight questions addressing victimization ranged between 8 (minimum) and 40 (maximum) and for the questions addressing aggression, the interval ranged from 10 (minimum) to 50 (maximum). Psychometric analyses indicated good internal consistency for victimization ($\alpha = 0.81$) and aggression ($\alpha = 0.79$).

Sistema Multimídia de Habilidades Sociais para Crianças - SMHSC [40] (Multimedia System of Social Skills for Children, Casa do Psicólogo, São Paulo, Brazil). SMHSC is a self-assessment computerized instrument addressing social skills. It takes approximately 35 min to be completed. It is composed of 21 main videos depicting children interacting with other children and adults. Each situation presents another three short videos depicting alternative behavioral responses for the situation presented in the main video, namely: skillful, passive non-skillful, active non-skillful. The general classes of social skills that are assessed refer to empathy and civility, coping assertiveness, self-control, and participation. For instance, main video number 17 is titled “Resisting Peer Pressure” and belongs to the general class of social skill of coping assertiveness. In the video, Carlos finds out that the ball is kept in the teacher’s room and wants Bruno to go and get it, saying: “If you’re not a sissy”. The entire group confirms: “That’s right! If you’re not a sissy”. Another three videos are presented; each depicts a different response from Bruno. The first is a non-skill active response. Bruno disagrees from the boys and threat to fight saying: “I’m not a sissy! You are! Do you want a piece of me!” The second is a non-skilled passive response. Bruno agrees to do what the group demands saying: “Alright, alright, I’ll go....” The third response is skilled. Bruno disagrees and explains: “I’m not going there just because you want! And it has nothing to do with being a sissy!” After each response, two questions are asked: 1. “Do you usually respond this way?”, to which the following options are offered: “a. always, b. sometimes, and c. never”; and 2. “What do you think about responding this way?”, to which the options are: “a. correct, b. more or less, and c. wrong”. Only for the skilled response is a third question is asked: “Do you have difficulty responding this way”, to which the options are: “a. correct, b. more or less, and c. wrong”. Answers to the question were analyzed using SMHSC, which provided raw and standardized scores for each participant. The general score for difficulty in regard to the practice of social skills was used in this study ($\alpha = 0.78$).

2.3.2. Peer-Report (P-R)

Sociometric scale [41]. This peer-selection instrument is composed of 10 items and its completion takes approximately 7 min. The participants indicated positive preferences of up to three classmates with whom they enjoyed hanging around, playing, talking or doing schoolwork. They also indicated the negative preference of up to three classmates with whom they least liked to hang around, play, talk or do school work. The participants also listed classmates who had the following characteristics: having few friends, being nice, and being able to resolve conflicts. All the participants who consented to participate in the study, and not

only those who took part in the intervention, completed the sociometric scale. The number of indications of each sociometric item was considered within the intervention and comparison groups.

2.4. Statistical Analysis

First, to identify involvement in bullying based on the responses provided to the questionnaire, EVAP, grouping analyses were performed using Ward hierarchical method. The Ward method consists of a hierarchical grouping procedure in which the similarity measure used to group individuals is calculated as the sum of squares between the two groupings.

The Ward method consists of a procedure of hierarchical grouping in which the similarity measure used to gather groupings is calculated as the sum of squares between two groupings of all the variables. This method is distinct from other cluster methods because it uses an analysis of the variance approach in order to evaluate the distances between the clusters. In the Ward method, the mean distance of an observation that falls in the center of a cluster from the observations in the same cluster are taken as the basis and the total deviation squares are used. This method tends to result in groupings of approximately equal sizes due to the minimization of internal variation. Three categories emerged: 1. Bystander (low frequency of aggression and low frequency of victimization), 2. Victim (high frequency of victimization and low or moderate frequency of aggression), and 3. Bully (high frequency of aggression and low or moderate frequency of victimization). In this study, reactive-victims are those students who presented a high frequency of victimization with a moderate frequency of aggression.

