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Poly-victimisation in Polish adolescents
a study of risk and resilience

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POLY-VICTIMISATION IN POLISH ADOLESCENTS: A STUDY

OF RISK AND RESILIENCE

by

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Abstract

Youth who face exposure to multiple, different types of victimisations have been labeled 'poly-victims'. This thesis aimed to evaluate factors associated with poly-victimisation risk and resilience in Polish adolescents. The first study employed a cross-sectional, multi-informant survey to examine poly-victimisation prevalence and risk factors within an ecological framework. Participants were 454 adolescents aged 13-19 years from an urban-region of Poland. A high proportion (35.6%) were categorised as poly-victims ($\geq$ 6 different past-year victimisations). Risks from individual, relationship, family and community levels were found to increase the odds of poly-victimisation, highlighting the need to adopt a holistic approach to prevention. The second study (using the same sample as Study 1) aimed to explore coping as a source of resilience in poly-victims, using a self-report cross-sectional survey. Results revealed greater use of problem-solving coping moderated the negative impact of poly-victimisation on emotional well-being, and may foster resilience. To develop an understanding of the casual relationships between previously studied variables, Study 3 adopted a longitudinal design. 207 participants repeated surveys from Studies 1 and 2, approximately one-year later. Using cross-lagged analysis, it was found T1 risks positively predicted poly-victimisation at T2, after controlling for prior victimisation. Moreover, a significant moderating effect of problem-solving coping was found between T1 poly-victimisation and T2 emotional well-being, when controlling for prior well-being. Disruptive and withdrawn behaviour, and negative affect were shown to have reciprocal associations with poly-victimisation. Finally, Study 4 aimed to test the victim schema model to explore mechanisms underlying poly-victimisation. Using a quasi-experimental design, socio-emotional processing and poly-victimisation was evaluated in 73 Polish adolescents, aged 12-16 years. Poly-victims displayed significantly greater hostile

attribution bias, a stronger implicit association with the victim role, poorer access to adaptive emotion regulation strategies and selected more anti-social responses, compared to non-victims. Findings provide partial support for the victim schema model as a potential theoretical basis for the development and perpetuation of poly-victimisation. Collectively, the findings of this thesis have important implications regarding poly-victimisation risk assessment, prevention and resilience training.

List of publications and conferences

Publications

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1   CHAPTER 1: POLY-VICTIMISATION: AN INTRODUCTION

1.1   Overview

The purpose of this chapter is to introduce the topic of poly-victimisation. To provide context, a general introduction to the subject of child victimisation is given first, along with an outline of the different types of victimisations typically experienced during childhood. The next section will define poly-victimisation and its measurement, and then discuss prevalence and developmental trends. Finally, this chapter will synthesise the key theoretical perspectives of childhood victimisation, suggesting how these theories may also be applicable to poly-victimisation.

1.2   Context

Decades of research into victimisation during childhood has established that children are susceptible to violence, abuse and crime in their homes, schools and communities (Finkelhor & Dziuba-Leatherman, 1993). Child victimisation is a complex and widespread problem, that has been shown to have severe and long-lasting effects, which can endure into adulthood. These effects include a variety of psychiatric diagnoses, including depression, anxiety disorders and posttraumatic stress disorder (PTSD), and other mental health problems (Arseneault et al., 2006; Fowler, Tompsett, Braciszewski, Jacques-Tiura, & Baltes, 2009; Margolin & Gordis, 2000; Rigby, 2000; Springer, Sheridan, Kuo, & Carnes, 2007), substance abuse and delinquent behaviour (Dembo, Williams, Wothke, Schmeidler, & Brown, 1992; Fergusson, Horwood, & Lynskey, 1996; Kilpatrick et al., 2000), suicidal thoughts (Fergusson, Boden, & Horwood, 2008; Silverman, Reinherz, & Giaconia, 1996), social problems (Schwartz, McFadyen–Ketchum, Dodge, Pettit, & Bates, 1998; Ziv, Leibovich, & Shechtman, 2013), aggression (Buka, Stichick, Birdthistle, & Earls,

2001; Camodeca & Goossens, 2005) and poor academic functioning (Schwartz, Gorman, Nakamoto, & Toblin, 2005; Thijs & Verkuyten, 2008).

1.3 *Defining child victimisation*

The varying terminology associated with child victimisation makes establishing a definition harder and highlights the complexity of victimisation during childhood. For example, key terms such as *child abuse and neglect*, *child maltreatment*, *exposure to violence*, fail to provide a comprehensive and accurate description of the many acts that can be committed against children, which led Finkelhor (2008) to suggest the term *child victimisation* be used instead.

Finkelhor (2013, p.76) defined childhood interpersonal victimisation as "harms that occur to children because of other human actors behaving in ways that violate social norms". As such interpersonal victimisation is distinct from other sources of trauma, such as natural disasters or illness, as it involves issues of malice, betrayal, injustice and morality. Finkelhor (2008) proposes that childhood victimisations can be split into three categories: (i) conventional crimes e.g., robbery, assault, rape; (ii) acts that violate a child's welfare e.g., abuse and neglect, exploitation of child labour; and (iii) acts that would be considered crimes if committed by adults against adults, but in childhood are not usually considered a concern, e.g., sibling or peer assault, corporal punishment. These categories may not, however, always be distinct, and there may be substantial overlap between them.

The childhood victimisation literature has focused on a number of different victimisation types within these three categories, such as child abuse and neglect (Gilbert et al., 2009; Hussey, Chang, & Kotch, 2006; Norman et al., 2012; Radford et al., 2011; Stith et al., 2009), sexual victimisation (Ackard & Neumark-Sztainer, 2003; J. E. Barnes, Noll, Putnam, & Trickett, 2009; Finkelhor, 1994; Sartor et al.,

2013), peer victimisation or bullying (Perry, Hodges, & Egan, 2001; Schwartz, McFadyen–Ketchum, et al., 1998; Storch & Ledley, 2005; Wójcik & Kozak, 2015), and community violence (N. G. Guerra, Huesmann, & Spindler, 2013; Luthar & Goldstein, 2004; Rosario, Salzinger, Feldman, & Ng-Mak, 2003; Schwartz & Proctor, 2000). The main forms of different childhood victimisations are defined below.

1.3.1 *Conventional crime*

Conventional crime involves acts which would commonly be considered criminal when perpetrated by an adult against an adult, such as theft and assault (Finkelhor, 2008).

1.3.2 *Bullying / peer victimisation*

Bullying or peer victimisation is defined as being exposed to negative actions on the part of other children. These actions are carried out intentionally and repeatedly over time. Bullying also involves an imbalance of power, whereby the victim has difficulty defending themselves against their harassers (Olweus, 1991). Bullying can take direct forms, such as physical and verbal abuse, or indirect forms, such as peer group exclusion and spreading rumours.

1.3.3 *Maltreatment by caregivers*

Maltreatment involves any act or omission by a parent or other caregiver which results in harm, potential for harm, or the threat of harm to a child (Gilbert et al., 2009). Maltreatment includes physical abuse, sexual abuse, emotional abuse, neglect and family abduction or custodial interference (Finkelhor, Ormrod, Turner, & Hamby, 2005b).

1.3.4   Sexual victimisation

Sexual victimisation is defined as "sexual contact that occurs between children and much older persons … as a result of force, threat, deceit, while unconscious, or through exploitation of an authority relationship" (Finkelhor & Hotaling, 1984, p.31). This definition has been expanded to also include sexual harassment by peers, such as unwanted sexual touching or sexual name calling (Attar-Schwartz, 2009). Sexual victimisation covers two main forms: contact sexual abuse which involves all forms of unwanted touching, including rape; and non-contact sexual abuse which refers to sexual exposure or solicitation to engage in sexual activity (Wyatt & Peters, 1986).

1.3.5   Dating violence/ intimate partner violence

Dating violence is the occurrence of threatening behaviour or physical, sexual or psychological abuse in the context of a dating relationship (Wolitzky-Taylor et al., 2008).

1.3.6   Community violence

Exposure to community violence has been defined as "frequent and continual exposure to the use of guns, knives, and drugs, and random violence" (Osofsky, 1995p.782). This includes being a direct victim of violence in the community and witnessing community violence.

1.3.7   Witnessing/ indirect

Indirect victimisation involves witnessing acts of violence and victimisation happening to others, e.g., strangers in the community or a parent/sibling in the home.

1.3.8 Severity and Frequency

Finkelhor (2013) also proposes that child victimisations can be further categorised by their severity and frequency. Pandemic victimisations occur to a majority or near majority of children, e.g., assault by siblings or peers. Acute victimisations are less frequent and occur to a minority of children, and generally are of greater severity, e.g., physical abuse and neglect. Finally, extraordinary victimisations occur to only a very small number of children and are more serious and traumatising, e.g., murder, abduction by a nonfamily member and exposure to war and conflict. Typically, extraordinary and acute victimisations gain much more research focus. However, due to their high frequency and the impact they can have on a child's daily life, Finkelhor (2013) suggests pandemic victimisations could potentially be more damaging and require greater attention. Children also appear to be more worried about such victimisations, with three times as many reporting feeling concerned about a peer assault than sexual abuse (Finkelhor & Dziuba-Leatherman, 1995).

1.4 Prevalence

1.4.1 Challenges establishing the scale of the problem

There is no single source for statistics on child victimisation. Prevalence estimates from different studies can vary widely depending on the source of information. Whilst gathering information from official sources does ensure that professional judgement is involved in assessing whether a victimisation occurred (Finkelhor, 2013), data from these sources will likely have lower estimates than data based on self-report. Research shows that over three-quarters of youth fail to report victimisations to the police (Vynckier, 2012). Additionally, the National Crime Victimisation Survey (NCVS), conducted annually by the U.S. Bureau of the

Census, suggests that rates of conventional crime victimisation in children are at least three to four times greater than rates known to police (Finkelhor & Ormrod, 2001). Furthermore, only the most severe incidences are investigated by child protections services. Self-report studies, however, may reveal victimisations that would not be reported to the police or fall outside of the remit of child protection services. Other discrepancies in the prevalence of victimisation may arise from differences in the definition and scope of research studies.

1.4.2   Developmental etiology

At different ages children also appear to be vulnerable to different types of victimisations, and therefore prevalence rates can vary according to sample age range. As younger children are more dependent on family and caregivers and spend more time in the home, they are more likely to experience victimisations perpetrated by family members and less so by strangers. As children approach adolescence their social activities expand and they are exposed to an increasingly larger network of individuals, spend more time unsupervised and also acquire more valuable possessions, making them more likely to be victimised by strangers (Finkelhor, Ormrod, & Turner, 2009b). Incidences reported to the police confirm this pattern, showing that intrafamily victimisations are highest for younger victims, and decline sharply after the age of 12. Whereas, victimisation by strangers and acquaintances remains low throughout childhood and increases during adolescence (Finkelhor & Ormrod, 1999).

1.4.3   Why is victimisation during childhood so common?

Despite the difficulty establishing accurate statistics regarding the prevalence of child victimisation, children are believed to be the most victimised segment of the population (Baum, 2005; Finkelhor, 2011). This is due to the presence of certain

vulnerabilities unique to childhood. For example, children often lack the physical and social capability to fend off threats, due to their smaller size, have poor self-control and lack of conflict resolution skills (Finkelhor & Asdigian, 1996). Furthermore, as well as being exposed to victimisations that adults can also experience, children are subjected to a unique set of victimisations specific to their dependency status, e.g., physical neglect and sibling assault (Finkelhor & Dziuba-Leatherman, 1993). Children are also less able to choose where and with whom they spend their time, nor are they able to remove themselves from environments where they may be experiencing victimisations (Finkelhor & Dziuba-Leatherman, 1993). For example, if a child is subjected to victimisation in the home they are not able to leave, if they live in a violent community they cannot choose to move, and if they face peer victimisation in school they cannot easily change or leave school. In addition, particularly during adolescence, young people are more likely to spend time unsupervised and engage in delinquency. Such factors can then make them more vulnerable to victimisation (Miethe & Meier, 1994).

1.5   *Poly-victimisation*

The field of childhood victimisation explores a range of different victimisations, as described in Section 1.3. It, therefore, seems likely that there could be considerable overlap in these experiences. Much child victimisation research has however ignored any potential overlap by only investigating one kind of victimisation, e.g., peer victimisation, sexual victimisation etc. Consequently, each of these fields has developed their own knowledge base, models and approaches to intervention. This has meant a range of prevention programmes have been devised that each target narrow victim populations, but may fail to address broad victimisation exposure (Finkelhor, Ormrod, et al., 2005b).

This fragmented approach to child victimisation has also faced criticism for failing to obtain complete victimisation histories and to identify children who are at greatest risk (Turner, Finkelhor, & Ormrod, 2010). Additionally, research on singular types of victimisations limits an understanding of the cumulative impact of experiencing multiple forms and may result in misleading conclusions. Negative outcomes, which studies have attributed to the specific type of victimisation they were assessing, may actually be caused by the cumulative effect of multiple victimisations (Saunders, 2003). Neglecting to control for the experience of additional victimisations means conclusions cannot be drawn about the unique effect of any particular type of victimisation. Thus the impact of an individual type can be overestimated.

As a result of these criticisms there has been a call for a move away from research which focuses on a single type of exposure (Hamby & Grych, 2013), and more recently research has begun to analyse the interconnections between different kinds of victimisations. Significant overlap has been demonstrated across all major victimisation categories, including physical assault, sexual victimisation, maltreatment, crime, and witnessing violence (Turner et al., 2010). Research examining multiple forms of victimisation has shown that those who experience one form are more likely to suffer from other, additional kinds (Cyr et al., 2013; Finkelhor, Ormrod, & Turner, 2007a; Pereda, Guilera, & Abad, 2014; Turner et al., 2010). Generally, exposure to one kind of victimisation has been associated with a doubling or tripling of the risk for any other type (Finkelhor, Ormrod, Turner, & Holt, 2009a). For example, having a physical assault in the past year increased the odds of experiencing child maltreatment by four times in a large sample of 4,549 children (Finkelhor, Turner, Ormrod, & Hamby, 2009a).

These children, who are the target of multiple sources of victimisations, from multiple perpetrators, have been labelled poly-victims. Poly-victimised children may be subject to physical and emotional abuse at home by caregivers, bullying and harassment in school by peers, and experience or witness violence in their communities by strangers. Furthermore, once children become poly-victims their risk for further victimisations remains elevated and some are chronically targeted year after year (Finkelhor, Ormrod, & Turner, 2007c; Perry et al., 2001). For such children victimisation is "more of a condition than an event" (Finkelhor, Ormrod, & Turner, 2007b, p.9), i.e., is a much more stable and on-going process, rather than limited to one time period.

Findings from the poly-victimisation literature have supported the earlier criticisms of research exploring singular kinds of victimisations by suggesting that such research may overestimate the effects of individual victimisations. Finkelhor et al. (2007c) found that when controlling for additional types of victimisation, the predictive power of singular victimisations are eliminated or greatly reduced. For example, when controlling for poly-victimisation, sexual victimisation alone did not significantly contribute to psychological symptomology. Similarly, all victimisation categories showed substantially diminished correlations with emotional and social functioning once poly-victimisation was taken into account (Lätsch, Nett, & Hümbelin, 2017). Therefore, the presumed influence of individual victimisations may instead be caused by multiple victimisation experiences.

Furthermore, poly-victimisation research has shown that multiple experiences are a more important predictor of trauma symptoms than the presence of any individual type. Children who experienced a singular victimisation incident, even it was a severe type, displayed significantly less trauma symptomology than poly-victimised youth (Finkelhor et al., 2007b). This suggests that a single

victimisation by itself, even a serious one, rarely has a large traumatic influence. Rather, when a child displays trauma symptomology it may be important to look beyond the proximal victimisation experience and consider whether the child has a longer history of victimisation that is also contributing to the distress (Finkelhor, Ormrod, Turner, & Hamby, 2005a).

1.5.1 Conceptualising poly-victimisation

Poly-victimisation is measured using the Juvenile Victimisation Questionnaire (JVQ) (Hamby, Finkelhor, Ormrod, & Turner, 2004). The JVQ was designed to be a more comprehensive instrument than has been typically used in prior victimisation research, covering a wide range of victimisations that may occur during childhood, including non-violent victimisations and events that would not typically be viewed as crimes. The questionnaire asks about victimisations in five broad domains: conventional crime, child maltreatment, peer and sibling victimisation, sexual victimisation, and witnessing/indirect victimisation.

Poly-victimisation was first conceptualised by counting separate victimisation incidents of different types over the past year, termed the Separate Incident Version (SIV). Thus, a robbery and an assault occurring in the same incident would not be counted as two separate victimisations. Finkelhor, Ormrod, et al. (2005a) then proposed a measure based on a simple count of JVQ items with a "yes" response, referred to as the Screener Sum Version (SSV). In this case, a robbery and assault in the same incident would be counted as two separate victimisations. This method of assessing poly-victimisation is less time consuming, as it does not require follow-up questions to determine whether victimisations took place in separate incidences. It has been found to do as well or better than the SIV in predicting trauma symptom scores (Finkelhor, Ormrod, et al., 2005a). Finkelhor, Ormrod, et al. (2005a) acknowledge that "while a count of the number of different

victimisations does appear to be a powerful predictor of trauma symptoms, such a measure of poly-victimisation might nonetheless be criticised for treating victimisations too homogeneously" (p.1303). That is, it may be presumed that more severe victimisations, or experiencing victimisations across multiple life domains, would be more traumatising. Finkelhor, Ormrod, et al. (2005a) tested this assumption by examining whether victimisation characteristics and types explained additional variance in trauma symptoms beyond poly-victimisation. It was found that few types or characteristics added anything to a broad explanation of symptomatology above and beyond the simple count of victimisations. Given the added conceptual and methodological complexity required the authors did not recommend weighting victimisations based on type or characteristics.

When assessing past-year victimisations, Finkelhor, Ormrod, et al. (2005a) recommend using the number of victimisations above the mean as the threshold for poly-victimisation. For example, in a U.S. sample of 2,030 children aged 2-17 years the mean number of past year victimisations was 3.0 and so, when using the SIV, a threshold of four and above victimisations was used to classify poly-victimisation (Finkelhor, Ormrod, et al., 2005a). However, when administering the SSV, Finkelhor, Ormrod, et al. (2005) noted the threshold needed to increase in order to avoid inflating the amount of the sample considered poly-victims. Therefore, with a mean of 3.0 past year victimisations, a poly-victimisation threshold of five or greater victimisations was used.

When assessing for lifetime victimisation exposure, the 10% most victimised portion of the sample are classified as poly-victims (Finkelhor, Ormrod, & Turner, 2009a). In a U.S. national sample of 1,467 children aged 2–17, this 10% threshold was equivalent to scores of nine or more different victimisations types for the

youngest children aged 3–6, 10 or more for children ages 7–10, 12 or more for youth aged 11–14 and 15 or more for the youth aged 15–18 years.

There is, however, a lack of consistency in the field regarding the cut-off point to define poly-victimisation, and accordingly the total number of different victimisations required to be classified as a poly-victim has varied from study to study. For example, Finkelhor, Turner, Hamby, and Ormrod (2011) used the point after which trauma symptoms significantly rise to classify poly-victimisation. This lack of a definitive conceptualisation of poly-victimisation poses challenges when comparing prevalence rates between different studies.

1.5.2 *Prevalence of poly-victimisation*

Despite the differences in methods used to assess poly-victimisation, criteria used to define it and the sample age-range, research has consistently indicated that the majority of child victims experience more than one type of victimisation, and that multiple victimisation is the norm in most samples. For example, when investigating lifetime exposure, 66% of a U.S. sample of 4,053 2-17 year olds experienced more than one type of victimisation, 30% experienced five or more types and 10% were categorised as poly-victims, experiencing 11 or more different forms in their lifetime (Turner et al., 2010). Finkelhor et al. (2007a) found in a large U.S. sample of 2,030 2-17 year olds, 71% of the sample had experienced at least one form of victimisation during the past year, and of these 69% had experienced at least one additional form. 22% were classified as poly-victims, determined as those reporting four or more different victimisations. However, rates of past year poly-victimisation have been found to vary significantly from 9% in a Canadian sample (Cyr et al., 2013) to 31.7% in a sample of Spanish adolescents (Soler, Paretilla, Kirchner, & Forns, 2012). These variances are likely due to differences in methods

used to assess poly-victimisation, criteria used to define it, and differences in the culture and age-range of the sample (Pereda et al., 2014).

1.5.3 Developmental trends

The nature, frequency and impact of poly-victimisation can vary across different stages of development. Finkelhor, Ormrod, and Turner (2009b) found that victimisation levels are high throughout childhood (2-17 year olds), broadly increasing with age, with the mean number of past year victimisations at 1.7 for 2-5 year olds and 3.4 for 14-17 year olds. Victimisations of younger children, however, may be underestimated with incidences less likely to be formally reported as they may be viewed as minor or be handled by parents (Finkelhor & Ormrod, 1999).

Finkelhor, Ormrod, and Turner (2009b) studied the timing of the onset of poly-victimisation, finding two spikes in onset associated with starting elementary school at age 7, and moving onto high school at age 15. At these periods of transition, children may be entering a new social and physical environment, without previous established friendship networks and social status, and are exposed to a larger and more diverse range of new individuals (Finkelhor, Ormrod, & Turner, 2009b). Consequently, children may encounter greater conflict as they are more vulnerable to being bullied in school, exposed to more unfamiliar environments and spend more time without adult supervision. Victimisation within the home may also increase at these transition periods "if parents start to use physical and psychological coercion to get children to succeed in school or maintain compliance and authority now that children have new independence and distance from parental supervision" (Finkelhor, Ormrod, & Turner, 2009b, p.325).

1.6   Theoretical framework

The majority of theories and models surrounding victimisation have been proposed in relation to individual forms or categories of victimisation, with a lack of theories specifically formulated to account for cumulative experiences. Yet, the mechanisms that create vulnerability for one form of victimisation are likely to apply across multiple contexts and thereby these theories and models can be drawn upon to provide an understanding of how poly-victimisation can occur (Hamby & Grych, 2013). However, when attempting to account for exposure to a broad range of victimisations there is a need to acknowledge that specific processes involved may vary depending on the individual victim, the different categories of victimisation and the environmental context. For example, there are likely to be differences between the causes of a one-off stranger perpetrated robbery in the street and repeated harassment by peers at school. It therefore seems unlikely that one model or theory of victimisation can be universally applied to all victim experiences. Accordingly, the field of poly-victimisation tends to draw on several theories in an effort to account for how poly-victimisation arises. These theories differ in the extent to which they focus on causal, situational or interpersonal factors, along with their focus on simply identifying the factors involved or attempting to explain how these factors bring about poly-victimisation.

1.6.1   Ecological-transactional model

The social-ecological model proposed by Bronfenbrenner (1977), and later developed by Cicchetti and Lynch (1993), offers a framework for organising a wide range of factors associated with victimisation arranged by their proximity to the individual. The macrosystem is the most distal to the child and relates to cultural values and beliefs that foster violence within families and communities. The

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exosystem concerns the community and relationship factors that impact the child's environment. The microsystem is the most proximal to the child and relates to the immediate context in which victimisation takes place. This includes family factors, such as parenting styles and family conflict. At the ontogenic level, factors concern the individual characteristics of the child, including attachment to caregiver and behavioural characteristics.

The ecological approach assumes victimisation cannot be understood without taking into account the context in which victimisation occurs, as well as the individual victim and the complex interaction between these factors (Hong & Espelage, 2012). The model posits that influences operating at different ecological levels interact to create conditions of victimisation vulnerability (Lynch & Cicchetti, 1998). Thereby, experiences in one context will impact upon functioning in another context. For example, when applying the ecological framework to community violence exposure it was found that community factors at the most distal level can directly influence family and peer relations that, in turn, can shape a child's individual characteristics (Salzinger, Feldman, Stockhammer, & Hood, 2002).

Ecological frameworks are useful for organising and understanding a holistic range of factors associated with poly-victimisation, however, they do not focus on establishing casual pathways, nor offer an explanation as to how victimisation may occur. There is therefore a need to draw on further theories in order to explain how identified risks bring about poly-victimisation vulnerability.

1.6.2 *Pathways to poly-victimisation*

Drawing on elements of the social-ecological framework, Finkelhor, Ormrod, Turner, et al. (2009) devised a conceptual model for the pathways to poly-victimisation. This is the only model in the field specifically conceived for poly-victimisation. After examining those who became poly-victims during a one-year

period, the authors conjectured that several pathways are involved in the onset of poly-victimisation. Different pathways likely interact with each other, with each pathway being of greater or lesser importance depending on the individual poly-victim (Finkelhor, Ormrod, Turner, et al., 2009).

In the first pathway, families characterised by violence and conflict can lead to poly-victimisation. Victimisation within the home and witnessing violence can result in the development of victim schemas. These schemas may cause children to behave in a manner that makes them more vulnerable to victimisation by interfering with the cognitive processes that underlie effective conflict resolution strategies. This behaviour can also communicate vulnerability to others, thus inviting aggressive behaviour (Perry et al., 2001). In this way, victimisations due to living in a dangerous family can make children vulnerable to further victimisations in other contexts, such as at school and in the community. Furthermore, the impact of intrafamily violence can result in emotional dysregulation, which can affect a child's ability to form positive relationships outside of the home and ultimately lead to peer rejection and victimisation (Schwartz, Dodge, Pettit, & Bates, 2000; Shields & Cicchetti, 2001).

Secondly, having a chaotic, multi-problem family environment, characterised by factors such as poor supervision and displacement, may expose children to more potential perpetrators and contexts where victimisation is possible. For example, children from single-parent families have been shown to be at a higher risk of victimisation (Lauritsen, 2003). This is thought to be because they are exposed to additional caregivers (e.g., partners of parents) and therefore have contact with more individuals who have the potential to abuse or harm them. Moreover, problematic family relationships often lead to insecure attachments, which has been associated with greater victimisation both in and outside the home (Perry et al., 2001).

A third pathway to poly-victimisation can develop from residing in dangerous environments, where crime is high and social cohesion and community supervision is lacking (Lauritsen, 2003). This can put children at high risk at of community violence. Dangerous environments may additionally result in poor family management and other familial difficulties, due to the strain of living in a more deprived area, which could increase victimisation in the home (Coulton, Korbin, & Su, 1999). Moreover, schools will be populated by peers from this community, who may have a lowered tolerance to violence associated with living in a dangerous community, increasing incidences of peer victimisation (Finkelhor, Ormrod, Turner, et al., 2009).

Characteristics of the child themselves can be a further pathway to poly-victimisation. Behavioural or emotional problems may influence a child's temperament and have a negative impact on how they are perceived by others (Bernstein & Watson, 1997). Consequently, this can make children more likely to become a target for victimisation and mean they are less likely to have a strong social support network to act as a deterrent against victimisation (Hodges & Perry, 1999). Behavioural or emotional problems can furthermore reduce a child's capacity to anticipate dangerous situations or protect themselves from dangerous people (Shields, Cicchetti, & Ryan, 1994).

The majority of poly-victims identified primarily with one of these pathways, yet a third of poly-victims could not be grouped into any of the four clusters (Finkelhor, Ormrod, Turner, et al., 2009). Consequently, the vulnerabilities and characteristics leading to poly-victimisation may vary, despite some levels of overlap, and there is a need for further risks and mechanisms to be explored (Finkelhor, Ormrod, Turner, et al., 2009).

1.6.3 *Lifestyle/routine activities theory*

The similar approaches of routine activities (Cohen & Felson, 1979; Miethe & Meier, 1994) and lifestyle exposure theories (Hindelang, Gottfredson, & Garofalo, 1978) focus on situational causes of victimisation. These theories propose that the likelihood of an individual being victimised depends on exposure to perpetrators, proximity to high crime areas, their attractiveness as a target and the absence of guardianship (Miethe & Meier, 1994). That is, those who encounter more risky people and areas, and therefore spend more time in dangerous contexts, are at increased victimisation risk. Similarly, those who possess valuable and accessible goods, and who have characteristics which make them physically or socially vulnerable (e.g., small physical size, ethnic or religious minority), are considered to be at heightened risk. When applied to child victimisation, this theory views young people as engaging in risky activities such as staying out late without appropriate guardianship, abusing substances and involvement in delinquency (Jensen & Brownfield, 1986).

1.6.3.1 *Critique of the lifestyle/routine activities approach.*

Finkelhor and Asdigian (1996) have, however, criticised the lifestyle/routine activities approach and argue that these theories are only suitable to explain the occurrence of criminal victimisations perpetrated by strangers, and not the wider range of victimisations that youth are exposed to. Many victimisations that occur during childhood are perpetrated by those known to the victim, including family members (Finkelhor & Dziuba-Leatherman, 1995). Yet the lifestyle/routine activities approach theorises that it is time spent unsupervised and away from caregivers that exposes children to greater victimisation risk. This theory cannot, therefore,

adequately account for victimisations such as child abuse and neglect, where spending time away from family members may actually reduce victimisation risk.

Finkelhor and Asdigian (1996) therefore proposed extending these theories by expanding the definition of target attractiveness. In routine activities theory, target attractiveness typically refers to the possession of valuable material objects. However, Finkelhor and Asdigian assert that this definition is not broad enough, and that there are additional environmental factors that can create risk which are unrelated to routine activities (e.g., behavioural characteristics of the victim). Accordingly, Finkelhor and Asdigian (1996) suggested that factors which are not explained by lifestyle or routine activities theories create vulnerability because they "have some congruence with the needs, motives, or reactivities of offenders" (p.6). That is, certain qualities attract offenders and so the presence of these qualities in victims make them more likely to be targeted.

Finkelhor and Asdigian (1996) proposed that these characteristics, labelled 'target congruence', can increase victimisation risk in three ways. Firstly, through 'target vulnerability' which refers to characteristics of the victim that reduce their capacity to protect themselves or deter perpetrators. These characteristics include small physical size, emotional reactivity, aggressive or withdrawn traits, or psychological problems. Secondly, 'target gratifiability' relates to victim characteristics which appeal to an offender, e.g., having valuable possessions or being female. Finally, 'target antagonism' refers to victim characteristics that elicit anger, jealously or destructive impulses from the perpetrator. Such characteristics include belonging to a particular ethnic or religious group, being homosexual, or factors that increase the parental burden such as having a disability or being highly disruptive. In a test of this model Finkelhor and Asdigian (1996) found that factors representing target congruence made an independent contribution to the prediction of

three separate kinds of youth victimisation, over and above variables associated with the traditional routine activities model.

Although the revised lifestyle/ routine activities framework goes beyond the ecological model by explaining why identified risks create vulnerability, it does not offer an explanation as to how victims develop certain characteristics which make them more vulnerable to perpetrators.

1.6.4   *Social information processing model*

Crick and Dodge (1994) developed the Social Information Processing (SIP) model to explain children's social adjustment. Largely, this model has been used to understand aggressive interactions, however it can also be applied more generally to interpersonal victimisation. SIP mechanisms may influence victimisation risk as deficits in information processing lead to maladaptive behaviour in social interactions, which can make the individual more attractive to perpetrators. According to the model, when processing a social cue several mental steps are taken in order to enact an appropriate response.

In a review of 64 empirical studies on SIP mechanisms and victimisation, van Reemst, Fischer, and Zwirs (2014) concluded that victims show impairments at multiple stages of the SIP. At step 1 (encoding), victims have been found to display greater attention towards negative cues, such as threat related words and angry faces, compared to non-victims. This was found among various types of victimisation, such as child abuse (Gibb, Schofield, & Coles, 2009), sexual trauma (Fleurkens, Rinck, & van Minnen, 2011) and robbery (Elsesser, Sartory, & Tackenberg, 2005). At step 2 (interpretations of cues), victims showed more hostile attributions (Pornari & Wood, 2010) and a higher external locus of control i.e., viewed situations as less under their own control (Christiansen & Evans, 2005; Fredstrom, Adams, & Gilman, 2011). Furthermore, victims displayed more negative evaluations of themselves and others

(Bowling, Beehr, Bennett, & Watson, 2010). At step 3 (clarification of goals), victims were found to have more revenge goals (Camodeca & Goossens, 2005; Reid-Quiñones et al., 2011) and fewer goals concerning developing relationships (Rudolph, 2010). At step 5 (response decision), victims were shown to make more aggressive responses (Barnett, Barlett, Livengood, Murphy, & Brewton, 2010; Berlin, Appleyard, & Dodge, 2011) or more avoidant responses that lack assertiveness (Garner & Lemerise, 2007; Yeater & Viken, 2010).

The SIP model has, however, faced criticism for neglecting the role of emotional processes in social interactions. Crick and Dodge (1994) acknowledge that emotion is an important component of SIP and that the SIP model does not express the role of emotions adequately. Lemerise and Arsenio (2000) highlight that the intensity of emotions and a child's regulatory capacities can influence aspects of SIP. For example, children who lack the skills to regulate negative emotions may become too overwhelmed and self-focused to consider the specific context of the social interaction. They, therefore, rely on a limited set of responses, making them more likely to choose avoidant or hostile goals (Eisenberg, Fabes, Nyman, Bernzweig, & Pinuelas, 1994; Saarni, 1999). In sum, emotional processes are likely to also influence the behavioural characteristics which put children at a greater risk of victimisation.

1.6.5 Victim schema model

To address these limitations, the Victim Schema Model (VSM) (Rosen, Milich, & Harris, 2009) was developed to integrate processes of socio-cognitive and emotional processing into a single model. The VSM incorporates features of Baldwin's (1992) relational schema theory, Crick and Dodge's (1994) SIP model, Perry et al., (2001)'s proposal of the victim schema, and the role of emotion regulation. The VSM was conceived to explain the mechanisms underlying chronic

peer victimisation, however it is likely the same mechanisms operate to create more general victimisation vulnerability (Hamby & Grych, 2013). The model proposes an easily accessible victim schema informs and guides children's socio-cognitive and socio-emotional processing in ways that can increase the risk of being victimised. Such processes are assumed to operate automatically and outside of conscious awareness, and therefore victims may react maladaptively in social interactions before they can consciously consider the alternatives. As such, children can repeatedly display the characteristics which make them vulnerable to victimisation, and so this model could account for poly-victimisation.

The model proposes that children who experience victimisation will develop a readily accessible victim schema. Schemas include knowledge, perceptions and expectations of the self and of others; generalisations based on previous experiences; individual motivations; and affective reactions (Baldwin, 1992). At the first step, the model proposes that children with more easily accessible victim schemas will be hyper-vigilant for threatening cues and, concurrently, are more likely to interpret ambiguous social behaviour as hostile and threatening. This perception of threat then further activates the child's victim schema, leading to an implicit self-association with the victim role and an expectation of victimisation. This expectation is then proposed to elicit a state of negative emotional arousal that may inhibit the ability to process cues from the current social environment, and will lead victimised children to instead engage in preemptive, emotional processing. From this children will form a response with the aim of either avoiding threat (leading to submissive behaviour) or eliminating threat (leading to aggressive behaviour). In turn, these maladaptive responses may result in individuals being perceived as an easy target and contribute to their risk of victimisation (Maszk, Eisenberg, & Guthrie, 1999; Schwartz, Dodge, & Coie, 1993). Rosen et al., (2009) claim that by these mechanisms "a self-fulfilling

prophecy essentially results, whereby the child interprets [social interactions] as threatening, expects to be victimised, responds in a manner consistent with victimisation, and is subsequently victimised as a result" (p.83).

1.6.6 Conclusion

The reviewed theories have potential to advance the understanding of poly-victimisation and the design of prevention programmes. The social-ecological model can provide a useful framework to explore and organise holistic contributions to poly-victimisation. The revised lifestyle/routine activities approach can then be utilised to help interpret why certain risks create poly-victimisation vulnerability. The VSM can then further expand the understanding of underlying mechanisms that play a role in the development of social and emotional risk factors. This thesis will therefore draw upon the strengths of these theories to develop ideas and enhance the understanding of poly-victimisation.

2 CHAPTER 2: POLY-VICTIMISATION: CULTURE, RISK AND RESILIENCE

2.1 Overview

The purpose of this chapter is to explore the existing literature on poly-victimisation, with a focus on cultural variations, risk factors, outcomes and resilience. This chapter begins by outlining emerging differences in poly-victimisation prevalence between countries and what is known about victimisation in Poland. The chapter goes on to provide a critical review of the existing literature regarding poly-victimisation risk, using the framework of the social-ecological model to structure findings. Research on the impact of poly-victimisation is then examined and evaluated, along with factors that can foster resilience following victimisation. In reviewing prior literature, gaps in the current knowledge and areas for further research are identified, and used to inform the aims of this thesis.

2.2 Prevalence of poly-victimisation by country

The vast majority of poly-victimisation research has been conducted in the U.S. and Western Europe. However, community sample surveys from different countries, classifying poly-victimisation based on the JVQ, reveal prevalence rates that allow for cross-cultural comparisons. Among studies using the SIV of the JVQ to assess past-year poly-victimisation, prevalence rates vary between 9.5% for China (age range 15–17 years, $N = 18,341$; Chan, 2013), 11% for Canada (age range 15–17 years, $N = 783$; Cyr et al., 2013(Cyr et al., 2013)), 20.5% for Spain (age range 15–17 years; $N = 556$; Pereda et al., 2014) and 22% for the U.S. (age range 2–17 years; $N = 2,030$; Finkelhor, Ormrod, et al., 2005a). Studies based on the SSV of the JVQ reveal slightly higher prevalence rates of 16.9% for China (age range 12–18 years; N

= 3,155; Dong, Cao, Cheng, Cui, & Li, 2013), 20% for the U.S. (age range 2–17 years; *N* = 2,030; Finkelhor, Ormrod, et al., 2005a), 22% for Switzerland (age range 14–17 years, *N* = 6,749, Lätsch et al., 2017), 31.7% for Spain (age range 14–18 years; *N* = 722; Soler et al., 2012) and 36% for Chile (age range 12-17 years; *N* = 706; Pinto-Cortez, Pereda, & Lister, 2017).

Further cultures have also been investigated, however different forms of poly-victimisation measurement or assessment have been used making them more difficult to place within the context of other research. These include studies conducted in Finland (Ellonen & Salmi, 2011), Vietnam (Le, Holton, Nguyen, Wolfe, & Fisher, 2015), South Africa (Kaminer, du Plessis, Hardy, & Benjamin, 2013) and Pakistan (Aziz & Dawood, 2015), with rates of poly-victims varying from 9% in Finland to over 50% in South Africa. In addition, in a Russian study exploring retrospective childhood victimisations in 743 university students, the researchers established three levels of poly-victimisation: "low" poly-victimisation (5-7 types of victimisation) = 24.66%, "high" poly-victimisation (8-14 types) = 45.45%, and "extreme" poly-victimisation (15+ types of victimisation) = 10.88% (Bogolyubova, Skochilov, & Smykalo, 2015).

The above research confirms that rates of poly-victimisation can vary substantially between different countries and, consequently, there is a need to establish the prevalence of poly-victimisation in unstudied cultures, in order to raise awareness and propose more effective means of prevention and intervention.

2.2.1   *Victimisation in Poland*

2.2.1.1   *Prevalence*

One country where poly-victimisation has yet to be investigated is Poland. The limited amount of childhood victimisation research in Poland remains focused on individual forms of violence, with a lack of attention toward assessing a wider

range of victimisations and cumulative experiences. Evidence, however, indicates that victimisation is elevated in Eastern European cultures (Bogolyubova et al., 2015; Craig et al., 2009; Currie et al., 2012; Doroszewicz & Forbes, 2008; Gilbert et al., 2009).

Peer victimisation research has suggested that bullying in Polish secondary schools is above average compared to other European nations (Currie et al., 2012), with one nationwide study in Poland finding 63% had been subjected to some form of school violence (Komendant-Brodowska, Giza-Poleszczuk, & Baczko-Dombi, 2011). A cross-national study specifically investigating cyberbullying revealed 24.4% of Polish adolescents had experienced this victimisation in the past year. This compares to the highest prevalence rates in Romania and Greece (37.3% and 26.8% respectively) and lowest in Iceland and Spain (13.5% and 13.3% respectively) (Tsitsika et al., 2015). Moreover, the results of a study on bullying trends across 33 countries and regions revealed an upward trend in bullying incidents in Polish secondary schools (Chester et al., 2015).

The prevalence of childhood maltreatment in Poland was assessed in a national sample of 11-17 year olds (N = 1,005) (Wlodarczyk & Makaruk, 2013). 22% of respondents had experienced psychological abuse by adults and 21% physical abuse during their lifetime. Neglect was experienced much less frequently, by 3% of the sample. Furthermore, when comparing with other cultures, yearly prevalence of child maltreatment was found to be 10–11% in the U.S., 4–9% in Western European countries, and up to 33% in Eastern European countries (Gilbert et al., 2009).

Prevalence rates of sexual victimisation of young people in Poland have been reported as 28.4% for males and 34.4% for females (Krahé et al., 2015). Comparatively, the lowest prevalence was 10.1% for males and 12.4% for females in

Belgium, and the highest 49.0% for males in Cyrus and 52.2% for females in Netherlands (Krahé et al., 2015). Victimisation in Poland was therefore above the European average found in this study. Furthermore, rates of dating violence have been found to be as high 57% for female university students and 38.6% for men in Poland (Doroszewicz & Forbes, 2008).

Finally, with regard to indirect victimisation, 56.3% of Polish adolescents reported witnessing a situation where someone was beaten, robbed or threatened by another person (Hornowska, 2004).

2.2.1.2 Culture

Aspects of the Polish culture have been drawn upon to account for the apparent elevated victimisation rates. One of the most dramatic and important geopolitical developments since World War II has been the establishment of Western-style democracies and market economies in the formerly socialist countries of Eastern Europe. Political and economic changes radically altered these formerly socialist countries, challenged traditional community roles and family practices, and produced widespread economic problems. Such changes are known to be associated with violence (Krahé, 2001). Consequently, Doroszewicz and Forbes (2008) concluded that it seems rational that these transitional societies would experience increased levels of violence, including violence directed towards young people.

Brunell (2005) also highlighted the slow and inadequate pace of violence and victimisation prevention and protection services in Poland, in the post-communist era. Social service provisions have been criticised for being designed to serve a wide variety of social needs, with a lack of programmes specifically for child victimisation (Brunell, 2005). As such, victims are unlikely to identify social services as avenues of assistance, and the quality of services available may be questionable (Brunell, 2005). Furthermore, large disparities exist between such

provisions in urban and rural areas of Poland (Brunell, 2005). The lack of services to prevent and address childhood victimisations therefore likely means incidences will be higher than countries with more developed child services infrastructure.

2.3   *Risk factors for poly-victimisation*

Along with the developing research base exploring the prevalence of poly-victimisation, a further prominent focus in the poly-victimisation field centres on exploring risk factors. The vulnerabilities that expose a child to a greater risk for one type of victimisation also likely increase the risks for many other types (Romano, Bell, & Billette, 2011). If common risk factors can be identified, prevention resources could be more easily directed towards individuals displaying these risks, with the hope of reducing the chance of poly-victimisation and the negative mental health outcomes associated with it. Additionally, rather than having a range of prevention programmes, which target separate types of victimisation, addressing factors that give rise to, or protect against, poly-victimisation could have more powerful and long-lasting effects.

Multiply and poly-victimised youth show consistently higher risk profiles than non- and less victimised children (Nurius, Russell, Herting, Hooven, & Thompson, 2009; Turner, Shattuck, Finkelhor, & Hamby, 2016). In large scale study among Finnish children ($N = 13,459$), of those who displayed none of the investigated individual and family level risk factors 58% were non-victims, 41% had one to four victimisations, and 1% were poly-victims. Conversely, of those who displayed all 9 of the risk factors studied, none were in the non-victim group, 38% had one to four victimisations, and 62% were poly-victims (Ellonen & Salmi, 2011). This indicates risk factors of victimisation accumulate among poly-victims, who present a unique victimisation profile.

A number of studies, which have adopted an ecological framework to study risks of poly-victimisation, have shown that correlates are spread across community, relationships, family and individual domains (Ellonen & Salmi, 2011; Nurius et al., 2009; Romano et al., 2011). Further risk factors identified in prior literature can also be categorised into different social-ecological levels. Identified risk factors are summarised in Table 1 and discussed further below.

Table 1

Summary of Risk Factors for Poly-victimisation

Risk Factors
Individual Factors

- Gender

- Age

- Spend free time alone

- Spend free time in public spaces

- Involvement with out-of-school activities

- Delinquent behaviour

- Risky behaviour

- Alcohol and drug use

- Smoking

- Exposure to pornography

- Emotional stress

- Depression

- Anxiety

- Aggression

- Life stress

- Non-victimisation adversities

- Chronic disease or disability

	Family Factors
•	Single-parent families
•	Step-parent families
•	Older siblings
•	Parental alcohol and drug use
•	Parental unemployment
•	Parental conflict
•	Parental social control
	Relationship Factors
•	Quality of family relationships
•	Perception of family happiness
•	Parental rejection
•	Low social support
•	Friendship quality
	Community Factors
•	Larger communities
•	Rural communities
•	Proximity to crime and conflicts in community
•	Community disorder
•	Community mobility
•	Socioeconomic status
•	School type

2.3.1 *Individual*

When investigating gender differences, being male has been associated with increased poly-victimisation risk (Dong et al., 2013; Finkelhor et al., 2007b; Lila,

Herrero, & Gracia, 2008). It has been suggested that males are more likely to spend time in environments where victimisation may occur (Gómez, Johnson, Selva, & Sallis, 2004) and engage in more aggressive and delinquent behaviour, which can also place them at greater victimisation risk (Finkelhor, Ormrod, & Turner, 2009a). However, other studies have found that being female was associated poly-victimisation (Ellonen & Salmi, 2011) or failed to find gender differences (Lätsch et al., 2017; Romano, Bell, & Billette, 2011). Older age has also been associated with greater risk for poly-victimisation (Finkelhor et al., 2007a), whereas other studies have shown younger adolescents are at greater risk (Cyr et al., 2013; Dong et al., 2013). Evidence for gender and age as a risk factor is therefore mixed. These differences are likely to be a function of methodological variations, specifically regarding the age range studied and the types of victimisations explored.

How children spend their free time has also been identified as a risk factor, with those spending free time alone or in public places at greater risk of poly-victimisation (Ellonen & Salmi, 2011). Additionally, greater involvement in out of school activities has been associated with increased risk for multiple victimisation (Romano et al., 2011). These factors may place youth at greater risk as they are more likely to be vulnerable to victimisation when alone or unsupervised, and when exposed to new peers through engagement in extra curricular activities (Finkelhor & Asdigian, 1996). Greater involvement in delinquent and risky behaviour has also been linked with poly-victimisation (Ellonen & Salmi, 2011; Lila et al., 2008; Nurius et al., 2009; Turner et al., 2016), with alcohol and drug use, smoking, violent acts and exposure to pornography identified as specific risks (Dong et al., 2013; Ellonen & Salmi, 2011; Turner et al., 2016). Engagement in such behaviour can place children in more dangerous environments and in proximity to more potential perpetrators (Finkelhor & Asdigian, 1996). However, it has also been proposed that

these behaviours may be signs of attempting to cope with traumatic experiences (Dong et al., 2013). As existing evidence relies on cross-sectional data it cannot be certain whether delinquent behaviour is a risk factor for poly-victimisation, or a consequence of coping with prior victimisation.

With regard to mental health, emotional stress, indicated by depression, anxiety, hopelessness and anger, has been identified as risk factors for multiple victimisations (Nurius et al., 2009). Similarly, Dong et al. (2013) found greater depression and anxiety symptoms were associated with poly-victimisation. Aggressive tendencies have also been associated with multiple victimisation (Holt, Finkelhor, & Kantor, 2007). In line with the pathways to poly-victimisation model (Finkelhor, Ormrod, Turner, et al., 2009) emotional problems may influence a child's temperament and have a negative impact on how they are perceived by others. Consequently, this can make children more likely to become a target for victimisation and mean they are less likely to have a strong social support network to act as a deterrent against victimisation (Hodges & Perry, 1999). However, again, without robust longitudinal studies it cannot be determined whether such emotional and behavioural problems precede the onset of poly-victimisation or are consequences of it.

Non-victimisation trauma has also been linked to multiple and poly-victimisation risk, including suicide ideation and attempts (Nurius et al., 2009), greater childhood adversity, e.g., accidents, family break-up (Finkelhor, Turner, Ormrod, Hamby, & Kracke, 2009b; Romano et al., 2011), greater life stress (Nurius et al., 2009) and chronic disease or disability (Le et al., 2015). These experiences likely diminish a child's self-protection capacities and signify vulnerability which can attract perpetrators (Finkelhor & Asdigian, 1996).

2.3.2 *Family*

Family structure has been shown to act as a risk for poly-victimisation. Children from single-parent families are at greater risk (Aho, Gren-Landell, & Svedin, 2016; Lauritsen, 2003; Nurius et al., 2009; Turner, Finkelhor, & Ormrod, 2007). Overall risk for violence has been found to be approximately 50% higher for youth from single-parent families compared to youth from two-parent households (Lauritsen, 2003). It is thought that the social contexts associated with single-parent families create mechanisms for victimisation vulnerability (Lauritsen, 2003). For example, children may face more disruption and have less stability, i.e., they move homes and schools more frequently, which is associated with leaving support networks and contact with new, potentially dangerous, peers and environments (Turner et al., 2007). Single-parents also tend to have more demands on their time, meaning children may receive less supervision (Ram & Hou, 2003). Children from single-parent families also likely come into more contact with additional caregivers, who could be potential perpetrators (Lauritsen, 2003) and are more likely to reside in deprived areas, with higher levels of community violence (Margolin & Gordis, 2000). Moreover, single-parents generally have lower incomes than two-parent families, and evidence has shown that poly-victims are more likely come from families with greater financial strain (Ellonen & Salmi, 2011; Frías & Finkelhor, 2017). It is thought that economic difficulties can contribute to family stress and inconsistent and harsh parenting styles (McLoyd, 1990), making family victimisation more likely.

Step-families also pose a greater risk for poly-victimisation (Ellonen & Salmi, 2011; Le et al., 2015; Turner et al., 2007). The elevated level of risk seems to stem from greater family problems, parent-child conflict and a lesser commitment to the caretaking role on the part of the step-parent (Turner et al., 2007). Along with

conflict children may have with their step-parent, relationships with the biological parent can also be poorer in step-families (Dunn, Davies, O'Connor, & Sturgess, 2000). Step-parents and step-siblings may further become perpetrators of victimisation, with youth from step-families significantly more likely to experience victimisation at the hands of family members, compared to youth in single and two parent families (Turner et al., 2007). The presence of older siblings has also been shown to serve as a risk factor, as they could abuse younger siblings or expose them to riskier environments and delinquency (Finkelhor, Ormrod, & Turner, 2007).

Family problems, such as parental alcohol and drug abuse, unemployment and conflict, have also been linked with greater risk of multiple victimisations (Ellonen & Salmi, 2011; Stevens, Ruggiero, Kilpatrick, Resnick, & Saunders, 2005). For example, girls who reported a history of family alcohol problems had double the risk of multiple victimisation and boys had nearly four times the risk, compared to those without a history of parental alcohol problems (Stevens et al., 2005). Additionally, poor parental social control, measured by how often families dine together and whether parents know with whom their children spend free time, has been linked to greater poly-victimisation risk (Nurius et al., 2009).

Dysfunctional families may be more likely to direct aggression towards their children, increasing the risk of victimisation in the home (Stevens et al., 2005). Additionally, such problems may increase the likeliness that children are left unsupervised or unprotected, and therefore exposed to more dangerous contexts (Lauritsen, Laub, & Sampson, 1992). Such family adversity may also facilitate poly-victimisation risk through creating feelings of helplessness or anger in children, which may encourage children to spend time outside of the home where they may encounter victimisation (Finkelhor et al., 2007). Further, a negative family environment may reduce a child's capability to effectively cope with their

victimisation experiences (Bowes, Maughan, Caspi, Moffitt, & Arseneault, 2010) and also may impede the ability to process the associated trauma (Kliewer et al., 1998).

2.3.3   *Relationships*

The quality of family relationships and feelings of rejection from parents have been associated with multiple victimisations (Lila et al., 2008; Romano et al., 2011). Lacking family support has been identified as a further risk factor. 38.7% of poly-victims reported low family support, compared to 8.5% of non-victims (Turner et al., 2016). A low perception of family happiness has also been associated with poly-victimisation (Le et al., 2015). Poor relations with family may increase the possibly of victimisation in the home, and could also foster the development of feelings such as low self-worth, helplessness or anger in children and thereby make them more vulnerable to further extrafamilial victimisation (Romano et al., 2011). However, the direction of these relationships has not been ascertained. Children living in families in which relationships are poor might be more likely to be poly-victimised, or those who are victimised might be more likely to perceive family relationships as problematic.

In addition to poorer family relationships, multiply victimised youth report lower levels of peer social support (Nurius et al., 2009) and poorer friendship quality (Romano et al., 2011). This is in line with the peer victimisation literature which has consistently showed that children who lack social support and are rejected by peers, are more likely to experience peer victimisation (Hodges, Malone, & Perry, 1997; Saarento, Kärnä, Hodges, & Salmivalli, 2013). Lacking positive peer relations may be an indicator of poor social skills and behavioural problems which may attract victimisation (Rosen et al., 2009; Schwartz, Dodge, et al., 1998). It could also mean that children lack a support network to help stand up for them and deter perpetrators

(Hodges et al., 1997). There is also an indication that support from family and peers can promote self-esteem and increase an individual's perception that they cope effectively with victimisation (Ueno, 2005). A lack of support may therefore limit poly-victims capacity for resilience and leave them vulnerable to continued victimisation.

2.3.4 Community

Living in a large community increased the odds that children would be poly-victims in Sweden, and specifically that they would be exposed to both conventional crime and to witnessing victimisation (Aho et al., 2016). Urban life is thought to be more dangerous as children are exposed to more people, both adults and peers, with higher rates of criminality and with a greater anonymity in cities than in smaller communities. Proximity to crime and conflicts in the community have also been associated with poly-victimisation (Frías & Finkelhor, 2017). Conversely, in Vietnam, living in rural areas was found to act as a risk factor for poly-victimisation (Le et al., 2015). The authors suggested that while in urban areas, rapid development and globalisation brought about advancements in education and public awareness regarding the detrimental impacts of violence against children, this may not be the case in rural areas. It therefore appears that risks associated with urban and rural settings may be cultural specific.

Community disorder, characterised by rundown buildings, graffiti, public drinking, vandalism and crime, has been strongly associated with poly-victimisation. Only 7.0% of non-victims lived in a high community disorder neighbourhood, but nearly half of poly-victims (49.4%) did (Turner et al., 2016). The socioeconomic status of a community also appears to have an influence on violence exposure, although has not been specifically linked to poly-victimisation. Lauristen (2003) observed that the 20% of youth residing in the most disadvantaged communities

were found to be at greater risk of experiencing victimisation, however below this point socioeconomic status did not have a significant influence on victimisation. Neighbourhoods characterised by concentrated poverty and disorder are likely to be places where social control over behaviour is reduced, which tends to increase levels of violence in the community (Sampson & Lauritsen, 1994) and therefore risk for poly-victimisation.

Specific types of schools have been associated poly-victimisation. Public schools created greater risk for poly-victimisation compared to private schools (Le et al., 2015). The authors suggested that private schools may have a more nurturing environment, characterised by supportive staff. Teachers who model, teach and reinforce pro-social behaviour provide opportunities for children to develop important social competencies. Without this influence children may be more vulnerable to developing ineffective social skills that expose them to greater poly-victimisation risk (Biglan, Flay, Embry, & Sandler, 2012).

2.3.5 *Critique*

The vast majority of the above literature has used cross-sectional designs to show associations between risks and poly-victimisation, however there is a lack of longitudinal research exploring the direction of causality. It is possible, that some of the assumed risk factors are actually caused by prior poly-victimisation. Alternatively, there may be bi-directional relationships present. Longitudinal studies are therefore needed to confirm which factors precede increased poly-victimisation, and thereby which could be worthwhile targets of prevention programmes.

The reviewed literature draws upon a variety of theoretical perspectives, including the revised routine activities theory (Finkelhor & Asdigian, 1996) and the pathways to poly-victimisation model (Finkelhor, Ormrod, Turner, et al., 2009) (reviewed in Chapter 1, Section 1.6), to demonstrate why identified risk factors can

create poly-victimisation vulnerability. However, the current literature does not elucidate to why poly-victims develop characteristics which can put them at greater risk. There is a need to test theoretical models, such as the VSM (Rosen et al., 2009) (see Chapter 1, Section 1.6.5), to better understand the underlying mechanisms as to why risk factors develop in poly-victimised children, and how these factors create victimisation vulnerability. This knowledge can improve the design of intervention efforts to prevent and reduce risk, and accordingly, reduce poly-victimisation.

In addition, a longitudinal study found nearly a third of those experiencing poly-victimisation onset during the course of the study appeared to be low on all risk scales (Finkelhor, Ormrod, Turner, et al., 2009). This suggests that there are dimensions contributing to poly-victimisation risk that are yet to be explained. Further research is therefore needed to study the array of individual, relational and contextual factors that may be related to poly-victimisation.

