Chapter 1

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Toward Tailored Interventions: Explaining, Assessing and Preventing Persistent Victimization

In the past decennia, the number of scholars that has been investigating victimization of bullying has increased tremendously. This is a positive development, because victimization can have detrimental health consequences in the short and long term (Copeland, Wolke, Angold, & Costello, 2013; Kretschmer et al., 2018). However, studies that investigated victimization have almost exclusively focused on victims’ experiences of being bullied at one moment in time. The developmental patterns of victimization experiences are important to consider as well, because there is a fundamental difference between episodic victimization that lasts a relatively short period and being targeted persistently across different ages or contexts. Such persistent victimization has likely worse and longer-lasting consequences on health and status than being episodically targeted and can become increasingly difficult to stop (Barker, Arseneault, Brendgen, Fontaine, & Maughan, 2008; Bowes et al., 2013; Kochenderfer-Ladd & Wardrop, 2001; Sheppard, Giletta, & Prinstein, 2016).

Moreover, recent societal changes increased the urgency to address problems of persistent victims. Paradoxically, the growing number of implemented successful interventions that reduce the prevalence of victimization for many children (Ttofi & Farrington, 2011), seems to have worsened the well-being for the few remaining victims (Huitsing et al., 2019). Being victimized in an environment with highly salient anti-bullying efforts and few victimized peers could make victims feel more helpless and negative about themselves because the efforts made are not effective for them and no one shares their plight (Garandeau, Lee, & Salmivalli, 2018; Huitsing et al., 2019). Thus, positive societal changes in fact increased the urgency to understand and improve the situation of the few persistent victims.

To understand how these victims can be helped, insights are needed to explain, assess, and prevent persistent victimization. First, explaining persistent victimization requires a shift from mean-level approaches to estimating the within-person development of victimization over time, and to explaining these individual pathways. Second, to study victimization patterns we need an instrument that adequately differentiates between victims of bullying and victims of more general peer aggression, but it is unclear whether the available instruments do so. Last, there is a need for understanding about the efforts that can help victims escape their situation and prevent persistency. These insights are needed to extend current effective anti-bullying interventions with targeted approaches that help schools to recognize and tackle the few victims who remain victimized.
Addressing these questions, the overarching aim of this dissertation is to deliver scientific and applied contributions to all three parts of the explanation, assessment and prevention knowledge chain. The first objective, addressed in Part 1, is to expand our understanding of persistent victimization: I aimed to examine which individual and environmental characteristics explain persistent victimization as compared to episodic or non-victimization. Moreover, I aimed to explain these associations, by testing whether persistent victimization can be the result of a vicious cycle in which environmental and individual risk characteristics are bidirectionally interrelated with victimization. The second aim, addressed in Part 2, was to understand how victimization can be assessed more accurately. I strived to examine whether the most used instrument accurately differentiates victimization of bullying from victimization of peer aggression and whether explicit questions about characteristics of the bullying definition can improve this differentiation. The last aim, addressed in Part 3, was to contribute to understanding of prevention strategies that can help victims to escape their situation. In doing so, I (1) examined how victims’ individual belief systems can affect persistent victimization correlates, and across which contexts, and (2) provided a model for an intervention for teachers to recognize and prevent persistent victimization.

**Definition and Prevalence of Persistent Victimization**

By definition, “a person is being bullied when he or she is exposed, repeatedly and over time, to negative actions on the part of one or more other persons” (Olweus, 1993). Those who are victimized persistently experience such victimization over longer periods of time. The exact time span that defines persistency depends on the research question, but generally persistent victims are considered to be those who are victimized for at least two years. Estimates of the percentage of persistently victimized youth (mostly focusing on adolescence) in the population range across studies: for example, from four to seven (Barker, Arseneault, et al., 2008; Brendgen, Girard, Vitaro, Dionne, & Boivin, 2016; Kochenderfer-Ladd & Wardrop, 2001; Scholte et al., 2007; Sheppard et al., 2016), nine (Sourander, Helstela, Helenius, & Piha, 2000) to twelve (Bowes et al., 2013) percent. This variability in estimates is not surprising given the differences in not only time span but also participant age and research methods and measures. Nevertheless, these studies illustrate the considerable scope of the problem.