Afterwards, data concerning the pre- and post-tests were described in terms of mean and standard deviation. The variables of interest had their scores compared with respect to time (pre-test and post-test) and groups (intervention and comparison) through a random effect Poisson regression [42] with log-linear canonical link function. This type of model is indicated when the response variable is a count variable. The study data do not meet normality criteria, as in the usual regression model, because the function's domain is the real line, which is not the case for the data at hand. A random effect was included to account for the correlation arising from the fact that the same subject is observed in different periods: pre-test and post-test. Estimates of the parameters were obtained by the maximum likelihood method because the variables "few friends", "conflict resolution" and "being nice" have standard deviations greater than their means, the model included an over dispersion [43] using SAS's PROC GENMOD software (SAS Institute Inc., Cary, NC, United States of America). Throughout the analysis, a 5% level of significance was considered.

In the Poisson regression results, betas refer to orthogonal contrasts obtained for the comparisons between the variables of interest, with respect to time (pre- and post-). The orthogonal contrasts are a means of obtaining a test of a specified hypothesis concerning the model parameters. This is accomplished by specifying a matrix L for testing the hypothesis $L'\beta = 0$. The statistics calculated are based on the asymptotic chi-square distribution of the likelihood ratio statistic, for the generalized score statistic for generalized models, with degrees of freedom determined by the number of linearly independent rows in the matrix. For instance: Assume a group effect with two levels (Intervention and Comparison), to specify matrix L' . In order to test the difference between groups, we should create a matrix of one line with two columns: 1 was assigned to the first column and -1 was assigned to the second column. In this way, we would compare the groups (Intervention and Comparison) and obtain an estimated difference between the groups, estimative of difference that, in the results section of this paper is called betas. The betas presented in this paper correspond to contrast of times in inverted order, that is, post-test in regard to the pre-test having a matrix $L = (-1, 1)$. For this reason, when beta is negative, we can attribute increased acceptance to the post-intervention.

3. Results

Table 1 presents the differences found by the Poisson regression model for the variables with regard to the intervention and comparison groups in the pre- and post-tests.

Table 1. Comparison between groups (intervention and comparison) with regard to pre-test and post-test using Poisson regression model.

	Intervention ($n = 38$)		Comparison ($n = 40$)	
	Pre-test	Post-test	Pre-test	Post-test
S-R Total Victimization	26.63 (4.92)	22.13 (7.27) **	25.95 (4.27)	19.97 (8.79) **
S-R Physical Victimization	5.38 (2.23)	4.48 (2.14)	5.34 (2.26)	4.55 (2.20)
S-R Verbal Victimization	11.95 (2.33)	10.20 (3.35) *	11.63 (2.02)	8.84 (3.79) **
S-R Relational Victimization	9.30 (2.40)	7.45 (3.30) **	8.97 (2.57)	7.05 (3.16) **
S-R Total Aggression	20.50 (5.38)	19.85 (5.90)	19.89 (6.71)	20.03 (6.75)
S-R Physical Aggression	5.23 (2.02)	5.18 (2.02)	5.55 (2.37)	5.76 (2.27)
S-R Verbal Aggression	7.15 (2.26)	7.10 (2.65)	7.24 (2.87)	6.95 (2.67)
S-R Relational Aggression	8.18 (2.91)	7.83 (2.63)	7.11 (2.81)	7.32 (2.92)
S-R Difficulty with social skills	1.95 (1.06)	1.58 (1.14)	1.26 (0.92)	1.26 (1.21)
P-R Acceptance	4.83 (3.57)	5.33 (3.14)	3.74 (2.89)	4.58 (2.98)
P-R Few friends	1.03 (1.39)	0.93 (1.80)	0.32 (0.53)	0.47 (0.83)
P-R Conflict resolution	0.48 (0.85)	0.68 (1.35)	0.47 (0.80)	0.68 (1.69)
P-R Being nice	0.90 (1.37)	1.15 (1.76)	0.55 (0.72)	0.53 (0.86)

Notes: P-R = peer-report. S-R = self-report. Data presented as mean (standard deviation). * = $p < 0.05$, ** = $p < 0.01$.