2.4   *Outcomes of poly-victimisation*

Poly-victimisation has been shown to result in a range of detrimental outcomes. Moreover, poly-victimisation has been associated with greater negative effects compared to experiencing a single victimisation or repeated victimisations of the same type (Finkelhor et al., 2007c; Lätsch et al., 2017; Turner et al., 2010). Poly-victimised youth report greater trauma symptomology than less victimised or non-victimised peers (Finkelhor et al., 2007a; Radford, Corral, Bradley, & Fisher, 2013; Soler et al., 2012; Turner et al., 2010). In addition, this relationship has been explored longitudinally, providing an insight into the cause and effect relationship, with prior poly-victimisation shown to be highly predictive of subsequent trauma symptoms (Finkelhor et al., 2007b). Poly-victimisation has also been linked to further psychological problems, for example poly-victims were 5.8 times more likely

to be angry, 20.2 times more likely to be depressed, and 10.3 times more likely to be anxious, than other children. Additionally, these symptoms were shown to be predicted by prior poly-victimisation (Finkelhor et al., 2007c).

Research has also established a relationship between poly-victimisation and behavioural problems, including internalising and externalising symptoms (Ellonen & Salmi, 2011; Lätsch et al., 2017), hyperactivity or inattention (Schlack, Ravens-Sieberer, & Petermann, 2013), delinquent behaviour (Ford, Elhai, Connor, & Frueh, 2010), academic problems (Holt et al., 2007) and impaired social functioning (Ellonen & Salmi, 2011; Lätsch et al., 2017).

Finally, poly-victimisation has also been linked to reductions in social and personal resources. 1,186 youth aged 10-17 years were studied over a two-year period. Relative to youth with low levels of victimisation, those with high poly-victimisation at both time points reported significantly greater reductions in family social support, friend social support, self-esteem and mastery at time 2, after controlling for prior levels of resources (Turner, Shattuck, Finkelhor, & Hamby, 2015). Poly-victimisation has also been associated with lower self-liking (Soler et al., 2012). Collectively, these findings imply that not only do poly-victims experience poorer psychological and behavioural outcomes, but they face reduced social and personal resources which may diminish their ability to cope with their victimisation experiences and resulting outcomes.

2.4.1   *Why does poly-victimisation lead to worse outcomes?*

A number of different contributing factors have been cited to explain why poly-victimisation has been associated with greater negative effects. Poly-victims often experience more severe forms of victimisations in comparison with other victims. For example 55% of poly-victims experienced sexual victimisation, compared to 7.8% for other victimised children (Turner et al., 2010). Consequently,

poly-victims experiences may be more traumatic. Poly-victimised youth may also be particularly vulnerable to negative outcomes due to the cumulative impact of stress and trauma. Up until a certain point victims may be able to make use of effective coping mechanisms, however after multiple exposures potential for resiliency can be damaged (Turner et al., 2010). Furthermore, poly-victims face victimisation across a greater number of domains and by a greater number of perpetrators (Cyr et al., 2013). These youth therefore have less 'safe' environments available where they can be free from the threat of harm and where they can attempt to cope with, and recover from, their experiences (Turner et al., 2015).

These conditions also are likely to damage resources that can help to buffer the negative effects of victimisation and encourage resilience (Turner et al., 2010). For example, in the case of self-esteem, it seems probable that poly-victims who are victimised by multiple perpetrators and in multiple contexts are especially likely to believe they are unworthy and disliked by others. Poly-victims are also faced with greater evidence that victimisation is beyond their control, due to their frequent and multi-context experiences, and therefore are less likely to gain a sense of personal efficacy (Turner et al., 2015). Victimisation by multiple perpetrators and across many relationships also means poly-victims will have less individuals to build positive interpersonal relationships with, and thus less opportunities to practice effective social skills (Banyard, Hamby, & Turner, 2013). This can lead to isolation and produce further deficits in personal resources and the capacity for resilience (Soler et al., 2012; Turner et al., 2010).

2.4.2 Critique

The reliance on cross-sectional research limits the understanding of the poly-victimisation-symptomology relationship. Although the relationships between poly-victimisation, trauma and distress symptoms (Finkelhor et al., 2007b), and social and

personal resources (Turner et al., 2015) have been explored over time, all other findings are based on cross-sectional research. In order to design more effective interventions there is a need to understand the exact nature of the relationship between poly-victimisation and a variety of outcomes by undertaking further longitudinal research.

Furthermore, the poly-victimisation field has focused on the associations between poly-victimisation and clinical symptomology or other detrimental outcomes. Although this approach can contribute to an understanding of the effects of poly-victimisation, interventions based on these findings may be limited. Hamby, Roberts, Taylor, Hagler, and Kaczkowski (2017) caution this approach "does not reflect the way people think about their own lives. The vast majority of people want to thrive; they do not simply hope to be not dysfunctional" (p.14). There is therefore a need to examine positive indicators of psychological health and shift the focus towards maintaining well-being.

2.5   *Resilience*

Along with studying risk factors in an effort to prevent poly-victimisation, it is important to look simultaneously at protective factors to understand how victimised children can maintain healthy functioning in the face of adversity. The reviewed empirical evidence has demonstrated poly-victimisation is associated with poorer outcomes; however, some victimised children do not exhibit the negative consequences typically associated with such trauma (Bonanno, 2004). For example, studies have shown that 12–22% of maltreated children manifest better outcomes than expected given their experiences of abuse (Jaffee, Caspi, Moffitt, Polo-Tomás, & Taylor, 2007). Certain factors or mechanisms must be present that contribute to individual resilience and help to buffer the negative effects of victimisation. An

understanding of these mechanisms could be used to identify more effective methods to improve outcomes in poly-victimised children.

Resilience is defined as "a dynamic process wherein individuals display positive adaptation despite experiences of significant adversity or trauma" (Luthar & Cicchetti, 2000, p. 858). The term 'resilience' has been used to refer both to healthy functioning after exposure to trauma and to the capacities needed to adapt successfully to significant adversity (Luthar, Cicchetti, & Becker, 2000; Masten, 2011). Resilience in this thesis refers to factors that have the ability to promote better functioning in those experiencing victimisation.

Poly-victimisation research has focused less on these sources of resilience than on sources of risk. The sparse body of research studying resilience to poly-victimisation has shown that certain personal resources can have protective effects. Specifically, self-worth (Soler, Kirchner, Paretilla, & Forns, 2013), self-compassion (Játiva & Cerezo, 2014) and social support coping (C. Guerra, Ocaranza, & Weinberger, 2016) have been demonstrated to offer poly-victimisation resilience. A sense of self-worth was found to be a partial moderator of the relationship between poly-victimisation and internalising symptoms in a sample of 736 adolescents aged 14 to 18 years (Soler et al., 2013). That is, in poly-victimised adolescents, a higher sense of self-worth acts as a protective factor against internalising symptoms, whereas a lower sense of self-worth serves as a risk factor for greater internalising symptomology. In a sample composed of 109 adolescents aged 15 to 18 years, self-compassion partially mediated the relationship between poly-victimisation and psychological maladjustment. Therefore, poly-victimisation had less negative consequences for adolescents with high levels of self-compassion (Játiva & Cerezo, 2014).

2.5.1   Coping

When children experience a highly traumatic or stressful event, or live under conditions of chronic stress, coping responses may make the difference between successful or unsuccessful adaptation (Boxer & Sloan-Power, 2013). Lazarus and Folkman (1984) define coping as "constantly changing cognitive and behavioural efforts to manage specific external and/or internal demands that are appraised as taxing or exceeding the resources of the person" (p.141). A body of literature on coping and individual forms of victimisation (Cassidy & Taylor, 2001; Hampel, Manhal, & Hayer, 2008; Kliewer, Lepore, Oskin, & Johnson, 1998; Machmutow, Perren, Sticca, & Alsaker, 2012; Scarpa, Haden, & Hurley, 2006; Tolan, Guerra, & Montaini-Klovdahl, 1997) has indicated that particular coping strategies are a potential source of resilience, which can help to buffer the negative effects of victimisation. Conversely, selection of maladaptive coping responses have been demonstrated to exacerbate the negative effects of exposure to a singular victimisation type (Kochenderfer-Ladd & Skinner, 2002; Scarpa & Haden, 2006; Völlink, Bolman, Dehue, & Jacobs, 2013).

Two studies have investigated the effects of coping on building or reducing resilience in poly-victimised adolescents. C. Guerra, Ocaranza, et al. (2016) examined whether coping by searching for social support could act as a protective factor in the relationship between poly-victimisation and externalising symptomology. This sample comprised of a sample of 78 adolescents, aged between 12 and 18 years of age, cared for in child and adolescent protection public services in Chile. Results showed that poly-victimisation predicted externalising symptoms and that this relationship was moderated by the extent of searching for social support. Thus, by mobilising a support network and actively coping with victimisation the negative effects of poly-victimisation were reduced.

In another study, C. Guerra, Pereda, Guilera, and Abad (2016) examined the role of non-productive coping strategies (worry, wishful thinking, not coping, tension reduction, ignoring the problem, self-blame and keeping to oneself) in a sample of 114 adolescents, again drawn from a clinical sample. They found these strategies partially mediated the effect of poly-victimisation on internalising symptoms, so that poly-victimisation reduced the coping skills of adolescents, and resulted in greater symptoms of anxiety and depression (C. Guerra, Pereda, et al., 2016). The authors suggested that repeated exposure to victimisation can diminish a victim's ability to directly respond to the victimisation, and through learned helplessness they learn that there is no effective way of addressing the stressor (Seligman, 1975), resulting in greater use of non-productive coping methods. In turn, these coping strategies are related to greater internalising symptoms.

These studies, however, uses a cross-sectional design and therefore definite conclusions about the relationship between poly-victimisation, coping and symptoms cannot be reached. Further, the sample sizes were small and drawn from a clinical population. It is not, therefore, possible to generalise conclusions to community populations. Furthermore, a new instrument was used to measure and categorise poly-victimisation, which was based on therapist reports, rather than the JVQ which has become the standard measure used in poly-victimisation research. The use of this new measure may result in a less reliable assessment of poly-victimisation, and impact the extent to which findings can be compared with other poly-victimisation research.

Stress and transactional models of coping (e.g., Lazarus & Folkman, 1984; Roth & Cohen, 1986) underpin these findings, and explain why coping responses can either build or reduce resilience. Stress and transactional models of coping distinguish between two basic groups of strategies; those which involve direct

attempts to alter the stressor (problem-focused or approach strategies), and those that involve behavioural, cognitive, or emotional activities oriented away from the stressor in order to avoid it (emotion-focused or avoidance strategies). According to the stress and coping theory (Lazarus & Folkman, 1984) these distinct ways of coping can either have a positive or negative impact on an individual's functioning following stress or trauma exposure. In general, approach or problem-focused coping skills have been associated with protective or stress-buffering effects in the context of stress or trauma (Hampel et al., 2008; Yamasaki, Sakai, & Uchida, 2006). Whereas, avoidance or negative styles of coping can serve as a vulnerability factor, increasing the likelihood of poorer outcomes following stress (Seiffge-Krenke & Klessinger, 2000).

Approach strategies are assumed to be more beneficial as they allow appropriate action to be taken to prevent continued exposure to the threat and a resolution of the stressor (Fields & Prinz, 1997). In contrast, avoidance strategies are thought to be generally maladaptive as they can interfere with attempts to resolve the stressor and prevent an assimilation of trauma as individuals (Kliewer et al., 1998; Seiffge-Krenke & Klessinger, 2000). Avoidance strategies can also result in emotional numbness and avoidance behaviours, due to the conscious or unconscious attempt to avoid the stressor (Roth & Cohen, 1986).

2.5.2   Critique

There is a need to build on the scant amount of research investigating the role of coping in building or preventing resilience following poly-victimisation. Only limited coping strategies and outcomes have been explored in relation to poly-victimisation, restricting an understanding of which coping mechanisms could be targeted in interventions. In addition, the field has been criticised for a focus on deficits, to the exclusion of strength-based or competence-focused models (Grych,

Hamby, & Banyard, 2015; Hamby et al., 2017; Houston & Grych, 2015). Hamby et al. (2017) stress the need for an approach that emphasises healthy functioning, rather than the absence of pathology.

2.6   The current research

2.6.1   Gaps in the knowledge

The majority of poly-victimisation research has been conducted in Western cultures and subsequently there is a lack of knowledge regarding poly-victimisation, and mechanisms of risk and resilience, in other parts of the world. There is a need for further studies, in countries of different cultural backgrounds, to disentangle the influences of the various cultural dimensions that may underlie differences observed. Furthermore, without culture specific research to raise awareness of poly-victimisation, local child protection and victim services might fail to explore complete victimisation histories and a vulnerable sub-group of children may go over looked. In particular, a review of the literature has highlighted there is very limited research on poly-victimisation in Eastern Europe. Empirical evidence is therefore needed to understand poly-victimisation in this culture, and ensure local policy and services adequately cater for poly-victimised youth.

This thesis will address this, and make an original contribution to knowledge, by exploring poly-victimisation in Poland. This will add to prior research by revealing the prevalence and patterns of poly-victimisation in a previously unstudied culture, and can further contribute to the understanding of cultural variations in poly-victimisation.

Furthermore, there exists a lack of understanding concerning the pathways to poly-victimisation. Prior research has shown that risk factors can be spread across a young person's ecology, however, there are many risks that have been linked with

individual forms of victimisation that have not been empirically investigated in a poly-victimised sample. There is also an absence of research which attempts to explain the mechanisms that underlie identified risk factors, in order to provide a better understanding of how to intervene and reduce risk.

The current research will explore risk factors associated with poly-victimisation in Poland, across an adolescent's ecology. It will make a unique contribution to the field by examining risk factors that have yet to be explored in the poly-victimisation literature. Specifically, peer social preference and teacher reported disruptive and withdrawn traits. This thesis will also be the first to test a theoretical model of chronic peer victimisation (the VSM (Rosen et al., 2009)) in relation to poly-victimisation. This will make an original contribution to knowledge by revealing how poly-victimisation may arise, through the mechanisms of emotion regulation difficulties and socio-cognitive biases.

In addition, in the prior literature, there is a dearth of research investigating possible ways to promote resilience in poly-victimised youth. This is an important area for future research to focus upon, as prevention and intervention efforts will not be as effective if they only attempt to tackle the underlying risk factors leading to poly-victimisation and do not focus on building strengths. Consequently, there is a need to research ways of increasing resilience, and improving well-being, in order to maximize the effectiveness of interventions (Hamby, Smith, Mitchell, & Turner, 2016). Furthermore, the limited amount of prior studies exploring resilience in poly-victimised youth have focused on how sources of resilience may protect against reductions in negative symptomology, and have neglected to explore adaptive functioning. The absence of pathology does not necessary indicate victimised youth are resilient and functioning well (Grych, Hamby, & Banyard, 2015), and so there is

a need to explore whether protective factors can allow a resilient sub-section of poly-victimised youth to maintain well-being.

This thesis will expand existing knowledge on factors that can impact upon resilience in poly-victimised youth. It will be the first study to explore the influence of a range of different coping strategies on emotional well-being in poly-victimised adolescents, looking at both adaptive and maladaptive coping responses.

A review of the literature has also shown that the majority of previous research assessing factors of risk and resilience for poly-victimisation uses a cross-sectional design. Consequently, there is a lack of understanding regarding cause and effect. It may be that characteristics classed in prior research as risk factors precede poly-victimisation and create vulnerability for it; or alternatively, poly-victimisation onset may trigger these characteristics, meaning presumed risk factors may in fact be outcomes of poly-victimisation. There is therefore a need to address this gap in the knowledge and investigate the direction of the relationship between poly-victimisation, risk factors and outcomes. Similarly, the focus of most research on resilience has centred on the impact of victimisation in the short term, and less attention has been paid to identifying factors that promote resilience over time (Grych et al., 2015). It may therefore be rash to design intervention programmes based on the recommendations of cross-sectional research as it unknown whether the strengths they aim to promote have any lasting benefit.

Accordingly, by using a longitudinal design this research will build on prior cross-sectional studies to provide a greater understanding of causation between poly-victimisation, risks and outcomes. It will also make an original contribution to the field by exploring coping responses longitudinally for the first time.

Lastly, past studies have primarily relied on self-reports to explore poly-victimisation and its correlates, which could result in a biased perspective as children

and adolescents may not be able to give reliable information regarding aspects of their own behaviour, cognition, or social status. There is also a complete absence of research using experimental tasks to explore implicit processes.

This thesis will make use of methodologies that are novel in the poly-victimisation field. Specifically, by utilising a peer nomination task and experimental procedures, to measure implicit cognitive and emotional processes. Studying risk factors using multiple informants, along with experimental tasks, will offer unique and more reliable insights into poly-victimisation.

2.6.2 Aims

To address the identified gaps in the literature, the current body of research is comprised of four studies designed to advance the understanding of poly-victimisation in an Eastern European culture, explore how factors from multiple ecological levels can contribute to poly-victimisation risk and how coping styles can impact resilience in poly-victims. Specifically, the following aims underpin this research:

i) To investigate the prevalence of poly-victimisation in Polish adolescents *(Chapter 4)*.

ii) To explore poly-victimisation risk factors, applying an ecological framework and utilising self-reports, teacher reports and peer nominations *(Chapter 4)*.

iii) To explore underlying factors contributing to risk by undertaking a test of the VSM to understand how patterns of socio-cognitive and emotional processing may create poly-victimisation vulnerability, using self-report measures and experimental tasks *(Chapter 7)*.

iv) To study the relationship between poly-victimisation and emotional well-being, and the role of adaptive and maladaptive coping strategies in moderating this relationship, and fostering or impairing resilience *(Chapter 5)*.

v) To conduct a longitudinal follow-up one year later to understand more about the direction of causation between factors of risk and resilience, and explore patterns of poly-victimisation over time *(Chapter 6)*.

2.6.3   Implications

Outside of contributing original knowledge to the field of poly-victimisation, findings from this thesis could also have significant practical and policy implications, for reducing and preventing the negative consequences of poly-victimisation. A greater understanding of poly-victimisation in Eastern Europe would ensure local services and professionals are appropriately trained to assess for cumulative and chronic victimisation exposure. As well as knowing the risk factors of current or future poly-victimisation, which could allow at risk youth to be more easily identified.

Once identified, those most vulnerable can be referred to appropriate prevention programmes. Moreover, insights gained from this thesis, into factors that can be targeted to both decrease risk and encourage resilience, can be drawn upon to strengthen the effectiveness of intervention programmes. Findings from this research could also be used to help address the underlying factors leading to poly-victimisation, to improve intervention and prevention efforts further.

2.6.4   Structure of thesis

In Chapter 3, the methodology of this thesis will be outlined with reference to the individual study designs, measures and procedures. The subsequent chapters will move onto addressing the thesis aims and research questions. Chapter 4 (Study 1) uses a cross-sectional survey design to explore poly-victimisation prevalence and risks associated with poly-victimisation across individual, familial, relational and community contexts. Chapter 5 (Study 2) again uses a cross-sectional survey to

investigate the relationship between poly-victimisation and emotional well-being, and to examine resilience by exploring the moderating role of coping strategies on this relationship. Chapter 6 (Study 3) presents a longitudinal follow-up of Studies 1 and 2, focusing on patterns of poly-victimisation over time and the direction of causation between risks and poly-victimisation, and poly-victimisation, coping and emotional well-being. Chapter 7 (Study 4) then adopts a quasi-experimental design to explore socio-cognitive and emotional processing by examining differences between poly-victims and less victimised adolescents, in multiple stages of the VSM. These mechanisms will be discussed in relation to how they contribute to the development of individual level risks for poly-victimisation. Finally, Chapter 8 synthesises and discusses the findings of these four studies. Limitations of the thesis, implications and directions for future research are also discussed.

3   CHAPTER 3: METHODOLOGY

3.1   Overview

This chapter outlines the methodology used throughout the following four studies. The research designs and the rationale for selecting these are discussed. An overview of the ethical considerations that were taken into account throughout this research and consent procedures used are then given. Details of participants, measures and tasks, and an outline of study procedures are also provided.

3.2   Research design

This thesis adopts a mixture of quantitative approaches, using both cross-sectional and longitudinal survey research and a quasi-experimental design. Table 2 summaries the research methods used throughout this thesis.

Table *2*

Summary of Research Methods Employed

Study	Design	Data collection method
Study 1: Chapter 4	Cross-sectional	Survey
Study 2: Chapter 5	Cross-sectional	Survey
Study 3: Chapter 6	Longitudinal	Survey
Study 4: Chapter 7	Quasi-experimental	Computerised tasks and survey

Survey research was selected for the first three studies in this thesis due to the large number of variables to be explored, making this the most practical methodology. Further, previous studies that have examined poly-victimisation and risk or protective factors have used cross-sectional or longitudinal surveys (e.g., Ellonen & Salmi, 2011; Lätsch et al., 2017; Nurius et al., 2009; Turner et al., 2010), which further attests to the appropriateness of these methods for research of this

nature. Studies 1 and 2 adopted a cross-sectional design to explore relationships between a large number of variables, and compare the strength of associations between various variables. Building on these first studies, a longitudinal design was adopted in Study 3 to examine stability over time and explore the direction of causality between variables. This can provide a more robust understanding of these relationships and allow firmer conclusions to be drawn.

Previous poly-victimisation research has, to the best of our knowledge, exclusively used survey research. An experimental design was selected in Study 4 to study implicit process of emotional and social processing. This methodology was also selected to advance prior survey-based studies and make a unique contribution to the poly-victimisation literature. A quasi-experimental design was chosen as ethically and practically the independent variable in this study (victimisation) is not amenable to manipulation. The most practical way to study differences dependent upon level of victimisation is therefore to create groups based on victimisation exposure and examine differences between these pre-existing groups. Accordingly, data from quasi-experimental research is correlational, not causal and, as allocation to groups is not random, the internal validity is less strong than other forms of experimental designs.

3.3   *The research process*

Design of the studies of this thesis was undertaken independently by myself. Whilst planning studies 1-3 and reviewing the literature, I noted a prominent gap concerning the lack of poly-victimisation research in certain parts of the world. In order to ensure my thesis made as original contribution as possible I decided it would be valuable to explore poly-victimisation outside of the UK. I identified a particular absence of research in Eastern Europe, South American and South Asia.

After discussing with my supervisor, Professor Essau on where may be feasible to conduct this research, Poland was highlighted and I made contact with Dr Anna Bokszczanin, a faculty member of the Institute of Psychology at Opole University, Poland. This initial meeting took place after I had fully designed Studies 1-3 and had received RDB2 approval.

Dr Bokszczanin acknowledged the important need for poly-victimisation research in Poland and agreed to ascertain if any of her Masters level students were interesting in focusing their dissertation in this area. Dr Bokszczanin's role exclusively centered around supervising these students. In November 2014, I was introduced to two master's degree students from Opole Univeristy - Anita Tomasik and Paulina Mika. Study 4 was designed and ethics applied for in early 2016. The design of this study was done entirely independently and informed by my earlier findings and extensive review of the poly-victimisation field. In October 2016, Dr Bokszczanin put me in contact with another of her masters' students, Wojciech Karwot, who would focus on Study 4 for his dissertation.

All translations were completed by the team in Poland. I held Skype meetings at each stage of translation, so we could discuss discrepancies between the forward and back translated versions. In these meeting we also discussed any culturally inappropriate references and how they could be rephrased to be more appropriate for the Polish context. Final Polish translations were sent to me in word documents via email. I then put together a final questionnaire pack for Studies 1-3, with the order of measures counterbalanced. For Study 4, I programmed the two experimental tasks in Inquisit and the questionnaire in Qualtrics.

I planned the recruitment strategy and number of participants that would be needed for each study. The Polish master's students created a list of schools to contact for recruitment. I felt they were best placed to locate potential schools due to

their local knowledge, for example, some schools were too difficult to visit using public transport, and so were not contacted. I composed an initial recruitment email that was translated to Polish and sent to potential schools by the master's students. This was because it was felt it would be most appropriate to make initial contact in Polish. All replies expressing interest were discussed between myself and the master's students. I then drafted a response, which was translated to Polish. Once an initial relationship had been built over email, I made a follow-up call to an appropriate contact in each school in English and sent all study materials (in Polish), via email. This allowed me to field any more specific questions from schools, discuss important ethical issues and the practicalities of consent procedures and data collection. Once a school had confirmed they would participate Miss Tomasik, Miss Milka and Mr Karwot dealt with follow-up contact to arrange a specific time for data collection. This was so they could co-ordinate visits with their own timetable.

Pilot data collection and data collection for Studies 1-3 were conducted by Miss Tomasik and Miss Milka. Study 4 data collection was conducted by Mr Karwot. I did not travel to Poland to observe any data collection. I discussed this with Professor Essau and Dr Bokszczanin and it was felt that as the sessions would be conducted in Polish I would not be able to assist or benefit from observation. Instead, I kept in close contact with Miss Tomasik, Miss Milka and Mr Karwot via email throughout and held regular Skype meetings. This allowed me to give advice if any problems arose and keep track of the number of participants that had taken part.

Before data collection began, I put together a list of answers to any questions that I anticipated might come up from participants based on my past experiences of conducting survey research in schools. After each data collection session I asked the Polish team to report if there had been any additional questions so we could discuss their answer and how best to proceed in the future. I also checked in regularly

regarding their reflections on the data collection process. For example, was 40 minutes proving sufficient for participants to complete the survey? Was the classroom set-up to make sure participants were sat further enough apart to ensure privacy? Were there any challenging behaviours displayed from participants e.g., talking to each other during the session, looking bored or frustrated with the task? Were there any questions regarding not understanding particular words or questions? Were there any signs to indicate participants were feeling distressed? No significant issues were reported from the Polish team during data collection.

Completed questionnaires were collected by the team in Poland and then mailed over to myself at the University of Roehampton. I entered data from the questionnaires into SPSS and completed all analysis independently. At certain points my supervisors advised on the scope of the analysis and the appropriateness of methods, but all analysis was conducted, interpreted and reported by myself. I emailed the master SPSS data file, once I had completed data entry, to the team in Poland, who did analysis on separate research questions. Their analysis made up no part of the current thesis or publications, and was done exclusively for their own dissertations.

In conclusion, the only element of this thesis that was not undertaken independently was school recruitment and data collection. I did, however, play a lead role in recruitment and advised exactly how the data collection procedures should take place. Moreover, by holding regular meetings with those leading on data collection, I got an excellent insight into this process and any challenges. During my PhD, I also contributed to data collection on one of my supervisor's projects, and previously did extensive data collection in schools as a research assistant. I have, therefore, acquired significant hands-on experience of carrying out research in schools, and do not feel that failing to conduct data collection myself for the current

research had any significant negative implications for my learnings or development as an independent researcher.

3.4 Sampling

3.4.1 Studies 1 and 2

Participants were recruited via an opportunity sample. 48 schools across Opole, Greater Poland, Silesian, and Łódź provinces in Poland were contacted with information about the project via e-mail in November, 2014 (Appendix 2). The regions from which schools were recruited are urban environments with populations ranging from approximately 1 million to 4.5 million. According to data published by the Central Statistical Office of Poland (2015), the national average of those below the extreme poverty line (below the subsistence minimum) is 7.4%. Across the regions included in the study this rate ranged from 4.9% to 8.9%. Furthermore, unemployment rates ranged from 6.2% to 10.2%, in comparison to the national average of 9.8%. Crime rates in all four regions were slightly above the national average of 2,162 per 100,000, ranging from 2,171 to 2,989 per 100,000.

One week after e-mails were distributed a phone call was made to the school to discuss the project with the deputy head teacher (or another appropriate contact). Of the 48 schools contacted 22 agreed to participate in the initial study and to be contacted again regarding a follow-up study. Reasons schools gave for declining to take part in the research included concern about the sensitive nature of the subject matter, a lack of time within the school timetable to complete the study, and concern over the allotment of staff resources to the research.

Schools which had agreed to take part also raised concerns about the disruption to students and staff if large numbers of participants were recruited. It was therefore agreed by the research team that one class from each school would be

targeted to take part in order to minimise disruption to participating schools. Classes were selected based on instruction from schools as to which would be the most convenient for testing and which members of staff consented to be involved. This sampling method had the benefit of ensuring participants came from a wide range of locations and backgrounds, and were less likely to have many shared experiences as might be the case if participants were all recruited from a smaller number of neighbouring schools. Opportunity samples, however, are limited with regard to generalisation. For example, schools and participants more willing to participate may be from less deprived backgrounds and consequently this may skew the representation of victimisation.

3.4.2 Study 3

Recruitment for Study 3 involved an opportunity sample follow-up of participants from Studies 1 and 2. Five classes who participated in Study 1 had graduated from school and were unable to be contacted to take part in the follow-up study ($n = 95$). Additionally, a further four classes had moved onto a different school and were also unable to be contacted ($n = 61$). Therefore, there were 13 classes remaining, recruited from 13 different schools, who were contacted again in order to take part in Study 3. The final sample amounted to 45.6% of the sample from Studies 1 and 2. This high attrition rate was expected as 34.4% ($n = 156$) of the original sample could not be followed-up. Consequently, this rate primarily reflects practical barriers to retaining participants, as opposed to participant drop-out. Attrition analyses revealed there were no significant differences between demographic and study variables between responders and non-responders.

3.4.3 Study 4

Opportunity sampling was again used to recruit participants for Study 4. 12 schools were contacted to take part in the study, resulting in one school that agreed to partake. Three classes from three separate year groups were then selected on advise from the school and invited to participate.

3.5 Participants

3.5.1 Studies 1 and 2

The sample consisted of 454 adolescents (281 female and 173 male), between the ages of 13-19 years of age. The mean age of the sample was 16.56 years ($SD = 1.44$). 100% of participants reported their ethnicity as White Polish, reflecting the ethnic homogeneity of Poland. With regards to family structure, 79.5% of participants reported living with both biological or adoptive parents, 9.8% lived in a single-parent household, 9.5% with one biological/adoptive parent and one step-parent, and 1.2% lived with another caregiver. As an indicator of socio-economic status, parents' education level was recorded. 30.2 % of participants reported at least one caregiver completed higher education, 36.7% secondary general, 27.5% vocational, 3.2% lower secondary, and 2.4% were unsure.

3.5.2 Study 3

Participants were 207 adolescents (117 female and 90 male), who had participated in the prior studies. The mean age of the sample was 16.80 years ($SD = 1.49$), with participants ranging from 13-19 years of age. 100% of participants reported their ethnicity as White Polish. The majority (78.3%) of participants came from families with two biological or adoptive parents, 10.1% from a single parent family, 9.7% from a step-parent family, and 1.9% reported they resided with another

caregiver. 32.9% of the sample reported a caregiver had completed higher education, 34.8% secondary general, 25.1% vocational, 3.4% lower secondary, and 3.9% were not sure of their caregivers' education level.

3.5.3 Study 4

Participants were 73 adolescents (40 female and 33 male) between the ages of 12-16 years of age. The mean age of the sample was 14.77 years ($SD = 0.97$). 98.6% reported their ethnicity as White Polish and 1.4% ($n = 1$) identified as Kashubian, a West Slavic ethnic group. 64.4% of participants came from families headed by two biological or adoptive parents, 23.3% from a single parent family, 6.8% from a step-parent family, and 5.5% reported they resided with another caregiver. As regards to parental education level, 26% of the sample reported at least one of their caregivers had completed higher education, 29.2% secondary general, 35.6% vocational, 1.4% lower secondary, and 7.8% were unsure of their caregivers' education status.

3.6 Measures

All measures were translated from English to Polish via a forward–backward translation procedure. As proposed by Beaton, Bombardier, Guillemin, and Ferraz (2000) two bilingual translators, who were native Polish speakers and culturally aware, translated the scale from English to Polish. Forward translations were completed independently. Translators then sought consensus between the two versions, to create a single forward translation. Following this, two different translators completed a back translation from Polish to English. Back translation provides quality-control by confirming that the same meaning can be derived when the translation is adapted back into the source language (Wild et al., 2005). All translators then met to discuss and resolve any discrepancies.

Finally, the Polish translated versions were administered to a small sample (*N* = 5) from the target population. After completing the measures respondents were asked to share their commments after completing the questionnaire, their opinions about its language and comprehensibility, and any negative feelings that might have emerged. to comment on the comprehensibility of the survey and on any words or expressions they did not understand or found unacceptable. The respondents assessed the questionnaire as being generally clear but based on their comments, some minor linguistic changes were introduced. This pilot testing ensured that translated questions successfully captures the scientific intent of the question and, at the same time, made sense to respondents.

3.6.1 *Demographic questionnaire*

A 5-item demographic questionnaire was designed to collect information on gender, age, ethnicity, family structure and socioeconomic status, using parental education level as an indicator.

3.6.2 *Victimisation*

Past year victimisation experiences were assessed using the Juvenile Victimisation Questionnaire: 2nd Revision (JVQ-R2) Screener Sum Version (SSV) (Finkelhor, Hamby, Turner, & Ormrod, 2011). This measure assesses a broad range of childhood victimisation experiences. The JVQ was extensively reviewed and tested with victimisation specialists, focus groups of parents and children, and cognitive interviews with young children to determine the suitability of its language and content (Hamby et al., 2004). As a result, the JVQ has been determined appropriate for self-report by children aged 8 and over.

The original measure consists of 34 items covering different victimisations across five 'modules' of victimisation: conventional crime, child maltreatment by

caregiver, peer and sibling victimisation, sexual victimisation, and witnessing and indirect victimisation (Appendix 3). Acquired responses can be grouped in modules, or treated as separate items. In the SSV participants are asked to indicate "yes" or "no" as to whether they have experienced each type of victimisation. More comprehensive versions of the JVQ include follow-up questions for each screener item to gather additional information including perpetrator characteristics, whether injury resulted, and whether the event occurred in conjunction with another screener event.

In a nationally representative U.S. sample of 2,030 children aged 2-17 the JVQ showed moderate construct validity. All modules and most screener items showed significant moderate correlations with trauma symptoms ($r = -.02 - .31$), as measured by the Trauma Symptoms Checklist for Children (TSCC) (Briere, 1996). Adequate test-retest reliability over 3-4 weeks has also been shown ($k = .22 - 1.0$, mean $k = .63$). The overall $\alpha = .80$ for the SSV and α's for the various aggregates range from moderate to weak, and are for the most part a function of the number of component items. Conventional crime and physical assault with eight and 10 component items respectively, both have α's above .60. Modules such as child maltreatment and sexual assault with four or fewer items generally have low α's (Finkelhor, Hamby, Ormrod, & Turner, 2005). However, Finkelhor, Hamby, et al. (2005) claim that internal consistency is not truly relevant for measures which assess actual life events, and therefore suggest that the low α's for certain modules should not discourage their use.

3.6.2.1 Past year vs. lifetime victimisation

Assessment of victimisation using the JVQ can be based on either past-year victimisations or lifetime victimisations. Finkelhor, Ormrod, and Turner (2009) advise there are advantages and disadvantages associated with both of these

approaches. They ultimately do not recommend one over the other and suggest that researchers can use either approach. It can be argued that calculating poly-victimisation from a lifetime assessment allows for a more holistic assessment and provides a more complete victimisation history. Whereas, examining victimisation over a 1-year time frame may appear arbitrary and may result in telescoping, whereby participants overestimate the time scale and report victimisations which occurred outside of the past year period.

However, when assessing lifetime victimisations it is harder to directly compare across different age groups. Older adolescents will have amassed more time in which to be victimised and so will likely have higher lifetime totals than younger children. Additionally, findings indicate the less recent victimisations have less of an impact than more recent ones, making them less relevant to study. Finkelhor et al., (2007a) found that for older children, victimisations prior to the present year had no additional predictive power over and above that predicted by present year victimisation.

Whereas, past year assessments may provide researchers and clinicians with a more accurate understanding of the immediate risk that children and adolescents are facing. Also, participants might find it easier to complete surveys based on past year experiences, as memories will be more recent, resulting in more accurate reports.

When using both past year and lifetime assessment methods Finkelhor, Ormrod, and Turner (2009) found that lifetime assessment did increase victimisation rates, but these increases were modest. Rates of experiencing at least one form of victimisation increased from 69.3% for past year to 79.6% for lifetime, with mean number of victimisations increasing from 2.4 to 3.7. The authors concluded that for

the majority of participants, past year assessment would be sufficient to capture their level of victimisation exposure.

Considering the above factors and the specific aims of the current research, past year victimisation assessment was chosen. Recent victimisation experiences are of greater interest as the dependent variables investigated throughout this thesis (i.e., risk factors, coping, outcomes) are measured based on the participants current situation. Collecting data on victimisations which occurred several years ago could therefore confound relationships between variables.

3.6.2.2   *Current adaptation of the JVQ*

The JVQ allows for selection of specific modules or items that meet particular study needs, as such not all of the 34-items from the full JVQ-R2 were included in the current study. See Appendix 3 for the original JVQ measure and details of items were excluded from the adapted measure used in the current research. Items concerning 'extraordinary' victimisations, which occur to only a small number of children (Finkelhor, 2013), were excluded. Items were deemed to be 'extraordinary', and therefore excluded, if past-year victimisation rates were below 1% in prior large ($n = 1,467$), nationally representative poly-victimisation surveys (Finkelhor, Ormrod, & Turner, 2009a, 2009b). This was to make the measure as brief as possible, in light of the large number of other questions participants were being asked to answer, and to avoid including questions which past research shows would likely only be relevant to a small minority of participants.

This enabled a focus on more pandemic victimisations, which are more prevalent (e.g., sibling assault). These typically receive less attention in the child victimisation literature and are presumed to be less serious and traumatic (Finkelhor, Turner, & Ormrod, 2006). However, children have reported feeling more concerned about pandemic victimisations (Finkelhor & Dziuba-Leatherman, 1995), and peer

and siblings victimisations have been found to be as serious and harmful as other types of violence (Finkelhor, Turner, & Ormrod, 2006). Therefore, as pandemic victimisations are experienced more frequently, can provoke greater anxiety and may result in equal harm as 'extraordinary' victimisations, it is important they receive adequate focus.

The final measure used in the current research consisted of 25 items and showed good internal consistency ($\alpha = .84$). This adapted version is not as comprehensive as the 34-item original JVQ, but offers a more concise alternative, concentrating chiefly on peer-to-peer victimisation types. However, the polyvictimisation measure used was skewed towards capturing peer-to-peer victimisations. Anonymity was also assured, as items included do not trigger mandatory reporting. Below is an outline of the adapted JVQ, and supplementary and excluded items.

Conventional Crime (e.g., *In the last year, did anyone break or ruin any of your things on purpose?*). One item regarding kidnapping was removed because past research suggests it only affects a very small number of children (past-year percentage victimised = 0.4%, Finkelhor, Ormrod, & Turner, 2009a). This module therefore comprised of 8 items.

Child Maltreatment (e.g., *In the last year, did you get scared or feel really bad because grown-ups in your life called you names, said mean things to you, or said they didn't want you?*). One item regarding custodial interference/family abduction was removed because research suggests it only affects a very small number of children (past-year percentage victimised = 0.8%, Finkelhor, Ormrod, & Turner, 2009a). This module consisted of 3 items.

Peer and Sibling Victimisation (e.g., *In the last year, did any kid, even a brother or sister, hit you?*). An item regarding non-sexual genital assault was

removed as research suggests it only affects a very small number of children (past-year percentage victimised = 0.7%, Finkelhor, Ormrod, & Turner, 2009a)..

Supplemental peer relational aggression items were added to capture more pandemic, peer-to-peer victimisations. This module consisted of 7 items.

Sexual Victimisation (e.g., *In the last year, did anyone try to force you to have sex; that is, sexual intercourse of any kind, even if it didn't happen?*). This module (seven items) was excluded. Past research reveals past-year rates of between 0.1% (non-specific sexual assault) to 5.0% (flashing/sexual exposure) for items on this module (Finkelhor, Ormrod, & Turner, 2009a). However, the present research was designed to collect anonymous data, meaning follow-up of participants and disclosures to relevant authorities of suspected sexual abuse would not be possible (for discussion of the rationale to maintain confidentiality see section 3.7.1.1). After consulting with the University of Roehampton ethics committee, I was advised it was necessary to exclude the sexual victimisation subscale to prevent an ethical conflict of not being able to disclose suspected incidences of sexual abuse.

Witnessing Violence/Indirect Victimisation (e.g., *In the last year, did you see your parent hit or physically hurt your brothers or sisters?*). Four items were removed regarding murder of a family member or friend, witnessing a murder, exposure to shootings, terrorism or riots, and exposure to war or ethnic conflict because research suggests they affect a very small number of children (past-year percentage victimised = 0.6-0.8%, Finkelhor, Ormrod, & Turner, 2009a). This module consisted of 5 items.

Electronic Victimisation module was also added to the original JVQ-R2 to capture pandemic victimisation types (e.g., *In the last year, has anyone ever used the Internet to bother or harass you or to spread mean words or pictures about you?*). This module consisted of 2 items.

When responding participants were asked to indicate whether they had experienced each victimisation in the past-year by answering "yes" or "no". Victimisation exposure was measured by summing the number of different victimisations for which respondents reported exposure, resulting in a three-level grouping: non-victimised, less victimised (1-5 victimisations) and poly-victimised (six or more victimisation types) following the method used by Finkelhor, Turner, Hamby, and Ormrod (2011) to categorise poly-victims.

3.6.3   Studies 1 and 3: Risk factors

3.6.3.1   Community

Community disorganisation

Community disorganisation was assessed with the Community Disorganisation subscale of the Communities that Care Youth Survey (CCYS) (Arthur, Hawkins, Pollard, Catalano, & Baglioni, 2002) (Appendix 4). The CCYS was originally developed as a tool for assessing prevention needs in adolescent populations. The survey measures a broad range of risk and protective factors, across multiple social ecological domains, for adolescent problem behaviours. In order to assess a wide range of factors in a single session, the CCYS aimed to minimise the number of items used to measure each construct, while maintaining adequate psychometric properties.

The Community Disorganisation subscale measures indicators of community deprivation and crime. Participants were asked to rate how much each statement describes their community on a scale from 1 = "definitely not true" to 4 = "definitely true" (6 items; e.g., "Lots of graffiti"). Scores were computed by averaging responses for the 6 items (range from 1.00 to 4.00), with higher scores indicating a greater level of community disorganisation. The scale showed acceptable internal consistency in the current study ($\alpha = .72$).

Low commitment to school

Commitment to school was measured with the Low Commitment to School subscale taken from the CCYS (Arthur et al., 2002), measuring involvement and opinions of school (Appendix 4). Participants were asked to rate items on a 5-point scale (6 items; e.g., "How often do you try to do your best work in school?"). School commitment scores were calculated by averaging responses across all items (range from 1.00 to 5.00), with higher scores indicative of lower commitment to school. The scale showed acceptable internal consistency in the current study (α = .75).

3.6.3.2 Relationships

Peer social preference

Peer social preference was measured using a peer nominations sociometric task adapted from Coie and Dodge (1983) (Appendix 4). Such sociometric assessment methods derive information on social relationships by assessing children and adolescents' positive and negative social perceptions of one another. Peer nomination methods have certain advantages over other sources of information, such as self- and parent reports. Measuring peer relations based on information from peers who frequently interact with each other has high face validity. Additionally, peer nominations gather information based on the judgments of multiple contributors, rather than a single individual (Bukowski, Cillessen, & Velasquez, 2012; Marks, Babcock, Cillessen, & Crick, 2013). Peer nominations have also been demonstrated to be reliable and valid procedures to measure social status (Cillessen & Borch, 2006).

The task used in the current research consisted of two items. Participants were asked to indicate three classmates who they "most liked to spend time with" and three who they "least liked to spend time with". Participants were provided with

a class roster which listed each participant and an assigned identification code. Participants were asked to use these codes to make their nominations. The number of nominations each participant received from classmates were summed and standardised within classrooms. A positive z-score indicates receiving an above average number of nominations and therefore greater peer acceptance/rejection. A social preference score is calculated by subtracting the least liked z-score from the most liked z-score, giving the standardised difference between acceptance and rejection. A negative social preference score indicates little preference, while a positive score indicates a strong preference. Scores closer to zero specify average social preference.

3.6.3.3 Family

Poor family management

Family management was assessed with the Poor Family Management subscale of the CCYS (Arthur et al., 2002), which measures family management practices characterised by unclear expectations and rules, and poor supervision (Appendix 4). Participants were asked to rate how true each statement is to them on a 4-point scale ranging from 1 = "definitely not true" to 4 = "definitely true" (7 items; e.g., "When I'm not home my parents know where I am and who I am with"). Poor family management scores were calculated by averaging responses across the 7 items (range from 1.00 to 4.00), with a higher score indicating poorer family management. The scale showed acceptable internal consistency in the current study ($\alpha = .76$).

Family conflict

Family conflict was measured with the Family Conflict subscale taken from the CCYS (Arthur et al., 2002), which assesses the level of conflict between family members (3 items; e.g. "People in my family often insult or yell at each other")

(Appendix 4). Participants were asked to rate how true each statement is to them on a 4–point scale ranging from 1 = "definitely not true" to 4 = "definitely true". Mean scores were calculated (range from 1.00 to 4.00), with higher scores reflecting greater family conflict. The scale showed acceptable internal consistency in the current study (α = .76).

3.6.3.4   Individual

Disruptive and withdrawn behavioural problems

Teachers completed reports on disruptive behavioural problems using the Acting Out subscale (3 items, e.g., "constantly seeks attention") and withdrawn behavioural problems using the Shy-Anxious subscale (3 items, e.g., "withdrawn") from the Teacher-Child Rating Scale (Hightower et al., 1986), developed to measure aspects of a child's socio-emotional adjustment (Appendix 5). Teachers were asked to rate to what extent each behaviour was a problem for each participant in their class, on a 5-point scale ranging from 1 = "not a problem" to 5 = "very serious problem". Scores were computed by averaging teachers' responses for the three items on each subscale (range from 1.00 to 5.00), with higher scores indicating greater problematic behaviour. In the current research, the acting-out subscale showed good internal consistency (α = .85) and the shy-anxious subscale showed an acceptable internal consistency (α = .73).

3.6.4   Studies 2 and 3: Emotional well-being

Emotional well-being was assessed on three dimensions: positive affect, negative affect and life satisfaction. Positive and negative affect were measured using the 10 item Positive and Negative Affect Schedule-Child (PANAS-C) (Ebesutani et al., 2012) (Appendix 4), which has been shown to be clinically useful for identifying youth with anxiety and mood disorders (Chorpita & Daleiden, 2002).

Participants were asked to rate to what extent they have felt given positive (e.g., "Joyful") and negative (e.g., "Afraid") emotions and feelings over the last week on a 5-point scale ranging from 1 = "not at all/ very slightly" to 5 = "extremely". Positive or negative affect scores were calculated by averaging responses across the 5 items from each subscale (range from 1.00 to 5.00), with higher scores indicative of greater positive or negative affect. Both subscales showed good internal consistency in the current study (positive affect, α = .86; negative affect, α = .83). Life satisfaction was measured using an adapted version of the Students Life Satisfaction Scale (SLSS) (Huebner, 1991) (Appendix 4). Participants were asked to rate how much they agree or disagree with each statement (e.g., "I would like to change things in my life") on a 4-point scale from 1 = "disagree a lot to" 4 = "agree a lot" (7 items). Life satisfaction scores were calculated by averaging responses across all 7 items (range from 1.00 to 4.00), with higher scores reflecting higher life satisfaction. The scale showed good internal consistency in the current research (α = .80).

3.6.5   Studies 2 and 3: Coping Strategies

Coping strategies were measured via problem-solving, social support-seeking, distraction, internalising and externalising subscales from the Self-report Coping Scale (Wright, Banerjee, Hoek, Rieffe, & Novin, 2010) (Appendix 4). Adolescents were asked to report, using a 5-point scale (1 = "not at all" to 5 = "all the time"), how much they would use each of the coping responses if they had experienced one or more forms of victimisation as described in the JVQ. The problem-solving subscale consisted of 7 items (e.g., "I do something to chance the situation"; α = .85); the social support-seeking subscale contained 4 items (e.g., "I ask someone in my family for advice"; α = .82), the distraction subscale contained 4 items (e.g., "I do something else to help me forget about it"; α = .66), the internalising subscale covered 5 items (e.g., "I think about it so much I can't sleep";

$\alpha = .81$) and the externalising consisted of 4 items (e.g., "I yell or shout to let off steam"; $\alpha = .73$). Responses across each subscale were averaged, with higher scores indicating a greater utilisation of the strategy to cope with victimisation.

3.6.6 Study 4: Social and emotional processing

The following tasks and measures are summarised below and outlined in-depth in Chapter 7: Study 4, Section 7.3.3.

3.6.6.1 Implicit Association Task (IAT)

The IAT is a computer-administered procedure for measuring strengths of automatic association between concepts (Greenwald & Farnham, 2000). The IAT used in the current research was based on the version used by (Rosen, Milich, & Harris, 2007) devised to assess implicit social cognitions and peer victimisation in a sample of 9-13 year olds (Appendix 8).

The IAT consisted of seven blocks of word categorisation trials. Participants categorised words into 'me or victim' and 'not me or not victim' (victim-congruent) categories and 'me or not victim' and 'not me or victim' (victim-incongruent). The strength of an association between concepts is measured by calculating the d-score, which is the standardised mean difference score of the hypothesis-consistent pairings (victim – me/ non-victim – not me) and hypothesis-inconsistent pairings (non-victim – me/ victim – not me) (Greenwald, Nosek, & Banaji, 2003).

3.6.6.2 Hostile attribution bias and social response selection

Hostile attribution bias and response selection were measured using a modified version of the Child Hostile Attribution Style Measure (Krahé & Möller, 2004) (Appendix 6). This measure consists of four vignettes describing ambiguous social interactions in which a protagonist caused some form of harm to a person, but it is unclear whether or not the harm was intended. Example scenario: "Imagine you

are out in the school yard during break time, talking to your friends. You hold your

drink bottle in your hand. Just as you are about to take a sip, someone pushes you

from behind causing you to spill your drink". Participants are asked to imagine being

in each scenario and to make ratings regarding perceived hostile intent of the

protagonist, anger, wish to respond with aggression or withdrawal, and wish to

retaliate.

3.6.6.3   *Emotional pictures dot-probe task*

The emotional pictures dot-probe task (Kimonis, Frick, Fazekas, & Loney,

2006) is a variant of the traditional word variant (Appendix 9). The task is a spatially

oriented motivated attention task that assesses automatic attentional bias toward

emotional cues, providing an indirect index of emotional reactivity.

Picture pairings of differing emotional content are presented. Pairings are

either 'distress – neutral', 'neutral – neutral', or 'positive – neutral'. Reactions to a

'dot-probe' appearing in the place of one of the pictures immediately after its

presentation are measured. If the spatial location of the probe corresponds to the

same spatial location where the participant's attention is allocated then their response

to the probes' location will be faster. Given that the emotional quality of stimuli is

generally thought to facilitate allocation of attention, participants with normative

responses are generally expected to respond more quickly to probes replacing

distressing images because their attention selectively orients to distressing content

(Ohman, 1993; Vasey et al., 1995, 1996).

3.6.6.4   *Emotion dysregulation*

Emotion dysregulation was assessed with the Difficulties in Emotion

Regulation Scale (DERS) (Gratz & Roemer, 2004), a 36-item self-report

questionnaire designed to assess multiple aspects of emotional dysregulation

(Appendix 7). The measure is based on a conceptualisation of emotion regulation as adaptive ways of responding to emotions, including accepting responses, the ability to experience and differentiate the full range of emotions, and the control of behaviours in the face of emotional distress (Gratz & Roemer, 2004).

3.7   Procedure

3.7.1   Ethical considerations

3.7.1.1   Protection from harm

The first consideration when planning research concerning children is to firstly evaluate whether the research is necessary, and if it is necessary to involve children or if information can be gained without their participation. For this thesis, children's participation was considered justified as caregiver reports for adolescents are likely to be inaccurate, because adolescents spend much time unsupervised and are less likely to share experiences and feelings with their caregivers than younger children (Finkelhor, Ormrod, et al., 2005a). The best way to investigate risk and resilience for poly-victimisation is to therefore ask the child to report on their own experiences.

Secondly, there is a need to consider whether the research has benefits for children. Benefits tend to be future-oriented for children as a social group, rather than directly relevant to the children participating in the research. Past poly-victimisation research has provided important information on the circumstances surrounding it, as well as the consequences, and has advanced the field in terms of increasing understanding of this highly harmful and unfortunately common event; improving policies and programmes to address violence against children.

The benefits of the current research include contributing new knowledge that otherwise would not be available. It is clear that data reported to child protection

authorities vastly underestimates the true incidence of childhood victimisation exposure (Fallon et al., 2010; Radford et al., 2013). Without exploring the prevalence of poly-victimisation in different countries, the extent of the problem will not be known and as a result adequate services to detect, prevent and intervene cannot be devised. The current research will also provide important information to inform the design of such prevention and intervention efforts. Research can also provide children with opportunities to share their experiences and feelings, and to seek help. Overall, the potential benefits of this thesis, in terms of reducing poly-victimisation and its harm, are significant and would make this investigation necessary and worthwhile.

There is then a need to balance these benefits against the potential risks of harm caused by participation and to establish procedures to prevent and minimise any harm. All studies in this thesis involve participants answering questions about their past victimisation experiences. When asking children or adolescents to answer questions regarding victimisation history there is concern that recalling associated traumatic memories may result in distress (Alderson & Marrow, 2011). To understand the risk of this, researchers have begun investigating the number of children who report feeling upset or distressed as a result of a research study. A U.S. survey with 1,588 participants (aged 10-15 years), which included questions about violence exposure, asked about participants' experiences of the violence-specific questions. 23% of the participants reported being upset by questions about violence, with younger participants being significantly more likely to be upset than older participants (Ybarra, Langhinrichsen-Rohling, Friend, & Diener-West, 2009).

Such research attests to the need for safeguards to be in place when conducting victimisation research, however, there is a growing body of literature which highlights that the risk of victimisation survey research causing harm is

minimal (Finkelhor et al., 2014). After completing a telephone interview that included questions about sexual abuse, physical abuse and assault, witnessing parental violence and a variety of other stressful life events, Zajac, Ruggiero, Smith, Saunders and Kilpatrick (2011) reported that only 5.7% of a sample of 3,614 adolescents reported that they found 'some' questions distressing. Researchers have also pointed out that the distress recounted by participants is often minor and needs to be assessed in the context of other attitudes toward participation. For example, Radford et al. (2013) found a rate of distress of 7.9% in a large survey of 2,275 adolescents aged 11-17 years in the UK. However, 95% of those that reported distress said that participation in the study had nonetheless been worthwhile. Finkelhor, Vanderminden, Turner, Hamby, and Shattuck (2014) further examined the nature of distress stemming from victimisation research. From a sample of 2,312 youth aged 10-17 years, who completed an enhanced version of the JVQ via a telephone interview, 4.6% ($n = 104$) reported being upset by answering the survey. Of these participants, 26% rated the survey questions as 'not very upsetting', 49% as 'a little upsetting', 9% as 'pretty upsetting', and 17% as 'a lot upsetting'. Further, among the upset participants, 95.3% reported that they still would have participated knowing now what was in the survey, suggesting that they felt the value of the study outweighed their personal distress. Only 0.3% ($n = 7$) of the total sample were both upset by the survey questions and would not participate again. Even in this group the regret about participation was mostly due to the length of the survey and not the types of questions being asked. The researchers therefore concluded that "the level of discomfort created by this activity does not seem onerous or disproportionate to the potential benefit" (Finkelhor et al., 2014, p. 220). The Finkelhor et al. (2014) study was conducted via telephone, rather than self-administered. It is possible this could have helped to alleviate distress as the presence of an interviewer may have

provided some additional support. Additionally, this may have made it easier for participants who felt uncomfortable with the research topic to decline to participate. Whereas, when research is conducted in a school setting, participants may feel greater pressure to partake, as the school represents authority (Bruzzese & Fisher, 2003). These differences between prior studies and the present research were therefore taken into account when considering the potential for distress.

It is also important to note that many studies enquiring about traumatic events find that participants experience relief from acknowledging the incident (Griffin, Resick, Waldrop & Mechanic, 2003). Some studies have shown beyond not reporting feelings of distress, children report positive feelings about their participation in research and its potential to benefit others. For example, a U.S. study looking at the perceptions of 181 children on their participation in research found that their appraisals were generally positive and did not differ depending on whether they had a history of trauma exposure or not, or of the number of traumatic events they had experienced (A. T. Chu, DePrince, & Weinzierl, 2008).

Ethical concerns have also been raised with regard to sociometric assessment methods. These concerns centre around the use of peer nominations based on negative status or characteristics (e.g., least liked) and the possibility that participants may discuss their responses after the task, which may result in negative social and emotional consequences for those who are not positively perceived by their peers. For example, children who are nominated frequently as 'liked least' may be treated more negatively following research because they have been made more salient to their classmates (Mayeux, Underwood, & Risser, 2007).

However, research has indicated that there is no strong evidence that negative consequences occur for either the participants who are nominating or those being nominated (Bell-Dolan, Foster, & Sikora, 1989; Iverson & Iverson, 1996; Mayeux et

al., 2007). Primary school children who participated in sociometric testing, and a control group who answered questions about the school subjects they liked and disliked, were assessed on measures of mood and loneliness before and after participation. Participants' interactions with each other were also observed following the procedure. Those in the sociometric group did not differ from the control children in subsequent social interactions or in mood and loneliness (Bell-Dolan et al., 1989). In another study investigating children's opinions of sociometric testing the majority reported they had enjoyed participating (Iverson & Iverson, 1996). A further study interviewed children who had completed peer nominations, and also collected teacher reports on each child's responses to the testing (Mayeux et al., 2007). Results indicated that most children and teachers reported no negative emotional reactions to the testing, and that peers did not treat them any differently following the task (Mayeux et al., 2007). Overall, this research suggests that sociometric testing can be conducted without compromising ethical responsibilities. On balance, the potential for harm that may occur if this research is not done (i.e. high proportions of children experiencing poly-victimisation and its negative consequences) appears to be greater than the potential for harm from children participating in this research. Nonetheless, there are a small minority of youth who may experience distress and procedures were put in place to address this. These protocols included training of research staff, consulting with participating schools and local specialised organisations and providing participants with contact information for support services. I completed the NSPCC child protection awareness programme and safeguarding training in April 2014. The data collection team completed child-safeguarding training at Opole University, Poland in December 2014. This equipped the research team with the skills to best recognize and respond in the face of children's anxiety or distress.