**Part 1: Explaining Persistent Victimization (Chapters 2–4)**

What makes someone vulnerable to become a victim of persistent victimization? In this dissertation, I consider victimization a phenomenon that results from both group (sociological) and individual (psychological) processes. Bullies are often motivated
by a quest for social status in the peer group (Sijtsema, Veenstra, Lindenberg, & Salmivalli, 2009). By harassing their peers, bullies want to show their power and strength and increase their dominant position (Volk, Cioppa, Earle, & Farrell, 2015). When peers dare to take a stance against bullying and defend victims, this reduces the social rewards (i.e., becoming popular) gained by bullying and consequently the bullies’ motivation to bully (Salmivalli, Garandeau, & Veenstra, 2012). Therefore, bullies pick their targets strategically. They bully peers who are undefended by others or who have a low status in the peer group. In turn, it is likely that those who are persistently victimized have characteristics that make them generally less attractive to be defended, because their behavior deviates from what is socially expected or promotes affective supportive bonds (Juvonen & Gross, 2005).

The few studies that focused on explaining persistent victimization support this assumption. They showed that higher levels of internalizing symptoms (Brendgen et al., 2016) predicted persistent (as compared to decreasing) victimization. In addition, persistent victims were shown to have more problems in their family context, which may influence this maladjustment (Bowes et al., 2013; Brendgen et al., 2016). Moving this field forward, I extend this knowledge with three studies that explain persistent victimization with a focus on individual characteristics and the role of the school and home context and societal norms.

First, it becomes increasingly relevant to understand risk factors for being persistently victimized in the context of effective universal anti-bullying programs at school. An increasing number of schools work with these programs, which focus on the entire peer group to counteract bullying (Evans, Fraser, & Cotter, 2014; Ttofi & Farrington, 2011). Whereas children in schools that work with such interventions are helped, there are consistently a few children that remain victimized despite the intervention (Fonagy et al., 2009; Salmivalli, Kärnä, & Poskiparta, 2011; Sapouna et al., 2010). However, explanations for individual differences in intervention responsiveness are rare. By gaining understanding about those children that are not helped by a universal anti-bullying intervention, I aimed to provide knowledge about how such programs can be made effective for more children.

Therefore, the first research question (reported in Chapter 2) was: “What explains individual differences in victimization trajectories during a universal anti-bullying intervention?” I examined theoretically meaningful predictors of persistent victimization, focusing on characteristics thought to impede children’s social interactions with peers and ability to recruit defenders. I specifically examined whether social standing, child characteristics, and parent-child relationships varied
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across children who were persistently victimized versus those who were helped (decreasingly victimized) or not victimized.

Second, it is unclear what processes explain how previously found risk factors related to the individual and to the family domain contribute to persistent victimization. Theories about bidirectional processes ("spillover") suggest that rejection in the school- and home environment affect each other through socially maladjusted behaviors (Parke & Ladd, 2016). Specifically, frequent negative affect at home (such as negative parent-child relationships) may manifest itself in maladjustment symptoms, that in turn predict rejection in the peer context, such as peer victimization. Vice versa, peer victimization could further amplify maladjustment that is acted out at home and parents may respond to this with further negative affect. As such, persistent peer victimization may develop when children enter a vicious cycle in which problems at home and with peers affect each other through children’s maladjustment.

Therefore, the second research question (reported in Chapter 3) was: “Can children get caught in a bidirectional pattern of negative parent-child relationships and peer victimization, and is this pattern mediated by maladjustment symptoms?” Addressing this question, I examined in Chapter 3 whether parental rejection and warmth and peer victimization would be related over time in a bidirectional fashion. I also examined whether internalizing symptoms (depressive symptoms and social anxiety), and externalizing symptoms (conduct problems and bullying perpetration), mediated these associations in both directions.

Last, individual characteristics that are approved of by societal structures, namely being a member of a sexual minority group, may make someone more vulnerable to being persistently victimized. Most studies among lesbian, gay and bisexual (LGB) adolescents have focused on episodic victimization and shown that LGB adolescents had a higher risk to be victimized. However, research has not considered disparities in developmental patterns of victimization. It is likely that LGB youth are at risk for persistent victimization because they differ from the majority norm across contexts and ages and might therefore have difficulty to find support and escape their vulnerable position. Moreover, the associations of developmental patterns of victimization of LGB versus heterosexual adolescents with subsequent internalizing problems are unknown. This is relevant because LGB adolescents might recover less quickly from the experience of victimization because they often have access to fewer social resources (Pearson & Wilkinson, 2013; Williams, Connolly, Pepler, & Craig, 2005).
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Therefore, the third research question (reported in Chapter 4) was: “Are lesbian, gay, and bisexual (LGB) adolescents at higher risk for persistent victimization of bullying compared to heterosexual adolescents, and how is this associated with internalizing symptom development across LGB and heterosexual adolescents?” To this end, I examined how developmental trajectories of victimization across adolescence were associated with LGB identity, and whether LGB identity predicted associations between victimization trajectories and development of depressive symptoms and anxiety.