The results indicate a significant decrease in total victimization in the intervention ($\beta = 0.1851$, $SE = 0.0455$, $p < 0.0001$) and comparison groups ($\beta = 0.2617$, $SE = 0.0483$, $p < 0.0001$). Physical victimization decreased significantly in both groups. Verbal victimization decreased significantly among the victims in the intervention ($\beta = 0.1583$, $SE = 0.0674$, $p = 0.018$) and comparison groups ($\beta = 0.2742$, $SE = 0.0724$, $p = 0.0002$). Relational victimization also decreased among victims in both the intervention ($\beta = 0.2218$, $SE = 0.0777$, $p = 0.004$) and comparison groups ($\beta = 0.2409$, $SE = 0.0816$, $p = 0.003$). No significant differences were found with regard to aggression, though total aggression decreased somewhat in the intervention group. Difficulty experienced by victims in the intervention group in terms of practicing social skills was reduced, but not significantly. Peer acceptance increased for both the intervention and comparison groups, but not significantly. The intervention group was less frequently nominated as having few friends while the comparison group was more frequently nominated as having few friends, but in both cases, the differences were not significant. Conflict resolution did not increase significantly for the victims of any of the groups. The intervention group was more frequently considered nice, though with no statistical significance.

4. Discussion

This study's objective was to verify whether improved social and emotional skills would reduce victimization among Brazilian student victims of bullying attending the 6th grade (first year of the equivalent to middle school in Brazil). The results indicate a significant decrease in victimization presented by the intervention and comparison groups when comparing pre- and post-tests. Similar results in the intervention group are reported by another study that implemented interventions involving social and emotional skills [33]. In this study, however, a significant decrease in victimization was also presented by the comparison group, thus we cannot claim that the positive results observed in the intervention group were due to the program developed in this study addressing social and emotional skills. A potential explanation involves difficulties faced by students at the beginning of the 6th grade, such as changing schools, the need to interact with new students and adapt to significant changes in school structure, disciplinary control and expectations concerning academic performance [34]. For this reason, victimization rates are possibly higher at the beginning of the year when students were assessed in the pre-test and these initial difficulties concerning peer interactions, conflicts, violent situations and bullying may have decreased as students came to feel better adapted to the new school situation and after having made new friends, the situation that was reflected in the post-test.

Even though it was not statistically significant, aggression decreased in the intervention group. This result may be related to improved social skills, as this indicates a tendency of the victims in the intervention group to act with more civility, empathy, and self-emotional control, and to solve related problems in a non-violent way. This is important because, even though victims generally respond to aggression in a passive manner (exhibiting submission or crying easily, for instance), which may reinforce aggressiveness because a passive response signals to bullies that their actions are successful [31], an aggressive response may also increase the frequency with which intimidating situations occur over time [44]. The short-term interaction between victims and bystanders during the sessions was not sufficient to significantly increase the network of peers among those participating in the intervention; the post-test still indicated the participants had few friends. The short period between the pre-test and post-test may have also influenced the results due to “social status rigidity”, which requires time to be changed in social relationships [18]. Having the support of peers when facing bullying is important because even the most assertive responses of victims in the face of aggression may be ineffective in a context in which bullies have high social status or aggression is considered to be normal [36].

This study presents some limitations. First, the post-test was implemented one week after the intervention. A longer period of time would be more suitable to assess changes in bullying and social skills. Another limitation was that the activities were performed within an “artificial environment”; the context of a classroom provides more opportunities to intervene in real daily situations and test learned skills, although there was an effort in this study to make the intervention environment as close as possible to that which the participants routinely experience in their interactions. Further studies should overcome these limitations and incorporate the intervention developed in this study into the school curriculum so that this would be a role to be performed by teachers. Waiting a longer period between the pre-test and post-test is also recommended. The instrument used to collect data regarding bullying does not address cyber bullying, which represents another limitation in this study.