Moreover, I worked to identify local organisations that are available to offer skilled support and resources. This was important as the research was taking place in a cultural context outside of my own, and could enable me to get a better understanding of potential cultural specific risks. In October 2014, I contacted the Empowering Children's Foundation (ECF) via an email in English, informing them that the study was taking place, asking if they could share any advise after conducting similar research of their own, consulting on legal requirements for reporting child abuse in Poland, and asking if they could share educator and child-facing resources concerning violence. This consultation further informed the research team's knowledge of potential risks and how to deal with any signs of emotional distress. I passed on ECF's information materials for educators to participating schools, to help equip them with the best knowledge on how to deal with any distress and disclosures of abuse and maltreatment.

ECF also shared leaflets with their free-phone helpline and their online contact details. Consultants of this helpline are psychologists and counselors, trained to provide psychological support to assist children to cope with their problems and go through difficult situations. Each respondent was provided with information about available ECF sources for counselling and advise, in the event that the study raised traumatic memories or responses. Contact details and NCF leaflets were included in the debrief form (written in Polish), along with the section of their website on violence, which includes information to help children understand various threats and know how to deal with them and how to stay safe (Appendix 18 – English translation). Giving this information provided assurance that any participants wanting to access support after participation were directed to highly trained individuals, who were aware of the research and could offer the best possible help.

This available support was also reemphasised in a verbal debrief given in Polish (Appendix 18).

Researchers further acknowledged in the verbal debrief that the issues raised in the survey were serious and that obtaining professional assistance is important if anyone is at risk of harm, as suggested by Black and Ponirakis (2000). In addition to providing information on professional support services, researchers were vigilant in attending to children's visual, verbal and non-verbal cues of distress, after receiving safe-guarding training be able to recognize and respond appropriately to children's distress. Any participants who appeared to be affected by the study were discreetly approached afterwards to see how they were feeling and to signpost them to someone within the school or NCF for additional support. Researchers also stated that they were available to discuss any issues or emotions that had been raised from the study directly after the session or afterwards (contact detailed were provided on debrief forms). No participants contacted the research team directly for any additional help.

Distress may not be apparent during the research session, but may develop afterwards. To help identify this I ensured schools set up a check-in procedure one week after the data collection to look out for signs of upset. One-on-one in private, participants were asked what they thought of the research and if they had felt any different or experienced any negative emotions as a result of participating. It was considered this check-in would be best from someone who is known and trusted by the participants, and who is familiar with the child's usual behaviour so can read the signs that additional help may be needed. This check-in was planned with schools before data collection started. If school staff did notice anything that transpired to be connected to the study they were asked to contact myself. No such incidences were flagged by participating schools.

Since it is possible that some vulnerable participants may not be confident enough to approach an adult or organisation for help, or may be missed in a check-in procedure, an anonymous worry box was set up in schools.. This was referred to in both the verbal and written debriefs. A worry box is a cognitive-behavioural therapeutic approach to addressing anxiety and negative emotions in children. This modality aims to help young people recognize and reflect on their thoughts and feelings, and can facilitate a sense of greater control over them (Mayeux et al., 2007). This sense of control could in turn allow children to utilise more adaptive coping responses in the face of stressors, thereby helping to reduce any potential experiences of distress resulting from participation (Scarpa et al., 2006; Tremblay, Hébert, & Piché, 1999). This technique has been used in debriefing procedures in past peer victimisation research (e.g., Anthonysamy & Zimmer-Gembeck, 2007; Smith, Shu, & Madsen, 2001). Furthermore, although anything submitted to the worry box would remain anonymous, meaning no actions could be taken to help the participant directly, schools commented they would find a worry box helpful as a means to monitor levels of any distress and anxiety and adapt their support accordingly. Finally, debrief procedures emphasised the importance of the research in understanding and helping to prevent victimisation, in order to stress the value of participation. This can empower children and increase their sense of self-worth, which has been cited as a way to minimise harm from taking part in research (ISPCAN, 2016).

Arguably, these steps taken to address potential harm resulting from participation in this research means children who disclose victimisation during the course of this study had greater access to support than they might have had prior to the research (ISPCAN, 2016).

3.7.1.2 *Privacy and confidentiality*

Respecting the privacy and confidentiality of children participating in research involves close consideration of several aspects including, privacy with regard to the amount of information the child is being asked to reveal, privacy in the processes of data collection and storage, and ensuring participant responses are not identifiable in any data entry, analysis or publication of findings. In the current series of studies, participants were explicitly told in verbal instructions that if they chose to take part, they did not have to answer all questions and could skip any they wished to. This attempted to ensure that participants only shared information they were comfortable with. This research was conducted in groups in a classroom setting. Maintaining privacy in group research cannot be guaranteed (WHO, 2011) but every effort was made to make sure the location and methods used in collecting data meant participants could give their responses without them being seen by others. For example, the researcher checked desks or computers were spaced far enough apart to ensure privacy. Participants were also instructed to work independently and respect each other's privacy. Furthermore, participants were given envelopes with their questionnaire packs and instructed to place their completed survey in these envelopes, before handing it to a researcher to help maintain privacy.

Data was kept separate from identifiers to maintain anonymity and the participant's right to confidentiality. I generated a list of unique codes and passed these onto schools, who were asked to assign participant names to codes. Surveys were already pre-labelled with codes and school staff ensured these were handed to the appropriate participant. Participants were instructed not to write their names or identifying details on the survey. Completed surveys were collected by the researchers, who never had access to the list connecting codes with names. The list of names and linked codes was kept by schools, to ensure in the longitudinal study

coded surveys were handed to the correct participant. Schools never had access to data to retain the participants right to confidentiality. At the dissemination stage anonymity was maintained regarding identities of participants, schools and communities.

Significant ethical challenges can arise when participants disclose that they have been or are being harmed. In such circumstances, there is a need to balance the child's right to confidentiality with the researchers ethical responsibility to ensure that children are protected from harm (Hiriscau, Stingelin-Giles, Stadler, Schmeck, & Reiter-Theil, 2014). However, no consensus exists on what is the right approach and opinions about breaching confidentiality to report suspected child abuse are divergent (Cashmere, 2006; Powell, Fitzgerald, Taylor, & Graham, 2011). Some researchers argue they have a duty to report any suspected incidences of abuse or maltreatment to relevant authorities. Others maintain if the young person does want to report abuse then they should not be pressurised or have action taken against their will (ISPCAN, 2016).

Allen (2009) presents a summary of the arguments for and against mandatory reporting of suspected child abuse by researchers. Arguments for researchers' mandatory reporting of suspected child maltreatment:

1. The primary goal of mandatory reporting is to protect children.

2. Some research suggests that vulnerable participants may expect researchers to provide aid on disclosure.

3. Not reporting maltreatment ultimately weakens professional codes of ethics.

Arguments against researchers' mandatory reporting of suspected child maltreatment:

1. Researchers may lack adequate training in the detection of maltreatment.

2. Reporting requirements cause inconvenience to researchers, in terms of considerable time and effort and interference with research efforts.

3. Including researchers as mandated reporters may lead to over-reporting. ISPCAN (2016) reports that overall, a very small proportion of participants involved in child maltreatment research are identified as needing intervention. For example, in Korea there was a protocol in place for maltreatment disclosures. From a sample of approximately 5,000, no disclosures were received (Zolotor et al., 2009). Similarly, when over 6,000 children participated in a poly-victimisation study in the UK, six cases were identified who may be in immediate danger. Children were subsequently asked if they would like to talk to someone. Only two children's names were passed on to local authority social services (Radford et al., 2013).

4. Reporting of unsubstantiated cases could increase harm for some participants, in the form of punishment from perpetrators or stigma.

5. It may be more appropriate to encourage and support participants to seek professional help themselves.

6. Reporting threatens the integrity of research and may result in difficulties advancing science and knowledge. This includes sampling methodology damaged due to potential participants' refusal to take part for fear of being reported (falsely or otherwise); difficulty recruiting and retaining participants if reporting is discussed during the consent process or confidentiality broken during the course of the research project; possibility of participants not providing accurate data for fear of being reported to child protection services. Research has shown that adolescents completing a self-report survey regarding victimisation differ in rates of reporting depending on whether they were told responses would be anonymous (no disclosure) or confidential (told that experiences of physical or sexual abuse would be disclosed) (Langhinrichsen-Rohling, Arata, O'Brien, Bowers, & Klibert, 2006). It was found

that in the confidential condition there was a significant reduction in reporting of physical abuse (22.0% vs. 43.1% in the anonymous condition), and sexual abuse (14.3% vs. 37.0% in the anonymous condition). Other potentially sensitive information (e.g., abusiveness of family life) which would not trigger reporting did not significantly differ between groups (Langhinrichsen-Rohling et al., 2006). This indicates that is important to ensure surveys are anonymous to encourage accurate reporting.

The International Society for the Prevention of Child Abuse and Neglect report on ethical considerations in child maltreatment research concludes that there are no clear cut recommendations and that many experts argue that "ethical research can be conducted without reporting to authorities" (ISPCAN, 2016, p.4). Strategies depend on methodologies used and the information being collected (Hiriscau et al., 2014). The current series of studies were designed to collect anonymous data, meaning follow up would not be possible and disclosures of maltreatment would not be made. The above arguments for and against mandatory reporting were carefully considered to inform this decision, along with further considerations specific to this research, discussed below.

Legal requirements with regard to reporting suspected abuse or child maltreatment differ across international contexts (Williamson, Goodenough, Kent, & Ashcroft, 2005). In Poland, researchers are not legally mandated to report suspected child abuse (European Commission – National regulations on ethics and research in Poland, 2003). The WHO's (2011) ethical and safety guidelines recommend that national laws should be the primary source for direction when considering confidentiality protocols.

Ford (2002) states data collected on maltreatment must provide sufficient information that justifies breaking confidentiality. The current research used the

Screener Sum Version of the JVQ, were participants are asked to respond to a dichotomous 'yes/no' scale to victimisation questions. Unlike the Separate Incident Version, this does not collect information on what the incident involved, when it took place or who was the perpetrator. Consequently, it was considered that the information collected would no sufficient to be able to make a referral to child protection services.

There are also numerous precedents of past research on violence and poly-victimisation which have maintained complete confidentiality. For example, Sterzing, Gartner, and Mcgeough (2018) conducted an online survey measuring poly-victimisation and its correlates in over 1,000 sexual and gender minority adolescents in the U.S. This online survey ensured no identifying information was ever connected to the survey data or viewed by the research team, and thus responses remained entirely confidential. Researchers have concluded this method is ethically responsible as long as there is a facility for children to contact the research team, children are encouraged children to seek help and details of relevant support agencies are provided (Sharkey et al., 2011; Sterzing et al., 2018). All of these conditions were met in the current research. In addition, some studies have used methods that allow for anonymity of data, but encourage children to self-identify if they would like follow-up referral for support (e.g., Carroll-Lind, Chapman, Gregory, & Maxwell, 2006). In the current research, the debrief procedure highlighted that issues raised in the survey were serious and gave information to allow participants to seek professional assistance, or discuss doing so with the researcher or school staff.

3.7.1.3 *Informed consent*

Research must always obtain children's informed and ongoing consent, alongside parental consent and any other requirements that are necessary for the

research to proceed ethically. Consent needs to be based on a balanced and fair understanding of what is involved throughout and after the research process.

For all studies in this thesis three levels of informed consent were sought. The first level required was from the Headteacher of participating schools. The Headteacher was informed of the study aims and methods and asked to approve all materials before completing a consent form (Appendix 10, 15 – English translation). Once the school had approved the materials and consented to their involvement, parental consent was sought via an opt-out procedure. Information sheets and opt-out consent forms (Appendix 11, 16) were both sent home via adolescents and were emailed directly to parents/caregivers. Parents were asked to return the consent form if they did not wish their child to participate.

Passive parental consent for research with children and young people is approved by the British Psychological Society (BPS) code of ethics (British Psychological Society, 2004, p. 8), as long as the school gives permission for this to be done and child consent is gained. These conditions were adhered to in this project. Passive consent greatly improves participation rates (Langhinrichsen-Rohling et al., 2006) and reduces issues of bias in the sample that can occur when using active consent procedures (Pokorny, Jason, Schoeny, Townsend, & Curie, 2001). For example, Anderman et al. (1995) found that participants taking part in a sensitive health survey with active parental consent were more likely to be White, live in two-parent households, have a grade point average of B or above and be involved in extracurricular activities, compared to those recruited with passive consent. Moreover, failure to return an opt-out consent form is more likely to indicate latent consent, rather than latent refusal, and when parents do refuse consent the form is usually sent back promptly (Ellickson & Hawes, 1989).

Researchers have found that very high response rates can be achieved through the use of passive consent, which is a relatively common practice when surveys are administered at schools (Finkelhor et al., 2014). For example, researchers in New Zealand achieved a 93% participation rate when school officials approved the research and parents were sent a letter indicating that their children would participate unless the parents declined (Carroll-Lind et al., 2006). Participation rates differed from 62% for active consent and 93% for passive parental consent in a study conducted in the U.S. (Langhinrichsen-Rohling et al., 2006). It was therefore considered passive parental consent would be the most appropriate method to gain as large and as representative sample as possible in the current research.

An active consent procedure was used to gain informed consent from adolescent participants who had not already opted-out. Adolescents below the age of 16 years were given verbal instructions and consent information (Appendix 13) and were told to complete the survey or task in order to give their consent to take part. Those aged 16 years and over completed a written consent form (Appendix 14, 17). Consent procedures outlined the aims and importance of the research, the potential risks of harm, its voluntary nature, highlighted that confidentiality and anonymity would be assured and the right to withdraw. Adolescents were also given a non-research activity, alongside the questionnaire at the beginning of the session. Adolescents who didn't consent were instructed to complete this activity instead of the research study. This ensured that adolescents could decline consent privately, without drawing attention from their classmates or teachers. In Studies 1 and 2, 96 adolescents (15% of target population) declined to consent, in Study 3, 42 adolescents (14% of target population) declined and in Study 4, six adolescents (6% of target population) chose not to participate.

In Studies 1-3, were teacher reports were included in the survey, teacher consent was also gained via a written consent form (Appendix 12). All consent forms were issued three weeks prior to the start of the study to give all parties adequate time to consider their involvement and, in the case of opt-out parental consent, return the form to the school if desired.

3.7.2   Studies 1 - 3

Data for Studies 1 and 2 was collected over a period of four months from February-May 2015. Data collection for Study 3 was conducted approximately one year later between February-May 2016. A member of the research team and a school staff member were present throughout all data collection sessions to oversee, answer any questions and monitor for signs of distress. Participants completed surveys in classrooms in groups of between 12-27 participants, during school hours. Participants were sat as far apart from each other as necessary to ensure others could not see their responses and were instructed to work independently, and respect each other's privacy. At the beginning of the session, participants were informed by the researcher of the purpose of the study, the potential risks for emotional harm, its voluntary nature, reminded of their right to withdraw and that they could skip any questions they wished to (Appendix 13). They were also assured that the survey was anonymous and asked to give their consent for taking part in the study, either by completeing a consent form in Polish (for participants aged 16 years and over) (Appendix 14) or by completeing the survey (for participants aged 13-15 years).

Participants were given a self-administered questionnaire in paper form, which was marked with their unique identification code, and asked to complete it (Appendix 4 – English translation). The order in which the various questionnaires appeared in the participants' packs was counterbalanced. They were also given a class roster with names of all participants and a corresponding code to use when

completing the peer nomination task. The class rosters were collected back by a school staff member at the end of the session and all surveys were collected by a member of the research team. To make the respondents feel as comfortable as possible, we asked them to put their completed questionnaires in individual envelopes, which were then placed in the group's larger envelope. The average completion time for the survey was 29 minutes (range: 7–39 minutes).

Pupils in the class who did not have parental consent or chose not to consent themselves were asked to began a non-research task, which was handed out at the start of the session, instead of the survey. This was also collected in by the researcher at the end of the session, so they could not be identified by others as not participating in the study. Along with supervising children, the teacher present completed a measure on behavioural problems for each participant. This took on average two minutes per participant.

At the end of the session participants were given a verbal debrief (Appendix 19) from the researcher and issued with a written debrief form in Polish (Appendix 18), as described in Section 3.7.1.1. The debrief procedure encouraged participants to talk to someone if they were experiencing victimisations or any distress related to participating in the study. They were given the contact details of someone in the Polish research team and in the school, along with a leaflet containing details of a telephone and online help service, run by ECF, where they could seek psychological. After the debrief, the researcher gave a 10 minute talk on notable psychological experiments, which did not involve distressing content (e.g., Pavlov's dog, Asch (1951), Loftus and Palmer (1974)). This had the purpose of engaging participants further with the field of psychology and also provided a 'wind-down' to help reduce tension or any low mood from answering questions about victimisation.

3.7.3   *Study 4*

Data collection was completed in January 2017 on school premises during lesson time. Participants completed computerised tasks and questionnaires individually at a computer in groups of between 21-29 adolescents. Participants were sat as far apart from each other as necessary to ensure others could not see their responses and were instructed to work independently, and respect each other's privacy. A member of the research team and a school staff member were present throughout all data collection sessions to oversee, answer any questions and monitor for signs of distress.

At the beginning of the session, participants were informed by the researcher of the purpose and procedure of the study, the potential risks for emotional harm, its voluntary nature, their right to withdraw and to skip any elements of the task they wished to (Appendix 13). They were also assured that their responses would be anonymous. After hearing the verbal consent procedure, participants were reminded to read all instructions carefully, and that they would have the opportunity to practice each task before the experiment officially began. They were then asked to begin the task. The first screen gave a written consent statement (Appendix 17 – English translation) and asked participants to select a box either consenting or declining to take part. Participants who consented were directed to the study tasks. Those that didn't were directed to a non-research related reaction time task and follow-on activity. This meant no one present in the room would be aware that they had declined to participate.

Participants completed the experimental tasks first using Inquisit web version 5.0. The order in which the IAT and dot-probe task were administered was counterbalanced. Each of these tasks took approximately six minutes to complete. Once participants had finished the second task they were automatically directed to

Qualtrics where they electronically filled in the questionnaires. The order of these questionnaires was again counterbalanced. Questionnaires took approximately 20 minutes to complete.

At the end of the session participants were given a verbal debrief (Appendix 19) from the researcher and issued with a written debrief form in Polish (Appendix 18), as described in Section 3.7.1.1 and above in Section 3.7.2. Similarly, to Studies 1-3 after the debrief, the researcher gave a brief talk on notable psychological experiments, to help combat any potential distress or low mood stemming from the research activities.

4 CHAPTER 4: STUDY 1: RISK FACTORS OF POLY-VICTIMISATION IN POLISH ADOLESCENTS

4.1 Overview

This chapter aims to assess the frequency of various victimisation types and of poly-victimisation in Polish adolescents. This chapter will then go on to explore the associations between risk factors from different ecological levels and poly-victimisation, and make comparisons with less victimised and non-victimised adolescents.

4.2 Introduction

Children and adolescents have been shown to be particularly vulnerable to victimisation (Finkelhor & Dziuba-Leatherman, 1995), with some studies indicating that they are victimised at two to three times the rate of adults (Finkelhor, Ormrod, et al., 2005b). Furthermore, research has highlighted the array of different victimisations experienced during childhood and adolescence, including community violence, maltreatment by caregivers, sexual victimisation and peer victimisation. Much of the childhood victimisation research has focused on only one of these types of victimisations; however, evidence suggests that children who experience one form of victimisation are more likely to suffer from further, different kinds (Finkelhor, Ormrod, et al., 2005b; Saunders, 2003). These children who face exposure to a range of different victimisations, in separate incidents, have been labelled ''poly-victims" (Finkelhor, Ormrod, et al., 2005b). In addition to suffering a high frequency of victimisations, poly-victimised children also typically experience victimisation in several contexts simultaneously, such as at home, at school and in the community, perpetrated by adults, peers or strangers (Finkelhor et al., 2007a). For such children,

victimisation appears to be more of a condition than an event (Finkelhor et al., 2007c).

Research has indicated that in fact the majority of child victims experience more than one type of victimisation, and multiple and poly-victimised children are the norm in most samples. For example, in a U.S. sample of 4,053 2- to 17-year-olds, Turner et al., (2010) found 70% of the sample had experienced at least one form of victimisation during the past year, and of these 64% had experienced at least one additional form. Furthermore, 18% were classified as poly-victims (defined as 4 or more different, past year victimisations).

Rates of poly-victimisation have, however, been shown to vary depending on the country studied, with poly-victimisation rates ranging from 9.5% in China (Chan, 2013) to 36% in Chile (Pinto-Cortez et al., 2017). In particular, when examining childhood victimisation in Eastern Europe the prevalence appears elevated. For example, in Russia retrospective reports of victimisations experienced over the whole childhood-adolescence period revealed 45% reported 8-14 different types of victimisations and 11% reported 15 or more types (Bogolyubova et al., 2015). Further findings suggest that child maltreatment (Gilbert et al., 2009) and peer victimisation (Craig et al., 2009) are higher in Eastern European countries compared to those in Western Europe. For example, yearly prevalence of psychological/emotional victimisation in childhood are between 10–11% in the U.S. (Finkelhor, Ormrod, et al., 2005; Gilbert et al., 2009), 4–9% in Western European countries, and up to 33% in Eastern European countries (Gilbert et al., 2009). Moreover, in Poland, rates of bullying have been shown to be above the European average (Currie et al., 2012), with a nationwide study in Poland revealing 63% of adolescents been subjected to some form of school violence (Komendant-Brodowska et al., 2011).

Specific cultural factors may be responsible for the higher prevalence of victimisation in Eastern Europe, and specifically Poland. Poland was the first socialist country in Eastern Europe to adopt the market economy and political structures of Western democracies. Consequently, Doroszewicz and Forbes (2008) propose that victimisation experiences in Poland may serve as a model for understanding the experiences in other Eastern European countries, claiming that:

> although the formerly socialist countries that have adopted Western-style political and economic systems are far from homogeneous and may have marked cultural, religious, and social differences, it seems likely that most are, or soon will be, experiencing many of the social changes that were first evident in Poland (Doroszewicz & Forbes, 2008, p. 60).

The political and economic instability experienced as Poland transitioned from a former Soviet block country has been cited as increasing levels of societal violence, including violence directed towards young people (Doroszewicz & Forbes, 2008; Krahé, 2001). Brunell (2005) also highlighted the slow and inadequate development of victimisation prevention and protection services in Poland, compared to Western European countries, associated with the post-communist era. This reduced capacity could mean Poland is less equipped to tackle childhood victimisation.

In Poland, however, child victimisation research has only focused on singular forms of victimisation and failed to investigate cumulative experiences. Yet comparatively greater rates of child victimisation in Poland, and evidence of a high frequency of poly-victimisation in other Eastern Europe contexts (Bogolyubova et al., 2015) highlights the need to explore poly-victimisation in a Polish sample.

Furthermore, as Doroszewicz and Forbes (2008) suggest knowledge regarding victimisation in Poland could be applied to other Eastern European countries, it could be of particular value to understand poly-victimisation in Poland.

4.2.1 *Risk factors within an ecological framework*

Given the high prevalence of poly-victimisation revealed in past studies, understanding why some individuals are more vulnerable to victimisation is a crucial area of investigation, with important implications for preventative measures. Poly-victimisation has been associated with worse outcomes, such as greater mental health problems and higher life stress, compared to both non-victimised and single victimised children, including those who have experienced repeated episodes of the same type of victimisation (Finkelhor et al., 2007a). In addition to experiencing worse outcomes, once children become poly-victims, their risk for additional victimisation tends to remain elevated (Finkelhor et al., 2007c). It is therefore important to be able to identify those most clearly at risk of becoming poly-victims, to be able to direct them towards prevention resources with the hope of stopping the onset of poly-victimisation and minimizing the resultant negative outcomes.

Previous research has shown that risk factors associated with poly-victimisation span across individual, family, relationships and community domains. Thus supporting an ecological perspective and highlighting the need to look beyond characteristics of the victim (e.g., Ellonen & Salmi, 2011; Finkelhor, Ormrod, Turner, & Holt, 2009; Lila, Herrero, & Gracia, 2008; Nurius, Russell, Herting, Hooven, & Thompson, 2009). Several theoretical frameworks, including Finkelhor and Asdigian's (1996) revised lifestyle-routine activities framework and Finkelhor et al.'s (2009) pathways to poly-victimisation model describe the likeliness of victimisation occurring as the product of such risks, which make individuals more or less likely to become targets of harassment and abuse.

4.2.1.1 *Individual*

At an individual level certain psychological and behavioural factors have been shown to influence poly-victimisation risk. Specifically, displays of anxiety and emotional problems (Dong et al., 2013; Nurius et al., 2009) and aggressive behaviour (Holt et al., 2007) have been associated with poly-victimisation. This is in line with robust findings from the peer victimisation literature where two distinct groups of victims have been noted: passive and aggressive (Olweus, 1978). Passive victims are socially withdrawn, lack assertiveness and appear anxious to others. Conversely, aggressive victims can irritate and antagonise others by exhibiting disruptive and antisocial tendencies.

The Victim Schema Model (VSM) (Rosen et al., 2009) can offer an explanation as to how these characteristics develop, proposing that prior experiences of abuse and hostility may lead to the development of a victim schema. Although this model was proposed to explain chronic peer victimisation, it could also apply to poly-victimisation. The model proposes that as a result of the victim schema, youth are more likely to interpret ambiguous situations as hostile and to expect to be victimised. Accordingly, they may respond with aggression, in an attempt to defend themselves (Dodge et al., 2003; Waldman, 1996), or in a submissive manner, in an effort to avoid further social interaction (Garner & Lemerise, 2007; Yeater & Viken, 2010; Ziv et al., 2013). These responses can lead to a child being perceived as aggressive and disruptive, or withdrawn and anxious (Hodges & Perry, 1999; Olweus, 1978).

In accordance with Finkelhor and Asdigian's (1996) adaptation of routine activities theory, perpetrators can be attracted to these signs of vulnerability, as they indicate that victims will either not fight back or will give an explosive reaction. Furthermore, displaying these characteristics could lead to peer group exclusion and

therefore mean it is less likely victims have a strong social support network to act as form of protection against continued harassment (Finkelhor, Ormrod, Turner, et al., 2009).

4.2.1.2 Family

Family level influence can also impact poly-victimisation risk. Living in a chaotic family environment has been cited as a pathway to poly-victimisation (Finkelhor, Ormrod, Turner, et al., 2009), with specific risks including parental alcohol and drug abuse, unemployment and poor parental social control (Ellonen & Salmi, 2011; Nurius et al., 2009; Stevens, Ruggiero, Kilpatrick, Resnick, & Saunders, 2005). In accordance with Finkelhor and Asdigian's (1996) routine activities theory, adolescents who lack a stable family environment are more likely to be driven away from their households, and spend more time in dangerous situations where interpersonal victimisation and community violence risk is greater. Dysfunctional families may also be more likely to direct aggression towards their children, increasing the risk of victimisation in the home (Stevens et al., 2005).

4.2.1.3 Relationships

Relationship level factors include relationships with friends, partners and peers. Poor family relationships and parental rejection have been associated with poly-victimisation (Lila et al., 2008; Romano et al., 2011). Lacking family support has been identified as a further risk factor. 38.7% of poly-victims reported low family support, compared to 8.5% of non-victims (Turner et al., 2016). Poor relations with family may increase the possibly of victimisation in the home. Furthermore, consistent with the VSM, poor family relations may add to poly-victimisation risk by contributing to the development of hostile schemas, ultimately resulting in an individual being perceived as an attractive target. Children who have

poor relations with their family may also crave security and attention, which could make them more vulnerable to exploitation and victimisation by peers and adults outside of the family (Salzinger et al., 2002).

In addition to poorer family relationships, poly-victimised youth report lower levels of social support (Nurius et al., 2009) and poorer friendship quality (Romano et al., 2011). Children of low social status have been found to be at greater risk of peer victimisation (Echols, 2015; Gorman, Schwartz, Nakamoto, & Mayeux, 2011; Hodges et al., 1997; Saarento et al., 2013), however to our knowledge no research regarding peer rated social status and poly-victimisation has been conducted. Findings from the peer victimisation literature have, however, shown that low peer status can signal social vulnerability and elicit negative peer attitudes, which can then incite victimisation (Boivin, Hymel, & Hodges, 2001). Additionally, rejected children are likely to lack the protective influence of a strong support network (Perry et al., 2001; Schwartz et al., 1993), which may further increase their vulnerability.

4.2.1.4   Community

Factors related to a child's neighbourhood and school environment can further elevate poly-victimisation risk. Residing in disorganised communities, where crime is high, social ties are weak and community supervision lacking, has been related to greater exposure to violence (Lauritsen, 2003) and multiple victimisation (Turner, Shattuck, Hamby, & Finkelhor, 2013). In such environments social control over behaviour is reduced, meaning children may be more likely to encounter potential perpetrators or witness violent incidences. Finkelhor and Asdigian's (1996) routine activities theory would suggest that living in disordered communities would result in children spending more time in contact with potential perpetrators and in dangerous situations, leading to an increased risk of victimisation.

Furthermore, the pathways to poly-victimisation model (Finkelhor, Ormrod, Turner, et al., 2009) suggests mechanisms by which community factors can influence family level variables in order to foster poly-victimisation vulnerability. The model proposes the dangers and stress associated with living in disorganised communities may increase family stress and strain family relationships, and thereby increase the risk of victimisation in the home. Disorganised communities may also lower the inhibitions against abusive behaviour within the family (Coulton et al., 1999). Moreover, the model suggests that children from dangerous communities are likely to attend schools populated with other children from this community, which may increase the risk of peer victimisation (Finkelhor, Ormrod, Turner, et al., 2009).

The school environment is a further aspect of a child's broader environment. Findings indicate that commitment to school reduces the risk for assault victimisation (Lauritsen, Laub, & Sampson, 1992) and can serve as a protective factor and moderate the effects of multiple victimisations (Nurius et al., 2009). Daigle, Beaver, and Turner (2010) also found that high-risk individuals who reported a greater commitment to school were less likely to be victimised. Moreover, lacking commitment to school has also been associated with a greater risk for antisocial behaviour (Monahan, Oesterle, & Hawkins, 2010) and involvement with delinquent peers (Herrenkohl et al., 2003), which are known risk factors for poly-victimisation (Ellonen & Salmi, 2011; Lila et al., 2008; Nurius et al., 2009; Turner et al., 2016). This suggests that lower school commitment may increase the risk of poly-victimisation by placing children in the path of dangerous peers and environments where victimisation is more likely, providing support for Finkelhor and Asdigan's routine activities theory (1994).

4.2.2 The present study

The above findings draw on poly-victimisation research conducted in U.S., Western European and Asian samples, along with research into singular forms of victimisation. To our knowledge, however, there is no research available on poly-victimisation prevalence, nor an understanding of associated risks associated, in Poland. Prior child victimisation research conducted in Poland has focused on singular forms of victimisation, including bullying and witnessing violence (e.g. Hornowska, 2004; Komendant-Brodowska, Giza-Poleszczuk, & Baczko-Dombi, 2011; Mazur & Małkowska, 2003; Österman et al., 1994), but failed to investigate cumulative experiences. This literature has indicated victimisation is above the European average in Poland (Currie et al., 2012; Gilbert et al., 2009; Tsitsika et al., 2015) and therefore it would be of interest to examine whether victimisation across multiple contexts is equally high. Studying the Polish context may also be particularly insightful as findings could be generalised to other Eastern European countries (Doroszewicz & Forbes, 2008).

Additionally, prior poly-victimisation research has examined a relatively limited set of risk factors, and consequently numerous variables linked to individual forms of victimisation (e.g., peer social preference, disruptive and withdrawn behavioural problems, school commitment, poor family management) have yet to be explored with regard to poly-victimisation risk. Moreover, the ecological approach adopted in this study will allow variables from different contexts of a child's environment to be examined, and enable a more holistic understanding of the factors that can contribute to poly-victimisation. This knowledge could allow those who present these characteristics to be more easily identified as targets for intervention programmes.

Past studies have also primarily relied on self-reports of risk factors, which could result in a biased perspective, as adolescents may not be able to give reliable information regarding aspects of their own behaviour or cognitive state. The present study will aim to address this limitation by examining potential predictors of poly-victimisation among Polish adolescents drawing on self, teacher and peer reports.

This study, therefore, aims to explore poly-victimisation experiences in a sample of Polish adolescents. The adapted poly-victimisation measure used in the current study focuses primarily on peer-to-peer victimisations, along with conventional crime, maltreatment by caregivers and witnessing of violence. Secondly, this research aims to examine potential risk factors which can predict poly-victimisation across individual, relationship, family and community contexts. This research provides an original contribution to knowledge by examining poly-victimisation in a previously unstudied culture, using novel methods by collecting self, teacher and peer reports. Furthermore, this study will advance understanding by providing new insights into the range of risks associated with poly-victimisation and investigate specific factors that have not yet been explored in relation to poly-victimisation. This knowledge will allow a greater understanding of cultural differences in poly-victimisation experiences and assist in the identification of those most clearly at risk of becoming poly-victims.

The research questions for the current study are as follows:

1. What is the prevalence of poly-victimisation, and of different victimisation types, in a sample of Polish adolescents?

2. How do risks differ based on level of victimisation exposure?

3. How are risk factors from different levels of an adolescent's ecology associated with poly-victimisation?

4.2.2.1 Hypotheses

The first two research questions are exploratory and therefore no specific hypotheses have been made. With regard to the third research question, it is hypothesised that:

H1) Risk factors from all ecological levels will be positively correlated with poly-victimisation, as previous research has shown a range of individual, relationship, family and community factors are associated with poly-victimisation (e.g., Finkelhor, Ormrod, Turner, et al., 2009; Lila et al., 2008; Romano et al., 2011; Turner et al., 2013).

H2) Poly-victimised youth will present significantly greater levels of all risks compared to non-victims and less victimised adolescents.

H3) All risk factors will predict an increased risk of poly-victimisation.

4.3 Method

4.3.1 Design

This study adopts a cross-sectional survey to examine poly-victimisation prevalence and the relationships between risk factors and poly-victimisation. Participants completed a range of self-report questionnaires and carried out a peer nomination task. In addition, teachers completed reports of participant behavioural problems.

4.3.2 Participants

Participants were 454 adolescents (281 female and 173 male) recruited via an opportunity sample from 22 schools in the Opole region of Poland. The mean age of the sample was 16.56 ($SD = 1.44$), with participants ranging from 13-19 years of age. All participating schools were public, of which two were primary schools, eight were lower secondary schools, eight were general upper secondary schools, and four

were vocational upper secondary schools. 100% of participants recorded their ethnicity as White Polish. For further participant details see Chapter 3, Section 3.4.1.

4.3.3 Measures

Table 3 provides a summary of the measures used in the present study. Self-report of past-year victimisation was assessed using the JVQ (Finkelhor, Hamby, et al., 2011). Participants also completed reports of community disorganisation, school commitment, poor family management and family conflict. A peer nomination task, where participants rated classmates whom they 'most liked' and 'least liked' was also carried out to provide a measure of social preference. Lastly, teachers completed a report of participants withdrawn and disruptive behavioural problems (Hightower et al., 1986) as an objective measure of individual risk (all measures described in detail in Chapter 3, Section 3.5).

Table 3

Summary of Measures Used in Study 1

Construct	Measure	No. of items in subscale	Response options	Cronbach's alpha
Victimisation	JVQ (Finkelhor, Hamby, et al., 2011)	25	Yes/No	.84
Individual risks				
Disruptive behavioural problems	Teacher-Child Rating Scale (Hightower et	3	5 (*not a problem* to *very serious*	.85

Withdrawn behavioural problems	al., 1986)	3	*problem)*	.73
Relationship risks				
Peer social preference	Peer nomination procedure (Coie & Dodge, 1983)	2	N/A	N/A
Family risks				
Poor family management	CTCYS (Arthur et al., 2002)	7	4 (*definitely not true* to *definitely true*)	.76
Family conflict	CTCYS (Arthur et al., 2002)	4	4 (*definitely not true* to *definitely true*)	.76
Community risks				
Community disorganisation	CTCYS (Arthur et al., 2002)	6	4 (*definitely not true* to *definitely true*)	.72
Low commitment to school	CTCYS (Arthur et al., 2002)	6	5	.75

4.3.4 Procedure

All questionnaires were administered in class groups of between 12-27 participants, in a single 40-minute session. The order in which participants completed the measures was counterbalanced. Upon completion of the questionnaire participants were verbally debriefed by a member of the research team and provided with information regarding support services and a school worry box, where they could anonymously submit any concerns or feelings of distress.

4.3.5   Statistical analysis

4.3.5.1   Data cleaning

Before any analysis was carried out the data was explored for missing values. If less than 5% of data points are missing at random within a large data set then this is said to pose relatively few problems for analysis and missing values can be dealt with via most procedures (Tabachnick & Fidell, 2006). 22 participants were excluded as either more than 5% of responses were missing or the same choice had been selected throughout the whole questionnaire. Where less than 5% of data was missing mean substitution was used.

4.3.5.2   Testing for normality

Kolmogorov-Smirnov test (K-S test) for most variables was significant, indicating a deviation from normality. This test, however, is sensitive to the size of the sample and with a large sample even small deviations from normality will be reported as significant (Field, 2013). Therefore, with larger samples it is recommended to visually examine the shape of the distribution rather than using formal inference tests (Tabachnick & Fidell, 2006). Hence in addition to this test, normality of data was explored visually by plotting histrograms and Q-Q plots. From this, three variables were flagged as violating normality. To deal with the problem of skewed data, an outlier in victimisation total was adjusted to one value higher than the next most extreme score in order to lessen the impact of this outliner and meet assumptions of normal distribution, as recommended by Tabachnick and Fidell (2006). For teacher rated disruptive and withdrawn behavioural problems Log10 transformations were computed. Where homogeneity of variance was violated alternative tests were used.

4.3.5.3 Analyses

The following tests were used to analyse the data.

i) Descriptive statistics were calculated to examine the prevalence rates of individual victimisation types and poly-victimisation.

ii) A chi-squared test and one-way ANOVA were performed to examine age and gender differences between groups of differing victimisation exposure.

iii) Pearson's correlations were calculated to explore the relationships between poly-victimisation and risk factors.

iv) A one-way ANOVA and subsequent post hoc comparisons were performed to examine mean differences in risk factors between groups of different victimisation exposure.

v) Multinomial logistic regression was conducted to investigate if risk factors could predict victimisation group membership, using the poly-victim group as the reference category.

4.4 Results

In the current sample, it was common for adolescents to have experienced multiple forms of victimisations in the past year. The mean number of different victimisations was 4.58 ($SD = 4.23$), with a range of 0-19 different victimisation types. 15.9% ($n = 72$) of the sample reported no past-year victimisations. Of those who had been victimised (84.1%, $n = 382$), the vast majority (83%) experienced at least one additional form of victimisation. 48.5% ($n = 220$) were grouped as less victimised, reporting between 1-5 different victimisations. Poly-victims (≥ 6 victimisations) comprised 35.6% ($n = 162$) of the sample. As per the criteria recommended by (Finkelhor, Ormrod, et al., 2005a) for the Screener Sum Version of

the JVQ the poly-victimisation threshold was set as the number of victimisations above the mean +1. Therefore six or more different kinds of victimisations was used as the threshold to define poly-victimisation. This resulted in a three-level grouping based on victimisation exposure: non-victims, less victimised (1-5 total kinds of victimisations) and poly-victims ($\geq$6 total kinds of victimisations). Table 4 summarises the demographic variables for the overall sample and the three victimisation groups.

Table 4

Demographic Summary for Victimisation Groups in Study 1

		Victimisation Group		
	Overall (%) (N = 454)	Non-victimised (%) (*n* = 72)	Less victimised (%) (*n* = 220)	Poly-victimised (%) (*n* = 162)
Age (years)				
M	16.58	16.85	16.67	16.33
SD	1.38	1.35	1.26	1.53
Gender				
Female	281	39	139	104
Male	173	33	81	59
Family Structure				

Two Biological/ Adoptive Parents	79.5	79.6	80.4	72.1
One Parent & One Step-parent	9.5	10.2	8.8	11.0
Single Parent	9.8	8.9	9.3	12.0
Other Caregiver	1.2	1.3	1.5	4.9
Parental Education				
Lower Secondary	3.2	-	1.6	6.1
Vocational	27.5	17.7	25.0	31.5
Secondary General	36.7	36.1	39.9	27.5
Higher Education	30.2	41.3	30.3	30.8
Not Sure	2.4	4.9	3.2	4.1

An independent t-test was conducted to investigate gender differences between victimisation groups. There was no association between gender and victimisation group, $\chi^2(2, N = 454) = 2.17$, $p = .34$. A one-way ANOVA revealed there was a significant difference in age between victimisation groups, Welch $F(2, 189.94) = 4.04$, $p = .02$. Post-hoc analysis showed that poly-victims ($M = 16.33$, $SD = 1.52$) were significantly younger than non-victims ($M = 16.85$, $SD = 1.35$). There were no significant age differences between non-victims and less victimised, or less victimised and poly-victim groups.

The most frequent type of victimisations suffered by adolescents was peer and sibling victimisation (68.5%), followed by conventional crime (57.0%) and witnessing violence and indirect victimisation (48.0%). Electronic victimisation was reported by 29.1% of the sample and maltreatment by caregivers by 24.9%. Subscales of victimisations concerning physical and non-physical victimisations were also created. Overall, non-physical victimisations were more common, with

81.1% of the sample reporting a non-physical victimisation, compared to 52.2% reporting a physical victimisation.

The most common individual victimisation type reported overall was social discrediting by peers (experienced by 45.8% of the total sample). The least common types was dating violence (3.7%). See Figure 1. for frequency of all victimisation types. Looking within victimisation groups, for 'less victimised' adolescents the most common victimisation type was again social discrediting by peers (35.5% of the less victimised group reported this victimisation type), and the least common form was a bias attack (0.5%). In the poly-victimised group the most common form was also social discrediting by peers (80.2%) and the least common was dating violence (9.3%). See Figure 2 for a frequency of victimisation types within the less victimised and poly-victimised groups.
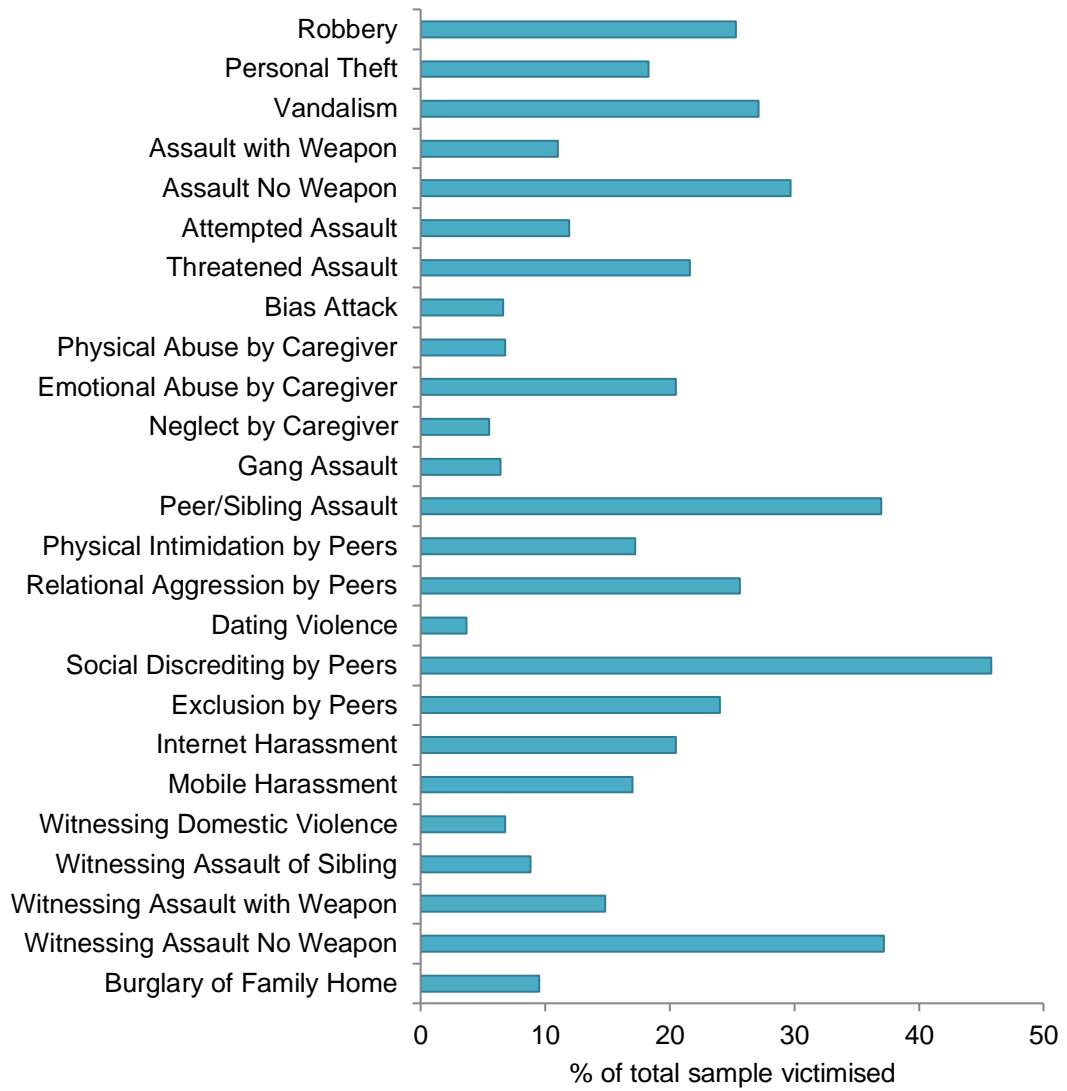
Figure 1. Bar chart showing the frequency in the past year of each victimisation type within overall sample
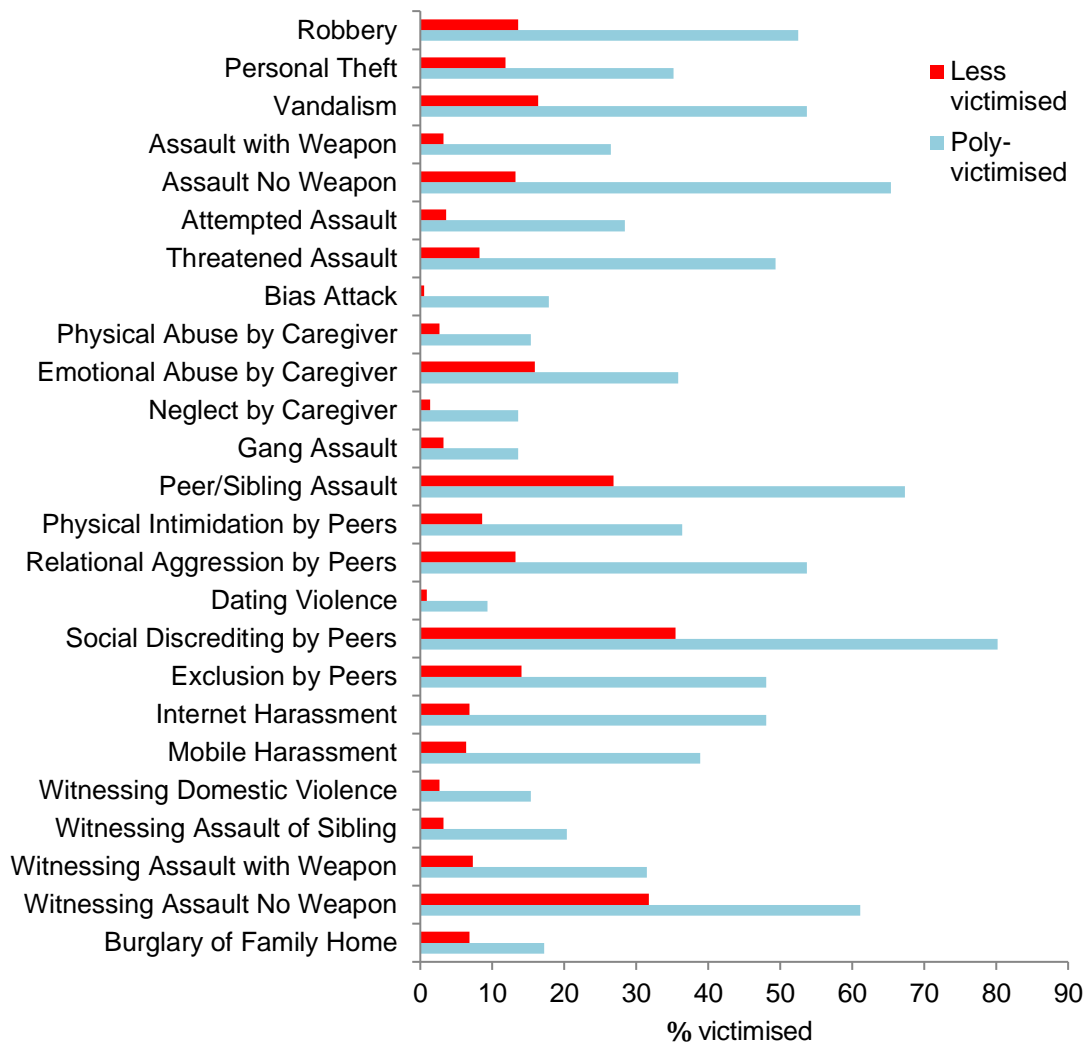
Figure 2. Bar chart comparing the frequency of past-year victimisations within less victimised and poly-victim groups.

As can be noted from Figure 5, victimisations of all types were more common in the poly-victim group compared to the less victimised group. For certain victimisation types reports were substantially greater in the poly-victim group compared to less victimised. For example, 0.5% of those in the less victimised group reported a bias attack, compared to 17.9% of poly-victims. This indicates that there are certain victimisations that are rare to experience if not a poly-victim.

In the poly-victim group, the mean number of JVQ modules experienced was 3.87 (*SD* = 0.86) (out of a possible total of five). All poly-victims experienced victimisations across two or more modules, with 95% experiencing three or more,

67% experiencing four or more, and 25% experiencing victimisations across all five JVQ modules.

4.4.1 *Risk factors for poly-victimisation*

All investigated risk factors significantly correlated with the total kinds of past year victimisations (Table 5). There were significant moderate positive correlations were observed between victimisation total and community disorganisation ($r = .49$, $p < .001$), poor family management ($r = .50$, $p < .001$), and teacher reported withdrawn behavioural problems ($r = .42$, $p < .001$). Along with significant weak positive correlations between victimisation total and low school commitment ($r = .26$, $p < .001$), family conflict ($r = .39$, $p < .001$) and teacher reported disruptive behavioural problems ($r = .29$, $p < .001$). Finally, there was a significant weak negative correlation between victimisation total and social preference ($r = -.26$, $p < .001$).

Table 5

Pearson's Correlation Matrix of Total Kinds of Victimisation and Risk Factors

	1	2	3	4	5	6	7	8
1. Victimisation Total	-							
2. Community Disorganisation	.49***	-						
3. Low school Commitment	.26***	.21***	-					
4. Family Conflict	.39***	.29***	.21***	-				
5. Poor family Management	.50***	.37***	.34***	.41***	-			
6. Social Preference	-.26***	-.07	-.08	-.16**	-.12**	-		
7. Teacher Disruptive	.29***	.18***	.03	.09	.14**	-.04	-	
8. Teacher Withdrawn	.42***	.11*	.13**	.26***	.23***	-.24***	.11*	-

Note. *p < .05, **p < .01, ***p < .001.

To confirm that variables were related to the full range of victimisation types investigated, Pearson's correlations were calculated between risk factors and JVQ modules (see Table 6). Results show that all risk factors are significantly related to victimisations across multiple domains. For example, peer social preference was most strongly correlated with peer/sibling victimisations, however, was also significantly negatively correlated with conventional crime, maltreatment by caregivers, electronic victimisation and witnessing victimisation.

Table 6

Pearson's Correlation Matrix of Risk Factors and Victimisation Modules

	Crime	Maltreat-ment	Peer/sibling	Electronic	Witnessing
Community Disorganisation	.42***	.31***	.36***	.31***	.35***
School Commitment	.26***	.14**	.20***	.14**	.14**
Family Conflict	.28***	.43***	.33***	.14**	.30***
Family Management	.39***	.37***	.40***	.34***	.34***
Social Preference	-.20***	-.17***	-.25***	-.15**	-.14**
Teacher Disruptive	.29***	.10*	.20***	.22***	.21***
Teacher Withdrawn	.33***	.31***	.36***	.21***	.31***

Note. *$p < .05$, **$p < .01$, ***$p < .001$.

For the next step of the analysis a series of one-way ANOVAs were performed to examine differences in risk factors based on victimisation groups. Post-hoc comparisons were tested at the adjusted alpha level of $p < .007$ after using a Bonferroni correction procedure. Results revealed that for all risk factors the poly-victimisation group exhibited significantly greater levels of risk, compared to both the non-victimised and less victimised groups (see Table 7). Additionally, for community disorganisation, low commitment to school, family conflict, and poor family management there was also a significant difference between non-victims and less victimised youth, with less victimised adolescents presenting with greater risks. When examining the effect sizes it can be seen that there was a large difference between groups based on community disorganisation ($\eta^2 = .18$), family conflict ($\eta^2 = .14$), and poor family management ($\eta^2 = .21$). There was a medium difference between groups for teacher rated withdrawn behaviour ($\eta^2 = .13$), low commitment to school ($\eta^2 = .06$), social preference ($\eta^2 = .06$), and teacher rated disruptive behaviour ($\eta^2 = .07$)

Table 7

One-way ANOVA and Post-hoc Tests of Mean Differences in Risk Factors by Victimisation Group

	Victimisation Group				
	Non-victim (*n* = 72)	Less Victimised (*n* = 220)	Poly-victimised (*n* = 162)		
Risk Factors	*M (SD)*	*M (SD)*	*M (SD)*	*F* value	η_p^2
Community					
Community Disorganisation+ a, b, c	1.54 (0.38)	1.72 (0.45)	2.11 (0.51)	49.20***	.18
Low Commitment to School a, b, c	2.71 (0.78)	2.96 (0.66)	3.26 (0.70)	18.17***	.06
Relationships					
Social Preference^ b, c	0.51 (1.67)	0.20 (1.48)	-0.51 (1.63)	14.00***	.06
Family					
Family Conflict+ a, b, c	1.34 (0.55)	1.62 (0.63)	2.10 (0.64)	36.38***	.14
Poor Family Management a, b, c	1.51 (0.42)	1.74 (0.47)	2.19 (0.44)	62.09***	.21
Individual					
Teacher rated disruptive+ b, c	0.07 (0.11)	0.09 (0.14)	0.17 (0.15)	17.46***	.07
Teacher rated withdrawn+ b, c	0.07 (0.12)	0.13 (0.13)	0.17 (0.17)	27.44***	.13

Note. η_p^2 = partial eta squared. [a] significant difference between non and less victimised groups. [b] significant difference between non and poly-victimised groups. [c] significant difference between less and poly-victimised groups. [+] homogeneity of variance violated and therefore Welch *F* statistic and Games-Howell post-hoc tests used. Hochberg post-hoc tests used in all other cases. [^] standardised mean scores.

* *p* <.05, ** *p* < .01, *** *p* < .001.

The next stage of analysis explored whether risk factors were able to predict poly-victimisation group membership. A multinomial logistic regression was conducted to predict victimisation group using variables of community, relationship, family and individual risk as predictors. All seven risk factors were entered as a group predicting the three victimisation levels, using the poly-victim group as the reference category. A test of the final model against an intercept only model was significant, indicating that the predictors as a set reliably distinguished between non-victims, less victimised and poly-victims, $\chi^2(14) = 232.93$, $p < .001$.

As seen in Table 8, increases in community disorganisation, family conflict, poor family management, withdrawn behavioural problems, and disruptive behavioural problems were all associated with greater odds of being a poly-victim compared to non-victim or less victimised. Low school commitment was also associated with a greater risk of becoming a poly-victim compared to non-victim, but was not a significant predictor of less victimised vs. poly-victim group membership. Odds ratios, when comparing poly-victims to non-victims, ranged from 7.02 (95% CI [2.94, 15.89]) for community disorganisation to 1.83 (95% CI [1.02, 2.99]) for low commitment to school. This means that for every one-unit increase in risk factors the odds of experiencing poly-victimisation, compared to no victimisation, were between 7.02 and 1.83 times greater, depending on the individual risk factor.

Finally, as social preference score increased (i.e., greater peer preference), the odds of experiencing poly-victimisation, compared to no or less victimisations, decreased. Every one-unit increase in social preference rating resulted in a 28% decreased risk of being a poly-victim compared to non-victim (OR = 0.72, 95% CI [0.56, 0.89]), and 19% decrease for poly-victimised compared to less victimised (OR = 0.81, 95% CI [0.69, 0.94]). Effect sizes for significant predictors ranged from small to medium.