Part 2: Assessment of (Persistent) Victimization (Chapter 5)

To comprehensively study victimization patterns and to evaluate interventions that prevent (persistent) victimization, it is crucial that researchers use a measurement instrument of victimization that accurately differentiates between victims of bullying and victims of the broader class of peer aggression. Bullying can be differentiated from other types of peer aggression by four key characteristics: frequency, intensity, power imbalance, and goal-directedness (Volk, Dane, & Marini, 2014). Without this differentiation, studies on developmental patterns or prevalence of victimization can be inaccurate. Moreover, tackling victimization of bullying requires different interventions than reducing general victimization of aggression (Eispeal, Low, Polanin, & Brown, 2013; Taub, 2002; Van Schoiack-Edstrom, Frey, & Beland, 2002) and it is thus important to evaluate whether the victims who are targeted with anti-bullying interventions are helped. However, currently used instruments do not explicitly assess these characteristics, and it is therefore unknown whether they differentiate victimization of bullying from victimization of other types of peer aggression (Jia & Mikami, 2018).

Addressing these concerns, my fourth research question (addressed in Chapter 5) was: “To what extent does an explicit assessment of each key characteristic of the bullying definition improve the differentiation between victims of bullying and victims of other types of peer aggression?” To this end, I examined whether the most widely used self-report measure, referring to the Olweus’ BVQ, captures experiences that match the definition of bullying. Moreover, I examined whether extending the BVQ with new questions that explicitly assessed the characteristics of the definition helped to better differentiate victimization of bullying from victimization of general aggression. Thus, I tested whether these victim groups differ in emotional, relational, and social status adjustment correlates that are conceptually more strongly related to victimization of bullying than to victimization of general aggression.
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Part 3: Prevention of Persistent Victimization (Chapters 6-7)

My last aim was to understand what helps victims to escape their situation. Although it is beyond the scope of this dissertation to provide effective tailored interventions for all persistent victims, with two studies I aim to contribute several pieces to the puzzle that can ultimately lead to development of those interventions. First, I focused on modifiable factors that affect the bidirectional associations between victimization and emotional maladjustment (Reijntjes, Kamphuis, Prinzie, & Telch, 2010), and thus break a potentially vicious cycle. One possible factor concerns adolescents’ implicit theories about the malleability of human social or moral characteristics. Implicit theories are belief systems that frame adolescents’ interpretations of events in their social worlds, especially stressful events (Dweck et al., 1988; Molden & Dweck, 2006). There is some empirical evidence that implicit theories can affect associations between victimization and depressive symptoms (Yeager et al., 2014; Yeager, Trzesniewski, & Dweck, 2013). Adolescents who hold an entity theory of personality – the idea that people’s traits are fixed (Yeager, Trzesniewski, Tirri, Nokelainen, & Dweck, 2011) are more likely to see victimization as done by and to people who cannot change. This appraisal can lead adolescents to worry about their victimization or exclusion enduring perpetually. However, adolescents who hold an incremental theory of personality believe more that people have the capacity for change and may think that victimization is done by and to people who can change over time. As such, youth with an entity theory were shown to be more affected by victimization in terms of depressive symptoms than their peers with an incremental theory.

However, previous studies that focused on effects of implicit theories on victimization correlates have not separated within- from between-context victimization. This is relevant because implicit theories have greatest effects in situations in which individuals experience ego threat (Burnette, O’Boyle, VanEpps, Pollack, & Finkel, 2012), and this threat perception likely depends on whether victimized adolescents’ peers also experience victimization, or whether they are the only one being victimized (Huitsing, Veenstra, Sainio, & Salmivalli, 2012; Schacter & Juvonen, 2016). To address this role of context-level victimization, my fifth research question (addressed in Chapter 6) was: “Can adolescents’ implicit theories affect associations between individual victimization and depressive symptoms, and does this depend on the average prevalence of victimization in their school?”

In Chapter 7 I focused on tools that help teachers to prevent persistent victimization. Teachers can play a role in preventing persistent victimization by noticing the victims in an early stage and respond with actions that are tailored to the specific situation and to influential peers in the group (Cunningham et al., 2019; Saarento, Boulton, &
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Salmivalli, 2015). However, teachers do often not recognize all victims (Campbell, Whiteford, & Hooijer, 2019; Haataja, Sainio, Turtonen, & Salmivalli, 2015; Oldenburg, Bosman, & Veenstra, 2016) and do not intervene structurally (Ellis & Shute, 2007; van der Ploeg, Steglich, & Veenstra, 2016), even if they work with an effective anti-bullying program. I proposed that teachers can further improve their recognition of, and tailored responses to, victimization with the systematic use of network diagnostics: easily interpretable statistics of the social structure of the relationships in classrooms, based on students’ answers to a questionnaire (Gest, Osgood, Feinberg, Bierman, & Moody, 2011). These diagnostics can be used to not only recognize victims or at-risk students earlier, but also to design interventions that are tailored to the specific situation and to relevant students in the peer group (Valente, 2012).