5. Conclusions

The intervention group experienced less difficulty to a statistically non-significant degree with regard to social skills. Victimization decreased significantly in both the intervention and comparison groups. Aggressiveness did not significantly decrease. This is the first study testing an intervention based on social and emotional skills directed at victims of bullying in Brazil, with the potential to encourage reflection upon intervention models to be designed for the Brazilian context.

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6. FINAL CONSIDERATIONS

The quality of the interactions between children and adolescents in the school is an important theme for education and health. Social skills present a transversality that requires the adoption of intervention strategies to promote the individual empowerment of students, in a way to alter positively how they establish their social relationships in the school environment as a space for collective interaction. In this context, individual empowerment favors the development of collective empowerment and the exercise of benefits in learning, health, and the quality of life of students.

Therefore, quality improvements in social interactions of students can represent stimuli for the establishment of a non-violent culture in school and, therefore, reduce the occurrence of bullying. Empowering the victim, considering the improvement of needed social skills to decrease vulnerability to bullying, also indicates that, throughout life, they will be able to deal with similar situations in an adequate manner. This is important, considering that deficits in social skills can remain unchanged over time and lead to more severe issues, such as violence.

The results demonstrated that intervention participants reduced the difficulty presented in practicing social skills at a non-significant statistical level. As behavior changes require a longer time to be effective in social relationships, the small amount of time existing between the end of intervention and the administration of the post-test could have influenced the results. However, the tendency to improve social skills in bullying victims was perceived by their peers, who indicated they had attained greater social acceptance, greater capacity to resolve conflicts, more sympathy and less indication that they had few friends, in comparison to the initial assessment (pre-test). Although not presenting significant differences, those are results that demonstrate improvement in the social position of victims. Despite it not being possible to attribute the reduction in victimization to the intervention, these are results showing the positive aspect of the study that, in the long-term, can broaden its magnitude to a degree that it can become significant.

On the other hand, the small increase of aggression in the comparison group suggests that it can be being used as a self-defense strategy or for the resolution of conflict. Thus, the best result for the intervention group, which saw a reduction in aggression, may be related to the improvement presented concerning social skills and not to the unknown variables, such as occurred with victimization. The comparison group result also could be due to a more intense search for status or social acceptance; greater concern with status can stimulate the practice of aggression as self-affirmation and an endeavor to achieve popularity. This is an important result

because, although students from the comparison group bully more their fellow students, they were also indicated by their peers as being more accepted. This can occur in contexts where violence is considered normative in the group of peers or is promoter of higher social status for aggressor students. New studies can be dedicated to the investigation of this aspect, as a means to verify if it happens the same way in the national context.

Beyond the limitations of this study previously indicated in article 2, there is another related to the allocation of participants in intervention and control groups that occurred per classroom and not per school. The most acceptable method would be to distribute the schools within the groups and not classrooms, to avoid the possibility of intervention participants comment about the program with other students who were part of the control group because they were at the same school, although from different classrooms. New studies can overcome this limitation by separating intervention and control groups per school.

In summary, as the reduction of victimization in the investigated sample cannot be attributed to improvement in social skills, despite the tendency of improvement in social skills, it is suggested that other anti-bullying intervention models should be tested, aiming to identify the most effective ones. It is recommended that future studies use an approach not exclusively focused on students' individual aspects.

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APPENDIX A - Consent Term



Centro Colaborador da Organização Mundial da Saúde
para o Desenvolvimento da Pesquisa em Enfermagem

UNIVERSIDADE DE SÃO PAULO
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TERMO DE ASSENTIMENTO

Destinado aos Adolescentes (a ser impresso em frente e verso)

PESQUISA: Treinamento de habilidades sociais como estratégia de enfrentamento do bullying: intervenção e empoderamento

Responsável pelo Projeto: Jorge Luiz da Silva

Orientadora: Prof.^a Dr.^a Marta Angélica Iossi Silva

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Instituição: Escola de Enfermagem de Ribeirão Preto (EERP-USP)