Table 8

Multinomial Logistic Regression for Predicting Membership of Victimisation Group by Risk Factors, With All Seven Risk Factors Entered as a Group

Predictor	*b (SE)*	Wald	OR	95% CI for OR
Non-victim vs. Poly-victim				
Intercept	-10.29 (1.21)	72.05***		
Community disorganisation	1.95 (0.43)	20.38***	7.02	[2.94, 15.89]
Low school commitment	0.60 (0.28)	4.74*	1.83	[1.02, 2.99]
Family conflict	0.95 (0.31)	9.22**	2.59	[1.43, 4.89]
Poor family management	1.82 (0.42)	18.56***	6.18	[2.84, 14.75]
Social preference	-0.33 (0.12)	7.97**	0.72	[0.56, 0.89]
Disruptive	4.29 (1.31)	10.79**	2.16	[1.21, 3.88]
Withdrawn	3.61 (1.33)	7.43**	2.51	[1.25, 5.02]
Less victimised vs. Poly-victim				
Intercept	-7.24 (0.91)	63.98***		
Community disorganisation	1.22 (0.27)	19.93***	3.39	[1.97, 5.72]
Low school commitment	-0.30 (0.20)	2.22	1.35	[0.88, 1.89]
Family conflict	-0.39 (0.19)	4.26*	1.49	[1.03, 2.16]
Poor family management	-1.08 (0.28)	14.59***	2.81	[1.73, 4.97]
Social preference	0.21 (0.08)	6.82**	0.81	[0.69, 0.94]
Disruptive	-3.08 (0.85)	13.08***	1.61	[1.14, 2.27]
Withdrawn	-3.90 (0.86)	20.41***	2.74	[1.76, 4.26]

Note. *b* = unstandardised beta coefficient; OR = odds ratio; CI = confidence interval. R^2 = .40 (Cox & Snell), .46 (Nagelkerke). Model $\chi^2(14)$ = 232.93, *p* < .001.
* *p* < .05, ** *p* < .01, *** *p* < .001

4.5   Discussion

This study extends prior research by assessing the prevalence and predictors of poly-victimisation among adolescents in Poland. Findings indicate that victimisation and poly-victimisation are common and are consistent with prior

research suggesting that risk factors from different ecological levels of an adolescent's environment affect poly-victimisation vulnerability (Ellonen & Salmi, 2011; Lila et al., 2008; Nurius et al., 2009). We extend this literature by establishing teacher reported behavioural problems, peer rated social status and low commitment to school are predictive of poly-victimisation, and confirm the importance of family and community risks.

With regard to prevalence, 84% reported experiencing at least one type of victimisation over the previous year and 35% had experienced high levels of different victimisations, and were classed as poly-victims. Although direct comparisons between victimisation rates in this study and those in previous studies are limited by methodological differences (e.g., types of victimisations measured, threshold of poly-victimisation, sample age range), the prevalence of suffering at least one victimisation is generally consistent with past studies which have found rates ranging from 62% (Romano et al., 2011) to 88% (Soler et al., 2012).

The proportion of poly-victimised adolescents in our sample, however, appears to be considerably higher than the majority of prior research from the U.S., Western Europe and Asia (Cyr et al., 2013; Dong et al., 2013; Finkelhor et al., 2007b; Lätsch et al., 2017). Our findings are, however, roughly comparable with a Spanish study, which found 31.7% of adolescents were poly-victimised (Soler et al., 2012), and a study in Chile, reporting 36% of the sample as poly-victims (Pinto-Cortez et al., 2017). This may be surprising given Spain and Poland are developed countries. However, Lätsch et al. (2017) notes that a countries socioeconomic development and equality does not necessarily relate to the extent of poly-victimisation among adolescents in a given culture (Lätsch et al., 2017). Additionally, a previous study conducted in Russia found high rates of lifetime poly-victimisation (Bogolyubova et al., 2015), indicating poly-victimisation may be more

common in Eastern European cultures. Some possible reasons for this could be connected to the period of economic and political instability which followed the collapse of the Soviet Union. During this period many social problems went unrecognised or underestimated (Sajkowska, 2010). As a consequence, Brunell (2005) highlights the slow and inadequate development of national provisions and local services to address childhood victimisations in Poland. This lack of victimisation prevention efforts would likely contribute to the higher prevalence of poly-victimisation found in the current study.

In addition, Doroszewicz and Forbes (2008) claim Poland has a culture of violence, which may be another contributor to the level of reported poly-victimisation in our sample. Prior findings from Poland appear to support this and suggest it may be more acceptable to use violence and aggression in this culture. For example, compared to other European countries Polish adults have been shown as more likely to endorse the use of corporal punishment (Sajkowska, 2010) and Polish children had a higher level of aggression acceptance, compared to U.S. and Finnish samples (Österman et al., 1994). Moreover, prior research has revealed high bullying incidences in Polish adolescents (Currie et al., 2012; Komendant-Brodowska et al., 2011; Tsitsika et al., 2015) and high rates of child maltreatment (Gilbert et al., 2009).

Further reasons could be connected to the Polish education system, which differs from countries such as the U.S., where the majority of poly-victimisation research has previously been conducted. The Polish education system has more points of transitions compared to Western countries. Adolescents enter a lower secondary school at 12/13 years of age, for three years. After which, they enter vocational training or continue general education, lasting between two and four years. At age 18 years students can then chose to enter post-secondary education prior to University level education. Finkelhor, Ormrod, and Turner (2009) found

periods of transitions between schools, in a U.S. sample, created a particular risk for poly-victimisation onset, findings peaks of poly-victimisation at these transitions. Therefore, the greater number of transitions in the Polish secondary education system may contribute to greater levels of poly-victimisation. Furthermore, in Polish schools, children are assigned to one class unit and share all lessons with the same students for duration of their time at each school. This structure may increase the risk of long-term victimisation of students with low social preference (Echols, 2015) and bring about further victimisations, outside of the peer victimisation domain, due to a lack of a protective social support network.

Current findings did not reveal any gender differences in relation to poly-victimisation. Prior evidence has also been mixed with some past studies also failing to find gender differences (Lätsch et al., 2017; Romano et al., 2011), whilst others have indicated that boys are more likely become poly-victims (Finkelhor et al., 2007a) and others that girls are at greatest risk (Ellonen & Salmi, 2011). These differences may, however, be a function of methodological and sample variations. In the current study, the sexual victimisation subscale was excluded. Evidence indicates the girls are significantly more likely to experience sexual victimisation than boys (Finkelhor, Ormrod, & Turner, 2009b). Not measuring this could therefore have had an impact on poly-victimisation rates in girls and should be taken into consideration when considering the impact of gender on poly-victimisation risk in this sample.

Current findings did reveal that poly-victims were more likely to be younger than non-victims. This is in line with previous research which has found that younger adolescents are at greater risk of becoming poly-victims (Cyr et al., 2013; Dong et al., 2013). Younger adolescents may be more vulnerable to victimisations because typically perpetrators are of the same-age or older (Olweus, 1991), and therefore younger adolescents will encounter a greater number of potential

perpetrators. In addition, younger adolescents are less likely to have developed physical, social or cognitive skills that can be used to protect themselves from victimisation and so may be more vulnerable generally (Finkelhor, 1995). However, the differences in the current measure of poly-victimisation (excluding sexual victimisation) and measures used in other poly-victimisation research may again have an impact on these findings. Finkelhor, Ormrod and Turner (2009b) showed that in girls, prevalence of sexual victimisation sharply increases between the ages of 13-17 years. Therefore by excluding a type of victimisation that is more common in older age groups the age distribution of poly-victimisation in the current study may be skewed toward younger adolescents.

4.5.1 *Risk factors of poly-victimisation*

With regard to risk factors of poly-victimisation, results offered support for our hypotheses. At the individual level, being rated by teachers as having problematic disruptive or withdrawn behavioural problems created greater risk for poly-victimisation. Additionally, poly-victims were rated as having significantly greater behavioural problems than non-victims and those with fewer victimisations. These findings are consistent with the peer victimisation literature which has found that victims typically fall into one of two categories: passive or aggressive (Olweus, 1978; Schwartz et al., 1993). The current study has extended these findings by showing that passive and aggressive traits are related to poly-victimisation, and victimisations across multiple domains, not only peer incidences. The revised lifestyle-routine activities framework would theorise responses such as aggression, frustration, crying or submission are congruent with the desires of perpetrators and thereby make them a target for future harassment and ensure continued victimisation across multiple contexts (Finkelhor & Asdigian, 1996; van Reemst et al., 2014). Moreover, these behavioural problems may be an indication of dysfunctional

regulation capacities, which can function to reduce an adolescent's ability to anticipate dangerous situations or protect themselves, and consequently compromise a victims capacity to deter harassment (Finkelhor, Ormrod, Turner, et al., 2009).

At the family level, poor family management and family conflict were found to be predictive of poly-victimisation. This is in line with previous research showing that problematic family environments create poly-victimisation risk (Lila et al., 2008; Romano et al., 2011). The current findings have expanded on this, revealing further specific characteristics of the home environment which create greater poly-victimisation risk. These variables were most strongly correlated with the maltreatment by caregivers module of the JVQ, but were also moderately correlated with all other victimisation categories. This shows family levels variables are associated with victimisations outside of the home context. Adolescents from poorly managed families are likely to experience inadequate supervision, creating the environmental conditions that place a child in contact with more dangerous situations and individuals (Finkelhor & Asdigian, 1996). Additionally, Finkelhor et al. (2009) suggested that family conflict can result in children learning maladaptive conflict resolution strategies and aggressive tendencies. This may ultimately lead to ineffective responses to victimisation that can make children an attractive target to perpetrators.

Along with family factors, relationships with peers were also found to be predictive of poly-victimisation, and poly-victims were rated by their peers as having lower social status compared to non-victims and less victimised adolescents. There was, however, no significant difference in social preference between non- and less victimised groups, indicating only the most highly victimised adolescents suffer peer rejection. These results are consistent with findings from the peer victimisation literature (Hodges et al., 1997; Saarento et al., 2013) and extend this knowledge by

demonstrating that low peer social preference can signal broader victim vulnerability and act as a risk factor for poly-victimisation, not only peer victimisation. This is reinforced by our findings showing that social preference negatively correlated with all JVQ modules, not only peer/sibling victimisation. Characteristics that make adolescents vulnerable to low peer preference (e.g., poor social skills, behavioural problems) likely also increase their target congruence and thereby attract a broad range of perpetrators and victimisations (Finkelhor & Asdigian, 1996). Additionally, low status adolescents may lack a strong support network, which would typically provide added protection from perpetrators, leaving them more vulnerable to victimisations at school (Perry et al., 2001; Schwartz et al., 1993). Furthermore, this lack of social protection could increase the risk of victimisations in the community and home. Unpopular adolescents are more likely to spend time alone, leaving them more exposed to community violence. They are also prone to spend more time at home, where they are vulnerable to intrafamily victimisation, as they may have a less active social life than their more popular counterparts.

Current findings also demonstrate that residing in a disorganised community is predictive of poly-victimisation, and that poly-victims rated their communities as significantly more disorganised than other adolescents. This is in line with previous findings revealing that poly-victimisation and exposure to violence is greater within communities with high crimes rates and weak social control (Lauritsen, 2003; Turner et al., 2016, 2013). Findings are also supported by Finkelhor et al.'s (2009) model positing that dangerous communities can be a pathway to poly-victimisation. Through living in a disorganised community residents may develop a higher tolerance to violence, and consequently family members and peers may become more aggressive, increasing contact with potential perpetrators (Coulton et al., 1999). Accordingly, disorganised communities can be a pathway to poly-victimisation by

exposing adolescents to dangerous contexts and perpetrators in the community itself, as well as in the home and school (Finkelhor & Asdigian, 1996). Our findings confirmed that community disorganisation was associated with peer and sibling victimisations, maltreatment by caregivers and electronic victimisations, adding support to this explanation.

Finally, low commitment to school contributed to greater poly-victimisation risk, and poly-victims were shown to have significantly lower commitment than their peers. This advances prior knowledge by indicating that adolescents' relationships with their school environment can increase victimisation vulnerability across multiple contexts. Lacking commitment to school can result in adolescents spending more time away from safe environments and engaging with delinquent peers (Herrenkohl et al., 2003), thereby creating the environmental conditions that can increase victimisation vulnerability (Finkelhor & Asdigian, 1996). Moreover, adolescents lacking school connectedness may miss out on the positive influence of nurturing and supportive staff who can aid the development of social competencies (Biglan et al., 2012), and thereby help to reduce poly-victimisation vulnerability.

4.5.2   *Strengths, limitations and future recommendations*

The focus of this research on Polish adolescents extends findings from U.S. and Western European samples and provides an understanding of poly-victimisation experiences during adolescence in a different culture. An additional strength is the inclusion of peer nominations and teacher reports, thereby ensuring a more objective picture of adolescents' characteristics and advancing the poly-victimisation field by being the first to utilise sociometric tasks. Finally, this study assessed a range of risk factors from different ecological levels and multiple forms of victimisations, rather than focusing on a single type. This can allow a more holistic understanding of vulnerability and can assist in the design of more comprehensive prevention efforts,

which target multiple levels of an adolescents' environment and multiple victimisation categories.

This study also has several limitations that should be taken into account when interpreting findings. Certain victimisation types that have typically been included in past poly-victimisation research (i.e., sexual victimisation) were excluded from the current measure of poly-victimisation, which concentrated mostly on peer-to-peer forms of victimisation. Consequently, we have not been able to examine complete victimisation histories, which presents some challenges when comparing prevalence findings with prior research. In addition, this study did not gather information on the sequencing or frequency of victimisations. It could be, for example, that initial victimisations of a particular type are more influential and increase the risk for poly-victimisation. Moreover, as the present study was cross-sectional the direction of causation among variables cannot be determined. Given the multiple pathways to and from victimisation, investigated risk factors may be both precursors to, as well as outcomes of, poly-victimisation. To explore this issue of causality, and provide a more comprehensive understanding of the nature of the relationship between these variables and poly-victimisation, a longitudinal exploration is needed.

Although this study has specified factors which are associated with poly-victimisation risk, the mechanisms by which these factors create vulnerability warrant further investigation. For example, in order to best address withdrawn and disruptive characteristics, which present findings have shown increase poly-victimisation risk, there is a need to understand how certain adolescents develop these behavioural problems. Social and emotional deficits are often theorised to be behind these behaviours (e.g., Rosen et al., 2009), however further research is needed to establish the nature of these deficits in poly-victims.

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Finally, whilst this study has provided insights into variables which create risk for poly-victimisation, little is known about which factors are associated with poorer outcomes once poly-victimisation onset has occurred. Knowledge of risk factors allow intervention programmes to be targeted towards those most likely to be victimised, and can help to prevent continued victimisation by addressing underlying causes. However, intervention efforts which only address risk and fail to attend to building resilience to victimisation will not be as successful (Hamby et al., 2016). Future research should therefore focus on ways of increasing resilience and improving well-being in poly-victims, in order to maximise the effectiveness of interventions.

4.5.3 Conclusion and implications

This study has extended previous research by studying poly-victimisation in an Eastern European culture and demonstrating associations between poly-victimisation and previously unstudied risk factors. The results highlight how common multiple and poly-victimisation are, as the majority of the sample (70%) had experienced two or more types of different victimisations, and confirms the importance of assessing complete victimisation histories rather than investing a single form of victimisation. Findings highlight that there is a need to expand victimisation services in Eastern Europe and to educate professionals working with children and adolescents on indicators of poly-victimisation vulnerability. Findings also have implications for risk assessment and suggest there would be value in targeting sub-groups who present the identified risk factors, with the hope of reaching vulnerable youth before the onset of poly-victimisation. Assessment for at-risks youths could be done in schools, through approaches such as teacher reports of behaviour and screening by school counsellors, from which support and referrals could be provided. Identification of those at risk, and subsequent prevention or

reduction of victimisation, is of critical importance to minimise the negative impact of poly-victimisation. Findings also imply that there is a need to adopt an ecological approach to prevention that considers factors concerning the adolescent themselves, their relationships with family and peers, and school and community factors. With the aim of achieving positive changes in more than one area of a young person's life.

5 CHAPTER 5: STUDY 2: POLY-VICTIMISATION AND EMOTIONAL WELL-BEING: THE ROLE OF COPING

5.1 Overview

This chapter aims to explore the relationship between poly-victimisation and emotional well-being in a sample of Polish adolescents. This study will also examine how approach (problem-solving and social support seeking) and avoidance (internalising, externalising and distraction) coping strategies may moderate the relationship between poly-victimisation and emotional well-being. This will provide an understanding of whether adaptive styles of coping can act as a source of resilience, and/or if maladaptive styles exacerbate the negative effects of poly-victimisation.

5.2 Introduction

Poly-victimised youth have been shown to exhibit worse outcomes compared to their less or non-victimised counterparts, across a range of psychological and behavioural problems. This includes clinical symptoms of trauma (Finkelhor et al., 2007a, 2007b; Radford et al., 2011; Soler et al., 2012), depression and anxiety (Finkelhor et al., 2007c), and internalising and externalising problems (Ellonen & Salmi, 2011; Lätsch et al., 2017). Prior poly-victimisation research has primarily focused on these measures of psychopathology to the exclusion of other mental health outcomes, such as emotional well-being. Multiple and poly-victims do not necessarily experience the most severe forms of victimisation and, therefore, it is possible that a significant number of these victims will report no signs of psychopathology, but may still experience lowered well-being.

Empirical evidence has supported this possibility. Greenspoon and Saklofske (2001) assessed internalising (stress, depression, anxiety) and externalising (conduct disorder, hyperactivity, aggression) psychopathology in 407 Canadian children aged 8-12 years, along with measures of subjective well-being. Findings showed that children can exhibit low levels of pathology based indicators, but also low levels of emotional well-being. This suggests that well-being and psychopathology are not always negatively related and should be conceptualised as separate constructs (Greenspoon & Saklofske, 2001). Thus, research which solely focuses on pathology-based indicators may not gain a full understanding of the effects of poly-victimisation.

5.2.1   *Emotional well-being*

Emotional well-being is one such mental health construct which has been neglected in the poly-victimisation literature. Huebner and Dew (1996) identified three separate factors of emotional well-being in adolescence: positive affect, negative affect and life satisfaction. Positive affect is defined as the extent to which a person typically feels positive emotions (e.g., joyful, lively), and negative affect refers to negative feelings (e.g., miserable, scared) (Watson, Clark, & Tellegen, 1988). Positive and negative affect are viewed as separate constructs, and therefore individuals can simultaneously experience high positive affect and high negative affect (Watson et al., 1988). Life satisfaction is defined as the cognitive appraisal of the quality of one's life overall (Diener, 1994).

Not only can poor emotional well-being impact upon quality of life and day-to-day functioning (Huebner & Dew, 1996), but evidence also indicates that reduced well-being could be an indicator of future risk for clinical symptomology. For example, a longitudinal study found that non-depressed individuals reporting low life

satisfaction were more likely than those with average or high life satisfaction to become depressed 2-3 years later (Lewinsohn, Redner, & Seeley, 1991). This highlights the importance of identifying and addressing low emotional well-being in young victims before it develops into a more robust clinical disorder.

There have been several studies on individual forms of victimisation and emotional well-being among adolescents, however no research on poly-victimisation. Rigby (2000) found that peer victimisation and low social support contributed to poor well-being. However, emotional well-being was assessed via anxiety, social dysfunction and depression, and therefore positive aspects of emotional well-being were neglected. Furthermore, in adolescent victims of dating violence, victimisation was found to be related to lower levels of life satisfaction (Callahan, Tolman, & Saunders, 2003). Although, again a full range of emotional well-being indicators were not assessed. When investigating both positive and negative aspects of well-being, different types of peer victimisation (verbal, physical, social and cyber) were associated with lower life satisfaction and self-esteem, and higher anxiety and depressive symptoms (Guhn, Schonert-Reichl, Gadermann, Hymel, & Hertzman, 2013). Additionally, Martin and Huebner (2007) found that overt peer victimisation experiences were associated with reduced life satisfaction and positive affect, and greater levels of negative affect. Relational victimisation was unrelated to positive affect, but similarly negatively correlated with life satisfaction and positively correlated with negative affect.

When examining cumulative experiences of relational, physical and cyber peer victimisation, Wigderson and Lynch (2013) found that these were related to lowered well-being, measured via depression, anxiety and self-esteem. Furthermore, cyber victimisation was negatively related to emotional well-being above and beyond traditional peer victimisation. This indicates that experiences of multiple

victimisations have a greater impact on well-being than individuals forms of victimisation (Wigderson & Lynch, 2013), highlighting the need to examine the emotional well-being of poly-victims.

5.2.2 Coping

Although a strong association between poly-victimisation and a range of negative consequences has been consistently reported in prior research, not all poly-victims experience poorer outcomes. The impact of poly-victimisation may therefore depend on an individual's personal resources, which can serve to buffer the effects of stress and trauma (Afifi & Macmillan, 2011; Dumont & Provost, 1999; Grych et al., 2015; Roth & Cohen, 1986). These sources of resilience can help individuals manage adversity, and research has shown that the negative impact of stress and trauma on psychological functioning is lessened for those who possess such resources compared to those who do not. For example, a greater sense of self-worth was found to protect against internalising symptomology in poly-victimised adolescents (Soler et al., 2013).

Coping strategies are one such resource which can help individuals maintain psychosocial adaptation in the face of stress (Roth & Cohen, 1986). As such, coping resources may be particularly pertinent for those who experience chronic victimisation. Researchers have suggested that coping may serve to moderate the effect of a stressor, thereby impacting any associated outcomes (e.g., Machmutow, Perren, Sticca, & Alsaker, 2012; Scarpa, Haden, & Hurley, 2006; Tolan, Guerra, & Montaini-Klovdahl, 1997). However, the moderating effect coping may have can depend upon the specific strategy used. As well as acting as a protective resource, particular coping responses can serve as a vulnerability factor, increasing the likelihood of negative outcomes following victimisation exposure. Theoretical

models of coping (e.g., Lazarus & Folkman, 1984; Roth & Cohen, 1986) distinguish between two basic groups of strategies; those which involve direct attempts to alter the stressor (problem-focused or approach strategies), and those that involve behavioural, cognitive, or emotional activities oriented away from the stressor in order to avoid it (emotion-focused or avoidance strategies).

From a theoretical perspective, strong associations can be expected between the use of specific coping strategies and an individual's functioning following victimisation (Lazarus, 2006). In general, approach or problem-focused coping strategies have been associated with better functioning (Hampel et al., 2008; Yamasaki et al., 2006), whereas avoidance or emotion-focused coping strategies are related to poorer adjustment (Seiffge-Krenke & Klessinger, 2000). However, depending on the situation, both types of coping may be associated with protective or harmful effects (Lazarus & Folkman, 1984; Roth & Cohen, 1986).

Causey and Dubow (1992) specify two types of approach strategies frequently used during adolescence: problem-solving and social support seeking. These strategies require adolescents to cognitively and/or behaviourally confront the stressor in an attempt to change the situation, or get help to deal with it (Fields & Prinz, 1997). These responses are assumed to be more beneficial in general as they allow appropriate action to be taken to prevent continued exposure to the threat and a resolution of the stressor. Additionally, a full acknowledgement of the stress and trauma experienced can result in a more open expression of emotion and help individuals to integrate the traumatic experiences (Kliewer et al., 1998). However, focusing closely on the source of the trauma can lead to increased distress, and when the situation is uncontrollable, approach coping can be non-productive, which could lead to feelings of frustration and anger (Roth & Cohen, 1986).

In contrast, avoidance strategies are thought to be generally maladaptive. Causey and Dubow (1992) identify three types of avoidance strategies, which involve the management of the adolescent's cognitive or emotional reactions to stress (Fields & Prinz, 1997). These strategies are internalising (e.g., getting mad at oneself for doing something wrong to deserve the harassment or abuse), externalising (e.g., dealing with negative emotional reactions by projecting them onto others or objects) and distancing (e.g., ignoring or minimising the stressor). It is thought these responses can interfere with attempts to resolve the stressor and prevent an assimilation of the traumatic experiences (Kliewer et al., 1998; Seiffge-Krenke & Klessinger, 2000). Avoidance strategies can also result in emotional numbness, unwanted intrusions of threatening material, and disruptive avoidance behaviours due to the conscious or unconscious attempt to avoid the stressor (Roth & Cohen, 1986). Fitzpatrick and Boldizar (1993) also cautioned that the use of avoidant coping strategies might result in subsequent emotional and behavioural difficulties caused by a lack of awareness of the connection between psychological symptoms and the threat or trauma.

Conversely, Duncan (1996) suggested that avoidance strategies may enable children to focus their attention on more positive thoughts, helping to facilitate a sense of control over the negative emotions caused by the stressor. Furthermore, avoidance strategies can allow for a more gradual recognition of threat, which can prevent the trauma from becoming overwhelming, and thereby reduce stress and anxiety (Horowitz, 1979).

5.2.2.1 *Coping and victimisation*

Frydenberg and Lewis (2000) suggest that approach coping is more effective than avoidance coping in the prevention of symptoms in adolescent victims. However, research has indicated that victims, and particularly those experiencing

chronic victimisation, are more likely to rely on avoidance coping strategies, due to the uncontrollable nature of their victimisation experiences (Tolan et al., 1997). Adolescents asked about their coping response to being bullied reported they were most likely to use avoidance strategies, such as ignoring the bully (73% of responses) and walking away (70%) (Sharp, 1995). Similarly, Smith, Shu, and Madsen (2001) found the most common response to bullying in 10- to 14-year-olds was ignoring the bully. In addition, avoidance coping was found to be more frequently used by sexually abused adolescents than by those experiencing non-victimisation stressful life events, or no stressful life events (Bal, Van Oost, De Bourdeaudhuij, & Crombez, 2003).

Coping strategy use also appears to differ depending on the frequency or duration of victimisation exposure. Children aged 9-14 who had been bullied for over four weeks reported using less social support coping than those bullied for four weeks or less (Hunter & Boyle, 2004). Similarly, findings from longitudinal research indicate that children who are persistently bullied use significantly less social support than children who are bullied over shorter periods of time (P. K. Smith & Talamelli, 2001). In addition, children who reported being bullied "sometimes or more often this term" used more avoidance coping than children who reported experiencing bullying less frequently ("once or twice this term") (Hunter & Boyle, 2004).

Turner et al. (2010) theorised that due to cumulative and chronic nature of poly-victimisation, the potential for resilience in poly-victims will likely be reduced meaning they are less able to use effective coping mechanisms. There has, however, as of yet been no empirical evidence gathered on the use of coping strategies in poly-victims.

5.2.2.2 *Coping as a moderator of victimisation*

Prior findings suggest that chronic victims are more likely to use avoidance strategies, which have been theorised as a less effective way to cope with trauma and threat (Lazarus & Folkman, 1984; Roth & Cohen, 1986). Research into peer, sexual and community victimisation has supported this view and shown that avoidance coping styles can exacerbate the negative impact of these victimisations, and contribute to greater psychological distress (e.g., Kochenderfer-Ladd & Skinner, 2002; Scarpa et al., 2006; Völlink, Bolman, Dehue, & Jacobs, 2013). In adolescent victims of community violence, disengagement coping (an avoidance strategy) predicted heightened PTSD symptom severity (Scarpa et al., 2006). Furthermore, Kochenderfer-Ladd and Skinner (2002), studying 9-10 year old victims of peer victimisation, demonstrated that girls who used cognitive distancing experienced more social problems, whereas boys exhibited more signs of anxiety. In addition, girls who used internalising coping responses were more likely to feel lonely, whereas boys who used this response displayed greater anxiety and depressive symptomology. Furthermore, in victims of child sexual abuse, results from teacher reports indicated that victims who use internalising or externalising coping strategies demonstrated more internalising and externalising behaviours, and greater social and concentration problems (Tremblay et al., 1999).

However, other research has suggested that avoidant strategies can have a beneficial effect when coping with victimisation. For example, adolescents victimised by peers who used distractive coping styles had lower depressive symptoms than those using support-based coping (Garnett, Masyn, Austin, Williams, & Viswanath, 2015). In addition, avoidance coping has been shown to buffer against increased PTSD arousal symptoms in victims of community violence (Dempsey, Stacy, & Moely, 2000).

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Findings regarding the effect of approach coping strategies appear equally mixed. Some studies suggest that these coping styles serve protective functions and are able to moderate the adverse effects of victimisation. For example, the detrimental effects of peer victimisation on psychological distress was reduced by the use of problem-focused coping (Cassidy & Taylor, 2001; Hampel et al., 2008). Duncan (1996) suggested that avoidance strategies can serve as a buffer for children and adolescents exposed to chronic neighbourhood violence. Moreover, children and adolescents exposed to recurrent violence and who used fewer approach strategies, particularly social support coping, tended to exhibit greater PTSD symptomology (Kliewer et al., 1998). Machmutow, Perren, Sticca, and Alsaker (2012) found some support for the benefits of social support-seeking for victims of cyberbullying, showing that close social support from peers and parents buffered the effects of cyberbullying on depressive symptoms, however more distant, informative social support had no effect.

In contrast, other research has shown that victims of cyberbullying who used more approach coping were more likely to show increased anxiety (Na, Dancy, & Park, 2015). Moreover, social support seeking, by telling an adult at home or school, has been demonstrated to exacerbate the emotional impact of racially-focused victimisation (Mendez, Bauman, Sulkowski, Davis, & Nixon, 2016). Further research has also indicated that problem-solving coping does little to decrease the negative effects of victimisation, and that victimised children who use this strategy are more likely to be rejected by their peers (Kochenderfer-Ladd & Skinner, 2002; Tenenbaum, Varjas, Meyers, & Parris, 2011).

5.2.2.3 Coping and poly-victimisation

Although various studies have examined coping as a moderator with regard to individual victimisation types, this has not been widely looked at in the context of

poly-victimisation. The exception to this are the recent studies from Guerra, Pereda, Guilera, and Abad (2016) and Guerra, Ocaranza, and Weinberger (2016) who investigated the effects of poly-victimisation and coping strategies on internalising and externalising symptoms in a clinical sample of adolescents. Findings revealed that poly-victimisation was weakly, positively correlated with non-productive coping. The non-productive strategies assessed were worry, wishful thinking, not coping, tension reduction, ignoring the problem, self-blame, and keeping to oneself. Path analysis showed that non-productive coping strategies partially mediated the effect of poly-victimisation on internalising symptoms, so that poly-victimisation reduced the coping skills of adolescents, and resulted in greater symptoms of anxiety and depression (C. Guerra, Pereda, et al., 2016). The authors suggested that repeated exposure to victimisation can diminish a victim's ability to directly respond to the victimisation, and through learned helplessness they learn that there is no effective way of addressing the stressor (Seligman, 1975), resulting in greater use of non-productive coping methods. In turn, these coping strategies are related to greater internalising symptoms.

This study, however, uses a cross-sectional design and therefore definite conclusions about the relationship between poly-victimisation, coping, and internalising symptoms cannot be reached. Further, the sample size was small (N =114) and drawn from a clinical population. Poly-victimisation, and related poorer functioning, is a common occurrence and is not limited to clinical populations. It is therefore limiting to study this in a clinical sample only, as results cannot be generalised to the wider adolescent population because of selection bias. In addition, the measure of coping that was used in this study relied on a global measurement of non-productive coping, which did not allow for any analysis based on specific styles. It is unlikely all of the non-productive strategies which were assessed by this

measure have the same detrimental impact on internalising symptoms. This, therefore, limits the application of these findings as intervention programmes would be unable to recommend to adolescents which specific strategies to avoid using. Finally, this study only assessed non-productive coping and failed to investigate the role of adaptive strategies as potential sources of resilience. This knowledge could have a greater impact in the development of effective interventions designed to reduce the negative effects of poly-victimisation.

In another study, Guerra, Ocaranza, et al. (2016) examined whether the coping strategy of searching for social support could act as a protective factor in the relationship between poly-victimisation and externalising symptomology. Results showed that poly-victimisation predicted externalising symptoms and that this relationship was moderated by the extent of searching for social support. Thus, by mobilising a support network and actively coping with victimisation the negative effects of poly-victimisation were reduced. This study, however, again used a small clinical sample ($N = 68$), and therefore it is not possible to generalise conclusions. Furthermore, a new instrument was used to measure and categorise poly-victimisation, which was based on therapist reports, rather than the JVQ which has become the standard measure used in poly-victimisation research. The use of this new measure may result in a less reliable assessment of poly-victimisation, and impact the extent to which findings can be compared with other poly-victimisation research.

5.2.3   The present study

A review of the literature has revealed that the impact of poly-victimisation on emotional well-being has yet to be examined, with prior research focusing on the associations between poly-victimisation and clinical symptomology (e.g., Alvarez-

Lister, Pereda, Abad, & Guilera, 2014; Ford, Elhai, Connor, & Frueh, 2010). Most studies of outcomes of victimisation have assumed that the absence of clinical pathology indicates adaptive functioning (Hamby et al., 2017; Houston & Grych, 2015). However, this narrow view of what constitutes functioning post trauma can limit our understanding of how children and adolescents have been affected by their experiences. There is a need to examine positive indicators of psychological health and focus on achieving well-being, not just minimizing pathology. The present study will aim to address this gap in the knowledge by exploring whether poly-victims are as mentally healthy as other adolescents, by assessing their emotional well-being.

The above literature has also provided evidence that specific coping styles can have protective or exacerbating effects in relation to certain victimisation types during childhood and adolescence, including peer victimisation, cyber-bullying and community violence. However, findings have been mixed and therefore the impact of coping on victimisation outcomes remains unclear. Previous studies have also not achieved any consensus concerning the structure of coping. Thus coping scales in previous research may not measure the same types or all types of coping (Skinner, Edge, Altman, & Sherwood, 2003), making it hard to draw conclusions. Furthermore, few studies have explored coping with regard to poly-victimisation. A greater understanding is thus needed of the role of both approach and avoidance coping strategies in poly-victimised adolescents from a community sample. Therefore, this study further aims to investigate the possible moderating effects of coping strategies in the relationship between poly-victimisation and emotional well-being.

The research questions for the current study are as follows:

1. How is poly-victimisation associated with emotional well-being?

2. How do the use of coping strategies differ depending on level of victimisation exposure?

3. Do coping styles moderate the relationship between poly-victimisation and emotional well-being?

5.2.3.1 Hypotheses

Consistent with theoretical and empirical evidence the following predictions were made in relation to the above research questions.

H1) Poly-victimised adolescents will report significantly lower emotional well-being, compared to those with fewer or no victimisations. As emotional well-being has been shown to be poorer in victims of individual forms (Callahan et al., 2003; Guhn et al., 2013; Martin & Huebner, 2007; Rigby, 2000).

H2) Poly-victims will use significantly less approach strategies and more avoidance coping, than less victimised adolescents and non-victims. As prior research has shown that victims are more likely to engage in maladaptive coping behaviours (Bal et al., 2003; Sharp, 1995; P. K. Smith et al., 2001; Tolan et al., 1997).

H3) The detrimental impact poly-victimisation is expected to have on emotional well-being will partially depend on the coping strategies adopted. In line with theoretical models of stress and coping (Lazarus & Folkman, 1984; Roth & Cohen, 1986), approach coping strategies are predicted to protect against lowered emotional well-being. Conversely, avoidance coping styles are expected to exacerbate the negative effects of poly-victimisation, resulting in poorer emotional well-being.

5.3 Method

5.3.1 Design

This study is a cross-sectional survey examining the relationships between poly-victimisation, emotional well-being and coping. Participants completed a range of self-report questionnaires related to past-year victimisations, life satisfaction, positive and negative affect, and coping responses following victimisation exposure.

5.3.2 Participants

Participants were a sample of 454 adolescents (281 female and 173 male), who also participated in Study 1. Participants were recruited via an opportunity sample from 22 schools across the Opole region of Poland. The mean age of the sample was 16.56 ($SD = 1.44$), with participants ranging from 13-19 years of age. 100% of participants recorded their ethnicity as White Polish. For further participant information refer to Chapter 3, Section 3.4.1.

5.3.3 Measures

Self-report of past-year victimisation was assessed using the JVQ (Finkelhor, Hamby, et al., 2011). Participants also completed reports of life satisfaction and positive and negative affect as indicators of emotional well-being, and the Self-report Coping Scale assessing five types of approach or avoidant coping strategies. All measures are described in detail in Chapter 3, Sections 3.5.2.2, 3.5.4 and 3.5.5. Table 9 provides a summary of the measures used in the present study.

Table 9

Summary of Measures Used in Study 2

Construct	Measure	No. of items in subscale	Response options	Cronbach's alpha
Victimisation	JVQ (Finkelhor, Hamby, et al., 2011)	25	*Yes/No*	.84
Emotional well-being				
Life satisfaction	SLSS (Huebner, 1991)	7	4 (*disagree a lot* to *agree a lot*)	.80
Positive affect	PANAS-C (Ebesutani et al., 2012)	5	5 (*not at all/ very slightly* to *extremely*)	.86
Negative affect	PANAS-C (Ebesutani et	5	5 (*not at all/ very slightly* to	.83

			al., 2012)		extremely)	
Coping			Self-report		5 (*not at all* to *all*	
Problem solving			Coping Scale	7	*the time*)	.85
Social support-seeking			(Wright et al., 2010)	4		.82
Distraction				4		.66
Internalising				5		.81
Externalising				4		.73

5.3.4 Procedure

For further information regarding procedures and ethical considerations see Chapter 3, Sections 3.6.1 – 3.6.3. All questionnaires were administered in class groups of between 12-27 adolescents, in a single 40-minute session. Questionnaires for the present study were completed in the same session as measures for Study 1. The order in which participants received the questionnaires in their packs were counterbalanced. Upon completion of the questionnaire participants were debriefed by a member of the research team, as described in Chapter 3, Section 3.6.1.

5.3.5 Statistical analyses

5.3.5.1 Data cleaning

Data was explored for missing values and outliers. 22 participants were excluded from further analysis as either more than 5% of responses were missing or the same choice had been selected throughout the whole questionnaire. If less than 5% of data points are missing at random within a large data set then this is said to pose relatively few problems for analysis and missing values can be dealt with via most procedures (Tabachnick & Fidell, 2006). Where less than 5% of data was missing mean substitution was used.

5.3.5.2 *Testing for normality*

Normality of data was tested by conducting the K-S test and by visually inspecting the data by plotting histrograms and Q-Q plots. From this exploration, one variable (negative affect) was identified as violating normality. Log10 transformations were computed on this variable in order to address the problem of skewness. Where homogeneity of variance was violated alternative tests were used.

5.3.5.3 *Analyses*

The following tests were used to analyse the data.

i) Pearson's correlations were calculated to explore the relationships between victimisation, indicators of emotional well-being and coping strategies.

ii) A one-way ANOVA and subsequent post hoc comparisons were performed to examine mean differences in emotional well-being and coping strategies between the three victimisation groups.

iii) A series of moderation analyses (Hayes, 2013) were conducted to investigate the moderating effect of each coping strategy on the relationship between poly-victimisation and each indicator of emotional well-being.

iv) For significant interaction effects, simple slopes analyses were carried out to explore the exact nature of the moderation effect by testing significance at 1 SD above the mean, mean, and 1 SD below the mean levels of coping (Aiken & West, 1991).

5.4 *Results*

5.4.1 *Poly-victimisation and emotional well-being*

A Pearson's correlation was calculated to explore the relationship between victimisation and emotional well-being. As seen in Table 10, results show there was

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a significant moderate negative correlation between total kinds of victimisation and life satisfaction ($r = -.44$, $p < .001$). Positive affect was weakly, negatively correlated with victimisation total ($r = -.24$, $p < .001$), whereas negative affect was moderately, positively correlated with victimisation total ($r = .43$, $p < .001$).

To further explore the association between victimisation and emotional well-being, a one-way ANOVA was carried out to examine differences between victimisation groups (non-victims, less victimised, and poly-victims), based on the groupings from Study 1. As seen in Table 11, there was a significant overall effect for all indicators of emotional well-being on victimisation group. Follow-up Hochberg post-hoc analyses (tested at the adjusted $p < .006$ level after using a Bonferronni correction procedure) revealed poly-victims exhibited significantly lower life satisfaction and positive affect, and significantly higher negative affect compared to non-victimised and less victimised adolescents. Effect sizes for life satisfaction ($\eta^2 = .17$) and negative effect ($\eta^2 = .17$) were large, and a small effect size emerged for positive affect ($\eta^2 = .05$).

5.4.2   Coping

In the total sample, mean scores showed that problem-solving was most reported coping strategy ($M = 3.41$, $SD = 0.75$). This was followed by social support ($M = 3.13$, $SD = 1.07$), distraction ($M = 2.84$, $SD = 0.81$), and internalising ($M = 2.55$, $SD = 0.96$). Finally, externalising was the strategy participants reported using the least frequently to cope with victimisation ($M = 2.14$, $SD = 0.90$).

When examining the relationship between victimisation and coping, as seen in Table 10, the strongest correlations appear between victimisation and internalising ($r = .20$, $p < .001$) and externalising ($r = .26$, $p < .001$) coping. This suggests that experiencing a greater number of past-year victimisations is associated with greater

use of these avoidant strategies. A weak, but significant, negative correlation was also found between victimisation and social support seeking ($r = -.12$, $p = .01$), indicating greater victimisation experiences are related to less support seeking. Correlations between total kinds of victimisations and both problem-solving and distraction coping were non-significant. Findings, therefore, suggest a general trend of positive associations between victimisation and avoidant coping use, and negative associations between victimisation and approach coping.

To explore this further a one-way ANOVA was conducted (Table 11) which showed a significance effect of victimisation group on internalising and externalising coping. Follow-up post-hoc comparisons (tested at the $p < .006$ level) indicated poly-victims used significantly greater amounts of internalising and externalising coping, compared to non-victims and less victimised groups. However, no differences in problem-solving, social support seeking, or distraction coping were found between victim groups.

It is also of interest to examine the correlations between emotional well-being and coping strategies. From Table 10, it can be seen that positive relationships were found between life satisfaction/positive affect, and approach coping strategies. Conversely, these were negatively correlated with internalising and externalising coping strategies. Whereas, for negative affect, there is a weak negative correlation with social support seeking ($r = -.13$, $p < .01$), and moderate positive correlations with internalising ($r = .51$, $p < .001$) and externalising styles ($r = .41$, $p < .001$). These findings indicate that use of approach coping is associated with increased positive aspects of emotional well-being, whereas use of avoidance coping strategies is related to greater negative emotional well-being.

Table 10

Pearson's Correlation Matrix of Total Kinds of Victimisation, Emotional Well-being and Coping Strategies

	1	2	3	4	5	6	7	8	9
1. Victimisation Total	-								
2. Life Satisfaction	-.44***	-							
3. Positive Affect	-.24***	.64***	-						
4. Negative Affect	.43***	-.64***	-.48***	-					
5. Problem-solving	-.05	.16**	.29***	-.09	-				
6. Social Support	-.12*	.31***	.35***	-.13**	.40***	-			
7. Distraction	-.09	.06	.19***	.02	.28***	.24***	-		
8. Internalising	.20***	-.40***	-.32***	.51***	.12*	.15**	.10*	-	
9. Externalising	.26***	-.29***	-.13**	.41***	.01	.04	.08	.42***	-

Note. * *p* <.05, **p* < .01, *** *p* < .001.

Table 11

One-way ANOVA and Post-hoc Tests of Mean Differences in Emotional Well-being and Coping Strategies across Victimisation Groups

	Victimisation Group				
	Non-victims	Less victimised	Poly-victims		
	(n = 72)	(n = 220)	(n = 162)		
	M (SD)	M (SD)	M (SD)	F value	η_p^2
Life Satisfaction [a, b, c]	3.32 (0.46)	3.01 (0.53)	2.59 (0.59)	47.59***	.17
Positive Affect [b, c]	3.75 (0.78)	3.60 (0.87)	3.23 (0.87)	10.98***	.05
Negative Affect [+ a, b, c]	0.18 (0.15)	0.25 (0.16)	0.38 (0.16)	45.60***	.17
Problem-solving Coping	3.48 (0.77)	3.43 (0.77)	3.36 (0.67)	0.63	.00
Social Support Coping	3.19 (1.06)	3.20 (1.08)	2.95 (1.04)	2.61	.01
Distraction Coping	2.90 (0.76)	2.84 (0.82)	2.79 (0.84)	0.50	.00
Internalising Coping [+a, b, c]	2.14 (0.74)	2.53 (0.99)	2.81 (0.95)	15.32***	.05
Externalising Coping [+a, b, c]	1.63 (0.60)	2.17 (0.89)	2.36 (0.95)	26.63***	.07

Note. η_p^2 = partial eta squared. [a] significant difference between non and less victimised groups. [b] significant difference between non and poly-victimised groups. [c] significant difference between less and poly-victimised groups. [+] homogeneity of variance violated and therefore Welch F statistic and Games-Howell post-hoc tests used. Hochberg post-hoc tests used in all other cases.

*** $p < .001$.

5.4.3 *Coping as a moderator of the relationship between poly-victimisation and emotional well-being*

To test the hypothesis that coping strategies can moderate the relationship between poly-victimisation and indicators of emotional well-being moderation analyses (Hayes, 2013) were conducted on participants in the poly-victim group only (Table 12).

The interaction effect between problem-solving coping and victimisation, for life satisfaction was significant, indicating a moderation effect, $b = 0.06$, 95% CI [0.02, 0.10], $t(158) = 3.00$, $p = .003$. To probe the problem-solving $\times$ victimisation total interaction, simple slopes were estimated for poly-victims who reported using low (-1 SD below the mean), mean, and high ($+1$ SD above the mean) levels of problem-solving (Aiken & West, 1991). As depicted in Figure 3, for those who reported low levels, $b = -0.08$, 95% CI [-0.12, -0.04], $t(158) = -4.00$, $p < .001$, and mean levels of problem-solving coping, $b = -0.04$, 95% CI [-0.07, -0.01], $t(158) = -2.80$, $p = .005$ there was a significant negative relationship between poly-victimisation and life satisfaction. For high use of problem-solving coping, the relationship between poly-victimisation and life satisfaction was non-significant, $b = 0.02$, 95% CI [-0.03, 0.62], $t(158) = -0.76$, $p = .45$. This suggests that with greater use of problem-solving coping strategies poly-victimisation has less of a negative impact upon self-reported life satisfaction.

Table 12

Linear Model of Predictors of Life Satisfaction and Positive Affect for Poly-victimised Adolescents

Variable	b [95% CI]	SE b	β	t	f^2
Life satisfaction					
Constant	2.63 [2.54, 2.71]	0.04	0.01	61.06***	0.06
Problem-solving (centred)	0.19 [0.07, 0.32]	0.06	0.24	3.19***	
Victimisation total (centred)	-0.04 [-0.07, -0.01]	0.01	-0.21	-2.81**	
Problem-solving × victimisation	0.06 [0.02, 0.10]	0.02	0.24	3.00***	
Positive affect					
Constant	3.25 [3.12, 3.37]	0.06	0.01	50.81***	0.06
Problem-solving (centred)	0.44 [0.24, 0.65]	0.09	0.36	4.80***	
Victimisation total (centred)	-0.03 [-0.07, 0.01]	0.02	-0.12	-1.63	
Problem-solving × victimisation	0.09 [0.03, 0.14]	0.03	0.23	2.99***	

Note. Life satisfaction, $R^2 = .12$. Positive affect, $R^2 = .15$. b = unstandardized coefficient, β = standardized coefficient. CI = confidence interval.

* $p < .05$, ** $p < .01$, *** $p < .001$.
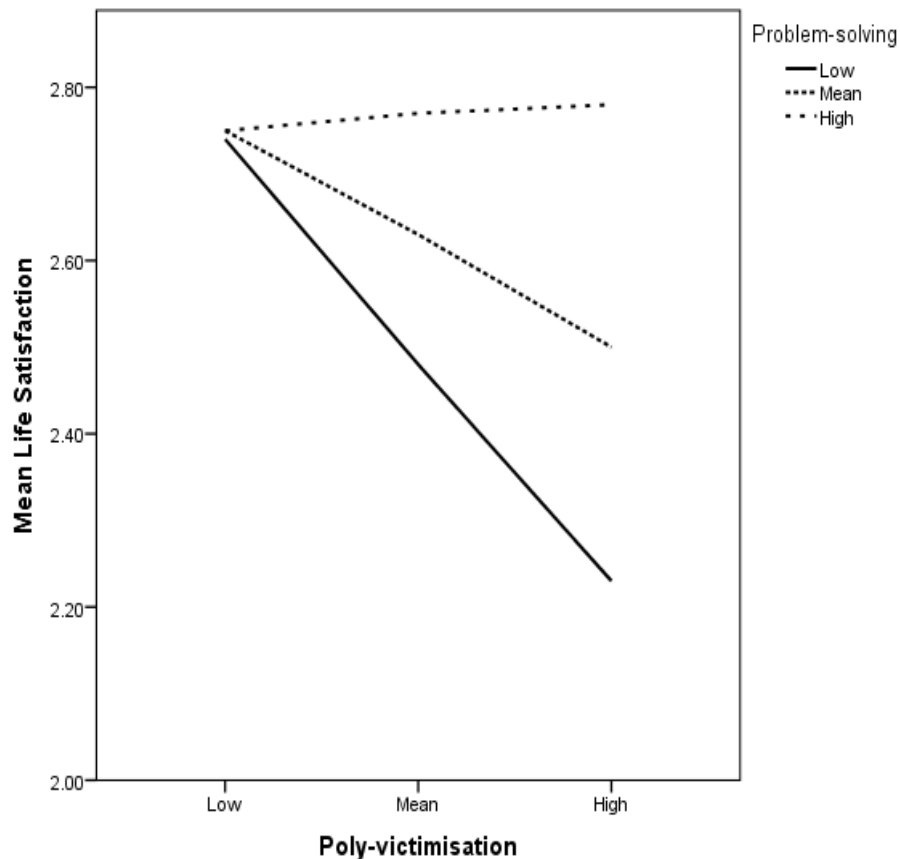
Figure 3. Simple slopes equation of the regression of poly-victimisation on life satisfaction at three levels of problem-solving coping use.

The interaction between victimisation and problem-solving for positive affect was significant, indicating a moderation effect, $b = 0.09$, 95% CI [0.03, 0.14], $t(158) = 2.99$, $p = .003$. As shown in Figure 4, for poly-victims who report a low use of problem-solving coping there was a significant negative relationship between victimisation total and positive affect, $b = -0.10$, 95% CI [-0.16, -0.04], $t(158) = -3.21$, $p = .001$. For poly-victims reporting average, $b = -0.04$, 95% CI [-0.9, 0.01], $t(158) = -1.77$, $p = .08$, and high levels, $b = 0.5$, 95% CI [-0.02, -0.11], $t(158) = 1.49$, $p = .14$, of problem-solving coping the relationship between poly-victimisation and positive affect was non-significant. This indicates, as use of problem-solving coping increases, the relationship between increased poly-victimisation and lower positive affect becomes weaker, and eventually non-significant.
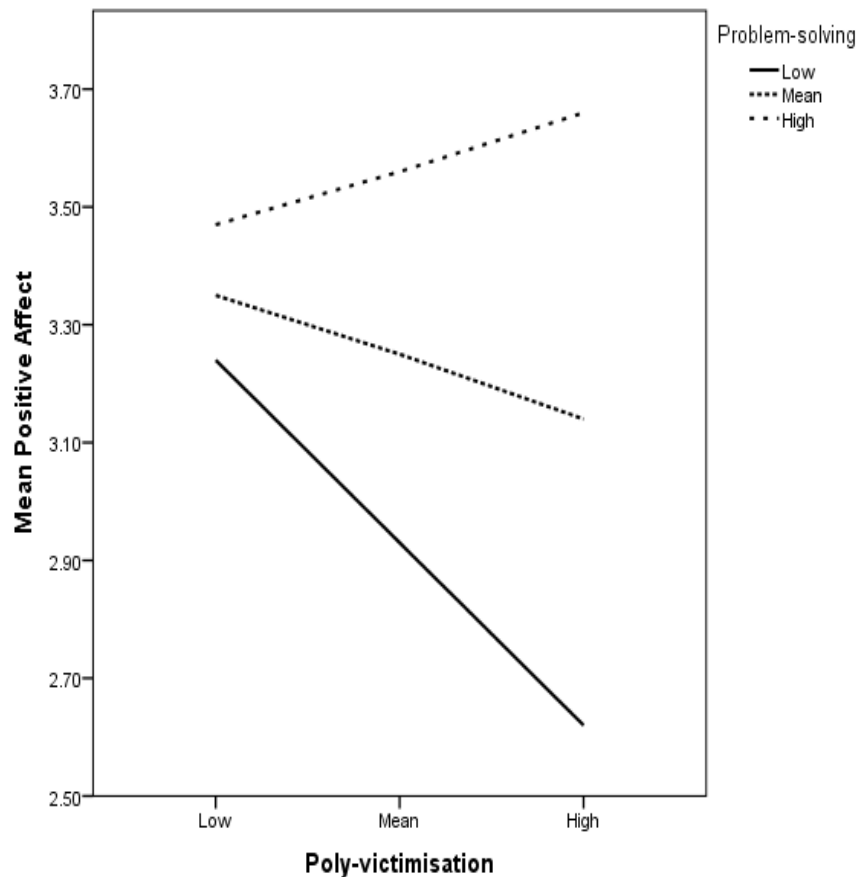
Figure 4. Simple slopes equation of the regression of poly-victimisation on positive affect at three levels of problem-solving coping use.

The interaction between poly-victimisation and problem-solving for negative affect was non-significant, indicating no moderation effect. The interaction between poly-victimisation and social support-seeking, along with avoidance coping styles (internalising, externalising, and distraction) on all indicators of emotional well-being (life satisfaction, positive affect, and negative affect) were non-significant, indicating no moderating effect of these coping styles on the relationship between poly-victimisation and emotional well-being. See Appendix 22 for details of full non-significant results.

5.5   *Discussion*

This study makes an original contribution to knowledge by investigating non-clinical outcomes of poly-victimisation and how the strategies used to cope with

poly-victimisation can impact upon these outcomes. Our findings demonstrated that poly-victims experienced poorer emotional well-being, compared to less victimised and non-victimised adolescents. This study also revealed that poly-victims use significantly more avoidance coping styles than other adolescents. In addition, present findings showed that problem-solving coping acts as a buffer against reductions in life satisfaction and positive affect associated with poly-victimisation.

With regard to the effect of poly-victimisation on emotional well-being, it was found that poly-victims reported significantly lower life satisfaction and positive affect, along with greater negative affect, supporting our hypothesis. This is the first study to show the impact of poly-victimisation on emotional well-being. Findings are in line with previous research showing poly-victimisation is associated with greater indicators of psychopathology (Ellonen & Salmi, 2011; Finkelhor et al., 2007b; Radford et al., 2011; Soler et al., 2012; Turner et al., 2010). Poly-victims are likely to suffer from reduced emotional well-being as they experience victimisations across multiple domains (as shown in Study 1) and different relationships. Consequently, they are less likely to have a 'safe' environment where they are free from harassment, which may reduce their potential to recover from and cope with their experiences (Finkelhor et al., 2007a; Turner et al., 2010).

It is important to have an understanding of the whole array of outcomes following poly-victimisation exposure and to recognise that adolescents who do not display clinical symptoms may also suffer negative consequences, and a reduction in their day-to-day quality of life. Additionally, prior evidence indicates that low well-being may be a risk factor for the development of later clinical symptomology (Lewinsohn et al., 1991). Consequently, having a greater understanding of the relationship between poly-victimisation and emotional well-being may help with the

identification of those at risk of presenting with more severe psychopathology, and facilitate earlier intervention.

Results from the present study also reveal that approach strategies were preferred above avoidance strategies to cope with victimisation by the sample as a whole. This is a positive finding since the stress and coping theory suggests that approach coping will lead to better adaption following traumatic situations than the use of avoidant, emotion-focused strategies (Lazarus & Folkman, 1984). Approach strategies are theorised to be more beneficial as they involve a direct attempt to resolve the stressor and to prevent continued exposure to the threat (Roth & Cohen, 1986). Our findings provide support for this theory as it was shown that problem-solving and social support seeking were positively correlated with emotional well-being, whereas internalising and externalising strategies were negatively correlated.

When examining coping strategies used by poly-victims only, however, findings revealed that this group were significantly more likely to use internalising and externalising strategies, compared to less victimised and non-victimised groups. This supports our hypothesis and findings from the literature on singular victimisation types, which has shown victims of frequent bullying are more likely to use avoidance coping compared to less frequent victims (Hunter & Boyle, 2004), and that sexually abused adolescents use avoidance coping more frequently than non-victimised adolescents (Bal et al., 2003). This finding has important implications as it suggests that the most vulnerable adolescents are more likely to use less effective coping methods than their peers. They, therefore, are facing a double hit of greater victimisation exposure and being less equipped to deal with these experiences.

Findings, however, did not support out hypothesis that poly-victims would also engage in lower levels of approach coping. There were no differences in

approach coping found between poly-victims and less victimised or non-victim groups. Poly-victims, therefore, do seem to have the personal resources available to use approach strategies to the same extent as their less victimised peers. However, after a point poly-victims may turn to less adaptive coping strategies, i.e., internalising and externalising. Lazarus (1999, p.122) states that "as conditions change a prior way of coping may become obsolete and need to be changed to fit the new person-environment relationship". Once an adolescent becomes poly-victimised they may no longer consider their situation as amendable to change; victimisation has become a condition rather than an event. Consequently, they may modify their method of coping and become more likely to adopt avoidant approaches.

Findings concerning coping styles as moderators of emotional well-being offer only partial support for our hypotheses. In line with the stress and coping theory (Lazarus & Folkman, 1984) and previous research (Hampel et al., 2008), problem-solving coping was shown to have protective effects against reductions in life satisfaction and positive affect for poly-victimised youth. This may be because actively trying to resolve conflicts can lead to a greater feeling of control and autonomy over victimisation experiences, resulting in improved outcomes (Dempsey et al., 2000). Problem-solving coping was not, however, found to protect against increases in negative affect associated with poly-victimisation. This may indicate that problem-solving coping can only buffer against reductions in positive aspects of emotional well-being, but cannot protect poly-victims from experiencing greater negative emotions.