Therefore, my sixth research question (addressed in Chapter 7) was: “How can network diagnostics help teachers to recognize and tackle victimization more systematically?” To this end, I explained why network diagnostics could help school professionals, such as teachers, to recognize and tackle bullying. Second, I proposed how these network diagnostics can be handled: how can teachers interpret the information and translate it into tailored actions? My aim was to raise awareness of the potential value of the systematic use of network information to aid the daily practice of tackling bullying, and the need for empirical research on their usefulness in improving teachers’ responses to bullying and in preventing persistent victimization.

Overview of Data and Analytical Methods
In this dissertation I used different datasets and analytical techniques, and where possible a multi-informant method with reports from children (all studies), classmates (Chapter 2, 5), and parents (Chapter 3).

Datasets
The data in this dissertation stem from four datasets (see Table 1.1), span a wide age range (7-22 years old) and include youth from both the Netherlands and the USA. The datasets used in Part 1 about explaining persistent victimization were two five-wave studies that provided information about the development of persistent victimization over time: two years in the KiVa-NL study among children, and about ten years in the TRAILS study among adolescents and their parents. For Part 2 of the dissertation, I collected data about the measurement of victimization with a set of questions I developed, and included information from 1,738 children. The data used in Part 3 to look at the role of implicit theories is a national probability sample of more than 6,000 adolescents from the USA. In addition, the last chapter about network
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diagnostics includes a proposal on how data can be made practically available for
education professionals.

**Analytical techniques**

In this dissertation I used different analytical techniques, three of which were
relatively new and rarely applied, and helped to gain more comprehensive insights.
In Chapters 2 and 4 I used Latent Cluster Growth Analysis (LCGA), in which I added
the modern three-step approach in Chapter 4 with not only weighted predictors
but also outcomes (BCH approach). Second, I used the repeated measures Latent
Class Approach (LCA) to demonstrate the sensitivity of the results, an approach that
provides additional information about the (non-) linear development and groups in
the data. In Chapter 3, I used a relatively new form of Cross-Lagged Panel Modeling
(CLPM), namely the Random Intercepts-CLPM. This enabled me to check for variation
between people and thereby look as much as possible at within-person development,
in order to discover a vicious cycle. In Chapter 6, I used a multilevel approach to
test random-intercept and random-slope mixed effects models and therefore could
examine whether the role of implicit theories differed across school contexts. These
four advanced techniques enabled me to provide relevant nuances in the models and
interpretations.
**Tables**

<table>
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<th>Research question</th>
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| **Explanation** Chapter 2  
What explains individual differences in victimization trajectories during a group-based anti-bullying intervention? | KIva waves 1-5        | Children (age 7-12) in schools that participated in the KiVa intervention (n = 6,142) and in the control sample (n = 2,980), separately | Latent Cluster Growth Analysis (LCGA), Multinomial regression analysis |
| Chapter 3  
Can children get caught in a reciprocal pattern of problems in parent-child relationships, individual maladjustment, and peer relationships? | KIva waves 1-5        | Pooled sample (n = 9,770) of children (age 7-12) in KiVa intervention and control schools | Random Intercept Cross Lagged Panel Modeling (RI–CLPM): indirect effects analysis |
| Chapter 4  
Are lesbian, gay, and bisexual (LGB) adolescents at higher risk for persistent victimization of bullying compared to heterosexual adolescents, and how is this associated with internalizing symptom development across LGB and heterosexual adolescents? | TRAILS waves 1-5      | N = 151 LGB and N = 1,275 heterosexual adolescents (age 11-22) and one of their parents | Three-step LCGA with BCH approach: Repeated Measures (RM)–LCGA |
| **Assessment** Chapter 5  
Do self-report assessments need to better discriminate victimization of bullying from victimization of general peer aggression, and is this possible by adding explicit questions about the key characteristics of the bullying definition? | Extra questionnaire (for current study) in KiVa NL wave 11 | N = 1,738 children (age 7-12) in schools that participated in the KiVa intervention, including 138 systematic victims | Descriptive and regression analysis |
| **Prevention** Chapter 6  
Can adolescents’ implicit theories affect associations between individual victimization and depressive symptoms, and does this depend on the average prevalence of victimization in their school? | PATHS+ wave 1         | N = 6,237 ninth grade adolescents in 25 schools across the U.S. | Random-intercept and random-slope mixed effects models |
| Chapter 7  
How can network diagnostics help teachers to systematically recognize and tackle victimization? | --                    | --                                                                     | --                                                        |
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