Prezado aluno, você está sendo convidado(a) a participar do estudo intitulado “Treinamento de habilidades sociais como estratégia de enfrentamento do *bullying*: intervenção e empoderamento”, cujo objetivo consiste em verificar se o Treinamento de Habilidades Sociais (THS) colabora para a mudança da condição de vulnerabilidade ao *bullying* em adolescentes. Pretende-se, a partir dos resultados obtidos com esta investigação, contribuir para avanços nos estudos sobre o *bullying* escolar, especialmente no que diz respeito a formas de prevenção e enfrentamento deste tipo de violência.

Caso concorde em participar da pesquisa, precisará responder a dois questionários, na escola, durante o período de aula. Os questionários se referem ao *bullying* (Por exemplo: eu briguei quando algum colega me bateu primeiro ou fez algo que eu não gostei; os colegas me provocaram; colegas me excluíram de grupos e/ou brincadeiras) e às habilidades sociais (Por exemplo: ao ser injustamente criticado, consigo responder sem perder o controle; ao perceber que fui grosso ou ofendi alguém, eu peço desculpas). Depois, para a escolha dos participantes do treinamento de habilidades sociais será realizado um sorteio entre os alunos. Assim, você poderá ou não participar do treinamento de habilidades sociais que ocorrerá na escola, durante o período de aula, totalizando 11 encontros de uma hora cada, sendo um encontro por semana. Na intervenção serão trabalhadas as habilidades sociais direcionadas a se fazer e manter amizades, prevenir e gerenciar conflitos, desenvolver maior autocontrole emocional e solucionar problemas de relacionamento.

Antes e durante a realização do estudo você poderá ter todas as informações que quiser e poderá não concordar com a participação na pesquisa ou retirar o consentimento a qualquer momento, sem prejuízo ou consequência alguma. Se estiver participando, poderá se negar a responder alguma questão ou parte dela. Também poderá se recusar a participar do treinamento de habilidades sociais ou desistir durante o período em que esteja ocorrendo.

Espera-se que esta investigação não gere riscos ou desconfortos aos participantes, porém, se for verificado o surgimento de alguma indisposição física ou emocional decorrente do procedimento de coleta dos dados, ou da intervenção, os mesmos serão interrompidos e o participante receberá os cuidados necessários ou encaminhado a outros profissionais quando

necessário. Além disso, garante-se o direito à indenização, conforme as leis vigentes no país, caso haja qualquer ou eventual dano decorrente da participação do adolescente na pesquisa.

Como a pesquisa conta com a participação voluntária, você não receberá qualquer valor em dinheiro, mas terão a garantia de que não haverá nenhum custo para a sua família ou para a escola. Além disso, todos os resultados obtidos serão analisados em conjunto, isto é, de todos os participantes juntos e serão utilizados exclusivamente com fins científicos, o que implica a sua divulgação em revistas especializadas ou eventos científicos. Contudo, o nome dos participantes e da escola não serão em nenhum momento divulgadas e nem aparecerão em nenhuma parte da pesquisa.

Esse termo é assinado em duas vias, sendo que uma delas ficará com o pesquisador e outra será entregue a você para conhecimento. O projeto da pesquisa foi analisado e aprovado pelo Comitê de Ética em Pesquisa com Seres Humanos (CEP) da EERP/USP, que tem a finalidade de proteger os participantes de pesquisas, mediante o respeito às questões éticas necessárias para a sua realização.

Se tiver alguma dúvida, poderá entrar em contato comigo pelo telefone (16) 98184-6697 ou (16) (16) 3315-3413 de 2ª à 6ª feira das 08h00min às 17h00min ou pelo e-mail jorgelsilva@usp.br. Além disso, eu estarei disponível pessoalmente na escola durante três meses a partir do momento que você receber este termo. Vocês ainda poderão contatar o CEP no endereço da EERP/USP - Avenida dos Bandeirantes, 3900 - Campus USP - Ribeirão Preto - SP - 14040-902 - Telefone (16) 3602-3386 - de 2ª à 6ª feira das 08h00min às 17h00min.