Contrary to our hypothesis, and findings from Guerra, Ocaranza, et al. (2016), social support-seeking failed to moderate the relationship between poly-victimisation and emotional well-being. This is, however, consistent with some previous research which has indicated that the effects of social support-seeking can

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vary (Machmutow et al., 2012; Mendez et al., 2016; Na et al., 2015). One explanation may be that poly-victims are unable to utilise social support coping effectively. Findings from Study 1 revealed that poly-victimisation was associated with family conflict, low peer preference and community disorganisation, characterised by low community support. Therefore, it is likely that poly-victims have less available social support across multiple relationships and consequently cannot make use of this coping strategy.

In addition, the social support-seeking subscale used in the current study did not distinguish between emotional and instrumental support. Carver, Scheier, and Weintraub (1989) claim these two types are conceptually different and differ in the degree to which they focus on attempting to resolve the stressor. Seeking social support for instrumental reasons involves seeking advice, assistance, or information, in an attempt to resolve the problem. Seeking social support for emotional reasons involves getting moral support, sympathy, or understanding, and therefore can be viewed as an aspect of emotion-focused coping. Past research has indicated that these two forms of social support can have differing effects on victimisation outcomes (Machmutow et al., 2012). Therefore if poly-victims are engaging in emotion focused, rather than instrumental, social support-seeking then this may be classed as a form of avoidance coping, which could explain why no buffering effects were found for this strategy.

Whereas theory and some prior literature has suggested avoidance coping can exacerbate the effects of some individuals victimisation types (Scarpa et al., 2006; Völlink et al., 2013) and poly-victimisation (C. Guerra, Pereda, et al., 2016), our findings revealed no effect of internalising, externalising or distraction coping on emotional well-being. Nonetheless, whilst these strategies did not negatively impact emotional well-being, they were shown to be ineffective at protecting against poorer

outcomes and so should still be avoided. Moreover, significant associations were found between greater use of avoidance strategies and poorer emotional well-being. This suggests that there are links between avoidance coping approaches and poorer functioning, however further investigation is needed to understand this relationship.

The unclear effects of avoidance strategies have also been demonstrated in past research; for example, Kochenderfer-Ladd and Skinner (2002) found that avoidant coping methods were not a unique predictor of maladjustment following peer victimisation, but rather were associated with poor interpersonal adjustment. Kochenderfer-Ladd and Skinner (2002) suggest that avoidance strategies are not necessarily always maladaptive and therefore the impact they have upon victimisation outcomes may vary. For example, internalising may be an adaptive coping strategy for some victims, as worrying about possible future victimisations and self-reflecting may motivate them to modify the behavioural traits which made them a target for victimisations. Similarly, using externalising coping strategies may in some instances prove beneficial by making children feel less vulnerable and more capable of standing-up for themselves.

5.5.1 *Strengths, limitations and future recommendations*

By studying the effects of poly-victimisation on non-clinical outcomes the current study provides a unique and more complete picture of the effects of poly-victimisation during adolescence. An additional strength is the inclusion of approach coping strategies and the use of moderation analyses to explore adaptive functioning, which has typically been neglected in prior research. Accordingly, findings have been able to provide a greater understanding of resilience and poly-victimisation, and are the first to demonstrate that coping can play a role in maintaining well-being.

There were, however, a number of weaknesses in the current study that should be taken into consideration. This study was cross-sectional in design and therefore direction of causation cannot be established. It cannot be determined whether poly-victimisation causes poorer emotional well-being or whether those with poorer emotional well-being are more likely to be victimised. Equally, it is unknown whether specific coping strategies cause deficits in emotional well-being or if those with poorer emotional well-being are more likely to use certain types of coping. Future studies should examine the nature of these relationships using a longitudinal design in order to clarify causality.

In addition, the present findings do not allow conclusions to be drawn as to why problem-solving coping was found to have beneficial effects for poly-victims. Future research should focus on understanding the exact nature of the protective effects that problem-solving coping affords, by exploring variables such as personal appraisals and autonomy over victimisations, and whether victimisations were judged to be amenable to change.

Although our study has shown that problem-solving coping can buffer against reduced emotional well-being, it is not known whether it has potential to protect against the more severe and debilitating outcomes, such as depression and PTSD, which have been linked to poly-victimisation in prior studies. Further research is needed to further explore the role of different coping strategies in relation to different outcomes, in order to provide a strong body of evidence for the effectiveness of coping skills training in poly-victimised youth.

5.5.2 *Conclusion and implications*

This study has revealed that poly-victimisation is associated with reduced emotional well-being, and has added to knowledge by moving beyond the study of

pathology based indicators. Results highlight that the impact on day-to-day functioning needs to be monitored and addressed in poly-victims, in addition to assessments for clinical symptomology. Findings also show that, in general, poly-victimisation is negatively associated with approach coping and positively associated with the use of avoidance coping, with poly-victims reporting greater use of internalising and externalising styles compared to other adolescents. Finally, the only coping method which was found to have a moderating effect on the relationship between poly-victimisation and emotional well-being was problem-solving. Greater use of this strategy was shown to protect against lowered life satisfaction and positive affect in poly-victimised adolescents. This implies that training adolescents in the use of problem-focused coping styles could be beneficial at building resilience to poly-victimisation.

Interventions need to focus not only on addressing risk factors, but also increasing the potential for resilience in youth in order to maximise their effectiveness. Findings from the current study should therefore be used alongside findings from Study 1 to make recommendations for the best ways to protect youth from poly-victimisation. However, the application of these findings may be limited as they are based on cross-sectional designs. There is a need to explore these associations longitudinally to better understand causation and effects over time, and thus be able to make more robust recommendations.

6 CHAPTER 6: STUDY 3: A LONGITUDINAL FOLLOW-UP OF RISK AND RESILIENCE

6.1 Overview

This chapter describes Study 3 that used a longitudinal research design. Participants from Studies 1-2 were reassessed approximately one-year later to explore patterns of poly-victimisation over time, and the direction of causality between poly-victimisation, risks, and outcomes. This chapter additionally investigates the moderating effect of coping styles on the relationship between poly-victimisation at Time 1 (T1) and emotional well-being at Time 2 (T2).

6.2 Introduction

Previous studies of this thesis, along with the majority of prior poly-victimisation research have used cross-sectional designs (e.g., (Cyr et al., 2013; Ellonen & Salmi, 2011; Lätsch et al., 2017; Pereda et al., 2014). This research has been able to highlight a range of factors associated with poly-victimisation, however, such designs rely upon theoretical explanations for causality. Cross-sectional research makes inferences that certain risk factors predict greater poly-victimisation, or that poly-victimisation leads to psychological and behavioural problems. However, it is also plausible that bi-directional relationships may exist. Moreover, cross-sectional poly-victimisation research does not take into account any prior symptoms or experiences. It is, therefore, important to examine risk and resilience as part of a longitudinal design to be able to draw firmer conclusions regarding causality and make robust recommendations for the design of intervention programmes.

6.2.1 Poly-victimisation risks

Two past longitudinal studies have examined risk factors for poly-victimisation onset. Finkelhor et al. (2007c) explored patterns of poly-victimisation over a two-year period in a sample of 1,467 U.S. children aged 2-17 years. They identified those who were poly-victims at both time points and those who became poly-victims at T2 and looked at which factors predicted these groupings. 46% of those who were poly-victims at T1 were also poly-victims at T2 (stable poly-victimisation). 40% of poly-victims at T2 had not been poly-victims at T1 (poly-victimisation onset).

Findings revealed that variables associated with stable poly-victimisation were different to onset of poly-victimisation. Moving to a more deprived neighbourhood and child anger or aggression predicted stable poly-victimisation. Risks for poly-victimisation onset were family problems, including violent behaviour, alcohol abuse, imprisonment and unemployment, and living in single parent or stepparent household. The authors did however note that the multivariate model predicting poly-victimisation onset was not very strong and suggested that "predicting entry into poly-victimisation in the short-term may be difficult" (Finkelhor et al., 2007c, p.492).

Building on this, Finkelor, Ormrod, Turner et al. (2009) conducted a 3-wave longitudinal study, following-up a large U.S. sample of 2,000 children, aged 2-17 years, over four years. The authors examined which risk factors predicted poly-victimisation onset at T2 and T3. They hypothesised four potential pathways leading to poly-victimisation and tested a logistic regression model, comparing youth who became a poly-victim during the course of the study to those who were not poly-victimised. Poly-victim onset was predicted by at least one of the four risk areas – dangerous communities, families with high conflict, families with multiple problems

and child emotional problems. Findings revealed each of these areas of risk made an independent contribution to poly-victimisation onset, after controlling for the other pathways. This suggests different poly-victims may be affected by different risks.

This study did, however, have a high attrition rate. Only around half of the original sample participated in all three waves of the study, which could potentially distort findings. Furthermore, almost a third of those in the poly-victim onset group had low levels of risk in all four areas. This indicates there must be other risks for poly-victimisation which have not been assessed in longitudinal designs, and so further investigation is warranted.

Longitudinal research has also revealed that prior poly-victimisation can act as a risk for continued victimisations. Finkelhor et al. (2007c) found that youth classified as poly-victims at T1 were at a particularly high risk of on-going poly-victimisation one year later. The presence of poly-victimisation at T1 also increased the risk for every individual kind of victimisation at T2. For example, those who were poly-victims at T1 were 6.8 times more likely than non-poly-victims to report a sexual victimisation at T2, and 4.3 times more likely to suffer maltreatment at T2.

6.2.2 *Poly-victimisation-symptomology relationship*

A small body of longitudinal research has examined whether prior multiple or poly-victimisation experiences result in increased subsequent negative outcomes. Cisler et al. (2012) investigated how various forms of interpersonal violence, including sexual assault, physical assault and witnessed violence, related to a range of negative outcomes in a large sample of adolescents, over the course of three years. It was found that cumulative exposure to interpersonal violence at T1 predicted depressive symptoms, trauma symptoms, delinquency and binge drinking at T2 and T3, after controlling for initial levels of problems. This study, however, only focused on interpersonal victimisations. Consequently, many other forms of victimisation

commonly experienced by adolescents were not assessed. Moreover, a large amount of attrition occurred over the three-year period. Of the 3,614 adolescents measured at T1, 2,511 were measured at T2, and 1,653 were measured at T3. Analysis revealed that this attrition did not happen at random, which could have skewed findings. Specifically, adolescents who completed all three waves had significantly lower depression, fewer interpersonal victimisations and less delinquent acts compared to adolescents who did not complete all waves.

Four further studies have specifically focused on the longitudinal relationship between poly-victimisation and trauma or distress symptoms. Finkelhor et al. (2007b) examined poly-victimisation experiences, assessed with the JVQ, and trauma symptomology in a U.S. nationally representative sample of 2-17 year olds. Two waves of data were collected approximately one year apart. Poly-victimisation over a one-year period accounted for an increase in trauma symptoms at the end of the year, after controlling for prior victimisation, prior trauma symptoms and other life adversities. The authors also looked at the independent contributions of different victimisation categories (i.e. physical assault, peer/sibling victimisation, property victimisation, witnessed victimisation, sexual victimisation and maltreatment), and found all forms of victimisation were associated with greater T2 trauma symptoms, however poly-victimisation was the most strongly associated with this increase.

Turner, Shattuck, Finkelhor, and Hamby (2015) examined the relationship between poly-victimisation and distress symptoms, and the mediating effect of social and personal resources (family support, peer support, self-esteem and mastery). Two waves of data were collected approximately two years apart in a sample of 1,186 youth aged 10 to 17 years. Poly-victimisation was found to be predictive of greater distress at T2. Additionally, compared to youth who reported none or a low number of victimisations, stable poly-victims (poly-victims at both time points) and those

experiencing poly-victimisation onset during the measured time period, reported greater reductions in psychosocial resources. Moreover, self-esteem and mastery significantly mediated the association between poly-victimisation and distress (Turner et al., 2015).

Longitudinal studies examining the effect of prior psychological symptomology on subsequent poly-victimisation have unveiled mixed findings. Finkelhor et al. (2007c) found that anxiety and depression at T1 was not predictive of stable poly-victimisation or poly-victimisation onset at T2. Whereas, other evidence has suggested that psychological distress can predict on-going victimisations. Cuevas, Finkelhor, Clifford, Ormrod, and Turner (2010) studied a sample of 1,025 U.S. children between the ages of 2-17 years, who had experienced at least one form of victimisation in a prior wave of data collection. They assessed victimisation experiences over the following one-year period and psychological distress (measured as a composite score of the depression, anger, and anxiety).

Results showed psychological distress was a unique predictor of T2 poly-victimisation, as well as victimisation across the different JVQ categories (conventional crime, maltreatment, peer and sibling victimisation, sexual victimisation and witnessed victimisation), while controlling for demographic variables and prior year victimisation. Cuevas et al. (2010) posited that the psychological consequences of victimisation may also serve as a risk for continued victimisation and poly-victimisation, supporting a theory of bi-directionality between poly-victimisation and symptomology.

Cuevas et al. (2010) suggest that psychological distress may play a different role depending on the type of victimisation. For example, with regard to crime victimisations poorer psychological functioning may erode protective qualities, and thereby increase vulnerability to future victimisations. For maltreatment re-

victimisation, symptomology may lead to a child presenting as a greater parenting challenge, resulting in continued caregiver abuse. For peer victimisation, psychological distress may increase the risk of victimisation due to stigmatisation by peers (Cuevas et al., 2010). Moreover, psychological distress may also portray a more general impression of vulnerability, which could attract a range of perpetrators who view the individual as an easy target.

Collectively, these longitudinal findings provide a greater understanding of the causal relationship between poly-victimisation and psychological symptoms. However, these studies have all taken place in the U.S. and in some cases have used the same dataset. These prior longitudinal studies have also focused solely on symptoms of trauma. Therefore, more evidence is needed to understand causality with other poly-victimisation outcomes. For example, nothing is known about the directionality of the relationship between poly-victimisation and emotional well-being. With respect to Study 2, it is not clear whether poly-victimisation precedes low emotional well-being, or whether low emotional well-being precedes poly-victimisation, with poor well-being serving as a risk factor.

As detailed in Chapter 5, Section 5.2.1, Huebner and Dew (1996) identified three separate factors of emotional well-being in adolescence: positive affect, negative affect and life satisfaction. Cross-sectional evidence from Study 2 showed that poly-victimisation predicts reduced emotional well-being. However, evidence from the peer victimisation literature suggests that there could be a bi-directional association with emotional well-being.

Martin, Huebner, and Valois (2008) studied life satisfaction and different forms of peer victimisation in 417 adolescents at two waves, one-year apart. The study demonstrated that T1 life satisfaction added to the prediction of T2 relational peer victimisation, although not overt peer victimisation. The authors concluded that

life satisfaction appeared to be a risk factor for some forms of peer victimisation. Martin et al. (2008) posited that adolescents with higher life satisfaction possess characteristics and display behaviours that make them more liked by peers and better able to resolve conflict. Thereby, adolescents with lower life satisfaction who do not have these qualities may be more vulnerable to peer victimisation.

To our knowledge, there is no longitudinal research concerning any forms of childhood victimisation and affect. However, Fogleman, Walerius, Rosen, and Leaberry (2016) examined the link between affect and peer victimisation in 104 children aged 8-12 years using a cross-sectional design. Using hierarchical regression they found negative affect was associated with both self and parent reported peer victimisation. This is in line with other research which demonstrates that displaying negative emotions during peer interactions, positively correlates with peer victimisation, whereas positive emotions are negatively correlated with peer victimisation (Hanish et al., 2004).

Fogleman et al. (2016) concluded that affect is an important factor in determining which children are likely to experience peer victimisation, as peers typically prefer children who demonstrate less negative and more positive affect. Moreover, a child's negative emotions might make it more difficult for them to positively interact with their peers (Fogleman et al., 2016). As theorised by the Victim Schema Model (Rosen et al., 2009), negative emotional arousal may inhibit a child's ability to process cues from their social environment, which may then impair response selection. Accordingly, victimised children will be more likely to ineffectively respond, displaying behaviours such as fear, anger or withdrawal, which result in a greater risk of victimisation from peers (Rosen et al., 2009).

Fogleman et al. (2016) also showed that low levels of positive affect did not predict peer victimisation. The authors noted there is an absence of research

exploring the impact of positive affect on victimisation, but suggested that positive affect may be a better predictor of a positive construct of social interaction, such as high friendship quality, as opposed to the negative construct of peer victimisation. The directionality of the relationship between poly-victimisation and emotional well-being therefore warrants further investigation.

6.2.3   Coping

Findings from Study 2 showed that utilising adaptive coping strategies can promote resilience in poly-victims. Specifically, it was shown that with high levels of problem-solving coping, the negative relationship between poly-victimisation and both positive affect and life satisfaction was no longer significant. Problem-solving coping therefore protected against reductions in emotional wellbeing in poly-victims.

Prior to this thesis, only two other studies have explored the link between coping and poly-victimisation. Results showed that poly-victimisation predicted externalising symptoms in a small clinical sample of adolescents, and that this relationship was moderated by the extent of searching for social support (C. Guerra, Ocaranza, et al., 2016). Thus, by using social support to cope with poly-victimisation, its negative effects were reduced. In a second study, non-productive coping strategies were found to partially mediate the effect of poly-victimisation on internalising symptoms, in that poly-victimisation reduced the coping skills of adolescents, and resulted in greater symptoms of anxiety and depression (C. Guerra, Pereda, et al., 2016).

The above studies, however, use a cross-sectional design and therefore definite conclusions about the casual relationship between poly-victimisation, coping and outcomes cannot be reached. The literature on longitudinal trends between children's coping and outcomes remains very limited (Dubow & Rubinlicht, 2011),

and this absence of research is even more pronounced in relation to how children cope with victimisation (Grych et al., 2015).

Shelley and Craig (2009) examined the relationship between coping styles and peer victimisation six months later in 220 children. T1 coping, while controlling for T1 victimisation, was analysed as a predictor of T2 victimisation. Externalising, internalising and distancing coping at T1 significantly predicted higher levels of peer victimisation at T2. These avoidant strategies may indicate vulnerability to peers and suggest an inability to cope, which could increase victimisation risk. It was additionally found that T1 social support coping predicted reduced T2 victimisation in girls, but there was no significant association for boys. The authors suggest this is because girls and boys friendships are characterised by different qualities. When boys seek social support, they may not receive the emotional support they need and it may not be a normative behaviour, and it therefore does not have a protective effect.

These findings provide a greater understanding of the causal links between coping and peer victimisation, however do not offer any insight into how different coping strategies may increase or reduce resilience in victimised youth. To the best of our knowledge, the study by Rosario, Salzinger, Feldman, and Ng-Mak (2008) is the only research which examines coping as a moderator between victimisation and symptomology in childhood with a longitudinal design. The roles of social support and coping as moderators between exposure to community violence and internalising symptoms were examined longitudinally among a U.S. sample of 667 adolescents aged 11-14 years. After controlling for potential confounders (e.g., social desirability, victimisation and witnessing of family violence), internalising symptoms of anxiety, depression and PTSD at T2 were moderated by social support and coping. Specifically, increased community violence exposure, decreased social

support, and increased use of defensive and confrontational behavioural coping at T1 were associated with greater internalising symptoms at T2.

These findings are supported by stress and transactional models of coping, which are reviewed in more detail in Chapter 5, Section 5.2.2. Lazarus & Folkman's (1984) stress and coping theory and Roth and Cohen's (1986) approach and avoidance model propose strong associations between the use of specific coping strategies and an individual's functioning following victimisation. Social support is categorised as an approach strategy and is theorised to be associated with better functioning following stress and trauma. Whereas, defensive and confrontational coping are avoidance strategies and are theorised to be related to poorer adjustment post-trauma.

Rosario et al. (2008) however, fail to assess the complete array of victimisations that can be experienced during adolescence. Furthermore, this study did not investigate all possible coping strategies, only assessing behavioural coping. There is therefore an urgent need for further longitudinal research which focuses on relations between coping with poly-victimisation and outcomes.

6.2.4   *The present study*

The reviewed literature highlights the scant amount of longitudinal research exploring risks and outcomes of poly-victimisation, with the majority of studies that have investigated this adopting cross-sectional designs (see Chapter 4, Section 4.2 and Chapter 5, Section 5.2 for an in-depth review of relevant cross-sectional research). The present study intends to address the scarcity of longitudinal research concerning poly-victimisation and to build on findings from Studies 1 and 2 to allow an understanding of the direction of causality between risk factors and poly-victimisation, and poly-victimisation and emotional well-being, with the inclusion of coping as a moderator.

From Study 1 it was observed that a range of factors from individual, relationship, familial and community levels were associated with poly-victimisation. However from these findings it cannot be determined that these factors precede and create increased risk for poly-victimisation. By adopting a longitudinal design the current study will aim to add to this understanding. Using a cross-lagged model, the longitudinal relationship will be examined between risk factors at T1 and T2 poly-victimisation, controlling for prior poly-victimisation, and between T1 poly-victimisation and T2 risk factors, controlling for prior levels of risk. The fact that prior levels of risk/victimisation are controlled for allows one to rule out the possibility that a cross-lagged effect is due simply to the fact that risk factors and poly-victimisation were correlated at T1. This approach permits a greater understanding of the causal effect between variables.

The two prior longitudinal studies that assessed poly-victimisation risk have shown that factors from different ecological levels predict subsequent poly-victimisation (Finkelhor et al., 2007c; Finkelhor, Ormrod, Turner, et al., 2009). However, these studies did not use cross-lagged analysis and thus did not test whether prior poly-victimisation was associated with increased levels of risk. From the theoretical perspective of the VSM (Rosen et al., 2009), prior victimisation experiences may impair an adolescent's social functioning and result in ineffective response selection. Victims will display disruptive or withdrawn behaviour with the aim of reducing threat and the VSM proposes that these behaviours will then create risk for continued victimisation. Accordingly, the individual level risks of disruptive and withdrawn behavioural problems, which will be examined in the present study, are expected to both predict later poly-victimisation, and be predicted by prior poly-victimisation. The present study will test this. There is also empirical evidence that

peer rejection contributes to increased peer victimisation over time, and also that initial victimisation predicts increases in later peer rejection (Hodges & Perry, 1999).

On theoretical grounds, factors from more distal levels of an adolescent's ecology (e.g., community disorganisation, family management) can directly influence factors at a more proximal level and create conditions where victimisation is more likely (Lynch & Cicchetti, 1998). However, there is no empirical evidence available to suggest that prior victimisation can influence factors at a more distal ecological level. Therefore, risk factors studied from community and family levels are expected to predict poly-victimisation one year later, but there are not hypothesised to be any bi-directional effects.

Findings from Study 2 then revealed poly-victimisation predicted reduced emotional well-being, however the nature of cause and effect in this relationship could not be determined. Using a cross-lagged model the current study will explore whether T1 poly-victimisation precedes reductions in T2 emotional well-being, after controlling for prior wellbeing and if T1 emotional well-being creates vulnerability for greater T2 poly-victimisation, controlling for T1 poly-victimisation. This design will allow a greater understanding of the causal relationship between variables.

In addition, Study 2 found that problem-solving coping strategies were able to mitigate the negative relationship between poly-victimisation and emotional well-being, but again the nature of this pathway over time was not established. To our knowledge there has been no longitudinal research examining the role of coping strategies on the effect of outcomes following poly-victimisation. However, coping necessarily precedes outcomes in time and in order to establish the efficacy of coping as an intervening process it is necessary to clarify the direction of influence between causal relationships (Rosario et al., 2008). This study will examine how T1

coping moderates the relationship between T1 poly-victimisation and T2 emotional well-being, after controlling for T1 emotional well-being, and vice versa.

Lastly, by observing differences in victimisation types and poly-victimisation at different time points, this study aims to examine changes in victimisation experiences over time and investigate the extent to which prior victimisation increases the risk for continued victimisation.

6.2.4.1   Research questions

The research questions for this study are therefore as follows:

1. What is the relationship between community (community disorganisation, low commitment to school), family (poor family management, family conflict), relationship (peer rated social status) and individual (teacher reported withdrawn and disruptive behavioural problems) level risk factors and poly-victimisation over time, after controlling for each at the previous time point?

2. What is the relationship between poly-victimisation and emotional well-being over time, after controlling for each at the previous time point?

3. Do coping strategies at T1 moderate the longitudinal relationship between T1 poly-victimisation and T2 emotional well-being, after controlling for prior well-being?

4. Does prior poly-victimisation create risk for continued victimisations and what are the patterns of poly-victimisation over time?

6.2.4.2   Hypotheses

Based on the theoretical and empirical evidence reviewed it is hypothesised that:

H1. Greater risk factors at T1 will predict greater poly-victimisation at T2, after controlling for prior poly-victimisation. On theoretical grounds of the VSM, T1 poly-victimisation is expected to predict T2 increases in individual and relationship level factors, after controlling for prior levels of risk. There is not hypothesised to be a significant relationship between T1 poly-victimisation and T2 community and family risk factors, controlling for T1 risk.

H2. Greater poly-victimisation at T1 will predict poorer emotional well-being at T2, after controlling for prior well-being. Based on the findings of longitudinal studies exploring the poly-victimisation-symptomology relationship, and from the peer victimisation literature on emotional well-being, it is further hypothesised that T1 negative affect will predict greater T2 poly-victimisation, controlling for T1 poly-victimisation. There is no prior evidence to suggest that low life satisfaction and positive affect will predict later poly-victimisation, so there are not hypothesised to be any effects in this direction.

H3. T1 Problem-solving coping will moderate the relationship between T1 poly-victimisation and T2 emotional well-being, after controlling for T1 emotional well-being. Based on findings from Study 2 the remaining coping strategies (social support seeking, distraction, externalising, and internalising) are not expected to have a moderating effect.

H4. Victimisations at T1 will increase risk of re-experiencing the same victimisation type at T2. Poly-victimisation at T1 will be strongly correlated with poly-victimisation at T2.

6.3 Method

6.3.1 Design

This study is a longitudinal survey examining the relationships over time between poly-victimisation, risk factors, emotional well-being and coping. One year after completing Study 1 & 2 participants repeated the same survey.

6.3.2 Participants

Participants were 207 adolescents (117 female and 90 male) who had participated in Study 1 & 2 and had previously consented to being contacted with regard to taking part in future studies. The mean age of the sample was 16.80 years ($SD = 1.49$), with participants ranging from 13-19 years of age. 100% of participants reported their ethnicity as White Polish. For further participant information see Chapter 3: Methodology, Section 3.4.2.

Five classes who participated in Study 1 & 2 had graduated from school and were unable to be contacted to take part in the second wave of data collection. Additionally, a further four classes had moved onto a different school and were also unable to be followed up. Therefore, there were 13 classes remaining, recruited from 13 different schools, which were contacted again in order to take part in Study 3. This amounted to 298 pupils who were available to follow-up (65.6% of Study 1 & 2 sample).

Of these a high percentage (82.9%) gained parental consent and gave individual consent to participate in the follow-up study. From this group of 247 pupils, due to absences on the day of data collection, 233 took part in Study 3. During data cleaning 26 participants were excluded from analysis. The final sample therefore consisted of 207 participants, amounting to 45.6% of the sample from Studies 1 and 2. This high attrition rate was expected as 34.4% ($n = 156$) of the

original sample could not be followed-up. Consequently, this rate primarily reflects

practical barriers to retaining participants, as opposed to participant drop-out.

Attrition analyses were conducted to confirm there were no significant differences

between responders and non-responders. As shown in Table 13, it was found

participants completing both time points used significantly less externalising coping,

compared to non-responders. There were no significant differences between any

further study variables indicating attrition between time points occurred at random.

Table 13

Differences in Variables between Responders and Non-responders at T2

Variable at T1	Responders at both time points ($n = 207$)	Non-responders at T2 ($n = 247$)	t
	M (SD)	M (SD)	
Victimisation Total	4.63 (4.29)	4.53 (4.18)	-0.25
Community Disorganisation	1.82 (0.54)	1.84 (0.49)	0.48
Low School Commitment	3.01 (0.73)	3.04 (0.67)	0.55
Poor Family Management	1.83 (0.58)	1.89 (0.54)	1.33
Family Conflict	1.76 (0.76)	1.74 (0.73)	-0.33
Peer Social Preference	0.28 (1.60)	0.21 (1.59)	0.07
Disruptive Behaviour	0.12 (0.14)	0.10 (0.16)	-1.27
Withdrawn Behaviour	0.11 (0.14)	0.13 (0.17)	-1.20

Life Satisfaction	2.94 (0.61)	2.94 (0.57)	-0.03	
Positive Affect	3.49 (0.94)	3.55 (0.83)	0.67	
Negative Affect	0.28 (0.18)	0.27 (0.17)	-0.65	
Problem-solving	3.42 (0.81)	3.41 (0.69)	-0.12	
Social support seeking	3.05 (1.07)	3.21 (1.06)	1.60	
Distraction	2.88 (0.83)	2.80 (0.80)	-1.09	
Internalising	2.47 (0.97)	2.61 (0.95)	1.58	
Externalising	2.03 (0.88)	2.23 (0.90)	2.38*	

6.3.3 Measures

Table 14 provides a summary of the measures used in the current study. For complete details of all measures used please refer to Chapter 3: Methodology, Section 3.6.

Table 14

Summary of Measures Used in Study 3

Construct	Measure	No. of items	Response options	Cronbach's alpha
Victimisation	JVQ (Finkelhor, Hamby, et al., 2011)	25	Yes/ No	.88
Individual risks				
Teacher-rated disruptive problems	Teacher-Child Rating Scale (Hightower et al., 1986).	3	1 = *not a problem* to 5 = *very serious problem*	.79
Teacher-rated withdrawn problems		3		.85
Relationship risks				
Social preference	Peer nomination procedure (Coie & Dodge, 1983)	2	N/A	N/A
Family risks				
Poor family management	CTCYS (Arthur et al., 2002)	7	1 = *definitely not true* to 5 = *definitely true*	.81
Family conflict	CTCYS (Arthur et	4	1 = *definitely not true*	.82

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	al., 2002)		to 4 = *definitely true*	
Community risks				
Community disorganisation	CTCYS (Arthur et al., 2002)	6	1 = *definitely not true* to 4 = *definitely true*	.82
Low commitment to school	CTCYS (Arthur et al., 2002)	6	1 = *never* to *5* = *almost always; very interesting* to *very boring; very important* to *not at all important)*	.84
Emotional well-being				
Positive/ Negative affect	PANAS-C (Ebesutani et al., 2012)	5 / 5	1 = *not at all/ very slightly* to 5 = *extremely*	.87 / .83
Life satisfaction	SLSS (Huebner, 1991)	7	1 = *disagree a lot* to 4 = *agree a lot*	.84
Coping				
Problem-solving	Self-report Coping Scale (Wright et al., 2010)	7	1 = *not at all* to 5 = *all the time*	.87
Social-support seeking		4		.83
Distraction		4		.63
Internalising		5		.82
Externalising		4		.77

6.3.4   Procedure

As with T1 data collection, all questionnaires were administered in class groups in a single 40-minute session. A member of the research team was present throughout to answer any questions. The order in which questionnaires appeared in the participants survey packs were counterbalanced. Participants were reminded that they could skip any questions if they wished and that there were no right or wrong answers.

Upon completion of the questionnaire participants were verbally debriefed by a member of the research team and provided with information regarding support services and the school worry box, where they could anonymously submit any

concerns or feelings of distress. For further details regarding consent procedures and ethical considerations see Chapter 3: Methodology, Section 3.6.

6.3.5 Statistical analyses

6.3.5.1 Data cleaning

Data was first examined for missing values and outliers. 14 participants were excluded from analysis as either 5% or greater of their responses were missing, or the same choice had been selected throughout a whole questionnaire. Where less than 5% of data was missing mean substitution was used as recommended by (Tabachnick & Fidell, 2006). Data from a further 12 participants was excluded as their responses were identified as outliers.

6.3.5.2 Testing for normality

Normality of data was tested by conducting the K-S test and by visually inspecting the data by plotting histograms and Q-Q plots. From this the variables victimisation total and disruptive behaviour problems were identified as violating normality. An outlier in victimisation total was adjusted to one value higher than the next most extreme score in order to lessen the impact of this outliner and meet assumptions of normal distribution. Log10 transformations were then computed on disruptive behaviour problems in order to ensure normal distribution. Where homogeneity of variance was violated alternative tests were used.

6.3.5.3 Analyses

The following tests were used to analyse the data.

i) Victimisation frequencies from T1 and T2 were used to calculate re-victimisation rates and relative risks. From this poly-victims were grouped based on victimisation patterns over time.

ii) Pearson's correlations were calculated to explore relationships between T1 and T2 variables.

iii) A series of cross-lagged hierarchical regression analyses were performed to investigate the direction of the relationship between victimisation and risk, i.e., predicting T2 victimisation from T1 risk factors, controlling for prior victimisation, and predicting T2 risks from T1 victimisation, controlling for T1 risk factors.

iv) Hierarchical regressions were conducted to investigate the direction of the relationship between victimisation and emotional well-being, i.e., predicting T2 emotional well-being from T1 victimisation, controlling for T1 well-being, and predicting T2 victimisation from T1 emotional well-being, controlling for T1 victimisation.

v) To examine the moderating role of coping in the relationship between T1 victimisation and T2 emotional well-being, separate hierarchical regression analysis were conducted for each coping strategy (Aiken & West, 1991). For significant interaction effects, simple slopes analyses were carried out to explore the exact nature of the moderation effect (Aiken & West, 1991).

6.4   Results

The mean number of different victimisations experienced at T2 was 4.67 (*SD* = 4.76), with a range of 0-18 different victimisations reported. 20.3% (*n* = 42) of the sample reported no past-year victimisations. 46.9% (*n* = 97) were grouped as less victimised, reporting between one and five different victimisations. Poly-victims, defined as those experiencing six or more victimisation types (Finkelhor, Turner, et al., 2011) comprised 32.9% (*n* = 68) of the sample. Table 15 presents a comparison of these findings with those from T1.

Table 15

Summary of Descriptive Statistics for Victimisation at T1 and T2

Descriptive statistic	T1 (N= 454)	T2 (N = 207)
M (*SD*) victimisation	4.58 (4.23)	4.67 (4.76)
Range victimisation	0-19	0-18
% non-victimised	15.9	20.3
% less victimised	48.5	46.9
% poly-victimised	35.6	32.8

Table 16 summaries the demographic characteristics of the sample in the current study.

Table 16

Demographic Summary for Victimisation Groups at T2

		Victimisation Group		
	Overall (%) (N = 207)	Non-victimised (%) (*n* = 42)	Less victimised (%) (*n* = 97)	Poly-victimised (%) (*n* = 68)
Age (years)				
M	16.80	16.79	16.91	16.66
SD	1.49	1.84	1.36	1.44
Gender				
Female	56.5	40.5	59.8	61.8
Male	43.5	59.5	40.2	38.2
Family Structure				
Two Biological/ Adoptive Parents	78.3	76.2	82.5	73.5
One Biological/ Adoptive Parent & One Step-parent	9.7	9.5	9.3	10.3
Single Parent	10.1	11.9	8.2	11.8

Other Caregiver	1.9	2.4	-	4.4
Parental Education				
Lower Secondary	3.4	-	3.1	5.9
Vocational	25.1	19.0	23.7	30.9
Secondary General	34.8	35.8	40.2	26.5
Higher Education	32.9	38.1	30.9	32.4
Not Sure	3.9	7.1	2.1	4.3

6.4.1   Re-victimisation

Rates of re-victimisation between time points revealed that victimisation at T1 acted as a risk for re-experiencing the same victimisation type at T2. As shown in Table 17, peer or sibling victimisations had the highest level of re-victimisation at T2 (76.0% who reported a peer/sibling victimisation at T1 also reported a victimisation in the category at T2), followed by conventional crime (70.8%), and witnessing or indirect victimisation (52.2%). Maltreatment by caregivers (48.0%) and electronic victimisation (43.3%) were the least likely to be re-experienced at T2, although still showed high levels of persistence across time.

The relative risks of experiencing each type of victimisation at T2 based on experiencing it at T1 were calculated. Maltreatment by caregivers at T1 resulted in the greatest risk of re-victimisation. Those who reported a victimisation in this category at T1 were 2.69 times more likely to re-experience this victimisation type at T2, compared to those who had not been maltreated at T1. Similar rates were seen for all other victimisation modules, with relative risks of re-victimisation ranging from 1.98 to 1.62 (Table 17).

53.8% of poly-victims at T1 were also poly-victimised at T2, indicating this is a relatively stable state. For those who were poly-victims at T1 the risk of T2 poly-

victimisation was 2.67 times greater than those who did not present poly-victimisation at T1. 38.2% of the sample were newly poly-victimised at T2, showing a trajectory whereby those with fewer victimisations at T1 experience greater victimisation the following year, resulting in poly-victimisation onset. Conversely, 46.2% of adolescents who were poly-victimised at T1 were not so at T2, suggesting it is possible to escape from poly-victimisation and that it is not always a long-term condition.

Table 17

Rates of Victimisation, Re-victimisation, and Desistance Over a One-year Period

Victimisation type	Victimisation rate (%)		Re-victimisation relative risk	95% CI	Re-victimised (%)	Desisted (%)	New victims (%)
	T1	T2					
Conventional crime	62.8	58.9	1.76	1.31, 2.36	70.8	29.2	25.4
Maltreatment	23.2	26.1	2.69	1.73, 4.19	48.0	52.0	41.9
Peer/sibling victimisation	62.3	61.8	1.98	1.47, 2.66	76.0	24.0	23.4
Electronic victimisation	29.0	28.5	1.93	1.27, 2.93	43.3	56.7	55.9
Witnessing/indirect	44.4	41.1	1.62	1.17, 2.26	52.2	47.8	43.5
Poly-victimisation	37.7	32.9	2.67	1.79, 3.99	53.8	46.2	38.2

Note. Victimisation rate = % of sample who reported a victimisation in this category/ were poly-victimised. Sample from T1 represents only those who participated at both time points. Relative risk of re-victimisation = the ratio of the probability that a participant is victimised at T2, to the probability that a participant is not victimised at T2.

6.4.2 *Risk factors and poly-victimisation*

The next stage of the analysis explored the longitudinal relationships between proposed risk factors and poly-victimisation. A Pearson's correlation was conducted between total kinds of victimisation at T1 and T2 and risk factors at T1 and T2 (Table 18). Correlations showed that all risk factors at T1 were moderately correlated with T2 victimisations, with correlation coefficients ranging from $r = -.27$ to .45. Correlations between victimisations at T1 and risk factors at T2 were considerably weaker or non-significant, giving an initial indication that risks are associated with greater subsequent victimisation, rather than vice-versa.

Table 18

Pearson's Correlation Matrix of Total Kinds of Victimisation and Risk Factors at T1 and T2

	VT		CD		SC		FC		FM		SP		TD		TW	
	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2	T1	T2
Victimisation Total																
T1	-															
T2	.55***	-														
Com. Disorganisation																
T1	.53**	.44***	-													
T2	.36***	.53***	.40***	-												
School Commitment																
T1	.35***	.13*	.23***	.09	-											
T2	.06	.20**	.12	.29***	.16*	-										
Fam. Conflict																
T1	.49***	.38***	.37***	.28***	.37***	.17*	-									
T2	.23**	.40***	.19**	.30***	.08	.36***	.41***	-								
Fam. Management																
T1	.53***	.45***	.43***	.29***	.36***	.20**	.37***	.28***	-							
T2	.29***	.52***	.31***	.43***	.15*	.33***	.28***	.45***	.41***	-						
Social Preference																
T1	-.16*	-.27***	-.09	-.11	-.07	-.03	-.13	-.08	-.20**	-.05	-					
T2	-.11*	-.31***	-.16*	-.13	-.04	-.19**	-.08	-.15*	-.10	-.13	.37***	-				
Teacher Disruptive																
T1	.39***	.34***	.23**	.24**	.16*	.08	.25***	.13	.25***	.17**	-.15*	-.05	-			

T2	.19*	.35***	.22**	.24**	.08	.13	.13	.15*	.18**	.18**	-.15*	-.19**	.31***	-	
Teacher Withdrawn															
T1	.38***	.37***	.21**	.21**	.16*	.09	.22**	.12	.29***	.15*	-.23**	-.18**	.11	.09	-
T2	.12*	.43***	.23**	.26***	.01	.15*	.13	.14	.19**	.27***	-.21**	-.16*	-.08	.11	.29**	-

Note. VT = victimisation total; CD = community disorganisation; SC = low school commitment; FC = family conflict; FM = poor family management; SP = social preference; TD = teacher rated disruptive problem behaviours; TW = teacher rated withdrawn problem behaviours

* *p* < .05, ** *p* < .01, *** *p* < .001.

Using a cross-lagged approach we tested a hierarchical regression model exploring the longitudinal relationships of risk factors at T1 on T2 victimisation total, controlling for prior victimisation, and the longitudinal effect of T1 victimisation on T2 risk factors, controlling for prior risks. As seen in Table 19, risks were entered with the most proximal factors to the adolescent entered first through to the most distal, i.e., individual factors, followed by relationship factors and finally community factors, in line with the principles of the ecological model. Victimisation at T1 was controlled for. All risk factors at T1 were shown to be significant predictors of victimisation total at T2. Greater disruptive behavioural problems, withdrawn behavioural problems, poor family management, family conflict, and community disorganisation were predictive of increases in subsequent victimisation. Conversely, greater social preference and greater commitment to school were predictive of decreases in T2 victimisation.

In total all risk factors explained 44.2% of the variance in T2 victimisation, $R^2 = .44$, $F(8, 431) = 42.65$, $p < .001$. After controlling for prior victimisation, individual levels risks factors were entered in step 2, they together accounted for an additional 5.6% of variance in T2 victimisation, $F(3, 436) = 79.61$, $p < .001$. In step 3, all relationship variables were entered into the model and, together, added a significant and additional 5.8% of the variance in poly-victimisation at T2, $F(6, 433) = 50.48$, $p < .001$. In step 4, community risks were also entered into the model, resulting in an additional 3% of variance explained, $F(8, 431) = 42.65$, $p < .001$.

Table 19

Hierarchical Multiple Regression Analyses Predicting T2 Victimisation from T1 Risk Factors, Controlling for T1 Victimisation

DV	β	t	R^2	ΔR^2	F Change
			IV = T2 Victimisation Total		
Step 1			0.298	0.298	186.20***
T1 Victimisation	0.55	13.65***			
Step 2			0.354	0.056	18.78***
T1 Victimisation	0.40	8.75***			
Disruptive	0.16	3.74***			
Withdrawn	0.21	5.04***			
Step 3			0.412	0.058	14.14***
T1 Victimisation	0.29	5.86***			
Disruptive	0.11	2.76**			
Withdrawn	0.15	3.68***			
Family Management	0.19	4.25***			
Family Conflict	0.10	2.40*			
Social Preference	-0.13	-3.38**			
Step 4			0.442	0.030	11.70***
T1 Victimisation	0.26	5.14***			
Disruptive	0.11	2.75**			
Withdrawn	0.16	3.83***			
Family Management	0.19	4.19***			
Family Conflict	0.12	2.79**			
Social Preference	-0.14	-3.63***			
Community Disorg.	0.13	3.07**			
School Commitment	-0.14	-3.57***			

Note. $* p < .05$, $** p < .01$, $*** p < .001$.

To test the next stage of the model, further hierarchical regression analyses were conducted with victimisation at T1 used to predict risk factors at T2, after controlling for risks at T1. Community disorganisation was excluded from this

analysis as there is no foundation to expect prior victimisation to impact upon community disorganisation. As shown in Table 20, T1 victimisation predicted greater disruptive and withdrawn behavioural problems at T2. This suggests that these characteristics both increase victimisation vulnerability, and also that subsequently victimisation can increase behavioural problems. T2 peer social preference and family risk factors were not predicted by prior victimisation.

Table 20

Hierarchical Multiple Regression Analyses Predicting T2 Risk Factors from T1 Victimisation, Controlling for T1 Risk Factors

DV	β	t	R^2	ΔR^2	F Change
T2 Disruptive					
Step 1			0.352	0.352	15.74***
T1 Disruptive	0.19	3.97***			
Step 2			0.373	0.021	5.21**
T1 Disruptive	0.15	2.92**			
T1 Victimisation	0.22	3.79**			
T2 Withdrawn					
Step 1			0.293	0.293	14.72***
T1 Withdrawn	0.18	3.83***			
Step 2			0.312	0.019	3.34*
T1 Withdrawn	0.17	3.32**			
T1 Victimisation	0.19	3.48*			
T2 Social Preference					
Step 1			0.061	0.061	28.35***
T1 Social Preference	0.25	5.32***			
Step 2			0.061	0.000	0.13
T1 Social Preference	0.25	5.25***			
T1 Victimisation	-0.02	-0.37			

Note. The column header above β, t, R^2, ΔR^2, F Change is "IV = T1 Victimisation".

	β	t	R^2	ΔR^2	F
T2 Family Conflict					
Step 1			0.105	0.105	23.97***
T1 Family Conflict	0.32	4.90***			
Step 2			0.112	0.007	1.71
T1 Family Conflict	0.28	3.74***			
T1 Victimisation	0.10	1.31			
T2 Family Management					
Step 1			0.149	0.149	35.87***
T1 Family Management	0.39	5.99***			
Step 2			0.159	0.011	2.67
T1 Family Management	0.32	4.25***			
T2 School Commitment					
Step 1			0.025	0.025	5.28*
T1 School Commitment	0.16	2.30*			
Step 2			0.025	0.000	0.01
T1 School Commitment	0.16	2.11*			
T1 Victimisation	0.01	0.10			

Note. $* p < .05$, $** p < .01$, $*** p < .001$.

6.4.3 *Poly-victimisation and Emotional Well-being*

We then probed the longitudinal relationship between poly-victimisation and emotional well-being. In order to initially explore the relationships between these variables, intercorrelations were calculated between victimisation total at T1 and T2 and indicators of emotional well-being at T1 and T2 (Table 21). Correlations show that T1 and T2 life satisfaction and positive affect are significantly negatively correlated with victimisation at both time points, and T1 and T2 negative affect are significantly positively correlated with victimisation at both time points.

Table 21

Pearson's Correlation Matrix between Total Kinds of Victimisation and Indicators of Emotional Well-being at T1 and T2

	VT	LS	PA	NA

	T1	T2	T1	T2	T1	T2	T1	T2
Victimisation total								
T1	-							
T2	.55***	-						
Life Satisfaction								
T1	-.48***	-.34***	-					
T2	-.34***	-.49***	.50***	-				
Positive Affect								
T1	-.26***	-.21**	.67***	.27***	-			
T2	-.31***	-.39***	.41***	.63***	.53***	-		
Negative Affect								
T1	.46***	.38***	-.65***	-.32***	-.52***	-.32***	-	
T2	.30***	.43***	-.33***	-.53***	-.35*	-.56***	.52***	-

Note. VT = victimisation total; LS = life satisfaction; PA = positive affect; NA = negative affect.

$* p < .05, ** p < .01, *** p < .001$.

A series of hierarchical regression analyses were then calculated to examine the direction of the relationship, i.e. whether greater victimisation at T1 predicts poorer emotional well-being at T2, controlling for T1 well-being, and/or if poorer emotional well-being at T1 predicts greater victimisation at T2, controlling for T1 victimisation. Figure 5 shows the significant pathways of the tested model.

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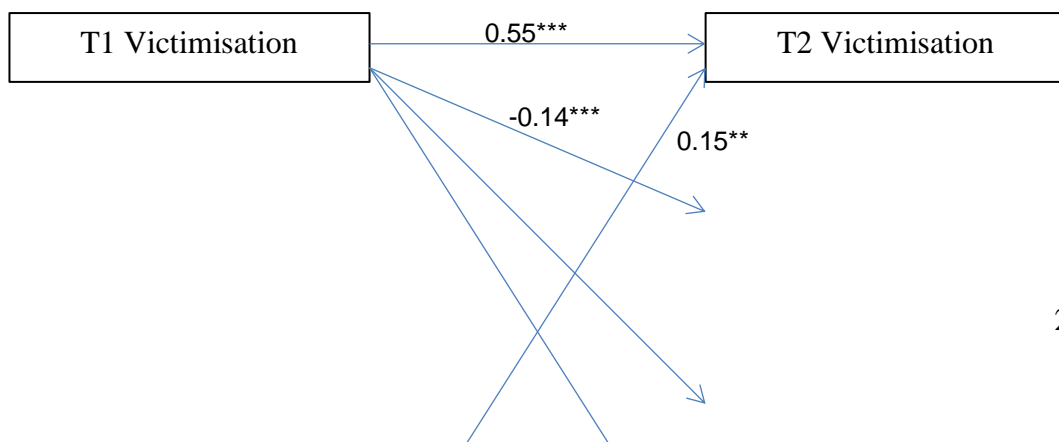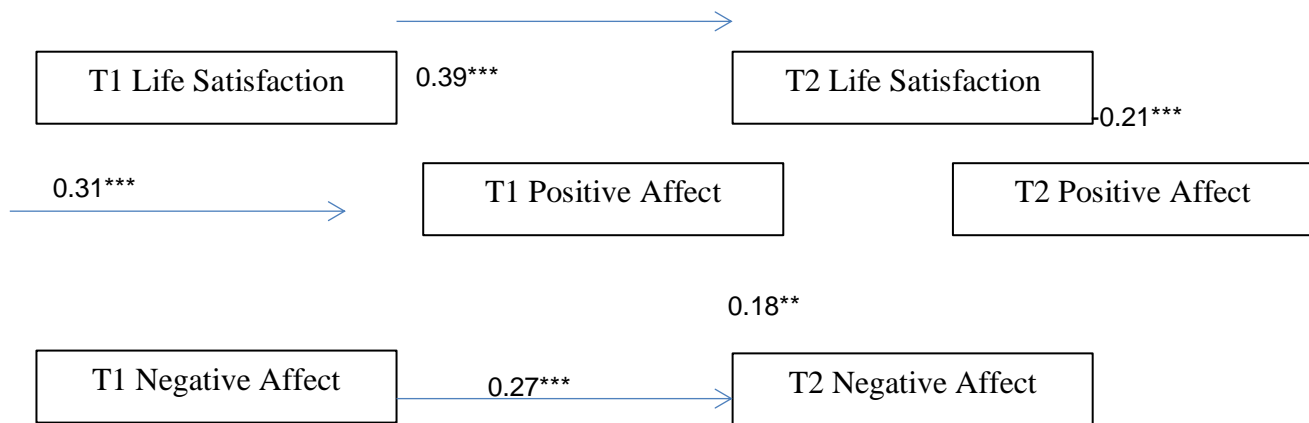
Figure 5. Model tested exploring longitudinal relationships between victimisation and emotional well-being. Standardised beta coefficients are shown. To enhance clarity only significant relationships are included.

As shown in Table 22, T1 victimisation was a significant predictor of all indicators of emotional well-being, after controlling for prior emotional well-being. When examining other pathways, as shown in Table 23, it was found that life satisfaction and positive affect at T1 were not predictive of T2 victimisation. However, negative affect at T1 did significantly predict T2 victimisation, after controlling for T1 victimisation. This suggests that victimisation can lead to greater negative affect, which then leads to increased risk of poly-victimisation.

Table 22

Hierarchical Multiple Regression Analyses Predicting T2 Emotional Well-being from T1 Victimisation, Controlling for Emotional Well-being at T1

IV = T1 Victimisation

DV	β	t	R^2	ΔR^2	F Change
T2 Life Satisfaction					
Step 1			0.152	0.152	78.38***
T1 Life Satisfaction	0.39	8.85***			
Step 2			0.167	0.015	7.79**
T1 Life Satisfaction	0.33	6.60***			
T1 Victimisation	-0.14	-2.79**			
T2 Positive Affect					
Step 1			0.096	0.096	46.66***
T1 Positive Affect	0.31	6.83***			
Step 2			0.137	0.041	20.85***
T1 Positive Affect	0.25	5.51***			
T1 Victimisation	-0.21	-4.57***			
T2 Negative Affect					
Step 1			0.073	0.073	34.31***
T1 Negative Affect	0.27	5.86***			
Step 2			0.097	0.025	12.00**
T1 Negative Affect	0.19	3.72***			
T1 Victimisation	0.18	3.46**			

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

Table 23

Hierarchical Multiple Regression Analyses Predicting Victimisation at T2 from

Emotional Well-being at T1, Controlling for Victimisation at T1

	DV = T2 Victimisation				
Predictors	β	t	R^2	ΔR^2	F Change

			R^2	ΔR^2	F
Life Satisfaction					
Step 1			0.302	0.302	88.52***
T1 Victimisation	0.55	9.41***			
Step 2			0.310	0.008	2.39
T1 Victimisation	0.50	7.55***			
T1 Life Satisfaction	-0.10	-1.55			
Positive Affect					
Step 1			0.298	0.298	116.20***
T1 Victimisation	0.55	13.65***			
Step 2			0.302	0.004	2.63
T1 Victimisation	0.53	12.74***			
T1 Positive Affect	-0.07	-1.62			
Negative Affect					
Step 1			0.298	0.298	118.52***
T1 Victimisation	0.55	13.64***			
Step 2			0.316	0.018	11.24**
T1 Victimisation	0.48	10.79***			
T1 Negative Affect	0.15	3.35**			

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

6.4.4 Coping strategies as moderators

The final stage of the analysis expands on findings from Study 2 by investigating whether T1 coping can moderate the relationship between T1 victimisation and T2 indicators of emotional well-being. Separate hierarchical regression analysis were conducted for each coping strategies. After mean-centring all variables and computing victimisation-by-coping interaction terms for each coping style (Aiken & West, 1991), the two predictors and the interaction were entered into a series of hierarchical regression models. Specifically for each analysis, after controlling for T1 life satisfaction/positive affect/negative affect (entered on Step 1), T2 life satisfaction/positive affect/negative affect was predicted from the

main effects of T1 victimisation (entered on step 2) and T1 coping (entered on step 3), and the interaction between T1 victimisation and T1 coping (entered on Step 4).

Table 24 summarises the findings of these regressions models. The following moderation effects were found: 1) T2 positive affect was negatively predicted by the victimisation x problem-solving coping interaction; 2) T2 negative affect was positively predicted by the victimisation x problem-solving. As shown in Table 23, all other interactions were non-significant.

Table 24

Hierarchical Multiple Regression Analyses Predicting Emotional Well-being at T2 from Victimisation at T1, with Coping Strategies included as Moderators

	T2 Life Satisfaction		T2 Positive Affect		T2 Negative Affect	
IV	β	ΔR^2	β	ΔR^2	β	ΔR^2
Step 1						
T1 LS/ PA/ NA	0.40***	0.162	0.33***	0.108	0.32***	0.101
Step 2						
T1 Victimisation	-0.20**	0.030	-0.24***	0.055	0.20**	0.030

Step 3						
T1 Problem Solving	0.07	0.005	0.11	0.010	0.08	0.007
T1 Social Support	-0.07	0.005	-0.11	0.010	0.12†	0.013
T1 Distraction	0.12	0.015	0.05	0.002	0.10	0.010
T1 Internalising	0.04	0.001	0.05	0.002	0.04	0.010
T1 Externalising	0.01	0.000	-0.01	0.000	0.15*	0.018
Step 4						
Vic x PS	0.10	0.009	0.17**	0.029	0.14*	0.018
Vic x SS	0.05	0.003	0.01	0.000	0.13	0.014
Vic x Distraction	-0.06	0.007	-0.02	0.000	0.07	0.003
Vic x Internalising	0.04	0.001	0.07	0.004	-0.08	0.007
Vic x Externalising	0.04	0.002	0.05	0.002	0.08	0.006

Note. LS = life satisfaction, PA = positive affect, NA = negative affect, PS = problem-solving coping, SS = social support seeking coping, Vic = total kinds of victimisation.

† $p < .10$, * $p < .05$, ** $p < .01$, *** $p < .001$.

To explore the nature of these significant interaction effects, we used the procedures described by Aiken and West (1991) to examine relations between T1 victimisation and T2 emotional well-being indicators at low (-1 SD below the mean), mean, and high ($+1$ SD below the mean) levels of coping. As depicted in Figure 6, increases in T1 victimisation were associated with decreases in T2 positive affect at low, $b = -0.10$, 95% CI [-0.14, -0.06], $t(203) = -5.12$, $p < .001$, and mean levels, $b = -0.06$, 95% CI [-0.09, -0.03], $t(203) = -3.75$, $p < .001$, of problem-solving coping. However, at high levels of problem-solving coping the relationship between T1 victimisation and T2 positive affect was non-significant, $b = 0.01$, 95% CI [-0.06, 0.04], $t(203) = -0.43$, $p = .67$. This suggests that a high use of problem-solving coping buffers against the negative impact of victimisation on self-reported

positive affect at a one-year follow-up, after controlling for prior levels of positive affect.
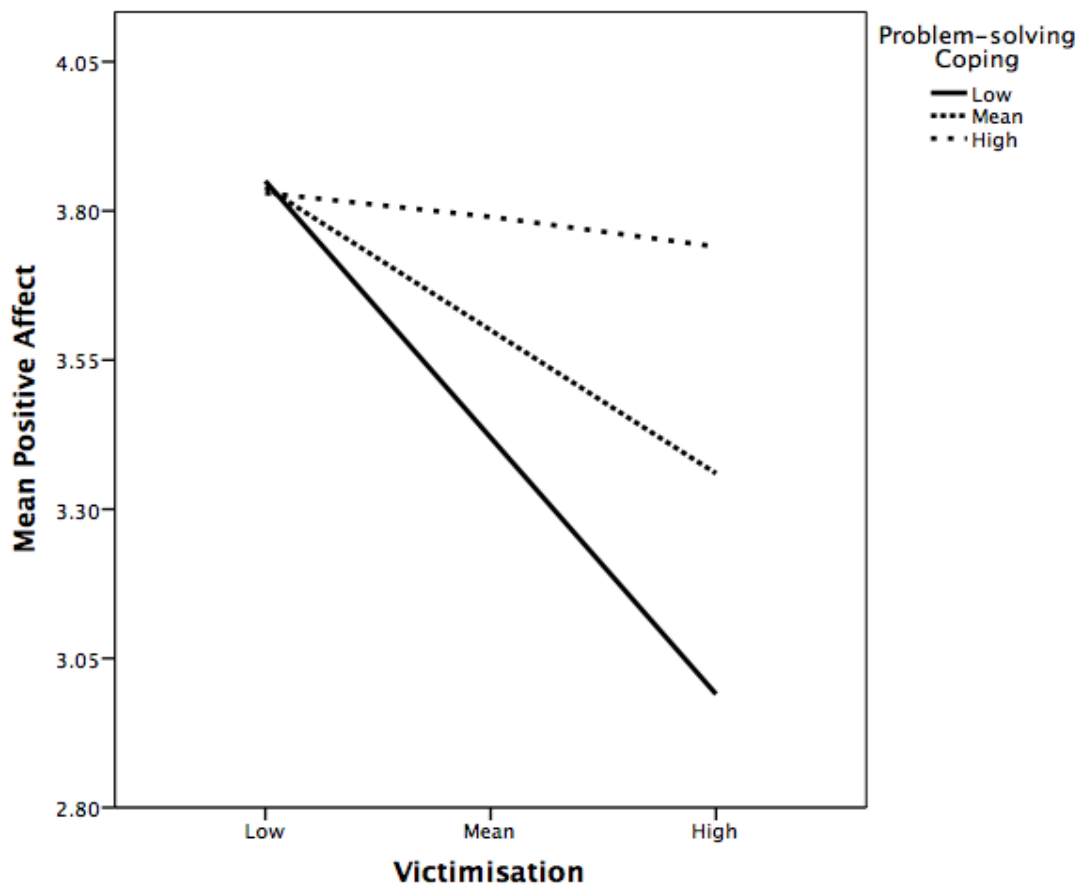
Figure 6. Plot of simple slopes for the relation between victimisation and positive affect at minus one standard deviation, at the mean, and at plus one standard deviation on problem-solving coping.

Next, the simple slopes were examined for the victimisation x problem-solving interaction for negative affect. At low levels, $b = 0.09$, 95% CI [0.05, 0.13], $t(203) = 4.40$, $p < .001$, mean, $b = 0.06$, 95% CI [0.04, 0.09], $t(203) = 4.86$, $p < .001$, and high levels of problem-solving coping at T1, $b = 0.04$, 95% CI [0.01, 0.07], $t(203) = 2.11$, $p < .05$, there was a significant positive relationship between T1 victimisation and T2 negative affect. As shown in Figure 7, the slope becomes less steep at high levels of problem-solving, indicating that T1 victimisation has less of a detrimental impact on T2 negative affect with greater use of problem-solving coping.

Johnson-Neyman technique reveals that at a level slightly greater than 1 *SD* above the mean (0.87) the relationship between victimisation and negative affect becomes non-significant, showing that problem-solving coping can mitigate the positive relationship between victimisation and subsequent negative affect.
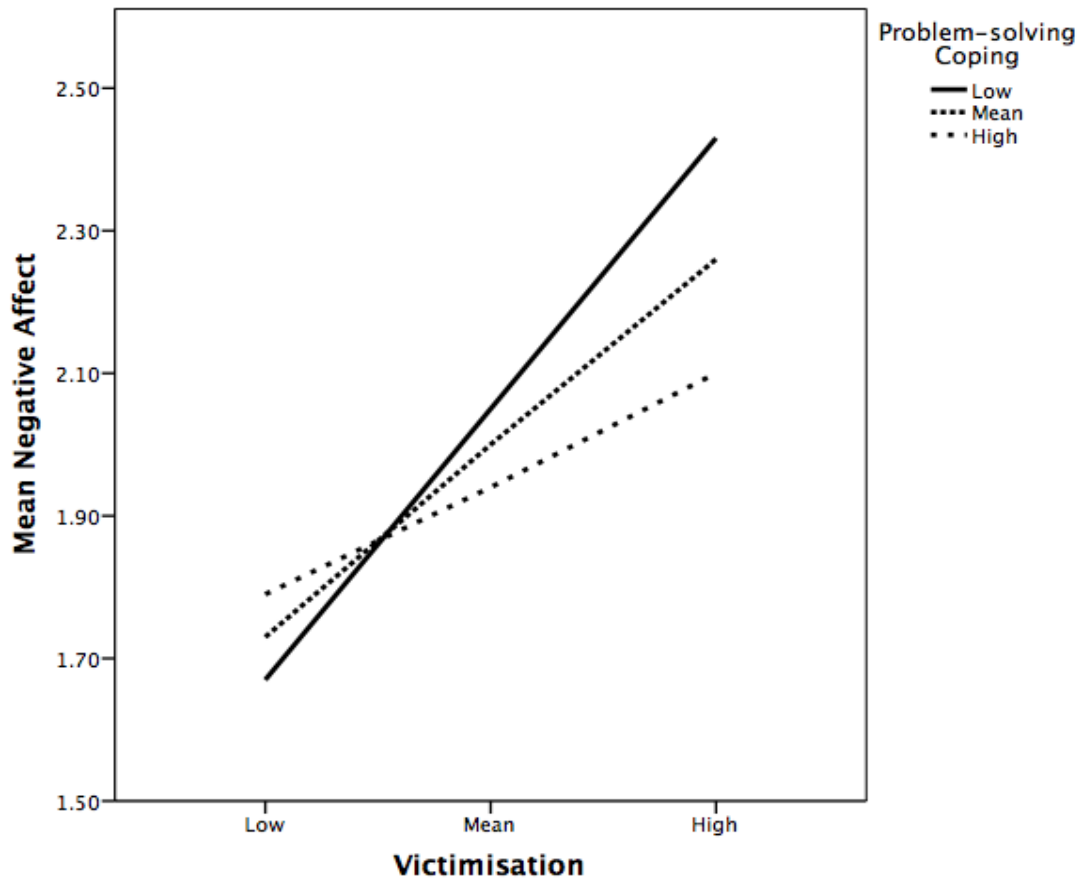
Figure 7. Plot of simple slopes for the relation between victimisation and negative affect at minus one standard deviation, at the mean, and at plus one standard deviation on problem-solving coping.

6.5   Discussion

This study used a longitudinal design to explore the causal relationships between risk factors and poly-victimisation, and between poly-victimisation, coping and emotional well-being. Additionally, trends in poly-victimisation over a one-year

period and associations between victimisation experiences at T1 and T2 were examined. Findings added to results from Studies 1 and 2, by revealing that greater levels of risk at T1 resulted in greater victimisation exposure one year later, and that individual levels risks also predicted greater subsequent victimisation. In addition, to our knowledge, this study is the first to show that the way adolescents cope with prior victimisation experiences can impact upon their emotional well-being one year later. Finally, examining victimisation experiences at two different time points showed that prior victimisation experiences create vulnerability for continued victimisation over time.

Similar victimisation and poly-victimisation rates were found at T1 and T2. 79.8% of the sample reported at least one victimisation over the past year, compared to 84% at T1. The rate of poly-victimisation was slightly lower at T2, at 32.8%, compared with 35.6% at T1. The prevalence of poly-victimisation is therefore, again, higher than observed in the majority of prior studies conducted in U.S., Western Europe and Asia, and reinforces the assertion made from Study 1 that poly-victimisation is higher in Eastern Europe due to cultural differences (see Chapter 4: Study 1, Section 4.5 for further discussion).

With regard to rates of poly-victimisation across the two time points our findings supported our hypothesis. In the current study, 53.8% were poly-victims at both T1 and T2, which is comparable to the rate of 46% found by Finkelhor et al. (2007c). Moreover, the persistence of poly-victimisation across time was found to be higher than that of any individual victimisation category. Those who were poly-victims at the start of the study were at 2.67 times greater risk of re-experiencing poly-victimisation one year later, compared to less victimised adolescents. This shows that highly victimised children are likely to remain so and supports Finkelhor, Ormrod, and Turner's (2007b) assertion that poly-victimisation is more of a stable

condition, than a series of events limited to one time period. Findings also revealed that for all victimisation categories assessed, those who reported incidences at T1 were at greater risk of re-experiencing these at T2, indicating victimisation of all types can be relatively stable across time.

The VSM (Rosen et al., 2009) offers an explanation for how peer victimisation can develop into a chronic condition. It is likely that this theoretical account could also apply to poly-victimisation. The VSM postulates that through impaired social and emotional functioning, prior victimisation creates conditions that make children more likely to be repeatedly targeted by perpetrators. Evidence from the current study with regard to individual level risk factors, provides further support for the application of this model to poly-victimisation.

6.5.1 Risk factors

In support of our hypothesis, individual, relationship, family and community risk factors as reported at T1 were predictive of greater victimisation at T2. These findings build on those from Study 1 and allow firmer conclusions to be drawn, showing each ecological level made a significant contribution to subsequent poly-victimisation risk over and above stability in level of risk.

In addition to creating risk for poly-victimisation, results revealed that disruptive and withdrawn behaviours as reported by teachers, were positively predicted by prior victimisation exposure. These results offer the first evidence of the causal relationship between these variables. This supports our hypothesis and the theoretical perspective of the VSM (Rosen et al., 2009), which surmises that prior victimisation experiences effect how an adolescent behaves in social interactions. When faced with a threatening or ambiguous situation, adolescents will activate a victim schema and as a result will expect to be victimised. This expectation is then

proposed to elicit a state of negative emotional dysregulation that may inhibit the ability to process cues from the current social environment. This, in turn, can make adolescents more likely to engage in disruptive or withdrawn behaviour, with the aim of reducing threat and negative emotional arousal (Rosen et al., 2009). The VSM proposes that these behaviours will then create risk for continued victimisation, as adolescents are perceived as an easy target (Maszk et al., 1999; Schwartz et al., 1993) and can reduce one's self-protection capacities (J. A. Chu, 1992; Cuevas et al., 2010).

It was also hypothesised that peer social preference would both predict and be predicted by total victimisation exposure. However, there was no significant association found between T1 victimisation and T2 social preference. Prior evidence has indicated a bi-directional relationship between peer rejection and peer victimisation (Hodges & Perry, 1999). However, our results are the first to reveal that while social preference judged by peers was a significant predictor of later victimisation, wider, multi-context victimisations did not predict reduced peer social preference.

Results concerning more distal ecological risk factors (poor family management, family conflict and low school commitment) revealed these were significant predictors of T2 poly-victimisation, but were not predicted by prior victimisation exposure. Examining these risks using a cross-lagged model allowed these observations to be made for the first time, and reveal unique insights into the nature of the relationships between poly-victimisation and risks, and the effects of poly-victimisation. Our findings show that factors from all ecological levels contribute to ensuing poly-victimisation risk, but that poly-victimisation does not impact upon factors outside of the ecological level most proximal to the adolescent.

6.5.2 Poly-victimisation and emotional well-being

Findings probing the nature of the relationship between poly-victimisation and emotional well-being revealed that prior victimisation is predictive of reductions in positive affect and life satisfaction, and greater negative affect at T2, over and above stability in emotional well-being. This adds to findings from Study 2 by confirming the causal association between poly-victimisation and reduced well-being. Findings are also in line with past longitudinal studies which have shown that previous poly-victimisation is associated with subsequent poor psychological health, in the form of externalising problems (Mrug & Windle, 2010), depressive symptomology (Cisler et al., 2012), and trauma and distress symptoms (Cisler et al., 2012; Finkelhor et al., 2007b; Turner et al., 2015).

When making inferences about the direction of causation between these variables it was additionally found that negative affect at T1 is related to greater victimisation at T2. Other indicators of emotional well-being (positive affect and life satisfaction) did not display this bi-directional relationship. For negative affect, however, results indicate that adolescents can be caught in a vicious cycle whereby victimisation results in greater negative affect and displays of this negative affect create vulnerability for further victimisations. By using a cross-lagged approach, this research is the first to indicate that negative affect can act as an antecedent and consequence of poly-victimisation. This confirms the importance of assessing and targeting day-to-day functioning, rather than solely focusing on clinical symptomology in poly-victimisation interventions.

We suggest that negative affect could be related to subsequent poly-victimisation as displaying emotions such as anger, fear and sadness, which embody negative affect, can make adolescents appear more vulnerable and an easier target. In accordance with the revised routine activity/lifestyle approach outlined by Finkelhor

and Asdigian (1996), this will increase the 'target congruency' of the victim and thereby make victimisation more likely.

6.5.3   Coping

When exploring the impact of coping strategies on the relationship between T1 victimisation and T2 emotional well-being results supported our hypothesis. Findings added to those of Study 2 by indicating that problem-solving coping is able to buffer the negative trend shown between poly-victimisation and reduced positive affect one year later. Specifically, for adolescents using a high level of problem-solving coping at T1, there was no association between T1 poly-victimisation and T2 reduced positive affect. In addition, the current study found a significant moderating effect of problem-solving coping between T1 victimisation and T2 negative affect. This suggests that problem-solving coping may be able to both protect against reductions in later positive emotions and mitigate the impact on increases in negative emotions, fostering an overall improved well-being in victimised adolescents. These findings provide further support for the stress and coping theory (Lazarus & Folkman, 1984) and indicate that problem-solving coping, can lead to greater feelings of control and autonomy over the situation, which is associated with improved outcomes following victimisation (Dempsey et al., 2000). For further discussion, see Chapter 5: Study 2, Section 5.5.

Longitudinal exploration of avoidance coping strategies (internalising, externalising or distraction) mirrored findings from Study 2, with no moderating effects being found. This is in contrast to the cross-sectional findings from C. Guerra, Pereda, et al. (2016) who discovered that non-productive coping mediated the relationship between poly-victimisation and greater internalising symptoms. This study, however, used a small sample drawn from a clinical population and a global measure of non-productive coping. Whereas, the methodological advantages of the

present study allow firmer conclusions to be drawn. These strengths include a longitudinal design, community sample and measuring specific avoidant coping strategies which prior research has shown are important in coping with childhood victimisation (Causey & Dubow, 1992; Hunter & Boyle, 2004; Kochenderfer-Ladd & Skinner, 2002). Present results support the conclusions drawn from Study 2 that avoidant coping styles are not beneficial with regard to poly-victimisation, and approach coping should be focused upon to improve resilience in poly-victimised youth.

The literature on longitudinal trends between coping with victimisation and outcomes is very limited (Grych et al., 2015) and these results are, to the best of our knowledge, the first to infer causal relations with poly-victimisation. Rosario et al., (2008) asserts that in order to establish the efficacy of coping as a source of resilience, it is necessary to clarify the direction of influence between causal relationships. Therefore, this study provides much needed insights, which allow us to infer with greater certainty that the interaction between poly-victimisation and problem solving coping could cause increased resilience, demonstrated by improved emotional well-being. This knowledge is vitally important to form the basis of recommendations for poly-victimisation interventions, which could focus on developing adaptive coping skills to increase resilience to poly-victimisation.

6.5.4   *Strengths, limitations and future directions*

This study has added to prior findings regarding risk, resilience and outcomes of poly-victimisation by adopting a longitudinal design, and providing an understanding of the causal relationships between these variables. Unique insights are given by using cross-lagged panel analysis, allowing observations of the relationship between each construct and other constructs at a later time point, while estimating the effects of a construct on itself at the later time point (i.e., stability).

This study has also adopted a strong design by using a multi-informant survey, and assessing a range of risk factors and coping strategies in order to give a more complete picture of factors related to poly-victimisation risk and resilience.

There are, however, some limitations that should be considered with cross-lagged panel analysis. Drawing causal inference rests on the assumption that all possible variables were measured and included in the model. Given the uncertainty surrounding many poly-victimisation variables, this assumption can be difficult to establish, and interpretations of cross-lagged panel analysis cannot determine true causality. Nonetheless, Selig and Little (2012) assert cross-lagged panel models are an important tool in building an argument for a causal effect of one variable on another.

Further methodological limitations can arise when conducting follow-up studies, including high rates of participant attrition over time. The sample of the current study consisted of 45.6% of participants from Studies 1 and 2. Firstly, this reduced the sample size in this study and the power to detect significant findings may have been reduced. Furthermore, if this attrition was non-random it could potentially skew findings. However, the vast majority of this attrition at T2 was accounted for by participants leaving or changing schools. Of those who were contacted to take part in the follow-up study, a high rate consented to participate in the second wave of data collection. Importantly, attrition analyses revealed there were no significant difference between responders and non-responders on key study variables.

A further limitation concerns the relatively short time period (one-year) over which this study was conducted. Although findings provide an indication of patterns of poly-victimisation risk and resilience over time, it cannot be determined if the same patterns would be observed over a longer time period, such as the whole of

adolescence. In addition, repeating the questionnaire after one-year could lead to the phenomenon known in the victimisation literature as "telescoping" (Finkelhor et al., 2007c). This involves participants mistaking the timing of victimisation experiences and potentially reporting the same victimisation at both time points. Telescoping can inflate rates of past year victimisation and associations between poly-victimisation and other constructs. Finkelhor et al. (2007c) assessed the influence of possible telescoping by recalculating re-victimisation rates with the potential telescoped events removed from T2 data. From this the authors concluded that telescoping may be responsible for a small portion of re-victimisation associations, but not enough to confound the reported associations (Finkelhor et al., 2007c). It is therefore felt that although the influence of potential telescoping should be considered, this issue is unlikely to cause significant problems in our data.

There is a need for future research to focus on explaining the mechanisms involved in creating poly-victimisation risk and resilience. For example, the present study revealed important inferences about the causal relationship between poly-victimisation and disruptive and withdrawn behaviour, which may be rooted in the theoretical grounds of the VSM. Future research should focus on testing the VSM in poly-victimised adolescents. This would allow a greater understanding of the mechanisms involved which make these behavioural problems both a precursor to and consequence of poly-victimisation. Similarly, future research should aim to understand why problem-solving coping may build resilience to poly-victimisation and test the effectiveness of coping skills training in improving outcomes following poly-victimisation.

6.5.5   *Conclusion and implications*

This study has added to the scarce body of longitudinal research into risks, resilience and outcomes in poly-victimisation, and forms part of the first series of studies to investigate these constructs in Polish adolescents. Findings make an original contribution to the field by allowing stronger inferences to be made about the antecedents and consequences of poly-victimisation. Specifically, results highlight that poly-victimisation creates continued risk for on-going victimisation and poly-victimisation over time. Findings also showed that risk factors from different ecological levels are associated with greater poly-victimisation vulnerability at a later time point, over and above stability in risks. Prior poly-victimisation results in reduced emotional well-being. Conjointly, novel bi-directional relationships emerged between poly-victimisation and both withdrawn and behavioural problems, and poly-victimisation and negative affect. Finally, results showed that problem-solving coping may help to maintain later psychological functioning following poly-victimisation.

This body of findings provides important evidence that can inform prevention methods and intervention programmes. As investigated risks factors precede poly-victimisation in time, children and adolescents presenting these risks can potentially be identified and targeted to prevent poly-victimisation onset. In addition, results have emphasised that negative affect, withdrawn and disruptive characteristics are particularly important constructs to be targeted in intervention programmes. These represent a positive feedback loop whereby the risk for poly-victimisation is further strengthened by its consequence. Social skills and emotion regulation training could therefore be important to reduce poly-victimisation and its effects.

Moreover, findings provide stronger evidence for the potential benefits of coping skills training on building resilience. This training could be targeted towards adolescents who are known victims, through counselling or referrals from child protection services, or could be incorporated into the school curriculum to equip adolescents with the skills to build resilience. Training should focus on encouraging children and adolescents to actively attempt to deal with victimisations experiences by thinking of ways to resolve the problem, in order to reduce the adverse effects of poly-victimisation.

7 CHAPTER 7: STUDY 4: SOCIO-COGNITIVE AND EMOTIONAL PROCESSING PATTERNS IN POLY-VICTIMISED ADOLESCENTS

7.1 Overview

This chapter aims to explore the patterns of socio-cognitive and emotional processing in a sample of Polish adolescents, making comparisons between non-victims, less victimised and poly-victims. The different stages of the victim schema model will be examined to explore if poly-victims display deficits in the ways they process social and emotional cues. Findings will be discussed in the context of how such deficits can create risk for poly-victimisation.

7.2 Introduction

Earlier studies from this thesis have shown that factors concerning the community, relationships, family and individual characteristics all enhance the explanation of poly-victimisation. It is therefore critical to consider the influence of ecological systems (Bronfenbrenner, 1977) in the prevention of poly-victimisation and when determining which adolescents may be at greatest risk. In particular, the need to focus on adolescents' behavioural traits is pressing, since these factors may be more easily modifiable and thus central to prevention and intervention efforts. Interventions that aim to address individual characteristics could be more easily implemented at the school and class levels as they do not require societal changes or engagement from multiple parties (Finkelhor, 2008; P. K. Smith, Pepler, & Rigby, 2004). Furthermore, evidence suggests that behavioural characteristics impact the quality of relationships (Maszk et al., 1999; Shields et al., 1994). Consequently, addressing these individual level traits may assist in reducing risk factors at the

relationship level. For these reasons, the current study will focus upon individual level factors and associations with poly-victimisation.

Findings from Studies 1 and 3 reveal that disruptive and withdrawn behavioural problems are predictive of poly-victimisation, both concurrently and one year later. In order to address these characteristics in interventions there is a need to understand the mechanisms by which aggressive or withdrawn behaviour may lead to poly-victimisation. Research has suggested that implicit social-cognitive and emotional processing styles of chronic victims impact upon behaviour, with deficits in processing increasing victimisation risk by making aggressive or withdrawn responses more likely (Rosen et al., 2009).

7.2.1 Emotional processing

Gross (1998) defines emotion regulation as "the processes by which individuals influence which emotions they have, when they have them, and how they experience and express these emotions. Emotion regulatory processes may be automatic or controlled, conscious or unconscious." (p. 275). Within this definition, different conceptualisations of what constitutes adaptive emotion regulation have been offered. Some approaches stress the concept of control of emotions and the ability to regulate emotional arousal (Kopp, 1989; Zeman & Garber, 1996). This can give individuals greater control over their behaviour, allowing them to behave in a way consistent with their goals when experiencing negative emotions (Linehan, 1993; Thompson & Calkins, 1996). For example, by slowing the development and expression of anger in response to provocation. While other conceptualisations highlight the importance of an emotional self-awareness and acceptance (P. M. Cole, Michel, & Teti, 1994; Thompson & Calkins, 1996). Ergo, skilled emotion regulation involves monitoring, evaluating and accepting emotional experience as well as

modifying it (Thompson & Calkins, 1996). Other perspectives accentuate the ability to be flexible and utilise appropriate emotion regulation strategies, dependent upon the context of the situation (P. M. Cole et al., 1994; Gratz & Roemer, 2004; Thompson, 1994). For example, by appraising the intentions of others in social situations and selecting an appropriate emotional response accordingly.

Gratz and Roemer (2004) reviewed the various conceptualisations of emotion regulation and drew them together to create a more comprehensive definition of emotion regulation. The authors proposed that emotion regulation that is focused on adaptive ways of responding to emotional distress rather than the control of emotions. This definition highlighted the multidimensional nature of emotion regulation, which may be conceived as involving the (a) awareness and understanding of emotions, (b) acceptance of and willingness to experience negative emotions, (c) ability to inhibit impulsive behaviours and engage in goal-directed behaviour when experiencing negative emotions, and (d) flexible use of situationally appropriate emotion regulation strategies to modulate emotional responses as desired, in order to meet individual goals and situational demands. Gratz and Roemer (2004) concluded that deficits in any of these aforementioned areas are indicative of emotion regulation difficulties.

Maladaptive emotional regulation has been linked with victimisation. Victimisation and trauma experiences have been associated with changes in neural systems that regulate emotional conflict in youth (Marusak, Martin, Etkin, & Thomason, 2015). Results showed that trauma-exposed youth failed to engage inhibitory circuitry during the regulation of emotional conflict, and were less able to regulate emotions. Moreover, trauma-exposed youth showed greater conflict related amygdala reactivity that was associated with reduced levels of reward sensitivity.

These findings suggest that childhood trauma may disrupt the development of adaptive regulation of emotional processing.

In turn, emotion regulation has been shown to be a potential factor involved in the development of childhood victimisation. Emotional difficulties can lead to social deficits and greater victimisation vulnerability (Hanish et al., 2004; Kim & Cicchetti, 2010; Rosen et al., 2009; Rosen, Milich, & Harris, 2012; Shackman & Pollak, 2014). For example, in a longitudinal study, dysregulated emotional reactivity was related to greater concurrent peer victimisation, and victimisation six months later in a sample of 213 adolescents (Rosen et al., 2012). Impairments in emotion regulation have also been documented among children with a history of victimisation in the community (Schwartz & Proctor, 2000). In a sample of 285 primary school aged children, experiences of violent victimisation were linked with social maladjustment through the mediation of emotion dysregulation (Schwartz & Proctor, 2000). Similarly, findings from a sample of 355 early adolescents, revealed that deficits in emotional clarity (difficulty understanding emotional experiences) predicted greater peer victimisation, which in turn predicted greater internalising symptoms (Hamilton et al., 2016).

Poor emotion regulatory abilities may be associated with greater victimisation through the expression of negative emotional arousal, such as expressions of anger, fear, and distress (P. M. Cole, Martin, & Dennis, 2004). For example, physically maltreated children have been shown to exhibit greater negative affect and more aggressive behaviour, compared to non-maltreated children (Shackman & Pollak, 2014). This negative emotional arousal can then make it difficult for victimised children to regulate their emotional states and to select a socially appropriate behavioural responses when exposed to perceived or actual threat (Ford, Chapman, Mack, & Pearson, 2006; Pakaslahti, 2000). Accordingly,

victimised children may exhibit displays of poor social competence, through responses such as anger and aggression or submissive behaviour (Ford et al., 2006; Shields & Cicchetti, 1998; Thompson & Calkins, 1996). In particular, when these emotional expressions are extreme or inconsistent with the social situation, they may elicit similarly aversive responses from others, such as victimisation (Bollmer, Harris, & Milich, 2006; Shields & Cicchetti, 2001; Shields et al., 1994).

With regards to poly-victimisation, research regarding emotion regulation is sparse. A study from Barnes, Howell, and Miller-Graff (2016) offers the only insight into the association between poly-victimisation and emotional processing. This study examined 304 college students, aged 18 to 24 years. Childhood poly-victimisation was measured retrospectively, using the JVQ adult-retrospective version. Difficulties in emotion regulation were assessed using the Difficulties in Emotion Regulation Scale (DERS; Gratz & Roemer, 2004), which evaluates clinically relevant dimensions of difficulties in emotion regulation (awareness, clarity, nonacceptance, strategies, impulse and goals). These findings revealed that emotion dysregulation is weakly positively related to childhood poly-victimisation.

This study, however, used a retrospective design and therefore reports of childhood poly-victimisation may be subject to inaccuracies. The sample consisted of U.S. college students, who were mainly White, female and from middle-class socioeconomic backgrounds, which limits the generalisability of findings to other ethnicities and cultures. Further, emotion dysregulation, which was assessed using the DERS, was analysed as an overall construct which may have weakened the relationship between emotion dysregulation and poly-victimisation. There is therefore a need to examine poly-victimisation and the different dimensions of emotion dysregulation separately.

7.2.2 *Social-cognitive processing*

Crick and Dodge's (1994) Social Information Processing (SIP) model
proposes that when exposed to social stimuli, individuals progress through a cyclical
series of stages. At each stage, a database of previously learned social information
determines how they interpret ambiguous social situations, and their subsequent
social response. See Chapter 1, Section 1.6.4 for a detailed overview of the SIP
model. In the case of victimised children and adolescents SIP patterns are likely to
be directly affected by their past negative experiences, resulting in the development
of schemas where they view themselves as victims and others as hostile and
threatening (Dodge, 2006). These schemas can then affect responses in social
situations as victimised children may expect others to respond to them in a hostile or
aggressive way, even if the intent of others is non-threatening, and behave
accordingly in ways that make them targets for victimisation (Crick & Dodge, 1994;
Dodge, 2006; Rosen et al., 2007; Schwartz et al., 1993).

Empirically, children who have been victimised by peers have been shown to
have several deficits in processing social information. Camodeca and Goossens
(2005) tested the different stages of the SIP model in peer victims. Their findings
revealed, based on vignettes where the intent of the protagonist was ambiguous,
victims attributed greater hostile intent than non-victims. Such interpretations reflect
distorted and dysfunctional thought patterns that facilitate engagement in aggressive
or submissive behaviour, which can add to victimisation risk. Findings also showed
that peer victims reported a greater desire to retaliate than their classmates did. The
authors therefore argue that if a child presents a cognitive bias in interpreting the
intent of others, this is carried on along the whole process, through selection of

antisocial goals, expression of anger or submission, and creation and enactment of socially maladaptive responses (Camodeca & Goossens, 2005).

7.2.3   The victim schema model

The SIP model, however, overlooks the role of emotional processes in social interactions. Emotional processing is likely to also contribute to victimisation risk (Eisenberg et al., 1994; Lemerise & Arsenio, 2000; Saarni, 1999). To address this limitation, the Victim Schema Model (VSM) (Rosen et al., 2009) was developed to integrate process of socio-cognitive and emotional processing into a single model. The VSM provides a theoretical account of the mechanisms underlying chronic peer victimisation. It proposes the accessibility of a victim schema, developed from prior experience and knowledge, informs and guides children's socio-cognitive and socioemotional processing in ways that can increase the risk of further victimisation. See Chapter 1, Section 1.6.5 for a detailed overview of the VSM.

Rosen et al., (2009) tested the multiple stages of the VSM using a longitudinal design with a sample of children aged 9-13 years. Structural equation modelling supported the model, revealing that accessibility of the victim schema presents a significant risk factor for peer victimisation. Findings further supported the dynamic and reciprocal influences that victim schema accessibility and emotion regulation difficulties can have on peer victimisation. Emotion dysregulation was shown to be a particularly influential risk factor in Rosen and colleagues (2009) test of the model. These findings, along with further empirical evidence regarding the each stage of the VSM are detailed below.

7.2.3.1   Hypervigilance/Hostile attribution bias

The activation of schemas in children who are frequently victimised will lead them to expect others to be hostile and threatening, as individuals will interpret the

intent of others based on their stored knowledge of previous experiences (Baldwin, 1992; Crick & Dodge, 1994). As such, victims may interpret the intent of other differently to their non-victimised counterparts. Adolescents experiencing peer victimisation were found to expect others to be hostile and aggressive (Ziv et al., 2013) and peer victimisation has been positively associated with higher levels of hostile attributions (Camodeca & Goossens, 2005; Pornari & Wood, 2010; Schwartz, Dodge, et al., 1998) and is predictive of hostile attributions one year later (Perren, Ettekal, & Ladd, 2013).

These hostile attributional biases have been linked to greater externalising and internalising behaviours. Hostile attributions were found to partially mediate the impact of peer victimisation on increases in externalising problems (Perren et al., 2013). Similarly, a study examining adolescents direct exposure to violence in a range of contexts (home, school, community), along with experiences of witnessing violence, found that hostile attribution bias mediated the relationship between violence exposure and aggressive behaviour (Calvete & Orue, 2011). Furthermore, a study examining the longitudinal association between peer rejection and aggressive behaviour in middle childhood revealed that peer rejection was predictive of increased hostile attributional biases, which in turn resulted in greater levels of physical aggression (Dodge et al., 2003). It has also been shown that children who exhibited elevated levels of hostile attribution biases, report greater feelings of emotional distress (i.e. sadness, upset) in response to peer victimisation (Crick, Grotpeter, & Bigbee, 2002). These findings suggest that hostile attribution bias may operate as a potential mechanism through which initial victimisation can lead to disruptive and withdrawn behaviours, which have been shown in Studies 1 and 3 of this thesis to be linked with greater poly-victimisation by making adolescents a more attractive target to perpetrators.

7.2.3.2 *Implicit expectation of victimisation*

Children who are frequently victimised can develop internal schemas for social interactions in which they implicitly associate themselves with the victim role and therefore expect to be victimised (Baldwin, 1992; Crick & Dodge, 1994). Evidence has indicated that victimisation can influence self-concept, for example it has been related to greater negative self-cognitions (D. A. Cole, Maxwell, Dukewich, & Yosick, 2010) and lower self-worth (Callaghan & Joseph, 1995). Furthermore, children who perceive themselves as victims were found to be more likely to attribute their victimisation experiences to stable and internal character factors (e.g., "it's something about the way I am"), suggesting these children had formed a strong association between themselves and the victim role. Conversely, those who did not perceive themselves as victims were more likely to attribute victimisation to either unstable or external influences (e.g., "it's something I did wrong") (Graham & Juvonen, 1998).

In a direct test of self-association with victimisation in a sample of children aged 9-13 years, those frequently victimised by peers were more likely to demonstrate an implicit self-identification with the victim role, as demonstrated by performance on a self-concept IAT (Rosen et al., 2007). The VSM proposes that this implicit association with victimisation can reinforce hostile attributional biases and trigger emotional distress associated with prior experiences of victimisations. This study, however, only looked at victims of peer harassment and abuse and therefore findings cannot be generalised to more broad experiences of victimisation.

Although an implicit expectation of victimisation has not yet been examined in poly-victims, Rosen et al. (2009) claim that the more often children experience peer victimisation the more accessible their victim schema becomes. Thus, it follows that as poly-victimised children experience high frequencies of victimisations, they

will likely hold a greater implicit association of themselves with victimisation, meaning their victim schema would be activated more frequently. Moreover, in line with the theory of learned helplessness (Seligman, 1975), expectations of repeated and unavoidable victimisations may cause poly-victims to believe they are helpless to prevent continued exposure. This expectation may diminish their self-protection capacities and efforts to adapt their behaviour to try to avoid victimisation.

7.2.3.3 *Emotional dysregulation*

As described earlier, prior literature indicates an association between emotional dysregulation and greater victimisation (S. E. Barnes et al., 2016; Hanish et al., 2004; Rosen et al., 2012; Shackman & Pollak, 2014). Research also indicates that emotion regulation becomes more difficult as intensity of emotional arousal becomes stronger, indicating that children who experience more intense negative arousal have greater difficulty regulating their emotions and behavioural responses (Eisenberg & Fabes, 1992). Rosen et al. (2009) propose that, similarly, the more negative an outcome a child expects, the more intense their emotional arousal will be. Therefore, activation of a victim schema, and the associated expectation of victimisation, will result in greater negative arousal making it difficult to control emotional distress, competently process social cues, set goals, and enact appropriate responses (Rosen et al., 2009). Rosen et al. (2007) provided support for this by showing that more chronically victimised children displayed significantly greater distress on a victim narrative task, indicating increased emotional dysregulation and negative emotional arousal. Initial support for the link between greater emotional dysregulation and poly-victimisation has also been demonstrated (S. E. Barnes et al., 2016).

7.2.3.4   *Pre-emptive processing*

The model then proposes that due to this dysregulated negative emotional arousal, victimised children are unable to effectively process social information, and instead engage in automatic preemptive processing. This rapid and unconscious cognitive processing fails to take into account the contextual factors of the interaction (e.g., relationships, intent, social goals) and instead triggers selection of emotionally driven goals based on reducing arousal (Lemerise & Arsenio, 2000). Furthermore, this preemptive processing may interfere with individuals' ability to perceive potential risk and their ability to protect themselves (Messman-Moore & Long, 2003), which could contribute to incidences of further victimisations.

Rosen et al. (2007) provided support for the occurrence of preemptive processing. Chronically victimised children of peer abuse were poorer at attending to and processing victimisation related stimuli. This was demonstrated by supressed attention to victimisation related words (e.g., tease, fight) on the emotional Stroop task, despite the greater emotional salience of these words. The authors suggested that the victim words may have produced an extreme, dysregulated emotional arousal in frequently victimised children that led them to automatically suppress their attention to the content of the words (Rosen et al., 2007). This finding supports the VSM by indicating that frequently victimised children may be implicitly cognitively and emotionally reacting in social interactions, impairing their ability to actively attend to social cues due to debilitating emotional arousal.

Further research also indicates that victimised children show reduced attentional orientation towards threatening or distressing content. On an emotional pictures dot-probe task, greater exposure to community violence was related to a reduced responsivity to distressing stimuli (Kimonis, Frick, Munoz, & Aucoin, 2008). Another study explored the effect of multiple trauma experiences on

attentional biases in university students, again using a dot-probe task. Reichert, Segal, and Flannery-Schroeder (2015) found no significant differences between those with no, some and multiple incident interpersonal and non-interpersonal trauma histories. This suggests that those with multiple trauma histories do not exhibit attentional bias to threats compared to individuals with some or no trauma.

However, in this study the measurement of trauma included incidences such as death of a family member, serious illness, or divorce of parents, and therefore did not focus specifically on victimisations. This type of trauma exposure likely has a different impact on emotional processing. Furthermore, the scale did not accurately discriminate between revictimisation of the same trauma type and experiences of different types of trauma. Thus, there remains a need to further examine how experiences of poly-victimisation impact attentional bias and whether this supports the concept of preemptive processing.

7.2.3.5   *Goal Selection and Response Generation*

At the final stage of the victim schema model, children select their goals for the social interaction and enact a response based on these. Goal selection is thought to be heavily influenced by the intensity with which children experience emotions and their efficacy for regulating emotions (Eisenberg & Morris, 2002; Lemerise & Arsenio, 2000). As the model proposes that victims will be likely to experience negative emotional arousal when the victim schema is accessed, they will be more likely to choose avoidant or hostile goals to reduce their own arousal (Rosen et al., 2007). Those experiencing an increase in internalising emotions, such as anxiety and fear, will be more likely to set goals to reduce arousal through avoiding and minimising conflict, and will therefore display submissive or avoidant behaviour. Conversely, children who demonstrate externalising emotions, such as anger, will be

more inclined to set goals to reduce arousal through reactively aggressive behaviour (Lemerise & Arsenio, 2000). Displays of these aggressive or submissive behaviours has been associated with increased victimisation (Olweus, 1978; Schwartz, Dodge, et al., 1998; Toblin, Schwartz, Hopmeyer Gorman, & Abou-ezzeddine, 2005) and poly-victimisation (as reported in Studies 1 and 3).

7.2.4 Present study

Although a growing body of research explores the role of SIP and emotional factors in the development of maladaptive social behaviours in childhood (Crick & Dodge, 1994; Dodge, 2006; Lansford, Malone, Dodge, Pettit, & Bates, 2010), information regarding the processing patterns of victims is less extensive. Moreover, information regarding poly-victims is particularly lacking. To our knowledge, no research has yet examined socio-cognitive processes in poly-victims and only one study has investigated the association between emotion regulation and poly-victimisation. Also the majority of empirical evidence reviewed above focuses on children, with few studies investigating social processing and emotion regulation difficulties in adolescents (Neumann, van Lier, Gratz, & Koot, 2010). Findings from prior studies highlight how common poly-victimisation is in adolescence and therefore there is a need to confirm whether these processing deficits remain in this later stage of childhood.

This aim of the present study is therefore to investigate deficits in socio-cognitive and emotional processing in poly-victimised adolescents. Specifically, this study will test the stages of the VSM, by comparing processing patterns of poly-victims to those with no or fewer victimisation experiences. The VSM was devised to explain the cyclical relationship between peer victimisation and processing deficits, however, it is feasible that the mechanisms outlined in the model operate

when exposed to broader, multi form victimisation exposure. Furthermore, it is possible that the activation of the victim schema will be even stronger for poly-victims, compared to chronic victims of peer abuse, because poly-victims will expect victimisation in even more contexts. This model could also be valuable to explain the development of poly-victimisation, as it outlines how initial victimisation can create deficits that in turn create risk for continued, chronic victimisation.

By applying the VSM to poly-victimisation, the current study hopes to gain an improved understanding of how poly-victims think and feel about their social work. Findings could lead to more effective intervention efforts to reduce poly-victimisation by focusing on establishing competent social perception patterns in victimised youth.

7.2.4.1 Research questions

The research questions for the current study are as follows:

1. Do poly-victims exhibit a hostile attribution bias when presented with ambiguous social scenarios?

2. Do poly-victims implicitly associate themselves with the victim role?

3. Do poly-victims display deficits in self-reported emotion dysregulation and in automatic processing of emotional stimuli?

4. Do poly-victims select anti-social goals (aggressive, submissive, or revenge)?

5. Do indicators of socio-emotional processing predict victimisation exposure?

7.2.4.2 Hypotheses

It is hypothesised that, based on their prior experiences of frequent victimisations and hostility in multiple contexts, poly-victims will demonstrate a deficient set of cognitive and emotional processing skills.

H1. Poly-victims will show distorted perceptions regarding the intent of others in ambiguous hypothetical social situations. Compared to non- and less victimised adolescents, poly-victims will be more likely to attribute the intent of others as hostile.

H2. Poly-victims will display a greater implicit association between the self and victimisation on an Implicit Association Task (IAT), compared to non- and less victimised adolescents.

H3. Poly-victims will report greater emotional dysregulation compared to non- and less victimised adolescents. Additionally, in an emotional pictures dot-probe task, poly-victims will exhibit greater automatic negative emotional arousal, resulting in a slower mean response time toward distressing stimuli, compared to non- and less victimised adolescents.

H4. Poly-victims are more likely to select goals based around responding aggressively, seeking revenge, or withdrawal in hypothetical social situations, compared to non- and less victimised adolescents.

H5. Hostile attrition bias, victimisation-self implicit association, anti-social goal selection, difficulties in emotion regulation and reduced attention toward distressing emotional content (lower distress facilitation index) will positively predict total kinds of victimisation.

7.3 Method

7.3.1 Design

A quasi-experimental design was used to study differences in socio-cognitive and emotional processing dependent upon level of victimisation exposure. The independent variable is victimisation group (no victimisation, less victimised and poly-victim). Random allocation to victimisation groups would be unfeasible and groups used are therefore pre-existing, based on self-reported past-year victimisation exposure. The dependent variables are indicators of socio-cognitive and emotional processing measured using self-report questionnaires, a victimisation-self IAT and an emotional dot-probe task.

7.3.2 Participants

Participants were 73 adolescents (40 female and 33 male) between 12-16 years of age. The mean age of the sample was 14.77 years ($SD = 0.97$). Participants were recruited via an opportunity sample from one school public school in the Opole region of Poland. 98.6% ($n = 72$) reported their ethnicity as White Polish and 1.4% ($n = 1$) identified as Kashubian, a West Slavic ethnic group. For further participant details, see Chapter 3: Methodology, Section 3.4.3.

7.3.3 Measures

Table 25 provides a summary of the measures used in the present study. The JVQ is described in detail in Chapter 3: Methodology, Section 3.5.2.2.

Table 25

Summary of Measures Used in Study 4

Construct	Measure	No. of items in	Response options / task	Cronbach's alpha

		scale	output	
Implicit self-association with victimisation	IAT	N/A	D-score	N/A
Emotional processing	Emotional pictures dot-probe	N/A	Distress facilitation index	.90
Victimisation	JVQ (Finkelhor, Hamby, et al., 2011)	25	*Yes/No*	.84
Hostile attribution bias	Child Hostile Attribution Style Measure (Krahé & Möller, 2004)	4	4 (*not at all certain* to *very certain*)	.67
Social goals				
Anger	Child Hostile Attribution Style Measure (Krahé &	4	4 (*not at all angry* to *very angry*)	.71
Retaliate	Möller, 2004)	4	4 (*not at all* to *very much*)	.73
Aggression		4	4 (*definitely not true* to *definitely true)*	.74
Avoidance		4	4 (*definitely not true* to *definitely true)*	.86
Emotion dysregulation				
Non-acceptance	DERS (Gratz & Roemer, 2004)	6	5 (*almost never* to *almost always*)	.80
Goal directed behaviour		5		.72
Impulse control		6		.81
Emotional awareness		6		.71
Access to ER strategies		8		.78
Emotional clarity		5		.72

7.3.3.1 Implicit Association Task (IAT)

The IAT is a computer-administered procedure for measuring strengths of automatic association between concepts (Greenwald & Farnham, 2000). The task was run using Inquisit 5 Web by Millisecond. The task requires participants to sort words into categories. Words are presented individually on a computer screen, and participants are instructed to sort the words into categories by pressing keys on a keyboard as rapidly as possible, without making errors. The IAT has been extensively validated in a host of social–psychological domains, including at identifying aspects of an individual's self-concept (Greenwald & Farnham, 2000). A study by Baron and Banaji (2006) demonstrated the validity of the IAT with adolescents when assessing the implicit racial attitudes of 13 year-olds.

The IAT used in the current research was based on the version used by Rosen et al. (2007) devised to assess implicit social cognitions and peer victimisation in a sample of 9-13 year olds. Word stimuli were limited to those that appeared in a children's thesaurus and there were eight target words per category (see Appendix 8 for details of IAT stimuli and instructions). The IAT consisted of seven blocks of word categorisation trials (Table 26), with 20 trials for practice blocks and 40 trials for experimental blocks.

Table 26

Outline of IAT Procedure

Block	No. of trials	Categories		
1: Practice	20	Me	vs.	Not me
2: Practice	20	Victim	vs.	Non-victim
3: Experimental (victim-congruent)	40	Me *or* Victim	vs.	Not me *or* Non-victim
4: Experimental (victim-congruent)	40	Me *or* Victim	vs.	Not me *or* Non-victim
5: Practice	20	Non-victim	vs.	Victim

6: Experimental (victim-incongruent)	40	Me *or* Non-victim	vs.	Not me *or* Victim
7: Experimental (victim-incongruent)	40	Me *or* Non-victim	vs.	Not me *or* Victim

In the first block, participants were asked to categorise words into 'me' or 'not me' categories (e.g., human vs. dog) and in the second block into 'victim' vs. 'non victim' categories (e.g., tease vs. friend). In the experimental blocks, participants categorised words into 'me or victim' and 'not me or not victim' (victim-congruent) categories in blocks 3-4 and 'me or not victim' and 'not me or victim' (victim-incongruent) in blocks 6-7. The fifth block provides practice that reverses key assignments for the 'victim' vs. 'non victim' concept. The orders of blocks 2-4 and blocks 5-7 were counterbalanced. Each stimulus item was displayed until a correct response was made. The next stimulus item then followed after a 250-ms inter-trial interval. Error trials were handled by requiring participants to correct their responses.

The strength of an association between concepts is measured by calculating the d-score, which is the standardised mean difference score of the hypothesis-consistent pairings (victim – me/ non-victim – not me) and hypothesis-inconsistent pairings (non-victim – me/ victim – not me) (Greenwald et al., 2003). Mean reaction times were created for each experimental block and divided by each individual participant's standard deviation across both blocks to create a d-score (Greenwald et al., 2003). A victim-congruent d-score and a victim-incongruent d-score will be calculated. This procedure controls for individual differences in reaction times (Greenwald et al., 2003). The differences in reaction times between the victim-congruent trials and victim-incongruent trials reflect the degree to which participants implicitly associate themselves with the victim role. In general, the higher the d-

score the stronger the association between the self and victimisation, whereas negative d-scores suggest a stronger association between the self and non-victimisation.

7.3.3.2   *Hostile attribution bias and social response selection*

Hostile attribution bias and response selection were measured using a modified version of the Child Hostile Attribution Style Measure (Krahé & Möller, 2004) (Appendix 6). This measure consists of four vignettes describing ambiguous social interactions in which a protagonist caused some form of harm to a person, but it is unclear whether or not the harm was intended. Example scenario: "Imagine you are out in the school yard during break time, talking to your friends. You hold your drink bottle in your hand. Just as you are about to take a sip, someone pushes you from behind causing you to spill your drink".

Participants are asked to imagine being in each scenario and to make ratings regarding (i) *perceived hostile intent of the protagonist*: "How certain would you be that the other person pushed you on purpose?" Responses were given on 4-point scale ranging from 1= "not at all certain" to 4= "very certain". Responses from each of the four scenarios for this item were averaged to create a hostile attribution bias score (4 items; $\alpha = .67$).

(ii) *Anger*: "How angry would you feel in this situation?" (1= "not at all angry" to 4= "very angry"). Responses from each of the four scenarios for this item were averaged to create an anger response score (4 items; $\alpha = .71$).

(iii) *Wish to retaliate*: "How much would you wish you could get your own back on the other person?" (1= "not at all" to 4= "very much"). Responses from each scenario for were averaged to create a revenge response score (4 items; $\alpha = .73$).

(iv) *Wish to respond with aggression*: "Would you respond aggressively towards the other person(s) e.g., verbally or physically attack them?" (1= "definitely

not true" to 4 = "definitely true"). Responses from each scenario for were averaged to create an aggressive response score (4 items; $\alpha = .74$).

(v) *Wish to respond with avoidance*: "Would you try to avoid the other person(s)?" (1= "definitely not true" to 4 = "definitely true"). Responses from each scenario for were averaged to create an avoidant response score (4 items; $\alpha = .86$). For all subscales higher scores indicate greater social processing deficits.

7.3.3.3 *Emotional pictures dot-probe task*

The emotional pictures dot-probe task (Kimonis et al., 2006) is a variant of the traditional word version of the task that has been used extensively in the anxiety literature (MacLeod, Mathews, & Tata, 1986). The task is a spatially oriented motivated attention task that assesses automatic attentional bias toward emotional cues, providing an indirect index of emotional reactivity. The task was originally developed for assessing potential emotional deficits in children and adolescents with callous-unemotional traits. It was developed using picture stimuli taken from the International Affective Picture System (IAPS) database (Lang, Bradley, & Cuthbert, 2008), which consists of pictures of varied emotional content. The picture stimuli used in the task were carefully selected to tap distressing content (e.g., crying child), positive emotional content (e.g., puppies) and neutral emotional content (e.g., fork) (see Appendix 9 for sample pictures). Stimuli have been validated and evaluated for age acceptability by parents and youth in an independent sample (Kimonis et al., 2006).

The task was administered via Inquisit 5 Web and consists of one block of practice stimuli (16 picture pairs) followed by four test blocks of picture pairs, each containing 24 picture pairs. Pairings are either 'distress – neutral', 'neutral – neutral', or 'positive – neutral'. Each picture pair presentation consists of three sequential and non-overlapping components: (1) a 500ms fixation cross appearing in the centre of

the screen, (2) a 250ms simultaneous presentation of two picture stimuli that are centred and located immediately above and below the location of the fixation cross, and (3) an asterisk (i.e., dot-probe) appearing in either the top or bottom picture location immediately after the offset of the picture. Participants are instructed to select a key on the keyboard that corresponds to the location of the dot-probe (up or down), as quickly as possible. The time between when the probe appears and when the participant presses the corresponding key is recorded in milliseconds and used to calculate attentional facilitation indices (MacLeod & Mathews, 1988). If no key is pressed within 5000 milliseconds, the response is recorded as incorrect. Incorrect responses are not included in the calculation of facilitation indices as they reflect that the participant was not paying attention to a specific stimulus pair (Kimonis et al., 2006).

For the distress facilitation index, participant's average response time to probes replacing distress stimuli is subtracted from their average response time to probes replacing neutral stimuli in the neutral-neutral picture pairings, i.e., Facilitation = 1/2 x [(Neutral Only/Probe Up – Distress Up/Probe Up) + (Neutral Only/Probe Down – Distress Down/Probe Down)]. This index controls for individual differences in reaction time by providing a measurement of emotional processing that is relative to the individual's average speed to emotionally neutral pictures.

If the spatial location of the probe corresponds to the same spatial location where the participant's attention is allocated then their response to the probes' location will be faster. Given that the emotional quality of stimuli is generally thought to facilitate allocation of attention, participants with normative responses are generally expected to respond more quickly to probes replacing distressing images because their attention selectively orients to distressing content (Ohman, 1993;

Vasey et al., 1995, 1996). This normal response pattern would result in an overall shorter mean response time to distressing content, indicated by higher scores on the distress facilitation index.

7.3.3.4 *Emotion dysregulation*

Emotion dysregulation was assessed with the Difficulties in Emotion Regulation Scale (DERS) (Gratz & Roemer, 2004), a 36-item self-report questionnaire designed to assess multiple aspects of emotional dysregulation (Appendix 7). The measure is based on a conceptualisation of emotion regulation as adaptive ways of responding to emotions, including accepting responses, the ability to experience and differentiate the full range of emotions, and the control of behaviours in the face of emotional distress (Gratz & Roemer, 2004).

The measure consists of six subscales: Non-acceptance of emotional responses (e.g., "When I'm upset, I feel guilty for feeling that way"; 6 items; $\alpha =$ .80); difficulties engaging in goal-directed behaviour (e.g., "When I'm upset, I have difficulty concentrating"; 5 items; $\alpha = .72$); Impulse control difficulties (e.g., "When I'm upset, I lose control over my behaviours"; 6 items; $\alpha = .81$); Lack of emotional awareness (e.g., "I am attentive to my feelings"; 6 items; $\alpha = .71$); Limited access to emotion regulation strategies (e.g., "When I'm upset, I believe that wallowing in it is all I can do"; 8 items; $\alpha = .78$); and Lack of emotional clarity (e.g., "I have difficulty making sense out of my feelings"; 5 items, $\alpha = .72$). Participants were asked to indicate how often the statements apply to them using a 5-point scale ranging from 1= "almost never" to 5= "almost always". A score for each subscale was calculated by averaging responses across all items within each subscale. Higher scores suggest greater problems with emotion regulation (range from 1.00 to 5.00).

Subscales of the DERS were grouped into four composite variables, following Gratz and Roemer's (2004) conceptualisation of emotion regulation:

(i) awareness and clarity (11 items; α = .72; subscales: Lack of emotional awareness and Lack of clarity); (ii) non-acceptance (6 items; α = .80; subscale: non-acceptance); (iii) difficulties with goal-directed behaviour and impulse control (11 items; α = .78; subscales: Difficulties engaging in goal-directed behaviour and Impulse control difficulties); and (iv) strategy use (8 items; α = .78; subscale: Limited access to strategies).

In a test of this measure among a community sample of adolescents, confirmatory factor analysis revealed that the structure of the DERS in adolescents is equivalent to that previously found among adults. Furthermore high internal consistency (average for the subscales = .81) and validity were found in prior research (Neumann et al., 2010). Internal consistencies for subscales in the current study ranged from acceptable to good (α = .72 to .80).

7.3.4   Procedure

Participants completed the study in class groups of between 21-29 adolescents at individual computers, in a single session. Participants completed the IAT and dot-probe task (using Inquisit Web 5), the order of which was counterbalanced. Each of these tasks took approximately six minutes to complete. Once participants had finished the second task they were automatically directed to Qualtrics where they electronically filled in the questionnaires. The order of these questionnaires was again counterbalanced. The survey took approximately 20 minutes to complete.

A member of the research team was present throughout to answer any questions. Upon completion of the study, participants received a verbal and written debrief. Information was given regarding support services and the school worry box, where they could anonymously submit any concerns or feelings of distress. For

further details regarding procedures and ethical considerations see Chapter 3:
Methodology, Section 3.6.

7.3.5 *Statistical analysis*

7.3.5.1 *Data cleaning*

Data was explored for missing values and outliers. There were no missing
values, however incorrect responses on the emotional dot-probe task were identified
and excluded from analysis. In addition, response times of below 100ms were
removed from the dataset because they were considered to be outliers (Kimonis et
al., 2006). All data was also checked for unengaged respondents i.e., those who
responded the same on all tasks or questionnaires. No such incidences were
discovered.

Outliers were identified by examining boxplots. Two variables were shown
to contain univariate outliers (avoidance goals, distress facilitation index). It was
judged that these outliers were from the intended population but with more extreme
responses than a normal distribution, and so should not be excluded from the
analysis. Therefore outliers were adjusted to one unit smaller or larger than the next
most extreme score, as recommended by Tabachnick and Fidell (2006).

7.3.5.2 *Testing for normality*

For victimisation total, aggressive goals and avoidance goals K-S test was
significant, indicating a deviation from normality. This test, however, has been
criticised for being too conservative (Tabachnick & Fidell, 2006). For these
variables, skewness and kurtosis values were in the acceptable range for normal
distribution (skewness = -0.35 to 0.83; kurtosis = -0.76 to 1.26). Normality of data
was further explored by visually inspecting Q-Q plots, which indicated the variables

did not deviate too greatly from normality and therefore parametric tests could be used.

7.3.5.3 Analyses

The following tests were used to analyse the data:

i) A one-way MANOVA, univariate ANOVAs and follow-up post hoc comparisons were calculated to examine mean differences in socio-cognitive and emotional processing between non-victims, less victimised and poly-victims.

ii) Multiple regression was conducted to determine whether deficits in socio-cognitive and emotional processing could predict victimisation exposure.

7.4 Results

In the current sample the mean number of victimisations in the past year was 4.17 ($SD = 4.46$). The number of different forms of victimisation experienced in the past-year ranged from 0 – 17. No past-year victimisations were reported by 30.1% ($n = 22$) of the sample. 37.0% ($n = 27$) were grouped as less victimised, reporting between 1-5 different kinds of victimisations. 32.9% ($n = 24$) were grouped as poly-victims (≥ 6 victimisations). This threshold was set using the criteria of Finkelhor, Ormrod, et al. (2005a) for the Screener Sum Version of the JVQ (poly-victimisation = the number of victimisations above the mean +1). The mean number of total kinds of victimisations reported in the less victimised group was 2.48 ($SD = 1.63$) and 9.58 ($SD = 32.97$) in the poly-victim group. Demographic differences between victimisation groups are shown in Table 27.