Agradecemos a sua colaboração!

Assentimento da participação

Eu, _____,
ciente das informações constantes no verso sobre o estudo e os meus direitos, aceito a participação no estudo acima especificado. Foi-me garantido que posso desistir de participar da pesquisa a qualquer momento, sem quaisquer penalidades ou prejuízos. Também me foi afirmado que não terei nenhum risco físico ou gasto financeiro, sendo que será mantida em segredo minha identificação. Tendo o consentimento do meu responsável já assinado, declaro que concordo em participar desse estudo. Recebi uma via deste termo assentimento e me foi dada a oportunidade de ler e esclarecer as minhas dúvidas.

Ribeirão Preto, ____ de _____ de 2015.

Assinatura do adolescente menor de 18 anos

Pesquisador responsável - Jorge Luiz da Silva
Nº USP 7496897 - CRP: 114635/06

APPENDIX B - Free and Informed Consent



Centro Colaborador da Organização Mundial da Saúde
para o Desenvolvimento da Pesquisa em Enfermagem

UNIVERSIDADE DE SÃO PAULO
ESCOLA DE ENFERMAGEM DE RIBEIRÃO PRETO

Avenida Bandeirantes, 3900 - Ribeirão Preto - São Paulo - Brasil - CEP 14040-902
Fone: 55 16 3602.3382 - 55 16 3602.3381 - Fax: 55 16 3602.0518
www.eerp.usp.br - eerp@edu.usp.br

TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO Destinado aos Pais (a ser impresso em frente e verso)

PESQUISA: Treinamento de habilidades sociais como estratégia de enfrentamento do bullying: intervenção e empoderamento

Responsável pelo Projeto: Jorge Luiz da Silva

Orientadora: Prof.^a Dr.^a Marta Angélica Iossi Silva

Telefone para contato: (16) 3315-3413

Endereço: Av. Bandeirantes, 3900 - Bairro Monte Alegre

Instituição: Escola de Enfermagem de Ribeirão Preto (EERP-USP)

Prezado pai ou responsável, o(a) adolescente sob a sua responsabilidade está sendo convidado(a) a participar do estudo intitulado “Treinamento de habilidades sociais como estratégia de enfrentamento do *bullying*: intervenção e empoderamento”, cujo objetivo consiste em verificar se o Treinamento de Habilidades Sociais (THS) colabora para a mudança da condição de vulnerabilidade ao *bullying* em adolescentes. Pretende-se, a partir dos resultados obtidos com esta investigação, contribuir para avanços nos estudos sobre o *bullying* escolar, especialmente no que diz respeito a formas de prevenção e enfrentamento deste tipo de violência.

Caso concorde com a participação do adolescente na pesquisa, ele(a) precisará responder a dois questionários, na escola, durante o período de aula. Os questionários se referem ao *bullying* (Por exemplo: eu briguei quando algum colega me bateu primeiro ou fez algo que eu não gostei; os colegas me provocaram; colegas me excluíram de grupos e/ou brincadeiras) e às habilidades sociais (Por exemplo: ao ser injustamente criticado, consigo responder sem perder o controle; ao perceber que fui grosso ou ofendi alguém, eu peço desculpas). Depois, para a escolha dos participantes do treinamento de habilidades sociais será realizado um sorteio entre os alunos. Assim, o adolescente poderá ou não participar do treinamento de habilidades sociais que ocorrerá na escola, durante o período de aula, totalizando 11 encontros de uma hora cada, sendo um encontro por semana. Na intervenção serão trabalhadas as habilidades sociais direcionadas a se fazer e manter amizades, prevenir e gerenciar conflitos, desenvolver maior autocontrole emocional e solucionar problemas de relacionamento.

Antes e durante a realização do estudo você poderá ter todas as informações que quiser e poderá não concordar com participação do(a) adolescente na pesquisa ou retirar o consentimento a qualquer momento, sem prejuízo ou consequência alguma. O adolescente também poderá se negar a participar e, se estiver participando, se negar a responder alguma questão ou parte dela. Também poderá se recusar a participar do treinamento de habilidades sociais ou desistir durante o período em que esteja ocorrendo.

Espera-se que esta investigação não gere riscos ou desconfortos aos participantes, porém, se for verificado o surgimento de alguma indisposição física ou emocional decorrente do procedimento de coleta dos dados, ou da intervenção, os mesmos serão interrompidos e o participante receberá os cuidados necessários ou encaminhado a outros profissionais quando

necessário. Além disso, garante-se o direito à indenização, conforme as leis vigentes no país, caso haja qualquer ou eventual dano decorrente da participação do adolescente na pesquisa.

Como a pesquisa conta com a participação voluntária, vocês não receberão qualquer valor em dinheiro, mas terão a garantia de que não haverá nenhum custo para a sua família ou para a escola. Além disso, todos os resultados obtidos serão analisados em conjunto, isto é, de todos os participantes juntos e serão utilizados exclusivamente com fins científicos, o que implica a sua divulgação em revistas especializadas ou eventos científicos. Contudo, o nome dos participantes e da escola não serão em nenhum momento divulgadas e nem aparecerão em nenhuma parte da pesquisa.

Esse termo é assinado em duas vias, sendo que uma delas ficará com o pesquisador e outra será entregue a você e ao adolescente para conhecimento. O projeto da pesquisa foi analisado e aprovado pelo Comitê de Ética em Pesquisa com Seres Humanos (CEP) da EERP/USP, que tem a finalidade de proteger os participantes de pesquisas, mediante o respeito às questões éticas necessárias para a sua realização.

Se tiver alguma dúvida, poderá entrar em contato comigo pelo telefone (16) 98184-6697 ou (16) (16) 3315-3413 de 2ª à 6ª feira das 08h00min às 17h00min ou pelo e-mail jorgesilva@usp.br. Além disso, eu estarei disponível pessoalmente na escola durante três meses a partir do momento que você receber este termo. Vocês ainda poderão contatar o CEP no endereço da EERP/USP - Avenida dos Bandeirantes, 3900 - Campus USP - Ribeirão Preto - SP - 14040-902 - Telefone (16) 3602-3386 - de 2ª à 6ª feira das 08h00min às 17h00min.

Agradecemos a sua colaboração!

Consentimento da participação

Eu, _____,
ciente das informações constantes no verso sobre o estudo e os meus direitos, aceito a
participação do adolescente sob minha responsabilidade
_____ no estudo acima especificado.

Foi-me garantido que posso desistir de participar da pesquisa a qualquer momento, sem quaisquer penalidades ou prejuízos. Também me foi afirmado que não terei nenhum risco físico ou gasto financeiro, sendo que será mantida em segredo minha identificação. A minha assinatura representa o meu consentimento em participar do estudo. Este termo é assinado em duas vias, uma cópia ficará comigo e a outra com o responsável pela pesquisa, e tive a oportunidade de discuti-lo com o mesmo.

Ribeirão Preto, ____ de _____ de 2015.

Assinatura do responsável pelo adolescente

Pesquisador responsável - Jorge Luiz da Silva
Nº USP 7496897 - CRP: 114635/06

ATTACHMENT A - Permission Letter from the Copyright Holder (Ciência & Saúde Coletiva)



Rio de Janeiro 23 março de 2017

Prezados autores: Jorge Luiz da Silva, Wanderlei Abadio de Oliveira, Flávia Carvalho Malta de Mello, Luciane Sá de Andrade, Marina Rezende Bazon, Marta Angélica Iossi Silva

Recebi seu pedido para re-publicar o seu artigo "Revisão sistemática da literatura sobre intervenções antibullying em escolas- que se em contra no prelo aguardando publicação.