Table 27

Demographic Summary for Victimisation Groups in Study 4

		Victimisation Group		
	Overall (%) (N = 73)	Non-victimised (%) (*n* = 22)	Less victimised (%) (*n* = 27)	Poly-victimised (%) (*n* = 24)
Age (years)				
M	14.77	14.55	14.97	14.75
SD	0.97	0.80	0.98	1.07
Gender				
Female	40	17	12	11
Male	33	5	15	13
Family Structure				
Two Biological/ Adoptive Parents	64.4	63.6	70.4	58.3
One Parent & One Step-parent	6.8	9.1	3.7	8.3
Single Parent	23.3	27.3	18.5	25.0
Other Caregiver	5.5	-	7.4	8.3
Parental Education				
Lower Secondary	1.4	-	3.7	-
Vocational	35.6	27.3	25.9	54.2
Secondary General	29.2	28.2	25.9	17.5
Higher Education	26.0	36.4	35.9	21.7
Not Sure	7.8	8.2	8.5	6.7

When checking for multicollinearity, it was found anti-social goals of anger, retaliate and aggression were strongly correlated (Table 28). It was, therefore, decided to average these three variables and create a composite variable of hostile responses for use in subsequent analysis (12 items; $\alpha = .74$).

Table 28

Pearson's Correlation Matrix between Anti-social Goals

	Anger	Retaliate	Aggression	Avoidance
Anger	-			
Retaliate	.59***	-		
Aggression	.61***	.69***	-	
Avoidance	.26**	.15	.26**	-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

The first stage of analysis focused on examining mean differences between adolescents with no victimisation experiences, less victimised, and poly-victims, using a one-way MANOVA. There was a significance difference in socio and emotional processing based on victimisation group, $F(24, 118) = 3.09, p < .001$; Wilk's $\Lambda = 0.48$, $\eta_p^2 = 0.32$. Follow-up univariate ANOVAs were conducted (Table 29). Using a Bonferroni correction procedure, each ANOVA was tested at the adjusted alpha level $p < .006$. Results indicated that there were significant effects of victimisation group on hostile attribution bias, victimisation-self implicit association, limited access to emotion regulation strategies, hostile and avoidant responses.

Follow-up post hoc comparisons using Tukey HSD, tested at the adjusted alpha level $p < .006$, indicated poly-victims have significantly greater hostile

attribution bias ($M = 2.88$, $SD = 0.65$), compared to non-victims ($M = 2.02$, $SD = 0.47$). Poly-victims have a greater implicit association of themselves with the victim role ($M = -0.07$, $SD = 0.42$), compared to non-victims ($M = -0.38$, $SD = 0.60$). For indicators of emotion dysregulation, poly-victims reported greater difficulty accessing emotion regulation strategies ($M = 3.00$, $SD = 0.70$), than non-victims ($M = 2.44$, $SD = 0.81$). Poly-victims were significantly more likely to select hostile responses ($M = 2.13$, $SD = 0.60$), compared to non-victims ($M = 1.48$, $SD = 0.60$). Finally, using Games Howell post-hoc test, it was found poly-victims selected significantly more avoidant responses ($M = 2.43$, $SD = 0.91$), compared to both non-victims ($M = 1.30$, $SD = 0.38$) and less victimised adolescents ($M = 1.69$, $SD = 0.64$).

As seen from examination of partial eta squared effect sizes were medium or large in all incidences. Keppel (1991) has recommended partial eta squared above eta squared to improve the comparability of effect sizes between studies, which expresses the sum of squares of the effect in relation to the sum of squares of the effect and the sum of squares of the error associated with the effect.

Table 29

Univariate ANOVAs and Post-hoc Tests of Mean Differences in Socio-cognitive and

Emotional Processing by Victimisation Group

	Non-victim ($n = 22$)	Less victimised ($n = 27$)	Poly-victim ($n = 24$)		
	M (SD)	*M (SD)*	*M (SD)*	*F* value	η_p^2
Hostile attribution bias [a]	2.02 (0.47)	2.27 (0.64)	2.88 (0.65)	12.69***	0.27
Self-victimisation association [a]	-0.38 (0.60)	-0.38 (0.42)	-0.07 (0.42)	3.44**	0.09
Non-acceptance	2.51 (0.85)	2.74 (0.87)	2.74 (0.91)	0.53	0.02
Goals & impulse	2.67 (0.72)	2.78 (0.71)	3.12 (0.60)	2.86†	0.07
Awareness & clarity	2.75 (0.43)	2.60 (0.50)	2.70 (0.63)	0.50	0.01
Strategies [a]	2.44 (0.81)	2.60 (0.74)	3.00 (0.70)	3.32**	0.09
Distress FI	6.64 (52.92)	-10.16 (48.88)	-11.46 (34.55)	1.14	0.03
Hostile [a]	1.48 (0.40)	1.79 (0.44)	2.13 (0.60)	10.19***	0.23
Avoidance+ [a, b]	1.30 (0.38)	1.69 (0.64)	2.43 (0.91)	16.30***	0.32

Note. FI = facilitation index. η_p^2 = partial eta squared. [a] significant difference between non and poly-victimised groups. [b] significant difference between less and poly-victimised groups. [+] homogeneity of variance violated and therefore Welch *F* statistic and Games-Howell post-hoc tests used. Tukey HSD post-hoc tests used for all other variables.

† $p < .009$, ** $p < .006$, *** $p < .001$. Significance tested at $p < .006$ level.

A multiple regression was then run to predict total kinds of victimisation from indicators of socio-cognitive and emotional processing (Table 30). Independent variables, which significantly correlated with victimisation total (Table 31), were entered into the model. The model as a whole significantly predicted victimisation total, $F(6, 66) = 19.83$, $p < .001$, $R^2 = .643$, and explained 64.3% of the total variance in the dependent variable. Hostile attribution bias, hostile and avoidant anti-social responses were significant predictors of victimisation. These variables had positive unstandardised beta coefficients, indicating increases in these deficits were predictive of greater victimisation. Self-victimisation association reached marginal significance ($b = 2.17$, $t(66) = 1.68$, $p = .07$), signifying a trend whereby greater self-association with victimisation was related to experiencing a greater number of different victimisations. Emotion dysregulation indicators (access to emotion regulation strategies and difficulties with goal directed behaviour and impulse control) did not contribute to the multiple regression model.

Table 30

Summary of Multiple Regression Model for Social and Emotional Processing Predicting Victimisation Total

Predictor	*b*	SE	*β*	*t* value
Hostile attribution bias	1.44	0.67	0.22	2.12*
Self-victimisation association	1.27	0.75	0.14	1.79†
Strategy use	0.16	0.65	0.03	0.25
Goals & impulse	0.49	0.78	0.08	0.63
Hostile responses	1.67	0.86	0.20	2.09*
Avoidance responses	2.43	0.47	0.45	5.14***

Note. † *p < .10, * p < .05, ** p < .01, *** p <.001.*

Table 31

Pearson's Correlation Matrix between Victimisation Total and Socio-emotional Processing

	1	2	3	4	5	6	7	8	9	10
1. Victimisation total	-									
2. Hostile attribution bias	.64***	-								
3. Self-victim IAT	.36**	.28*	-							
4. Hostile responses	.59***	.62**	.27*	-						
5. Avoidant responses	.66***	.49***	.15	.35***	-					
6. Distress FI	-.10	-.06	-.21	-.22	-.07	-				
7. Goals & impulse	.35**	.33**	.30**	.52***	.08	-.15	-			
8. Awareness & clarity	.13	.31**	.04	.17	.21	.05	.13	-		
9. Non-acceptance	.15	.20	.16	.24*	.10	-.15	.47***	.03	-	
10. Strategy use	.39***	.40***	.26*	.39***	.23	-.15	.73***	.14	.64***	-

Note. * $p < .05$, ** $p < .01$, *** $p < .001$.

7.5   *Discussion*

The current study tested multiple stages of the VSM and examined associations of socio-cognitive and emotional processing in poly-victimised, less victimised and non-victimised Polish adolescents. Poly-victims were shown to have greater deficits in processing at multiple stages of the VSM, when compared to less victimised adolescents and non-victims. Specially, poly-victims displayed greater hostile attribution bias, a greater implicit expectation of victimisation, more limited access to emotion regulation strategies, and select more anti-social responses. When exploring socio-emotional processing as a predictor of poly-victimisation, only hostile attribution bias and selecting anti-social responses (hostile and avoidant) were found to be significant predictors. Collectively, findings provide initial support for the VSM as a potential mechanism underpinning poly-victimisation.

Findings concerning the first stage of the VSM supported our hypothesis, revealing that poly-victims displayed a greater hostile attributional bias regarding the intent of others in ambiguous hypothetical social situations, compared to non-victimised adolescents. This is the first study, to our knowledge, to demonstrate the link between poly-victimisation and hostile attribution bias. Poly-victims are likely to develop schemas based on their prior experiences whereby they expect social interactions to result in harassment and abuse. When this victim schema is activated poly-victims engage in dysfunctional social processing where they will spend less time considering the possible motives of other's and are more likely to assume ambiguous behaviour is ill-intended. Such assumptions of hostile intent has been shown to mediate the relationship between particular forms of victimisation and aggressive or submissive behaviour (Calvete & Orue, 2011; Crick et al., 2002; Dodge et al., 2003; Perren et al., 2013). Therefore, judging another person's intent as

hostile, may lead to poly-victims responding to peers, family members or strangers with an inappropriate behavioural response (e.g., aggression or submission), as they are expecting to have to respond to hostility. In turn, such behavioural problems have been shown to predict poly-victimisation over time (Study 3), perpetuating the cycle of continued victimisation.

In a test of the next stage of the model, current findings revealed that poly-victims displayed a greater implicit self-identification with the victim role than non-victims, supporting our hypothesis. That is, poly-victims were quicker to respond to stimuli pairings between words related to themselves and victim related words, than pairings between self words and neutral, non-victim words. This builds upon findings from Rosen et al. (2007), who showed that chronic peer victims had a greater association between themselves and peer victimisation. Due to the chronic nature of poly-victimisation, whereby it can become a life condition rather than an event (Finkelhor et al., 2007b), poly-victims self-concept may be altered. This could impact upon the development of schemas, by which poly-victims pre-emptively view themselves as victims and so expect to be victimised (Baldwin, 1992; Crick & Dodge, 1994). The VSM then proposes that this distorted thought pattern could in turn contribute to the development of a hostile attribution bias and encourage the enactment of aggressive or submissive behaviour (Rosen et al., 2009).

Findings concerning emotional dysregulation were less clear-cut, providing only partial support for our hypothesis. The total DERS score was positively related to poly-victimisation, substantiating findings from Barnes et al. (2016), which examined emotion dysregulation as a whole concept. The current study built on this and makes a unique contribution by exploring a multi-dimensional concept of emotion regulation and poly-victimisation. Victimisation group differences in the ability to engage in goal-directed behaviours and inhibit impulsive behaviours

approached significance, and this dimension was moderately positively correlated with victimisation total. Findings therefore indicate a trend whereby as these difficulties increase, victimisation exposure increases. The inability to inhibit inappropriate or impulsive behaviour, which can result in a difficulty behaving in accordance with desired goals, is indicative of difficulties modulating arousal (Gratz & Roemer, 2004). Such difficulties mean poly-victims approach social interactions with a tendency to express impulsive behaviour, such as frustration and aggression, that can impact the quality of social interactions and lead to a heightened risk for victimisation (Pope & Bierman, 1999; Wiener & Mak, 2009). Furthermore, impulsive attributes could increase the likeliness that adolescents will place themselves in dangerous contexts that are associated with exposure to victimisations (Kelly, Schwartz, Gorman, & Nakamoto, 2008).

In addition, poly-victims were found to report greater difficulties accessing a range of emotion regulation strategies and being able to select strategies based upon situational factors, compared to non-victims. Poly-victims therefore appear to exhibit narrow and inflexible responses during emotionally arousing situations, which has also been noted in children exposed to violence (Pope & Bierman, 1999). Current findings have shown poly-victims present a greater self-association with victimisation, they are therefore more likely to expect victimisation. Consequently, poly-victims may spend less time evaluating and interpreting situational demands in order to select appropriate emotion regulation strategies, and instead will rely on a limited range of less adaptive strategies. Difficulties with impulse control may also aggravate this problem by making it challenging for poly-victims to focus attention and explore the environment in order to accurately and unbiasedly interpret social information, and then control and enact adaptive behavioural responses (Pope &

Bierman, 1999). In this way impulsivity and goal directed behaviour difficulties might be linked to limited access to emotion regulation strategies.

Poly-victims did not, however, show deficits in all facets of emotion regulation. No differences were found between victim groups with regard to emotional awareness, acceptance or clarity. Typically, emotion regulation research focuses on a broad categorisation of emotion regulation to the exclusion of aspects such as the awareness, understanding, and acceptance of emotions (Neumann et al., 2010). Therefore, important dimensions of emotion regulation remain understudied (Neumann et al., 2010). There is hence a lack of understanding concerning multi-dimensional emotion regulation in both normative and victimised populations. Some research has supported our findings, revealing only certain subscales of emotion dysregulation are related to trauma. For example, using the DERS Pomroy (2014) found, in university students, exposure to multiple traumatisation was associated with impulse control and access to emotion regulation strategies only. However, other research specifically examining emotional unawareness has found positive associations with trauma and victimisation. For example, survivors of early-onset interpersonal trauma were found to report higher levels of alexithymia (difficulty identifying and labeling one's own emotional state) than non-traumatised controls (Cloitre, Scarvalone, & Difede, 1997; McLean, Toner, Jackson, Desrocher, & Stuckless, 2006) and this has also been found to predict cybervictimisation in adolescence (Aricak & Ozbay, 2016). The current findings, and mixed results from prior research, imply that it is important to examine separate components of emotion regulation as victimisation and poly-victimisation may have distinctive associations with these.

Research demonstrating a link between individual forms of victimisation and alexithymia, presumes that victims react with internalising or externalising

behaviours, because they cannot adequately recognise, express or deal with their emotions (Aricak & Ozbay, 2016). It is possible that we did not find any impact of poly-victimisation on emotional self-awareness and acceptance because of the chronic nature of poly-victimisation. The theory of learned helplessness (Seligman, 1975) states that when exposed to repeated and uncontrollable adversity (as in the case of poly-victimisation), efforts to adapt behaviour to try to avoid the situation diminish as individuals learn that nothing will help. It is therefore possible that even with an insight and understanding into their own feelings and emotion driven behaviours, poly-victims continue to engage maladaptive responses not because they cannot adequately identify and comprehend their emotions, but because they see no other option in an uncontrollable situation.

Current results also did not provide support for the concept of preemptive processing. According to the VSM emotion dysregulation will result in highly victimised adolescents automatically suppressing their attention towards victimisation related stimuli, which would impair their ability to process social information and result in preemptive processing. In contrast to our hypothesis based on the VSM and Rosen et al.'s (2007) findings, poly-victimised adolescents were not found to exhibit reduced attention towards emotionally salient stimuli. Implicit measures have, however, faced criticism regarding their low levels of reliability (Fazio & Olson, 2003; Gawronski, & Hahn, 2018; LeBel & Paunonen, 2011). Low internal consistency can reduce the probability of identifying experimental effects and replicabilty of findings (LeBel & Paunonen, 2011). Consequently, the lack of significant findings from the emotional pictures dot-probe task may reflect certain contextual and personal factors, such as current mood or recently activated memories, which influenced how participants performed in the current study (Ferguson & Bargh, 2007; Gawronski & Sritharan, 2010). To further unpick the role

of preemptive processing in poly-victims more research is needed, taking into account internal consistency and focusing on improving the reliability of implicit measures (LeBel & Paunonen, 2011).

In addition, the current study used an emotional pictures dot probe as opposed to an emotional Stroop task used by Rosen et al. (2007). Differences may, therefore, be due to methodological variances. The dot probe task offers some advantages over the Stroop task in measuring attention biases in victimised individuals. Chiefly, it does not rely on interference to measure bias in attention allocation and thus provides a more direct measure of visual attention (Pine et al., 2005). The use of pictorial stimuli also eliminates the effortful semantic processing that the Stroop task typically requires and provides a potentially more ecologically valid method of measuring attention bias (Fani, Bradley-Davino, Ressler, & McClure-Tone, 2010). The emotional dot probe may therefore be a more appropriate task to use to study preemptive processing and produce more valid findings, which indicate that poly-victims do not automatically orient away from emotional content.

Furthermore, the only prior study, to our knowledge, which has examined attentional biases and multiple incidences of trauma also found no effects. Reichert et al. (2015) found no differences in reactions to threat stimuli between young adults with no, some and multiple trauma histories, in line with current findings. The researchers concluded that considering multiple types of trauma together as a single construct may have confounded the results and obscured attentional biases that might have been associated with individual trauma types, upon which theory is based.

In accordance with the VSM we hypothesised that poly-victims would display reduced responsivity to distressing content. However, other approaches propose that traumatised individuals will have different reactions towards threat. For example, prior studies using dot-probe tasks have shown that victimised individuals

detect threat or trauma related stimuli more quickly than non-victimised individuals due to a hypervigilance to these cues (e.g., Elsesser et al., 2005; Fleurkens et al., 2011; Gibb et al., 2009). It is therefore possible that displays of hypervigilance confounded our results.

When testing the last stage of the VSM, current findings supported our hypothesis that poly-victims will be more likely to choose avoidant or hostile responses in social interactions. Poly-victims were found to select greater anger, retaliation, aggression and avoidant responses than their non- or less victimised counterparts, with the largest effect size seen for avoidant responses. Moreover, avoidant responses were found to be the most important predictor of victimisation. According to the VSM, victimised children or adolescents will select these responses in an effort to reduce their negative emotional arousal, by either avoiding conflict or exerting aggression (Lemerise & Arsenio, 2000). These findings are also reinforced by Studies 1 and 3, which showed that both concurrently and longitudinally disruptive and withdrawn behaviours were associated with greater poly-victimisation risk. The present study has added to these findings by demonstrating poly-victims display a pattern of cognitive and emotional processing deficits, which underpin anti-social response selection.

7.5.1 *Strengths, limitations and future directions*

This study is the first to our knowledge to examine socio-cognitive and emotional processing in poly-victims and can therefore add a deeper level of understanding regarding the underlying mechanisms which may contribute to poly-victimisation. Moreover, this study used both self-report measures and experimental, implicit tasks. Whereas questionnaires offer insights into reflexive processing, the use of implicit tasks can further understanding regarding unconscious and automatic

processing. They do not require introspection and so may tap into cognitive and affective states that are beyond an individuals' self-awareness. Furthermore, implicit tasks may be less susceptible to social desirability biases. This strengthens the study's methodology and is unique to poly-victimisation research, which has previously relied solely upon correlational designs.

Yet, implicit tasks have faced criticism regarding their lower levels of reliability compared to explicit measures (Fazio & Olson, 2003; Greenwald & Banaji, 1995). This low reliability can lead to poor experimental replication, as demonstrated empirically by LeBel and Paunonen, (2011). Using a simulation to manipulate varying degrees of reliability in a dependent variable, they found that a higher level of unreliability in such dependent variables is associated with significantly lower levels of replicability. The authors surmised experimental effects found when using implicit tasks may be highly sensitive to temporary personal or contextual factors, such as recently activated memories, current goals or emotions. Such factors are less likely to have an effect on the responses to a self-report questionnaire.

The IAT, however, has consistently shown acceptable levels of internal consistency (in the range of .60 to .90) (Greenwald, McGhee, & Schwartz, 1998) and has been cited as the most reliable implicit task (Fazio & Olson, 2003; Gawronski, & Hahn, 2018; LeBel & Paunonen, 2011). Nonetheless, challenges of reliability and replicability may influence the interpretation of the present findings from the IAT and emotional pictures dot-probe task and should be taken into consideration.

A further limitation of the study concerns the sample size, which was not large enough to allow us to test a model incorporating latent variables through structural equation modelling. Further, the relatively small sample size may have resulted in insufficient power to reveal small effects. In addition, the direction of

causation cannot be determined. It is unclear if the development of poly-victimisation leads to processing deficits or if initial victimisation results in ineffective processing, which then exacerbates risk for poly-victimisation.

Another weakness concerns the application of measures designed for peer victimisation to the study of poly-victimisation. The vignettes for the assessment of hostile attribution bias and anti-social response selection describe situations in a school setting, and did not cover ambiguous situations that could be encountered at home or in the community. Thus, there is a possibility that this measure mainly captured responses to peer victimisation and failed to assess poly-victimisation. This limitation highlights the need for measures to be devised that consider a broader range of childhood victimisations.

This study provides interesting initial insights into how deficits in socio-cognitive and emotional processing are related to poly-victimisation, however more research is needed to understand the reciprocal and dynamic effects, and causality. It is likely that bi-directional effects exist but further longitudinal research is needed to determine the nature of these relationships. Research with larger samples is also required in order to allow a thorough test of the VSM using structural equation modelling. Future research should also examine the role of socio-cognitive biases and emotion regulation in moderating the impact of poly-victimisation on subsequent outcomes, as prior research has suggested these processes can mediate social adjustment following violence exposure (Schwartz & Proctor, 2000). There is also a need for research to explore how to train poly-victimised youth to avoid relying on a maladaptive victimisation schema and instead engage in effortful processing based on the specific social and environmental characteristics.

7.5.2 Conclusion and implications

These preliminary findings indicate that the VSM, which was devised in relation to chronic peer victimisation can also be applied to poly-victimisation. The current findings are, to our knowledge, the first to show that a range of deficits, in both socio-cognitive and emotional processing, are associated with poly-victimisation. Results suggest poly-victims experience distorted and dysfunctional thought patterns and emotions, which create vulnerability for continued victimisation. Compared to non-victimised adolescents, poly-victims are more likely to interpret the intent of others as hostile, have a stronger implicit association between themselves and the victim role – indicating they are more likely to expect victimisation, display difficulty in accessing adaptive emotion regulation strategies, and are more likely to select anti-social responses.

Interestingly, for the majority of variables, with the exception of avoidance responses, there were no significant differences between non-victims and less victimised groups. This implies that there is something unique about poly-victimisation that results in these greater processing deficits. The experience of victimisation itself may not be associated with greater deficits. Rather the chronic nature of poly-victimisation, which has been referred to as a life condition rather than an event, is linked to impaired social and emotional processing abilities.

Typically, interventions which aim to reduce childhood victimisation target social skills in order to reduce anti-social responses (P. K. Smith et al., 2001). However, findings from the present study suggest there is a need to design interventions that also address children and adolescents socio-cognitive and emotional processing. Interventions could include training children to make benign attributions to others' intentions in ambiguous contexts and in improving emotional flexibility (Calvete & Orue, 2011; Lochman & Wells, 2004). Additionally, distress

tolerance training may be beneficial to avoid reliance on a victim schema, inform expectations and behaviour, and in training children to show less distress in the presence of threat (Rosen et al., 2009). The current study provides the first evidence of the associations between socio-emotional processes and poly-victimisation, and suggests these underlying mechanisms could have promising potential as a target for poly-victimisation prevention.

8   CHAPTER 8: GENERAL DISCUSSION AND CONCLUSIONS

8.1   Overview

The final chapter of this thesis brings together the findings from Studies 1-4 and reviews the contribution of these studies in advancing the understanding of poly-victimisation risk and resilience. A consideration of the strengths and limitations of this thesis and the implications of findings, in relation to prevention of poly-victimisation and the negative effects associated with it, are then discussed. Finally, directions for future research in this area are considered.

8.2   Summary of findings

Broadly, this thesis was carried out in order to examine factors that contribute to risk of poly-victimisation, explore the effects of poly-victimisation on well-being and how methods of coping can impact upon this. Specifically, aims included applying the social ecological model to examine how factors from different contexts of an adolescent's life (individual characteristics, relationships with family and peers and community factors) can augment poly-victimisation risk. Socio-cognitive and emotional processing in poly-victims was also explored, to gain a better understanding of how certain risk factors could develop. Finally, coping processes were studied to investigate whether presumed adaptive coping strategies can mitigate the detrimental impact poly-victimisation can have on well-being, and conversely whether maladaptive strategies can exacerbate this impact. Collectively, the findings from this thesis can be used to make recommendations for ways to reduce vulnerability to poly-victimisation by addressing risk factors, and how to encourage adolescents to develop resilience to both general victimisation and poly-

victimisation, so that they maintain good emotional well-being and psychological health.

8.2.1   Prevalence

Findings from Study 1 highlight the major burden of victimisation to which Polish adolescents are exposed. During a one-year period, the large majority (84%) of adolescents experienced at least one kind of victimisation. Moreover, 70% of the sample reported two or more different kinds and the mean number of different victimisations was 4.58. Results therefore stress that adolescents are more likely to suffer multiple victimisations than a single incidence. Additionally, adolescents tended to report a combination of victimisations across different modules. These findings support prior research examining multiple forms of victimisation, which has shown that those who experience one form of victimisation are more likely to suffer from other, additional kinds (e.g., Cyr et al., 2013; Finkelhor, Ormrod, & Turner, 2007b; Pereda, Guilera, & Abad, 2014; Turner, Finkelhor, & Ormrod, 2010).

35.6% of the sample were classed as poly-victims, suffering six or more different kinds of victimisations. Furthermore, similar rates of poly-victimisation were found in subsequent studies from this thesis. In Study 3 at T2 ($n = 207$) 32.8% were poly-victims and in Study 4 ($n = 73$) 32.9% were poly-victimised. This shows a level of consistency and provides a greater assurance of the reliability of findings.

When comparing these rates with other cultures, Polish adolescents were shown to experience greater poly-victimisation levels than youth from the majority of Western samples (Cyr et al., 2013; Finkelhor et al., 2007b; Lätsch et al., 2017). Our findings are, however, in line with prevalence rates from a sample of Spanish (31.7% poly-victims) (Soler et al., 2012) and Chilean adolescents (36% poly-

victims) (Pinto-Cortez et al., 2017). Additionally, when focusing on the Eastern European context, a Russian study examining lifetime poly-victimisation (Bogolyubova et al., 2015) and studies on peer victimisation from Poland (Currie et al., 2012; Komendant-Brodowska et al., 2011) have indicated above average rates of victimisation in this culture. Our findings support this and provides evidence that poly-victimisation appears to be a greater problem in the Polish culture. This is in line with past literature suggesting that prior economic and political instability, a culture of violence and the structure of the education system can contribute to higher levels of victimisation in Poland (Brunell, 2005; Doroszewicz & Forbes, 2008; Komendant-Brodowska et al., 2011; Tsitsika et al., 2015). Our findings reinforce the importance of examining victimisation cross-culturally. Doing so can raise awareness of poly-victimisation within different countries and thereby help to ensure clinicians, child welfare practitioners and school staff are vigilant to multiple victimisation experiences.

When looking at victimisation patterns over a one-year period findings from Study 3 supported past research showing that victimisation at T1 increased the risk of further victimisation at T2 (Boney-McCoy & Finkelhor, 1995; Cuevas et al., 2010; Finkelhor et al., 2007c). Moreover, the persistence of poly-victimisation across time was found to be higher than that of any individual victimisation category. Specifically, the risk of re-experiencing poly-victimisation at T2 was 2.67 times greater for those who were also poly-victims at T1, compared to less victimised adolescents. This supports Finkelhor, Ormrod, and Turner's (2007b) assertion that poly-victimisation is more of a stable, life condition, than a series of events limited to one time period.

8.2.2 Risk

Following on from exploring the prevalence of poly-victimisation, Study 1 also investigated risk factors for poly-victimisation. Findings supported our hypotheses and add empirical support to the application of the social-ecological model (Bronfenbrenner, 1977) for poly-victimisation risk. Risks concerning the individual (teacher reported aggressive and withdrawn behavioural problems), family (poor family management, family conflict), relationships (peer social preference) and the community (disorganised community and low commitment to school) were found to increase risk of becoming a poly-victim.

In a longitudinal follow-up of this study the relationships between risks and poly-victimisation were further examined, using cross-lagged analysis to permit greater understanding of the casual effects. By controlling for prior levels of risk/victimisation, this approach allows one to rule out the possibility that a cross-lagged effect is due simply to the correlation between risk factors and victimisation at T1. Prior longitudinal research in the field of poly-victimisation has focused on the victimisation-symptomology relationship, and has neglected to confirm the nature of the relationship between risk factors and poly-victimisation. Although more distal risk in a young person's ecology (i.e., community factors) can safely be assumed to be unaffected by prior victimisation, factors concerning relationships, family and individual characteristics may both contribute to poly-victimisation risk and be influenced by prior victimisation exposure (Cisler et al., 2012; Mrug & Windle, 2010). Study 3 confirmed that all risks at T1 were found to be predictive of greater total kinds of victimisation one year later, after controlling for prior victimisation. In addition, T1 victimisation predicted greater withdrawn and disruptive behavioural problems at T2, controlling for prior behaviours. Findings make an original

contribution to the field by allowing stronger inferences to be made about the antecedents and consequences of poly-victimisation.

Findings from Studies 1 and 3 highlight the need to take an holistic approach to poly-victimisation risk prevention and add to prior research on ecological risk frameworks for multiple victimisation (Lila et al., 2008; Nurius et al., 2009; Romano et al., 2011). However, a major component of the ecological model is that factors within and between each level of the young person's ecology are presumed to interact to influence the likelihood of victimisation. The current research, however, only looked at how these risks influenced poly-victimisation (and vice versa), and not the relationships between risk factors. This research, therefore, cannot provide full support for the ecological model. The ecological model also cannot provide an explanation as to how poly-victimisation may occur. Thus, there is a need to draw on other theories of victimisation to understand how the risks identified in this thesis create greater poly-victimisation vulnerability. The revised lifestyle-routine activities framework (Finkelhor & Asdigian, 1996) would suggest these factors create risk by fashioning the environmental conditions that can increase victimisation vulnerability, and by increasing target congruence. For example, family conflict and poor family management could result in youth spending more time away from home, in contexts where victimisation may be more likely (Finkelhor & Asdigian, 1996).

In addition, the VSM (Rosen et al., 2009) outlines how a series of social and emotional processing deficits can result in ineffective social responses and underpin chronic victimisation. In Study 4 of this thesis, these mechanisms were focused on to understand the development of individual level risk factors (withdrawn and disruptive behavioural problems) and poly-victimisation. As Finkelhor (2008) highlights, many risk factors for poly-victimisation, such as community problems

and family dysfunction, are difficult to address as they require societal changes or engagement from multiple parties. The risks of aggressive and withdrawn behaviour, however, may be more amenable to invention as they involve working with the child or adolescent only. By addressing these characteristics, it may also be possible to improve relationships with family and peers, and reduce the risks associated with these factors also.

Using the VSM (Rosen et al., 2009) as a framework, Study 4 findings are, to the best of our knowledge, the first to demonstrate that poly-victims exhibit distorted and dysfunctional patterns of processing social and emotional information, which are theorised to result in inappropriately aggressive or submissive behavioural responses. Compared to non-victims or less victimised adolescents, our results showed that poly-victims displayed a hostile attribution bias, a greater self-association with victimisation and deficits in accessing appropriate emotion regulation strategies. Finally, poly-victims were more likely to respond to ambiguous social scenarios with anger, revenge, aggression or avoidance. This is in line with Rosen et al.'s (2007) findings on chronic peer victimisation. In contrast to our hypothesis, poly-victims did not display deficiencies in emotional awareness and understanding, nor a tendency to engage in emotional, pre-emptive processing. These non-significant findings require further investigation. Overall, findings from Study 4 provide evidence to support multiple stages of the VSM in regards to creating poly-victimisation risk. Results illuminate specific socio-cognitive and emotional processes that should be targeted in order to help prevent the development of aggressive and submissive behaviour, with the aim of reducing poly-victimisation risk.

8.2.3   Outcomes

Findings from Studies 2 and 3 centre around the impact poly-victimisation has on emotional well-being and the role of coping in this relationship. Poly-victims were shown to have poorer emotional well-being compared to non-victims and less victimised adolescents. This is in line with prior literature showing that poly-victimisation is associated with greater clinical symptomology than single or less chronic victimisation (Ellonen & Salmi, 2011; Finkelhor et al., 2007b; Radford et al., 2013; Soler et al., 2012; Turner et al., 2010). Our results add to existing knowledge by moving beyond the study of pathology based indicators. Findings highlight the importance of monitoring low emotional well-being, which can have a significant impact upon day-to-day functioning (Huebner & Dew, 1996), in addition to assessments for clinical symptomology in poly-victimised youth.

When examining casual relationships in Study 3, our results revealed that T1 total kinds of victimisation predicted lower positive affect and life satisfaction and greater negative affect at T2, when controlling for prior well-being. In addition, increases in negative affect at T1 positively predicted victimisation at T2, after controlling for T1 victimisation. By using a cross-lagged approach, this research provides the first causal evidence to indicate that negative affect can act as an antecedent and consequence of poly-victimisation. Displaying emotions such as anger, fear and sadness, which embody negative affect, could make adolescents appear more vulnerable and increase their 'target congruency' (Finkelhor & Asdigian, 1996), and therefore contribute to increased victimisation.

8.2.4   Resilience

In order to construct more comprehensive recommendations for poly-victimisation intervention programmes there is a need, not only to address risk

factors, but to also consider approaches to increase resilience in victimised youth (Hamby et al., 2016). Coping as a source of resilience was investigated cross-sectionally and longitudinally in Studies 2 and 3. Study 2 revealed that poly-victims report using significantly more avoidance coping styles (internalising and externalising) than other adolescents. This supports Turner et al.'s (2010) suggestion that poly-victims may experience poorer outcomes as, due to the chronic nature of their victimisation experiences, they may be unable to make effective coping choices and as such reduce their capacity for resilience.

Building on this, current findings revealed poly-victims who reported they would opt for more adaptive coping strategies were less likely to report lower well-being. Specifically, results indicated that T1 problem-solving coping may mitigate the impact of T1 poly-victimisation on T2 poorer emotional well-being, after controlling for prior well-being. Problem-solving coping may therefore increase resilience in poly-victimised adolescents. Results also implied that social support seeking coping may play a role in buffering negative affect. This in line with the findings of C. Guerra, Ocaranza, et al. (2016), who found that searching for social support protected against increases in externalising symptoms in poly-victims. Further research is, however, needed to confirm this trend.

Collectively, findings from Studies 2 and 3 add important knowledge to the sparse research on poly-victimisation resilience. Results provide support for the stress and coping theory (Lazarus & Folkman, 1984) and Roth and Cohen's (1986) model, by revealing that approach strategies may foster resilience in the face of poly-victimisation. Approach strategies are theorised to be beneficial as they allow appropriate action to be taken to prevent continued exposure to the threat and a resolution of the stressor (Lazarus & Folkman, 1984; Roth & Cohen, 1986). However, in both our cross-sectional and longitudinal study, avoidant strategies

(internalising, externalising and distraction) were found to have no impact on emotional well-being. This is in contrast to our hypothesis and the key theoretical models which suggest avoidant strategies are maladaptive (Lazarus & Folkman, 1984; Roth & Cohen, 1986). However, it is possible that for some poly-victims avoidant strategies provide immediate relief from the stressor and so are not detrimental in the short-term. Thus, there is a need to study the effects of avoidant coping over a longer time period to fully understand the effects these strategies may have on poly-victimisation resilience.

8.3   *Strengths, limitations and future directions*

The studies that make up this thesis have several strengths that should be acknowledged. Firstly, the focus on multiple kinds of victimisation allows for the myriad of victimisation types that adolescents can experience to be taken into account. The majority of the childhood victimisation literature on predictors of and resilience to victimisation focuses on singular forms (e.g., peer victimisation, child maltreatment), and disregards the impact of suffering multiple kinds of victimisations. The current research adds to the body of literature highlighting the high prevalence of multiple and poly-victimisation. This strengthens the call for future childhood victimisation research to consider the influence of broader victimisation experiences more often.

The current research was carried out in a culture where there is a dearth of child victimisation research in general and specifically no prior research, to our knowledge, on poly-victimisation. This thesis therefore makes a unique contribution to the field and highlights the importance of examining victimisation cross-culturally. Additionally, the focus on Polish adolescents could help to raise awareness nationally of the importance of exploring complete victimisation histories,

and be used to encourage policy and services to address the considerable rates of poly-victimisation.

This thesis was also innovative in taking a longitudinal approach to studying risk and resilience, advancing knowledge of potential ways to prevent poly-victimisation and reduce associated psychological and emotional difficulties. The focus on socio-cognitive and emotional processing is also unique in the field of poly-victimisation, and resultant findings can be used as a springboard for future research. Specifically, we need to know more about the direction of causality between poly-victimisation and processing deficits. Research should then explore how best to train poly-victimised youth to not rely on a victimisation schema and instead engage in effortful processing based on characteristics of the environment.

Finally, studies in this thesis drew on strengths from different quantitative research designs, adopting cross-sectional, longitudinal and quasi-experimental approaches, to allow a more complete understanding of the nature of the relationships between variables. Furthermore, the current research incorporated self-reports, teacher reports, peer nominations and tasks measuring implicit processes. Such an approach removes the potential bias associated with relying entirely on self-reports and reduces method covariance, as information from the same sources tends to result in higher correlations compared to that from multiple sources.

Findings do, however, need to be considered in the context of the limitations associated with this thesis. The following section discusses broad limitations further. Limitations associated with each individual study are considered in greater detail in relevant chapters. The measure of poly-victimisation used in this thesis concentrated mostly on peer-to-peer victimisations, along with subscales of conventional crime, caregiver maltreatment and witnessing violence. Certain victimisation types that

have typically been assessed in past poly-victimisation research (e.g., sexual victimisation) were not explored. Consequently, this thesis did not examine complete histories of past-year victimisation. This presents some challenges when comparing prevalence findings with prior research cited, as they are not directly comparable.

Poly-victimisation research in general faces challenges concerning the operationalisation of poly-victimisation. There has not been an exact definition of poly-victimisation established and therefore different studies measure and define the concept differently. For example, in this thesis the JVQ did not include the sexual victimisation module or other items relating to more severe forms of victimisation. It also included additional items on peer and electronic victimisations. This poses some difficulties for making comparisons with past research that studied a different range of victimisations. The current research also used the screener sum version of the JVQ and therefore only collected information on occurrences of different victimisations. Consequently, repeat experiences of the same kind were not taken into consideration, which may have influenced associations with factors of risk and resilience. However, Finkelhor, Ormrod, et al. (2005a) advise that the exclusion of repeat victimisations has only a negligible impact on research outcomes, and that this method assists research to focus on the complete range of different victimisation types, which was the foremost aim of this thesis.

Another drawback of the current operationalisation of poly-victimisation is that no greater weight was given to certain kinds or combinations of victimisations that may be viewed as more severe or traumatising. Finkelhor, Ormrod, et al. (2005a), however, concluded that assigning greater weight for certain characteristics or types of victimisation resulted in only limited enhancements and did not recommend using this method given the greater methodological complexity. However, it would be interesting in future studies to determine whether certain risks

are associated with more severe types of victimisations or more pandemic types. Future research could also explore whether the moderating effect of approach coping strategies, found in the current research, is observed in poly-victims experiencing the most potentially traumatising forms of victimisation.

The version of JVQ used in this thesis asked about past-year victimisations as opposed to lifetime exposure. A timeframe of the past year is a long time period for pandemic victimisations (e.g., sibling assault), but a relatively short time period for more severe and less frequent victimisations. This could lead to underreporting due to forgetting or over-reporting due to telescoping victimisations from earlier time periods into the past year. It is possible that these factors could influence the accuracy of our findings regarding poly-victimisation prevalence.

In addition, studies in this thesis adopted the criteria described by Finkelhor, Turner, et al. (2011) and Turner et al. (2010) in order to classify participants into three groups according to their level of victimisation exposure (non-victims, less victimised, poly-victims). This method produced three unequal groups. When conducting analysis based on unequal groups, statistical power may be reduced and chances of type II error could increase. However, when using a one-way ANOVA the loss of power associated with this is thought to be negligible (Tabachnick & Fidell, 2006). Another disadvantage of dealing with unequal groups is that the test statistic will be more sensitive to small departures from the assumption of equal variance, compared to analysis based on equal groups (Tabachnick & Fidell, 2006).

Finally, it is unrealistic to be able to assess all possible forms of victimisation an adolescent may be exposed to, along with all potential risk and protective factors, moderators, mediators and outcomes. It is therefore conceivable that external variables which were not studied in the current research (e.g., non-victimisation

adversity, availability of social support, personal resources such as self-esteem) might have had an influence on the investigated relationships. Research must take into account a protocol that is not too long and taxing for young participants, however further, additional variables should be considered in future research.

Additionally, there may be further associations between the variables focused upon in this thesis which have not been explored. For example, evidence has emerged to suggest maladaptive coping may play a role in the development of poor social and/or emotional processing (Boxer et al., 2008; Ng-Mak, Salzinger, Feldman, & Stueve, 2004). Conversely, children's emotion regulation skills have been theorised to mitigate risk associated with victimisation by promoting adaptive coping strategies. Children with strong emotion regulation skills might be able to think through solutions to problems associated with victimisation more effectively than youth with less well-developed emotion regulation skills. Consequently, the coping strategies they choose to enact might also be more effective (Kliewer et al., 2004). Future research should focus on exploring this possible link in poly-victimised samples. Present findings from Studies 2 and 3 have already indicated that adaptive coping strategies may build resilience in poly-victims. Future research should explore if effective coping skills could reduce social and emotional processing difficulties in poly-victimised samples. If findings are positive, then intervention programmes which target coping skills could be widely applied in an effort to both prevent future victimisation and create resilience to it.

8.4   Implications

Despite these limitations, the results obtained could have several clinical and practical implications. These fall in two key areas: preventing poly-victimisation; and building resilience in order to reduce the negative impact of poly-victimisation.

At present there are no specific treatment models developed to address poly-victimisation, with interventions focused on specific forms of victimisation or more broadly on trauma (Banyard et al., 2013). Efforts, guided by empirical research, toward creating holistic interventions for victims of multiple exposure are therefore necessary and of great importance.

Our research has highlighted how common experiences of multiple and poly-victimisation can be. This implies that professionals working with vulnerable adolescents should be more attentive towards additional types of victimisation that may have occurred and explore complete victimisation histories. Furthermore, given that prior victimisation was found to increase the risk of experiencing further victimisation one year later, appropriate referrals to intervention services should be offered to known victims in the hope of preventing poly-victimisation.

Additionally, findings have shown that factors from different levels of an adolescent's ecology can contribute to greater poly-victimisation risk. This suggests a holistic approach to prevention is needed which aims to achieve positive changes in more than one area of the young person's life, by targeting factors concerning the adolescents themselves, family factors, their relationships and wider environment. Indeed, prior research has noted that interventions focusing on only one area of a young person's ecology are less likely to have a significant impact (J. D. Smith, Schneider, Smith, & Ananiadou, 2004). The current research highlights a number of specific areas that may be amenable to intervention. In particular, efforts at the child or adolescent level should focus on addressing dysfunctional processing of social and emotional information, with the hope of reducing aggressive and withdrawn behaviours. Findings regarding risk factors also have implications for risk assessment and may help with early identification of those at greatest risk of poly-

victimisation, with the aim of preventing it before onset. Young people identified as presenting a combination of the risks, which have been empirically linked to poly-victimisation, should be the primary targets of prevention efforts.

Banyard et al. (2013) emphasises the importance of avoiding the compartmentalisation and separation of services when attempting to address the complete burden of childhood victimisation. In order for easier identification of those with prior victimisations and/or the presence of risk factors, there is a need for an approach that promotes information sharing between the different agencies involved with young people (e.g., child protection agencies/ social workers, the police, school personnel, mental health clinicians). This could allow professionals to gain an awareness of the child or adolescent's experiences in different settings and intervene accordingly.

Finally, present findings regarding the role of coping should be applied alongside an understanding of risk factors to augment the effectiveness of intervention programmes, by both decreasing risk and encouraging resilience. Our results add to prior knowledge by revealing that approach coping styles, and in particular problem-solving strategies, may be effective at buffering reduced emotional well-being and enabling adaptive functioning in poly-victims. Interventions should therefore focus on training children to cope with adversity by attempting to take control of and tackle the problem. This feature should be incorporated within the design of a multifaceted victimisation programme, targeting a wide variety and combination of victimisations.

8.5   *Overall conclusions*

The aim of this thesis was to investigate poly-victimisation in Polish adolescents by exploring factors associated with risk and resilience. Findings from this research have demonstrated that the level of poly-victimisation in Poland is higher than found in Western cultures. In addition, it was shown that risks from the community, school, family environment, relationships with peers, and aggressive and withdrawn behavioural problems all contribute to greater subsequent poly-victimisation risk. Following on from this, findings indicated that poly-victims display deficits in socio-cognitive and emotional processing, which are theorised to contribute to the development of maladaptive behavioural responses. Findings also revealed poly-victimisation is predictive of poorer emotional well-being, but that adopting problem-solving coping strategies may mitigate this association.

This body of research has helped to advance the poly-victimisation field in a number of ways. Firstly, this thesis explored for the first time the prevalence of poly-victimisation in a sample of Polish adolescents. This adds to the understanding of cultural variations in poly-victimisation frequency. Secondly, factors associated with poly-victimisation risk have been explored using a longitudinal design, indicating that risks precede subsequent increases in victimisation. Thirdly, this research has been the first to explore the moderating impact of adaptive and maladaptive coping strategies over time. Fourthly, the current research has assessed socio-cognitive and emotional processing in poly-victims for the first time. Collectively, these findings have advanced the sparse knowledge regarding causation and areas to target to reduce risk and promote resilience in poly-victims. Finally, this thesis used methodologies that were novel in the poly-victimisation field, specifically by utilising a peer nomination task and measures of implicit cognitive and emotional

processes. These methods help to reduce potential bias associated with self-reports, which have typically been relied upon in prior poly-victimisation studies. Overall, this thesis has important implications for clinicians and child welfare practitioners regarding poly-victimisation risk assessment, prevention and resilience training.

Appendices

Appendix 1: Ethical approval

Studies 1-3

The research for this project was submitted for ethics consideration under the reference PSYC 14/ 127 in the Department of Psychology and was approved under the procedures of the University of Roehampton's Ethics Committee on 21.05.14.

Study 4

The research for this project was submitted for ethics consideration under the reference PSYC 16/ 224 in the Department of Psychology and was approved under the procedures of the University of Roehampton's Ethics Committee on 16.08.16.

Dear xxx,

I am writing regarding an opportunity for your school to participate in a valuable research project. I am a PhD student at the University of Roehampton, London, working in collaboration with Opole University, studying factors associated with frequent victimisation experiences during adolescence. Studying such factors can result in a more comprehensive understanding of who is most vulnerable and lead to more effective prevention programmes. It would additionally be a great opportunity for pupils to learn more about psychology and scientific research and I would be happy to give pupils a bit more information about psychology in general, or about university and a career in academia, if desired.

This study involves children aged 12-19 years completing a questionnaire regarding their victimisation experiences over the past year, their environment and their emotional well-being. We are aiming to get information from as many pupils as possible, however understand it may be unfeasible to test all years, and so if there are any particular year or subject groups you feel would be most suitable, or benefit from this research, this would be welcomed.

The questionnaire should take around 40 minutes to complete, and we would look to get students to complete the measures in whole class groups, so as to minimise any disruption. Additionally, a teacher will be asked to complete a short questionnaire regarding their pupils' behavioural strengths and difficulties, which would take 1-2 minutes per pupil, so hopefully could be done in the same session as pupils are completing their questionnaire set.

All questionnaires would be anonymised and data collected would remain confidential. This study has received ethical approval with an opt-out consent procedure, meaning parents will be sent a letter giving an overview of the study, and

will be asked to return the reply slip if they do not wish their children to take part. The pupils themselves will be asked to give verbal consent.

We are looking to conduct this research as soon as possible. If you think this is something your school could accommodate please let me know and I can follow up with a phone call and provide further information. If there is a more suitable member of staff to liaise with could you please let me know their contact details and I will get in touch.

Kind regards,

Faye Riley

Appendix 3: Item descriptions for the original JVQ-R2, with items highlighted that are included in the adapted JVQ used in the present research.

Module A: CONVENTIONAL CRIME

C1) Robbery

In the last year, did anyone use force to take something away from you that you were carrying or wearing?

C2) Personal Theft

In the last year, did anyone steal something from you and never give it back? Things like a backpack, money, watch, clothing, bike, stereo, or anything else?

C3) Vandalism

In the last year, did anyone break or ruin any of your things on purpose?

C4) Assault with Weapon

Sometimes people are attacked WITH sticks, rocks, guns, knives, or other things that would hurt. In the last year, did anyone hit or attack you on purpose WITH an object

or weapon? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else?

C5) Assault without Weapon

In the last year, did anyone hit or attack you WITHOUT using an object or weapon?

C6) Attempted Assault

In the last year, did someone start to attack you, but for some reason, it didn't happen? For example, someone helped you or you got away?

C7) Kidnapping

When a person is kidnapped, it means they were made to go somewhere, like into a car, by someone who they thought might hurt them. In the last year, did anyone try to kidnap you?

C8) Bias Attack

In the last year, were you hit or attacked because of your skin color, religion, or where your family comes from? Because of a physical problem you have? Or because someone said you are gay?

Module B: CHILD MALTREATMENT

Next, we ask about grown-ups who take care of you. This means parents, babysitters, adults who live with you, or others who watch you.

M1) Physical Abuse by Caregiver

Not including spanking on your bottom, in the last year, did a grown-up in your life hit, beat, kick, or physically hurt you in any way?

M2) Psychological/Emotional Abuse

In the last year, did you get scared or feel really bad because grown-ups in your life called you names, said mean things to you, or said they didn't want you?

M3) Neglect

When someone is neglected, it means that the grown-ups in their life didn't take care

of them the way they should. They might not get them enough food, take them to the doctor when they are sick, or make sure they have a safe place to stay. In the last year, did you get neglected?

M4) Custodial Interference/Family Abduction

Sometimes a family fights over where a child should live. In the last year, did a parent take, keep, or hide you to stop you from being with another parent?

Module C: PEER AND SIBLING VICTIMIZATION

P1) Gang or Group Assault

Sometimes groups of kids or gangs attack people. In the last year, did a group of kids or a gang hit, jump, or attack you?

P2) Peer or Sibling Assault

In the last year, did any kid, even a brother or sister, hit you? Somewhere like: at home, at school, out playing, in a store, or anywhere else?

P3) Nonsexual Genital Assault

In the last year, did any kids try to hurt your private parts on purpose by hitting or kicking you there?

P4) Bullying

In the last year, did any kids, even a brother or sister, pick on you by chasing you or grabbing your hair or clothes or by making you do something you didn't want to do?

P5) Emotional Bullying

In the last year, did you get scared or feel really bad because kids were calling you names, saying mean things to you, or saying they didn't want you around?

P6) Dating Violence (Note: Suggested for children aged 12 and older.)

In the last year, did a boyfriend or girlfriend or anyone you went on a date with slap or hit you?

Module D: SEXUAL VICTIMIZATIONS

S1) Sexual Assault by Known Adult

In the last year, did a grown-up YOU KNOW touch your private parts when you didn't want it or make you touch their private parts? Or did a grown-up YOU KNOW force you to have sex?

S2) Nonspecific Sexual Assault

In the last year, did a grown-up you did NOT KNOW touch your private parts when you didn't want it, make you touch their private parts or force you to have sex?

S3) Sexual Assault by Peer

Now think about kids your age, like from school, a boy friend or girl friend, or even a brother or sister. In the last year, did another child or teen make you do sexual things?

S4) Rape: Attempted or Completed

In the last year, did anyone TRY to force you to have sex; that is, sexual intercourse of any kind, even if it didn't happen?

S5) Flashing/Sexual Exposure

In the last year, did anyone make you look at their private parts by using force or surprise, or by "flashing" you?

S6) Verbal Sexual Harassment

In the last year, did anyone hurt your feelings by saying or writing something sexual about you or your body?

S7) Statutory Rape & Sexual Misconduct (Note: Suggested for children aged 12 and older.)

In the last year, did you do sexual things with anyone 18 or older, even things you both wanted?

Module E: WITNESSING AND INDIRECT VICTIMIZATION

Sometimes these things don't happen to you but you see them happen to other people. This means to other people in real life. Not people on TV, video games, movies, or that you just heard about.

W1) Witness to Domestic Violence

In the last year, did you SEE one of your parents get hit by another parent, or their boyfriend or girlfriend? How about slapped, punched, or beat up?

W2) Witness to Parent Assault of Sibling

In the last year, did you SEE your parent hit, beat, kick, or physically hurt your brothers or sisters, not including a spanking on the bottom?

W3) Witness to Assault with Weapon

In the last year, in real life, did you SEE anyone get attacked on purpose WITH a stick, rock, gun, knife, or other thing that would hurt? Somewhere like: at home, at school, at a store, in a car, on the street, or anywhere else?

W4) Witness to Assault without Weapon

In the last year, in real life, did you SEE anyone get attacked or hit on purpose WITHOUT using a stick, rock, gun, knife, or something that would hurt?

W5) Burglary of Family Household

In the last year, did anyone steal some thing from your house that belongs to your family or someone you live with? Things like a TV, stereo, car, or anything else?

W6) Murder of Family Member or Friend

When a person is murdered, it means someone killed them on purpose. In the last year, was anyone close to you murdered, like a friend, neighbour or someone in your family?

W7) Witness to Murder

In the last year, did you SEE someone murdered in real life? This means not on TV, video games, or in the movies?

W8) Exposure to Random Shootings, Terrorism, or Riots

In the last year, were you in any place in real life where you could see or hear people

being shot, bombs going off, or street riots?

W9) Exposure to War or Ethnic Conflict

In the last year, were you in the middle of a war where you could hear real fighting

with guns or bombs?

SUPPLEMENTAL ITEMS

ELECTRONIC VICTIMIZATION

INT1) Internet Harassment
Has anyone ever used the Internet to bother or harass you or to spread mean words or
pictures about you?

INT1B) Cell Phone Harassment
Has anyone ever used a cell phone or texting to bother or harass you or to spread
mean words or pictures about you?

INT2) Unwanted Internet Sexual Messages
Did anyone on the Internet ever ask you sexual questions about yourself or try to get
you to talk online about sex when you did not want to talk about those things?

SUPPLEMENTAL PEER RELATIONAL AGGRESSION ITEMS

P7) Social Discrediting by Peers
At any time in your life, did any kids ever tell lies or spread rumors about you, or
tried to make others dislike you?

P8) Social Exclusion by Peers
At any time in your life, did any kids ever keep you out of things on purpose,
excluded you from their group of friends, or completely ignored you?

University of Roehampton
London

We would like you to help us by answering some questions about some things that may have happened to you, your feelings, your environment and your classmates. These questionnaires should take around 40 minutes to complete.

You are more than welcome to miss out any questions that you feel you do not want answer. Please remember there are no right or wrong answers, we are just interested in your own experiences. Please read all questions carefully and be as honest as you can when answering.

To help us keep your answers private please do not write your name on this form. We will provide you with a class list with a code number next to it, which you will enter below where is says 'Code'. For questions related to your classmates you will use their code numbers and not their names.

Please fill in the information below:

Code _____

I am a: Boy   Girl

Age _____

Ethnicity _____

Class _____

School _____

Thank you for your time.

*We are going to ask you about some things that might have happened in **the last year** were you have been the target of crime, verbal or physical attacks, cyber-bullying, neglect or a witness to these.*

1) In the last year, did anyone use force to take something away from you that you were carrying or wearing?

No, never	**Yes**
☐	☐

2) In the last year, did anyone steal something from you and never give it back? Things like a backpack, money, watch, clothing, bike, phone, or anything else?

No, never	**Yes**
☐	☐

3) In the last year, did anyone break or ruin any of your things on purpose?

No, never	**Yes**
☐	☐

4) In the last year, did anyone steal something from your house that belongs to your family or someone you live with? Things like a TV, laptop, car, or anything else?

No, never	Yes
☐	☐

5) In the last year, did someone start to attack you, but for some reason, it didn't happen? For example, someone helped you or you got away?

No, never	Yes
☐	☐

6) In the last year, did someone threaten to hurt you when you thought they might really do it?

No, never	Yes
☐	☐

7) In the last year, did anyone hit or attack you on purpose WITH a weapon or something that would hurt? Somewhere like at home, at school, in a shop, in a car, on the street, or anywhere else?

No, never	Yes
☐	☐

8) In the last year, did anyone hit or attack you WITHOUT using a weapon or object that would hurt?

No, never	Yes
☐	☐

9) In the last year, were you hit or attacked because of your skin colour, religion, or where your family comes from? Because of a physical problem you have? Or because of your sexuality?

No, never	Yes
☐	☐

10) Sometimes groups of kids or gangs attack people. In the last year, did a group of kids or a gang attack you physically or verbally?

No, never	Yes
☐	☐

11) In the last year, did any kid, even a brother or sister, hit you? Somewhere like at home, at school, out playing, in your neighbourhood, or anywhere else?

No, never	Yes
☐	☐

12) In the last year, did any kids, even a brother or sister, pick on you by chasing you or grabbing your hair or clothes, or by making you do something you didn't want to do?

No, never	Yes
☐	☐

13) In the last year, did you get scared or feel upset because kids were calling you names, saying mean things to you, or saying they didn't want you around?