Como editora científica da Revista concedo-lhe permissão para essa re-publicação com a condição de que nela constem exatamente todos os créditos da Revista Ciência & Saúde Coletiva, como convém aos trabalhos científicos replicados. Tenho o prazer de saber que seu artigo, originalmente aprovado por nós, seja de interesse de um público maior.

Atenciosamente,



Maria Cecília de Souza Minayo

Editora Científica de Ciência & Saúde Coletiva

ATTACHMENT B - Permission Letter from the Copyright Holder (Temas Em Psicologia)



Porto Alegre,, 12 de abril de 2017

Prezados autores Jorge Luiz da Silva, Wanderlei Abadio de Oliveira, Marcela Almeida Zequinão, Elisângela Aparecida da Silva Lizzi, Beatriz Oliveira Pereira, Marta Angélica Iossi Silva,

A revista Temas em Psicologia gostaria de informá-los que recebemos a vossa solicitação para re-publicar o artigo intitulado "Resultados de intervenções em habilidades sociais na redução de bullying escolar: revisão sistemática com metanálise" que se encontra no prelo aguardando publicação.

Como editora científica da Revista concedo-lhes permissão para essa republicação com a condição de que nela constem exatamente todos os créditos à revista após 6 meses de publicação na revista Temas em Psicologia, especificando o link de acesso à mesma.

Agradecemos-lhe pela valiosa contribuição.

Atenciosamente,



Luisa Fernanda Habigzang
Editor Chefe

ATTACHMENT C - Permission Letter from the Copyright Holder (International Journal of Environmental Research and Public Health)

AUTORIZAÇÃO PARA REPUBLICAÇÃO DE ARTIGO

Ribeirão Preto, 24 de março de 2017

Recebemos um pedido para re-publicar o artigo no qual somos autores: "The Effects of a Skill-Based Intervention for Victims of Bullying in Brazil", que se encontra publicado na revista International Journal of Environmental Research and Public Health.

Concedemos permissão para essa republicação na tese de doutorado de Jorge Luiz da Silva, com a condição de que nela constem exatamente todos os créditos da publicação original, como convém aos trabalhos científicos replicados.

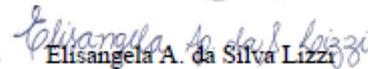
Atenciosamente,


Jorge Luiz da Silva

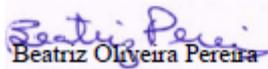

Wanderlei Abadio de Oliveira


Iara Falleiros Braga


Marilúdes Silva Farias


Elisângela A. da Silva Lizzi


Marlene F.C. Gonçalves


Beatriz Oliveira Pereira


Marta Ângela Iossi Silva

ATTACHMENT D - Ethics Committee Approval Letter



COMITÊ DE ÉTICA EM PESQUISA DA EERP/USP

Of. CEP-EERP/USP – 018/2015

Ribeirão Preto, 11 de fevereiro de 2015.

Prezada Senhora,

Comunicamos o projeto de pesquisa, abaixo especificado, foi analisado e considerado **APROVADO** pelo Comitê de Ética em Pesquisa da Escola de Enfermagem de Ribeirão Preto da Universidade de São Paulo, em sua 191ª Reunião Ordinária, realizada em 11 de fevereiro de 2015.

Protocolo CAAE: 39462414.0.0000.5393

Projeto: Treinamento de habilidades sociais como estratégia de enfrentamento do bullying: intervenção e empoderamento.

Pesquisadores: Marta Angélica Iossi Silva
Jorge Luiz da Silva

Em atendimento à Resolução 466/12, deverá ser encaminhado ao CEP o relatório final da pesquisa e a publicação de seus resultados, para acompanhamento, bem como comunicada qualquer intercorrência ou a sua interrupção.

Atenciosamente,


Prof. Dra. Angelita Maria Stabile
Vice-Coordenadora do CEP-EERP/USP

Ilma. Sra.
Prof. Dra. Marta Angélica Iossi Silva
Departamento de Enfermagem Materno-Infantil e Saúde Pública
Escola de Enfermagem de Ribeirão Preto - USP