No, never	Yes
☐	☐

14) In the last year, did any kids ever tell lies or spread rumours about you, or tried to make others dislike you?

No, never	Yes
☐	☐

15) In the last year, did any kids ever keep you out of things on purpose, excluded you from their group of friends, or completely ignored you?

No, never	Yes
☐	☐

16) In the last year, did a boyfriend or girlfriend, or anyone you went on a date with, slap or hit you?

No, never	Yes
☐	☐

17) In the past year, has anyone ever used the Internet to bother or harass you or to spread mean words or pictures about you?

No, never	Yes
☐	☐

18) In the past year, has anyone ever used a mobile phone or texting to bother or harass you or to spread means words or pictures about you?

No, never	Yes
☐	☐

Next, we ask about adults who take care of you. This means parents, babysitters, adults who live with you, or others who watch you.

19) In the last year, did you get scared or feel really bad because adults in your life called you names, said mean things to you, or said they didn't want you?

No, never	Yes
☐	☐

20) When someone is neglected, it means that the adults in their life didn't take care of them the way they should. They might not get them enough food, take them to the doctor when they are sick, or make sure they have a safe place to stay. In the last year, were you neglected?

No, never	Yes
☐	☐

21) Not including spanking on your bottom, in the last year, did a grown-up in your life hit, beat, kick, or physically hurt you in any way?

No, never	Yes
☐	☐

Sometimes these things don't happen to you but you see them happen to other people. This means to other people in real life - not people on TV, video games, films, or that you just heard about.

22) In the last year, did you SEE one of your parents get hit by another parent, or their boyfriend or girlfriend?

No, never	Yes
☐	☐

23) In the last year, did you SEE your parent hit or physically hurt your brothers or sisters?

No, never	Yes
☐	☐

24) In the last year, in real life, did you SEE anyone get attacked on purpose WITH a weapon or something that would hurt? Somewhere like: at home, at school, in a shop, on the street, or anywhere else?

No, never	Yes
☐	☐

25) In the last year, in real life, did you SEE anyone get attacked or hit on purpose WITHOUT using a weapon or object that would hurt?

No, never	Yes
☐	☐

<mark>Communities that care youth survey</mark>

Next, we are going to ask you about your experiences in your community, at home and at school. If you don't find an answer that fits exactly, use one that comes closest. If any question does not apply to you, or you are not sure what it means, just leave it blank.

How much do each of the following statements describe your neighbourhood:	Definitely NOT true	Mostly NOT true	Mostly true	Definitely true
Crime and/or presence of drugs				
Fights				
Lots of empty or abandoned buildings				
Lots of graffiti				
I feel safe in my neighbourhood				
There are lots of adults around who I could talk to about something important				

	Definitely NOT true	Mostly NOT true	Mostly true	Definitely true
My parents/ guardians ask if I've gotten my homework done				
My parents would know if I did not come home on time				
When I'm not at home, my parents know where I am and who I am with				
The rules in my family are clear				
My family has clear rules about alcohol and drug use				
If I drank alcohol without my parents' permission I would be caught by my parents				
If I skipped school I would be caught by my parents				
People in my family often insult or yell at each other				
People in my family have serious arguments				
We argue about the same things in my family over and over				
I feel very close to my mother / female guardian				
I share my thoughts and feelings with my mother / female guardian				
I feel very close to my father/ male guardian				
I share my thoughts and feelings with my father / male guardian				
My parents notice when I am doing a good job and let me know about it				
My parents tell me they're proud of me for something I've done				

Now thinking back over the past year, how often did you:	Never	Seldom	Sometimes	Often	Almost always
Enjoy being in school?					
Hate being in school?					
Try to do your best at school work?					

	Definitely NOT true	Mostly NOT true	Mostly true	Definitely true
My teachers notices when I am doing a good job and let me know about it.				
The school lets my parents know when I have done something well.				
I feel safe at my school.				
My teachers praise me when I work hard in school.				

How often do you feel that the schoolwork you are given is meaningful and important?

Almost always	Often	Sometimes	Rarely	Never
☐	☐	☐	☐	☐

How interesting are most of your classes to you?

Very interesting	Quite interesting	Fairly interesting	Slightly boring	Very boring
☐	☐	☐	☐	☐

How important do you think the things you are learning in school are going to be for your later life?

Very important	Quite important	Fairly important	Slightly important	Not at all important
☐	☐	☐	☐	☐

Students Life Satisfaction Scale

This questionnaire is about how you feel about yourself and your life. Please put a circle around the answer that shows how much you agree or disagree with each statement.

	Disagree a lot	Disagree a little	Agree a little	Agree a lot
My life is going well	1	2	3	4
I would like to change things in my life	1	2	3	4
I wish I had a different kind of life	1	2	3	4

I have a good life	1	2	3	4
My life is better than it is for most children	1	2	3	4
In the last month, I have felt happy very often	1	2	3	4
In the last month, I have felt sad very often	1	2	3	4

This scale consists of a number of words which describe different emotions and feelings. Read each item and then circle the appropriate answer next to that word. Rate to what extent you have felt this way during the past week.

	Not at all/ Very slightly	A little	Moderately	Quite a bit	Extremely
Joyful	1	2	3	4	5
Proud	1	2	3	4	5
Mad	1	2	3	4	5
Miserable	1	2	3	4	5
Happy	1	2	3	4	5
Scared	1	2	3	4	5
Lively	1	2	3	4	5
Sad	1	2	3	4	5
Afraid	1	2	3	4	5
Cheerful	1	2	3	4	5

Self-report Coping Scale

We are interested in what you do when you have been victimised (like the things that came up in the first set of questions). There are lots of ways to try to deal with these experiences, and you may do different things in different situations. This questionnaire asks you to think about what you usually do and feel when you have been picked on etc. Please circle how likely you are to do each of the following things.

If I'm being victimised by others…..	Not at all	Hardly ever	Some-times	Most of the time	All the time
I yell or shout to let off steam	1	2	3	4	5
I change something so things will work out	1	2	3	4	5
I find a way to solve the problem	1	2	3	4	5
I do something to make up for it	1	2	3	4	5
I keep myself busy with other things so I don't worry it	1	2	3	4	5
I do something to change the situation	1	2	3	4	5
I make a plan of what I am going to do	1	2	3	4	5
I go over in my mind what to do or say	1	2	3	4	5
I try to think of different ways to solve the problem	1	2	3	4	5
I stamp my feet and slam or bang doors	1	2	3	4	5
I get help from someone in my family	1	2	3	4	5
I ask someone in my family for advice	1	2	3	4	5
I think about it so much that I can't sleep	1	2	3	4	5
I talk to somebody about how it made me feel	1	2	3	4	5
I find lots of other things to think about	1	2	3	4	5
I worry that others will think badly of me	1	2	3	4	5
I get angry and throw or hit something	1	2	3	4	5
I swear (use bad words) out loud	1	2	3	4	5
I do something else to help me forget about it	1	2	3	4	5
I worry about it	1	2	3	4	5
I keep feeling afraid it will happen again	1	2	3	4	5
I watch TV or read a book so I can think about something else	1	2	3	4	5
I tell a friend or family member what happened	1	2	3	4	5
I just feel sorry for myself	1	2	3	4	5

Use the code numbers on your class list to answer each question. You may choose the same person for more than one question, but you may never choose yourself.

1. Three classmates who I MOST like to spend time with: ☐☐ ☐☐ ☐☐

----

2. Three classmates who I LEAST like to spend time with: ☐☐ ☐☐ ☐☐

Appendix 5: Teacher-Child Rating Scale

Please rate the extent to which each of the items are a problem for child

_____

	Not a problem				Very serious problem
Disruptive in class	1	2	3	4	5
Constantly seeks attention	1	2	3	4	5
Overly aggressive to peers	1	2	3	4	5
Withdrawn	1	2	3	4	5
Anxious/ worried	1	2	3	4	5
Unhappy	1	2	3	4	5
Poorly motivated to achieve	1	2	3	4	5
Poor concentration, limited attention	1	2	3	4	5
Difficulty following directions	1	2	3	4	5

In this next task you will be given four imaginary social scenarios that might happen in a typical school day. Please read these carefully and imagine yourself experiencing each situation. You will be asked some questions based on how you would feel and what you would do if this scenario had actually happened to you. Please circle one number for each question which best describes your feelings or intentions.

(A) Imagine it is break time at school. You sit at your table and are in an intensive conversation with your neighbour. You have already placed your books and folders for the next lesson on the table. Suddenly, one of your classmates runs past very close to your table so that all your things are scattered on the ground.

1. How certain would you be that the other person caused your things to fall on the ground on purpose?

1	2	3	4
Not at all certain			Very certain

2. How angry would you feel in this situation?

1	2	3	4
Not at all angry			Very angry

3. How much would you wish you could get your own back on the other person(s)?

1	2	3	4
Not at all			Very much

4. Would you respond aggressively towards the other person(s) e.g., verbally or physically attack them?

1	2	3	4
Definitely not true			Definitely true

5. Would you try to avoid the other person(s)?

1	2	3	4
Definitely not true			Definitely true

(B) Imagine you are out in the school yard during break time, talking to your friends. You hold your drink bottle in your hand. Just as you are about to take a sip, someone pushes you from behind causing you to spill your drink.

1. How certain would you be that the other person pushed you on purpose?

| 1 | 2 | 3 | 4 |

Not at all certain   Very certain

2. How angry would you feel in this situation?

| 1 | 2 | 3 | 4 |

Not at all angry   Very angry

3. How much would you wish you could get your own back on the other person?

| 1 | 2 | 3 | 4 |

Not at all   Very much

4. Would you respond aggressively towards the other person(s) e.g., verbally or physically attack them?

| 1 | 2 | 3 | 4 |

Definitely not true   Definitely true

5. Would you try to avoid the other person(s)?

| 1 | 2 | 3 | 4 |

Definitely not true   Definitely true

(C) Imagine you arrive in school in the morning as usual, enter the building and then walk to the room in which you have your first lesson. From the corridor, you can hear your fellow classmates chat and laugh inside the classroom. When you open the door, you encounter a sudden silence.

1. How certain would you be that your classmates stopped talking because you entered the classroom?

    1   2   3   4

    Not at all certain   Very certain

2. How angry would you feel in this situation?

    1   2   3   4

    Not at all angry   Very angry

3. How much would you wish you could get your own back on the other person(s)?

    1   2   3   4

    Not at all   Very much

4. Would you respond aggressively towards the other person(s) e.g., verbally or physically attack them?

    1   2   3   4

    Definitely not true   Definitely true

5. Would you try to avoid the other person(s)?

    1   2   3   4

    Definitely not true   Definitely true

(D) Imagine you are in a German lesson, sitting at one of the front tables. When the lesson starts, the teacher asks you to summarize the topics of the previous lesson. As you are trying to give an answer, your classmates behind you start whispering and giggling.

1. How certain would you be that your classmates whispered and giggled because you are speaking?

1	2	3	4
Not at all certain			Very certain

2. How angry would you feel in this situation?

1	2	3	4
Not at all angry			Very angry

3. How much would you wish you could get your own back on the other person(s)?

1	2	3	4
Not at all			Very much

4. Would you respond aggressively towards the other person(s) e.g., verbally or physically attack them?

1	2	3	4
Definitely not true			Definitely true

5. Would you try to avoid the other person(s)?

1	2	3	4
Definitely not true			Definitely true

Appendix 7: Difficulties in Emotion Regulation Scale

Indicate <u>how often each statement applies to you</u> using the following scale:

1	2	3	4	5
Almost Never (0 – 10%)	Sometimes (11 – 35%)	About Half the Time (36 – 65%)	Most of the Time (66 – 90%)	Almost Always (91 – 100%)

1. I am clear about my feelings.

2. I pay attention to how I feel.

3. I experience my emotions as overwhelming and out of control.

4. I have no idea how I am feeling.

5. I have difficulty making sense out of my feelings.

6. I am attentive to my feelings.

7. I know exactly how I am feeling.

8. I care about what I am feeling.

9. I am confused about how I feel.

10. When I'm upset, I acknowledge my emotions.

11. When I'm upset, I become angry with myself for feeling that way.

12. When I'm upset, I become embarrassed for feeling that way.

13. When I'm upset, I have difficulty getting work done.

14. When I'm upset, I become out of control.

15. When I'm upset, I believe that I will remain that way for a long time.

16. When I'm upset, I believe that I will end up feeling very depressed.

17. When I'm upset, I believe that my feelings are valid and important.

18. When I'm upset, I have difficulty focusing on other things.

19. When I'm upset, I feel out of control.

20. When I'm upset, I can still get things done.

21. When I'm upset, I feel ashamed at myself for feeling that way.

22. When I'm upset, I know that I can find a way to eventually feel better.

23. When I'm upset, I feel like I am weak.

24. When I'm upset, I feel like I can remain in control of my behaviors.

25. When I'm upset, I feel guilty for feeling that way.

26. When I'm upset, I have difficulty concentrating.

27. When I'm upset, I have difficulty controlling my behaviors.

28. When I'm upset, I believe there is nothing I can do to make myself feel better.

29. When I'm upset, I become irritated at myself for feeling that way.

30. When I'm upset, I start to feel very bad about myself.

31. When I'm upset, I believe that wallowing in it is all I can do.

32. When I'm upset, I lose control over my behavior.

33. When I'm upset, I have difficulty thinking about anything else.

34. When I'm upset, I take time to figure out what I'm really feeling.

35. When I'm upset, it takes me a long time to feel better.

36. When I'm upset, my emotions feel overwhelming.

Victim words	Non-victim words
Threat	Support
Bullying	Trust
Abuse	Kind
Violence	Family
Harassment	Friendship
Assault	Share
Criminal	Protect
Tease	Socialise
Me words	**Non-me words**
Human	Table
Child	Cat
Teenager	Tree
Me	Carrot
Pupil	Kettle
Student	Dog
Young person	Car
Adolescent	Chair

Task Instructions

Block 1

Victim   **Non-victim**

In this task, you will be asked to categorise words into groups as fast as you can.

Words representing categories at the top of the screen (victim or non-victim) will

appear one-by-one in the middle of the screen. When the words belongs to a

category on the left press the 'E' key on your keyboard; when the word belongs to a

category on the right press the 'I' key. Items belong to only one category. If you make an error an X will appear – fix the error by hitting the other key.

This is a timed sorting task so GO AS FAST AS YOU CAN whilst making as few errors as possible. This task will take about 5 minutes to complete.

Put your fingers on the 'E' and 'I' keys now and press the spacebar when you are ready to begin.

Block 2

Me   **Not me**

As you can see above the categories have now changed, as have the words you will be asked to sort. The rules, however, are the same.

When a word belongs to a category on the left press the 'E' key; when the word belongs to a category on the right press the 'I' key. Items belong to only one category. If you make an error an X will appear – fix the error by hitting the other key. Remember GO AS FAST AS YOU CAN.

Press the spacebar to begin.

Block 3

Victim   **Non-victim**

or   *or*

Me   **Not me**

As you can see above, the four categories that you saw separately now appear together. a word belongs to either category on the left press the 'E' key; when the word belongs to either category on the right press the 'I' key. Words belong to only one category. If you make an error an X will appear – fix the error by hitting the other key. Remember GO AS FAST AS YOU CAN.

Press the spacebar to begin.

Block 4

Victim   **Non-victim**

or   *or*

Me   **Not me**

Sort the same four categories again. Use the 'E' or 'I' key to categorise words into
one of the categories on the left or the right. Fix any errors by hitting the other key.
Remember GO AS FAST AS YOU CAN whilst making as few mistakes as possible.
Press the spacebar to begin.

Block 5

Non-victim   **Victim**

Notice above, there are only two categories and they have switched positions. Sort
the words again using the 'E' key to place words in the left category and the 'I' key
to places words in the right category.
Press the spacebar to begin.

Block 6

Victim   **Non-victim**

or   *or*

Not me   **Me**

As you can see above, the four categories now appear together again, but in a
different position. Each word belongs to only one group.
Use the 'E' or 'I' key to categorise words into one of the categories on the left or the
right. Fix any errors by hitting the other key.

Press the spacebar to begin.

Block 7

Victim	**Non-victim**
or	*or*
Not me	**Me**

For this final block sort the same categories again. Use the 'E' or 'I' key to categorise words into one of the categories on the left or the right. Fix any errors by hitting the other key.

Press the spacebar to begin.

Appendix 9: Dot-probe task instructions and example picture stimuli from IAPS database

1) The goal of the following task is to hit one of two keys to indicate if a dot appears at the top or bottom of the computer screen. During the task, pictures will flash

briefly on the computer screen followed by a dot. These images depict various scenes.

Please look at both of the pictures while they are on the screen – you will need to move your eyes back and forth to focus on each of the pictures. Do not focus on the centre of the screen.

When the task begins, rest your middle finger on the "i" key and your index finger on the "m" key. Your task is to respond as quickly as you can to the location of the dot.

Tap the "i" key if the dot appears at the top of the screen and the "m" key if the dot appears at the bottom of the screen.

Before each set of pictures, you will see an "X" in the centre of the screen. This lets you know that the next set of pictures and dot are about to appear.

This task will last about 5 minutes. Are you ready for some practice?

If so, hit the spacebar.

2) You can now have a short break. Remember, please keep your attention focused on the computer screen and respond as quickly as you can, whilst making as few mistakes as possible.

When you are ready, place your fingers on the 'i' (= dot at the top of the screen) and 'm' (= dot at the bottom of the screen) keys and press the spacebar to begin.

Distressing condition:

Neutral condition:

Positive condition:

Appendix 10: Headteacher consent form (Studies 1-3)

Title of Research Project: Multiple victimisation: Investigating risk and resiliency.

The study will be investigating pupils between the ages of 12-19 years. Pupils will be asked to fill in questionnaires about their victimisation experiences over the past year, their family, community and school environment, their coping strategies and their emotional well-being. They will also be asked to complete a questionnaire regarding perceptions of their classmates.

Pupils will complete the questionnaires in whole class groups with a researcher and member of teaching staff present, which should take around 40 minutes to complete. Additionally, a teacher will be asked to complete a short questionnaire regarding children's behavioural strengths and difficulties, lasting approximately 2 minutes per pupil. The school will be approached again at the end of the following academic year for pupils to complete the questionnaires again, in order to examine differences over time.

The findings of this study will be used to identify risks factors for experiencing more than one type of victimisation (multiple victimisation) during childhood and factors that may protect against this. Studying such factors can lead to a more comprehensive understanding of victimisation and to more effective intervention programmes.

Participants will identify themselves using assigned code numbers, and all responses will be completely confidential. All researchers have enhanced CRB (now called DBS) clearance. Children do not have to take part on the day if they do not want to and can skip over any questions if they like. There are no right or wrong answers and none of the questionnaires are in anyway diagnostic. Pupils will be issued with thorough debrief information, giving them details of where to gain support should they experience any emotional discomfort during or after completing the questionnaire. This study has received ethical approval under the procedures of the University of Roehampton's Ethics Committee.

The school, teachers, parents and children are free to withdraw from the research at any time, without needing to give a reason, by informing the investigator. There is no compulsion or pressure to take part in the project, and should someone decline to participate or subsequently withdraw, they will not be adversely affected.

The results of the research and a full copy of the completed project will be made available to the school for parents to access if they should wish.

Investigator Contact Details:
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Tel: +447984590598

Consent Statement:

I agree to take part in this research, and am aware that I am free to withdraw at any point without giving a reason, although if I do so I understand that data might still be used in a collated form. I understand that the information we provide will be treated in confidence by the investigator and that my identity will be protected in the publication of any findings, and that data will be collected and processed in accordance with the Data Protection Act 1998 and with the University's Data Protection Policy.

I confirm that I have checked and approve of the materials and measures in this study.

I confirm that parents will be asked to provide consent on an opt-out basis.

Name ………………………………….
Signature ………………………………
Date ……………………………………

Please note: if you have a concern about any aspect of your participation or any other queries please raise this with the investigator (or if the researcher is a student you can also contact the Director of Studies.) However, if you would like to contact an independent party please contact the Head of Department.

Director of Studies Contact Details:	**Head of Department Contact Details**
Professor Cecilia Essau	Dr. Diane Bray
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RoehamptonWhitelands College	Whitelands College
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Appendix 11: Parent/guardian information and opt-out consent (Studies 1-3)

Dear Parent/Guardian,

Title of Research Project: Multiple victimisation: Investigating risk and resiliency.

Researchers from the University of Roehampton are carrying out a project looking at children's victimisation experiences (e.g. crime in the community, bullying etc.). The study will be investigating children and adolescents between the ages of 12-19 years. This research has been approved by the Headteacher _____.

Pupils will be asked to fill in questionnaires about their victimisation experiences over the past year, their family, community and school environment, their coping strategies and their emotional well-being. Pupils will also be asked to complete a questionnaire regarding perceptions of their class mates. Pupils will complete the questionnaires in whole class groups, with a researcher and member of teaching staff present, which should take around 40 minutes to complete.

Additionally, a teacher will be asked to complete a short questionnaire regarding children's behavioural strengths and difficulties. Pupils will be approached again in one year's time to complete the questionnaire again, in order to examine differences over time.

A copy of the questionnaire will be kept in the school office should you wish to view it before deciding whether you are happy for your child to take part.

The findings of this study will be used to identify risks factors for experiencing more than one type of victimisation (multiple victimisation) during childhood and factors that may protect against this. Studying such factors can lead to a more comprehensive understanding of victimisation and to more effective intervention programmes.

Participants will identify themselves using assigned code numbers, and all responses will be completely confidential. It will not be possible for you, or the school, to gain a copy of your child's responses.

There is no compulsion or pressure to take part in the project, and should you or your child decline to participate or subsequently withdraw, your child will not be adversely affected. Children will be issued with thorough debrief information, giving them details of where to gain support should they experience any emotional discomfort during or after completing the questionnaire.

Investigator Contact Details:
Faye Riley
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Holybourne Avenue
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Email: rileyf2@roehampton.ac.uk
Tel: +447984590598

Consent Statement:

I am aware that I am free to withdraw my child at any point without giving a reason, although if I do so I understand that their data might still be used in a collated form. I understand that the information provided will be treated in confidence by the investigator and that the identity of my child will be protected in the publication of any findings, and that data will be collected and processed in accordance with the Data Protection Act 1998 and with the University's Data Protection Policy.

Please note: if you have a concern about any aspect of participation or any other queries please raise this with the investigator (or if the researcher is a student you can also contact the Director of Studies.) However, if you would like to contact an independent party please contact the Head of Department.

Director of Studies Contact Details:

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‒ ‒

I **DO NOT** wish my child to take part in the research: Multiple victimisation: Investigating risk and resiliency (as described above).

Name:………………………………….

Signature:……………………………..

Name of child:………………………………..

Class:………………………………….

Date:………………………………

University of Roehampton
London

Title of Research Project: Multiple victimisation: Investigating risk and resiliency.

Researchers from the University of Roehampton are carrying out a project looking at children's victimisation experiences (e.g. crime in the community, bullying etc.). The study will be investigating pupils between the ages of 12-19 years. Pupils will be asked to fill in questionnaires about their victimisation experiences over the past year, their family, community and school environment, their coping strategies and their emotional well-being. Pupils will also be asked to complete a questionnaire about their perceptions of their class mates. Pupils will complete the questionnaires in whole class groups with a researcher and member of teaching staff present, which should take around 40 minutes to complete.

In addition to this we would like you, as their teacher, to complete a short questionnaire regarding each child's potential behavioural problems. This should take no more than 2 minutes to complete for each child. This scale presents statements about children's possible emotional symptoms, behaviour, and academic functioning. You will be asked to select, using a 5-point scale, how serious a given problem is for each child in your class. You will be approached again in one year's time to complete the questionnaire again, in order to examine differences over time.

The findings of this study will be used to identify risks factors for experiencing more than one type of victimisation (multiple victimisation) during childhood and factors that may protect against this. Studying such factors can lead to a more comprehensive understanding of victimisation and to more effective intervention programmes.

All of the questionnaires selected have been approved by the Headteacher, _____. We will ask you to identify pupils using their code numbers only, and all responses will be completely confidential. There is no compulsion or pressure to take part in the project, and should you decline to participate or subsequently withdraw, you will not be adversely affected.

Investigator Contact Details:
Faye Riley
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Tel: +447984590598

Consent Statement:

I agree to take part in this research, and am aware that I am free to withdraw at any point without giving a reason, although if I do so I understand that my data might still be used in a collated form. I understand that the information I provide will be treated in confidence by the investigator and that my identity will be protected in the publication of any findings, and that data will be collected and processed in accordance with the Data Protection Act 1998 and with the University's Data Protection Policy.

Name ………………………………….

Signature ………………………………

Class …………………………………..

Date …………………………………

Please note: if you have a concern about any aspect of your participation or any other queries please raise this with the investigator (or if the researcher is a student you can also contact the Director of Studies.) However, if you would like to contact an independent party please contact the Head of Department.

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Appendix 13: Participant instructions and consent procedure for participants aged

13-15 (Studies 1-3)

"We are going to ask you to fill in a questionnaire about your victimisation experiences over the past year, along with questions about your environment and your class mates. These questionnaires should take around 40 minutes to complete.

"The findings of this study will help us understand more about victimisation and the issues surrounding this.

"This questionnaire is not a school requirement and you do not have to take part. You are also more than welcome to miss out any questions that you feel you do not want answer. There are no right or wrong answers, we are just interested in your own experiences.

"If you no longer want to take part in this study then you have to right to stop at any time or withdraw your responses after the study, without giving a reason, and you will not be negatively affected if you do so. You can do this by contacting your teacher and giving them your ID number. However, please be aware that data in a summarised form may still be used.

"The information you give will be kept completely private, so teachers, parents and other pupils will not see any of your responses. Your name will never be linked with any of your responses and only researchers can use the information you give.

"After the study you will be given some information about where to gain support should you wish to talk to someone about any of the issues raised in this questionnaire.

"If you are happy to, you will also be asked to complete these questionnaires again in one year's time, so we can look at changes over time.

"Does anyone have any questions?

"If you are happy to take part you can now begin the questionnaire or if you don't want to do the study please begin the alternative activity."

Appendix 14: Participant written consent form for participants 16-19 years

(Studies 1-3)

Title of Research Project: Multiple victimisation: Investigating risk and resiliency

As part of this research you will be asked to fill in a questionnaire about your victimisation experiences over the past year, along with questions about yourself, your family, community and school environment. You will also be asked to answer questions regarding perceptions of your class mates. These questionnaires should take around 40 minutes to complete. You will be approached again in one year's time to complete the questionnaire again, in order to examine differences over time.

The findings of this study will be used to identify risks factors for experiencing more than one type of victimisation (multiple victimisation) during childhood and factors that may protect against this. Studying such factors can lead to a better understanding of victimisation and to more effective intervention programmes.

This questionnaire is **not** a school requirement and there is no compulsion or pressure to take part in the project. Should you decline to participate or subsequently withdraw, you will not be adversely affected. You are also more than welcome to miss out any questions that you feel you do not want answer. There are no right or wrong answers, we are just interested in your own experiences.

If you no longer want to take part in this study then you have to right to stop at any time or withdraw your responses after the study, without giving a reason. You can do this by contacting the investigator (details below) and giving them your ID number, which will be provided on the questionnaires.

The information you give will be completely confidential, so teachers, parents and other pupils **will not** see any of your responses. Your name will never be associated with any of your responses and only researchers can use the information you give.

After the study you will be given details of where to gain support should you experience any emotional discomfort or wish to seek advice about any of the issues raised in this questionnaire.

Investigator contact details (UK): **Investigator contact details (PL)**
Faye Riley   Paulina Milka/

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London, UK SW15 4JD   45-040 Opole
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+4420 8392 4561   +48774547000

Consent Statement:

I agree to take part in this research, and am aware that I am free to withdraw at any point without giving a reason, although if I do so I understand that my data might still be used in a collated form. I understand that the information I provide will be treated in confidence by the investigator and that my identity will be protected in the publication of any findings, and that data will be collected and processed in accordance with the Data Protection Act 1998 and with the University's Data Protection Policy.

Name ………………………………….

Signature ………………………………

Date …………………………………

Please note: if you have a concern about any aspect of your participation or any other queries please raise this with the investigator (or if the researcher is a student you can also contact the Director of Studies.) However, if you would like to contact an independent party please contact the Head of Department.

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University of Roehampton
London

Title of Research Project: Social and emotional processing in adolescents

Researchers from the University of Roehampton, UK, in collaboration with Opole University, are carrying out a project looking at the way adolescents process social and emotional information. Testing will be carried out by researchers from Opole University and data will be processed and analysed by the University of Roehampton. This research has been approved under the procedures of the University of Roehampton's Ethics Committee. Researchers from Opole University who will be conducting the study have received a certificate of no criminal record from the National Criminal Register (KRK).

This project will test 60 participants between the ages of 13-19 years from 3 schools in the Opole region. Testing will take place on school premises during lesson time and a member of the research team and a school staff member will be present throughout. The study will take approximately 30 minutes to complete.

Participating adolescents will be asked to complete two short computerised tasks, which assess cognitive processing, followed by two questionnaires measuring reactions to social situations and emotional difficulties. As part of the study adolescents will be presented with a series of words and pictures, some of which have been categorised as unpleasant because they are associated with negative experiences (e.g., "abuse") or contain violent imagery. These stimuli are in line with what children would be expected to encounter on a daily basis through television, newspapers etc., and have been deemed appropriate for use in this age group (Kimonis et al., 2006). Participants will be reminded that if at any point during the study they become uncomfortable they can immediately stop and leave the study.

The findings of this study will be used to identify factors associated with experiencing frequent victimisation (poly-victimisation) during adolescence. Studying such factors can lead to a more comprehensive understanding of victimisation and to more effective methods of preventing it.

Participants will identify themselves using assigned code numbers, and all responses will be completely confidential. Adolescents do not have to take part on the day if they do not want to and can skip over any questions if they like. There are no right or wrong answers and none of the questionnaires are in anyway diagnostic. Pupils will be issued with details of where to gain support should they experience any emotional discomfort during or after completing the study. This study has received ethical approval under the procedures of the University of Roehampton's Ethics Committee.

The school, parents and adolescents are free to withdraw from the research at any time, without needing to give a reason, by informing the investigator. There is no compulsion or pressure to take part in the project, and should someone decline to participate or subsequently withdraw, they will not be adversely affected.

Findings of the research and a report of the completed project will be made available to the school for parents to access if they should wish.

As part of this task involves responding to rapidly changing stimuli on a computer screen it may not be suitable for suffers of photosensitive epilepsy or those who are sensitive to flashing images. All participants will therefore be asked to confirm they do not suffer from these conditions before consenting to take part.

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p.mil@uni.opole.pl
+48774547000

Consent Statement:

I am aware that I am free to withdraw the school at any point without giving a reason, although if I do so I understand that participant data might still be used in a collated form. I understand that the information provided will be treated in confidence by the investigator and that the identity of all respondents will be protected in the publication of any findings, and that data will be collected and processed in accordance with the Data Protection Act 1998 and with the University's Data Protection Policy.

Please note: if you have a concern about any aspect of the study or any other queries please raise this with the investigator (or if the researcher is a student you can also contact the Director of Studies.) However, if you would like to contact an independent party please contact the Head of Department.

I confirm that I have checked and approve of the materials and measures in this study.

I confirm that parents will be asked to provide consent on an opt-out basis.

Name …………………………………

Signature ………………………………

Date ……………………………………

Director of Studies Contact Details:

Professor Cecilia Essau
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Head of Department Contact Details:

Dr. Diane Bray
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Appendix 16: Parent/ guardian information sheet and opt-out consent form (Study 4)

Dear Parent/Guardian,

Title of Research Project: Social and emotional processing in adolescents

Researchers from the University of Roehampton, UK, in collaboration with Opole University, are carrying out a project looking at the way adolescents process social and emotional information. This research has been approved by the school's Headteacher and has been approved under the procedures of the University of Roehampton's Ethics Committee. Researchers from Opole University who will be conducting the study have received a certificate of no criminal record from the National Criminal Register (KRK).

This project will test 60 participants between the ages of 13-19 years from 3 schools in the Opole region. Testing will take place on school premises during lesson time and a member of the research team and a school staff member will be present throughout. The study will take approximately 30 minutes to complete.

Participating adolescents will be asked to complete two short computerised tasks, which assess cognitive processing, followed by two questionnaires measuring reactions to social situations and emotional difficulties. As part of the study children will be presented with a series of words and pictures, some of which have been categorized as unpleasant because they are associated with negative experiences (e.g., "abuse") or contain violent imagery. These stimuli are in line with what children would be expected to encounter on a daily basis through television, newspapers etc., and have been deemed appropriate for use in this age group by an independent sample of parents and youth (Kimonis et al., 2006). Children will be reminded that if at any point during the study they become uncomfortable they can immediately stop and leave the study. A copy of study materials will be kept in the school office should you wish to view it before deciding whether you are happy for your child to take part.

The findings of this study will be used to identify factors associated with experiencing frequent victimisations (poly-victimisation) during childhood. Studying such factors can lead to a more comprehensive understanding of victimisation and to more effective methods of preventing it.

Participants will be assigned an ID code that will be used to identify their responses. Names will therefore never be linked to responses and all responses will be completely confidential. It will not be possible for you, or the school, to gain a copy of your child's responses, however the overall findings of the study will be made available upon project completion.

There is no compulsion or pressure to take part in the project, and should you or your child decline to participate or subsequently withdraw, your child will not be adversely affected. Children will be issued with debrief information, giving them details of where to gain support should they experience any emotional discomfort during or after completing the study.

As part of this task involves responding to rapidly changing stimuli on a computer screen it may not be suitable for suffers of photosensitive epilepsy or those who are sensitive to flashing images. All participants will therefore be asked to confirm they do not suffer from these conditions before consenting to take part.

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+48774547000

Consent Statement:

I am aware that I am free to withdraw my child at any point without giving a reason, although if I do so I understand that their data might still be used in a collated form. I understand that the information provided will be treated in confidence by the investigator and that the identity of my child will be protected in the publication of any findings, and that data will be collected and processed in accordance with the Data Protection Act 1998 and with the University's Data Protection Policy.

Please note: if you have a concern about any aspect of your child's participation or any other queries please raise this with the investigator (or if the researcher is a student you can also contact the Director of Studies.) However, if you would like to contact an independent party please contact the Head of Department.

Director of Studies Contact Details:
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You are asked to return the below reply slip to the school by ……………. if you DO NOT consent to your child taking part in this research. By not returning this reply

slip you are consenting to your child taking part. Adolescents themselves will also be asked to provide consent if they are happy to take part.

– –
– – – – –

I **DO NOT** wish my child to take part in the research: Social and emotional processing in adolescents (as described above).

Name:……………………………………………

Signature:…………………………………………

Name of child:…………………………………..

Class:……………………………………………

Date:……………………………………………

University of Roehampton
London

Appendix 17: Participant consent form (Study 4)

Social and emotional processing in adolescents

This study is looks at how adolescents process social and emotional information and how this may be associated with being victimised. 60 participants between the ages of 13-19 will be tested from 3 schools in the Opole area. This study is a collaboration between the University of Roehampton in the UK and Opole University. Testing will be carried out by researchers from Opole University and data will be processed and analysed by the University of Roehampton. All researchers have received a ccertificate of no criminal record from the National Criminal Register (KRK).

If you decide to take part in this study you will be asked to complete two short computerised tasks, involving reacting to a series of words and pictures. Each task will last approximately 6 minutes and your reaction times to different stimuli will be measured. Some of these words and pictures you will be presented with have been categorised to be unpleasant. For example, some words will relate to victimisation (e.g., abuse) and some pictures will include violent imagery. These words/pictures are in line with material you would be likely to encounter in everyday life through television, newspapers etc., however if any of the stimuli presented should make you feel too uncomfortable to continue with the study, you are free to immediately withdraw your participation and stop the task.

For the second part of the study you will be asked to complete two questionnaires looking at how you interpret and react to some example social situations and about how you deal with your emotions. Questionnaires will take 15-20 minutes, to complete. We therefore anticipate that the whole study will take about 30 minutes of your time. Tasks and questionnaires will be completed at school in small groups during lesson time.

Your participation in this study will be used to identify factors that are linked to victimisation during adolescence. It is important to study these factors as it can lead to a better understanding of victimisation and to more effective methods of preventing it.

This study is **not** a school requirement and there is no pressure to take part in the project. Should you decide not to participate, or to withdraw any time after you have taken part, you will not be adversely affected. You are also more than welcome to miss out any parts of the study that you feel you do not to take part in, and there are no right or wrong answers.

By using an assigned ID number instead of your name your responses will be kept private. Your responses will also be completely confidential, so teachers, parents, and other pupils **will not** see any of your data – only researchers will have access to the information you give (and this will all be anonymous).

If you no longer want to take part in this study then you have to right to stop at any time or withdraw your responses after the study, without giving a reason. You can do this by contacting your teacher or the investigator (details below) and giving them your ID number – so remember to make a note of this.

Investigator contact details (UK):   **Investigator contact details (PL)**
Faye Riley   Wojciech Karwot
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Consent Statement:

As part of this task involves responding to rapidly changing stimuli on a computer screen it may not be suitable for suffers of photosensitive epilepsy or those who are sensitive to flashing images. Please confirm you do not suffer from these conditions before consenting to take part.

I do not suffer from photosensitive epilepsy ☐

I am not sensitive to flashing images ☐

I agree to take part in this research, and am aware that I am free to withdraw at any point without giving a reason, although if I do so I understand that my data might still be used in a collated form. I understand that the information I provide will be treated in confidence by the investigator and that my identity will be protected in the publication of any findings, and that data will be collected and processed in accordance with the Data Protection Act 1998 and with the University's Data Protection Policy.

Name ………………………………….

Signature ………………………………

Date ……………………………………

Please note: if you have a concern about any aspect of your participation or any other queries please raise this with the investigator (or if the researcher is a student you can also contact the Director of Studies.) However, if you would like to contact an independent party please contact the Head of Department.

Director of Studies Contact Details:
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London

Title of Research Project: Multiple victimisation: Investigating risk and resiliency

Thank you for taking part in this study. All of the answers you have given here will be kept confidential and there were no right or wrong answers.

You will not be negatively affected in any way if you decide you do not want your answers to be used, however, if you do decide that you no longer want to be part of this study then you will need to let your teacher know who can contact the investigator, before (DATE WILL DEPEND ON WHEN STUDY TAKES PLACE).

The purpose of this study was to examine things that may cause, or protect against, experiencing different victimisations during childhood (studies 1-3)/ examine how adolescents' process social and emotional information (study 4) and how this relates to victimisation experiences. The findings of this study will help researchers to understand what causes victimisation and create more effective methods to help those who experience victimisation.

If you experience any kind of negative emotions or distress after completing this study, it can help to talk to someone. You can either contact the investigator – (Poland data collector name), who's contact details are given below, or (name of school counsellor or nominated staff member) or there are specialised organisations who can support and advise you on a range of problems. These include:

- Fundacja Dzieci Niczyje (Empowering Children Foundation): https://fdds.pl
- FDN's free-to-call helpline **116 111** or go to https://116111.pl/mlodziez where you can can ask questions online, participate in forums and read useful guidelines concerning difficulties typical for your age.
- You can also contact them privately on Facebook: https://www.facebook.com/116111telefonzaufania

Your school has also set up a worry box. You can write down any worries or anxieties you have and post them into this box. This will be anonymous – no one will know who has submitted a worry or what you've written. This can help you to acknowledge any feelings of distress you have and could help you to overcome them.

Please note: if you have a concern about any aspect of your participation or any other queries please raise this with the investigator. However, if you would like to contact an independent party please contact the Head of Department.

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Part of leaflet included with debrief form:

Appendix 19: Participant verbal debrief (Studies 1-4)

"Thank you for taking part in this study. All of the answers you have given here will be kept private and there were no right or wrong answers. You will not be in trouble

in any way if you decide you do not want your answers to be used. But if you do decide that you no longer want to take part in this study then you will need to let your teacher know who can contact the investigator.

"The purpose of this study was to examine things that may cause, or protect against, experiencing a variety of victimisations when you're an adolescent (for studies 1-3) / how adolescents process social and emotional information and how this relates to victimisation experiences (for study 4). It's so important we find out more about this, so we can understand the scale of the problem, what may cause victimisation and create better ways to prevent victimisation and its harm.

"If you feel like this questionnaire has upset you in any way, or brought up any issues, then please talk to myself, I'll stay around for a while, or 'nominated school staff member'. We're here to talk and help. I will also provide you with the details of some organisations that can support you through any issues that may have been raised today. You can ask them questions over the phone or online, participate in online forums and read useful guidelines concerning difficulties typical for your age.

"If you are at risk of harm or you are suffering any form of abuse or victimisation then it's important you are aware of the help available. It can be a very difficult decision to tell someone, but getting advice and help it really important.

"If anyone has any questions now, I'll be here until …

"Thank you again for your time and for helping us learn more about such an important topic"

Appendix 20: Non-significant findings of the moderating effect of coping between poly-victimisation and indicators of emotional well-being from Study 2.

Interaction term			
	b	95% CI	*t*
LS x Social Support	0.00	-0.05, 0.06	-0.03

	b	95% CI	t
LS x Distraction	0.01	-0.03, 0.06	0.64
LS x Internalising	-0.01	-0.04, 0.02	-0.69
LS x Externalising	0.02	-0.01, 0.05	1.27
PA x Social Support	0.02	-0.06, 0.03	-0.79
PA x Distraction	0.00	-0.06, 0.07	0.06
PA x Internalising	0.00	-0.05, 0.05	0.08
PA x Externalising	0.02	-0.03, 0.07	0.78
NA x Problem solving	0.01	-0.02, 0.01	-1.20
NA x Social Support	0.00	-0.01, 0.01	-0.37
NA x Distraction	-0.01	-0.01, 0.02	-0.70
NA x Internalising	-0.01	-0.01, 0.00	-1.13
NA x Externalising	-0.01	-0.01, 0.01	-0.58

Note. LS = life satisfaction, PA = positive affect, NA = negative affect. b = unstandardized coefficient, CI = confidence interval.

References

Ackard, D. M., & Neumark-Sztainer, D. (2003). Multiple sexual victimizations among adolescent boys and girls: prevalence and associations with eating behaviors and psychological health. *Journal of Child Sexual Abuse*, *12*(1), 17–37. http://doi.org/10.1300/J070v12n01_02

Afifi, T. O., & Macmillan, H. L. (2011). Resilience following child maltreatment: a review of protective factors. *Canadian Journal of Psychiatry*, *56*(5), 266–72. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/21586192

Aho, N., Gren-Landell, M., & Svedin, C. G. (2016). The Prevalence of Potentially Victimizing Events, Poly-Victimization, and Its Association to Sociodemographic Factors. *Journal of Interpersonal Violence*, *31*(4), 620–651. http://doi.org/10.1177/0886260514556105

Aiken, L. A., & West, S. G. (1991). *Multiple regression: Testing and interpreting interactions*. Newbury Park, CA, CA: SAGE Publications.

Alvarez-Lister, M. S., Pereda, N., Abad, J., & Guilera, G. (2014). Polyvictimization and its relationship to symptoms of psychopathology in a southern European sample of adolescent outpatients. *Child Abuse & Neglect*, *38*(4), 747–56. http://doi.org/10.1016/j.chiabu.2013.09.005

Anderman, C., Cheadle, A., Curry, S., Diehr, P., Shultz, L., & Wagner, E. (1995). Selection Bias Related To Parental Consent in School-Based Survey Research. *Evaluation Review*, *19*(6), 663–674. http://doi.org/10.1177/0193841X9501900604

Anthonysamy, A., & Zimmer-Gembeck, M. J. (2007). Peer status and behaviors of maltreated children and their classmates in the early years of school. *Child Abuse & Neglect*, *31*(9), 971–91. http://doi.org/10.1016/j.chiabu.2007.04.004

Aricak, O. T., & Ozbay, A. (2016). Investigation of the relationship between cyberbullying, cybervictimization, alexithymia and anger expression styles among adolescents. *Computers in Human Behavior*, *55*, 278–285. http://doi.org/10.1016/j.chb.2015.09.015

Arseneault, L., Walsh, E., Trzesniewski, K., Newcombe, R., Caspi, A., & Moffitt, T. E. (2006). Bullying victimization uniquely contributes to adjustment

problems in young children: a nationally representative cohort study. *Pediatrics*, *118*(1), 130–8. http://doi.org/10.1542/peds.2005-2388

Arthur, M. W., Hawkins, J. D., Pollard, J. A., Catalano, R. F., & Baglioni, A. J. (2002). Measuring Risk and Protective Factors for Use, Delinquency, and Other Adolescent Problem Behaviors: The Communities That Care Youth Survey. *Evaluation Review*, *26*(6), 575–601. http://doi.org/10.1177/0193841X0202600601

Attar-Schwartz, S. (2009). Peer sexual harassment victimization at school: The roles of student characteristics, cultural affiliation, and school factors. *American Journal of Orthopsychiatry*, *79*(3), 407–420.

Aziz, A., & Dawood, S. (2015). The epidemiology of poly-victimization in Pakistan. *Journal of Behavioural Sciences*, *25*(1), 108–119.

Bal, S., Van Oost, P., De Bourdeaudhuij, I., & Crombez, G. (2003). Avoidant coping as a mediator between self-reported sexual abuse and stress-related symptoms in adolescents. *Child Abuse & Neglect*, *27*(8), 883–897. http://doi.org/10.1016/S0145-2134(03)00137-6

Baldwin, M. W. (1992). Relational schemas and the processing of social information. *Psychological Bulletin*, *112*, 461–484.

Banyard, V., Hamby, S., & Turner, H. (2013). Treatment models for poly-victimization. *National Children's Advocacy Center*. National Children's Advocacy Center. Retrieved from https://calio.dspacedirect.org/handle/11212/1249

Barnes, J. E., Noll, J. G., Putnam, F. W., & Trickett, P. K. (2009). Sexual and physical revictimization among victims of severe childhood sexual abuse. *Child Abuse & Neglect*, *33*(7), 412–20. http://doi.org/10.1016/j.chiabu.2008.09.013

Barnes, S. E., Howell, K. H., & Miller-Graff, L. E. (2016). The Relationship Between Polyvictimization, Emotion Dysregulation, and Social Support Among Emerging Adults Victimized During Childhood. *Journal of Aggression,*

Maltreatment & Trauma, *25*(5), 470–486.

http://doi.org/10.1080/10926771.2015.1133749

Barnett, M. A., Barlett, N. D., Livengood, J. L., Murphy, D. L., & Brewton, K. E. (2010). Factors Associated With Children's Anticipated Responses to Ambiguous Teases. *The Journal of Genetic Psychology*, *171*(1), 54–72. http://doi.org/10.1080/00221320903300395

Baron, A. S., & Banaji, M. R. (2006). The development of implicit attitudes. Evidence of race evaluations from ages 6 and 10 and adulthood. *Psychological Science*, *17*(1), 53–8. http://doi.org/10.1111/j.1467-9280.2005.01664.x

Baum, K. (2005). *Juvenile Victimization and Offending, 1993-2003*. Washington, DC, DC. Retrieved from http://psycnet.apa.org/psycextra/479672006-001.html

Beaton, D. E., Bombardier, C., Guillemin, F., & Ferraz, M. B. (2000). Guidelines for the process of cross-cultural adaptation of self-report measures. *Spine*, *25*(24), 3186–91. http://doi.org/10.1097/00007632-200012150-00014

Bell-Dolan, D. J., Foster, S. L., & Sikora, D. M. (1989). Effects of sociometric testing on children's behavior and loneliness in school. *Developmental Psychology*, *25*(2), 306–311. http://doi.org/10.1037/0012-1649.25.2.306

Berlin, L. J., Appleyard, K., & Dodge, K. A. (2011). Intergenerational continuity in child maltreatment: mediating mechanisms and implications for prevention. *Child Development*, *82*(1), 162–76. http://doi.org/10.1111/j.1467-8624.2010.01547.x

Biglan, A., Flay, B. R., Embry, D. D., & Sandler, I. N. (2012). The critical role of nurturing environments for promoting human well-being. *The American Psychologist*, *67*(4), 257–71. http://doi.org/10.1037/a0026796

Bogolyubova, O., Skochilov, R., & Smykalo, L. (2015). Childhood victimization experiences of young adults in St. Petersburg, Russia. *Journal of Interpersonal Violence*, *30*(7), 1153–67. http://doi.org/10.1177/0886260514539849

Boivin, M., Hymel, S., & Hodges, E. V. E. (2001). Toward a process view of peer rejection and harassment. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 265–289). New York: Guilford Press.

Bollmer, J. M., Harris, M. J., & Milich, R. (2006). Reactions to bullying and peer victimization: Narratives, physiological arousal, and personality. *Journal of Research in Personality*, *40*(5), 803–828. http://doi.org/10.1016/j.jrp.2005.09.003

Bonanno, G. A. (2004). Loss, Trauma, and Human Resilience: Have We Underestimated the Human Capacity to Thrive After Extremely Aversive Events? *American Psychologist*, *59*(1), 20–28. http://doi.org/10.1037/0003-066X.59.1.20

Boney-McCoy, S., & Finkelhor, D. (1995). Psychosocial sequelae of violent victimization in a national youth sample. *Journal of Consulting and Clinical Psychology*, *63*(5), 726–736. http://doi.org/10.1037//0022-006X.63.5.726

Bowes, L., Maughan, B., Caspi, A., Moffitt, T. E., & Arseneault, L. (2010). Families promote emotional and behavioural resilience to bullying: evidence of an environmental effect. *Journal of Child Psychology and Psychiatry*, *51*(7), 809–817. http://doi.org/10.1111/j.1469-7610.2010.02216.x

Bowling, N. A., Beehr, T. A., Bennett, M. M., & Watson, C. P. (2010). Target personality and workplace victimization: A prospective analysis. *Work & Stress*, *24*(2), 140–158. http://doi.org/10.1080/02678373.2010.489635

Boxer, P., Morris, A. S., Terranova, A. M., Kithakye, M., Savoy, S. C., & McFaul, A. F. (2008). Coping with Exposure to Violence: Relations to Emotional

Symptoms and Aggression in Three Urban Samples. *Journal of Child and Family Studies*, *17*(6), 881–893. http://doi.org/10.1007/s10826-008-9196-z

Boxer, P., & Sloan-Power, E. (2013). Coping with violence: a comprehensive framework and implications for understanding resilience. *Trauma, Violence & Abuse*, *14*(3), 209–21. http://doi.org/10.1177/1524838013487806

Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, *32*, 513–531.

Brunell, L. (2005). Marginality and the New Geography of Domestic Violence Policy in Post-Communist Poland. *Gender, Place & Culture*, *12*(3), 293–316. http://doi.org/10.1080/09663690500202533

Buka, S. L., Stichick, T. L., Birdthistle, I., & Earls, F. J. (2001). Youth Exposure to Violence: Prevalence, Risks, and Consequences. *American Journal of Orthopsychiatry*, *71*(3), 298–310. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/11495332

Bukowski, W. M., Cillessen, A. H. N., & Velasquez, A. M. (2012). Peer ratings. In B. Laursen, T. D. Little, & N. A. Card (Eds.), *Handbook of Developmental Research Methods* (pp. 211–228). New York, NY: Guilford Press.

Callaghan, S., & Joseph, S. (1995). Self-concept and peer victimization among schoolchildren. *Personality and Individual Differences*, *18*(1), 161–163. http://doi.org/10.1016/0191-8869(94)00127-E

Callahan, M. R., Tolman, R. M., & Saunders, D. G. (2003). Adolescent Dating Violence Victimization and Psychological Well-Being. *Journal of Adolescent Research*, *18*(6), 664–681. http://doi.org/10.1177/0743558403254784

Calvete, E., & Orue, I. (2011). The impact of violence exposure on aggressive behavior through social information processing in adolescents. *The*

American Journal of Orthopsychiatry, *81*(1), 38–50. http://doi.org/10.1111/j.1939-0025.2010.01070.x

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

Carroll-Lind, J., Chapman, J. W., Gregory, J., & Maxwell, G. (2006). The key to the gatekeepers: passive consent and other ethical issues surrounding the rights of children to speak on issues that concern them. *Child Abuse & Neglect*, *30*(9), 979–89. http://doi.org/10.1016/j.chiabu.2005.11.013

Carver, C. S., Scheier, M. F., & Weintraub, J. K. (1989). Assessing coping strategies: A theoretically based approach. *Journal of Personality and Social Psychology*, *56*(2), 267–283. http://doi.org/10.1037//0022-3514.56.2.267

Cassidy, T., & Taylor, L. (2001). Bullying, coping and psychological distress in older children. Poster session presented at the British Psychological Society Centenary annual conference, SECC, Glasgow, UK. In *Poster session presented at the British Psychological Society Centenary annual conference, SECC, Glasgow, UK*.

Causey, D. L., & Dubow, E. F. (1992). Development of a Self-Report Coping Measure for Elementary School Children. *Journal of Clinical Child Psychology*, *21*(1), 47–59. http://doi.org/10.1207/s15374424jccp2101_8

Chan, K. L. (2013). Victimization and poly-victimization among school-aged Chinese adolescents: Prevalence and associations with health. *Preventive Medicine*, *56*(3), 207–210. http://doi.org/10.1016/j.ypmed.2012.12.018

Chester, K. L., Callaghan, M., Cosma, A., Donnelly, P., Craig, W., Walsh, S., & Molcho, M. (2015). Cross-national time trends in bullying victimization in 33

countries among children aged 11, 13 and 15 from 2002 to 2010. *The European Journal of Public Health*, *25*(suppl 2), 61–64. http://doi.org/10.1093/eurpub/ckv029

Chorpita, B. F., & Daleiden, E. L. (2002). Tripartite dimensions of emotion in a child clinical sample: measurement strategies and implications for clinical utility. *Journal of Consulting and Clinical Psychology*, *70*(5), 1150–60. http://doi.org/10.1037//0022-006X.70.5.1150

Christiansen, E. J., & Evans, W. P. (2005). Adolescent Victimization: Testing Models of Resiliency by Gender. *The Journal of Early Adolescence*, *25*(3), 298–316. http://doi.org/10.1177/0272431605276931

Chu, A. T., DePrince, A. P., & Weinzierl, K. M. (2008). Children's Perception of Research Participation: Examining Trauma Exposure and Distress. *Journal of Empirical Research on Human Research Ethics*, *3*(1), 49–58. http://doi.org/10.1525/jer.2008.3.1.49

Chu, J. A. (1992). The revictimization of adult women with histories of childhood abuse. *The Journal of Psychotherapy Practice and Research*, *1*(3), 259–69. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/22700102

Cicchetti, D., & Lynch, M. (1993). Toward an ecological/transactional model of community violence and child maltreatment: consequences for children's development. *Psychiatry*, *56*(1), 96–118. Retrieved from http://europepmc.org/abstract/med/8488217

Cillessen, A. H. N., & Borch, C. (2006). Developmental trajectories of adolescent popularity: A growth curve modelling analysis. *Journal of Adolescence*, *29*(6), 935–959. http://doi.org/10.1016/j.adolescence.2006.05.005

Cisler, J. M., Begle, A. M., Amstadter, A. B., Resnick, H. S., Danielson, C. K., Saunders, B. E., & Kilpatrick, D. G. (2012). Exposure to interpersonal violence and risk for PTSD, depression, delinquency, and binge drinking among adolescents:

data from the NSA-R. *Journal of Traumatic Stress*, *25*(1), 33–40.

http://doi.org/10.1002/jts.21672

Cloitre, M., Scarvalone, P., & Difede, J. (1997). Posttraumatic stress

disorder, self- and interpersonal dysfunction among sexually retraumatized women.

Journal of Traumatic Stress, *10*(3), 437–452. http://doi.org/10.1002/jts.2490100309

Cohen, L. E., & Felson, M. (1979). Social Change and Crime Rate Trends: A

Routine Activity Approach. *American Sociological Review*, *44*(4), 588–608.

Retrieved from http://eric.ed.gov/?id=EJ210358

Coie, J. D., & Dodge, K. A. (1983). Continuities and changes in children's

social status: A five-year longitudinal study. *Merrill-Palmer Quarterly*, *29*(3), 261–

282.

Cole, D. A., Maxwell, M. A., Dukewich, T. L., & Yosick, R. (2010).

Targeted Peer Victimization and the Construction of Positive and Negative Self-

Cognitions: Connections to Depressive Symptoms in Children. *Journal of Clinical*

Child & Adolescent Psychology, *39*(3), 421–435.

http://doi.org/10.1080/15374411003691776

Cole, P. M., Martin, S. E., & Dennis, T. A. (2004). Emotion Regulation as a

Scientific Construct: Methodological Challenges and Directions for Child

Development Research. *Child Development*, *75*(2), 317–333.

http://doi.org/10.1111/j.1467-8624.2004.00673.x

Cole, P. M., Michel, M. K., & Teti, L. O. (1994). The development of

emotion regulation and dysregulation: A clinical perspective. *Monographs of the*

Society for Research in Child Development, *59*(2–3), 73–102.

http://doi.org/10.1111/j.1540-5834.1994.tb01278.x

Coulton, C. J., Korbin, J. E., & Su, M. (1999). Neighborhoods and child maltreatment: a multi-level study. *Child Abuse & Neglect*, *23*(11), 1019–1040. http://doi.org/10.1016/S0145-2134(99)00076-9

Craig, W., Harel-Fisch, Y., Fogel-Grinvald, H., Dostaler, S., Hetland, J., Simons-Morton, B., … Pickett, W. (2009). A cross-national profile of bullying and victimization among adolescents in 40 countries. *International Journal of Public Health*, *54 Suppl 2*, 216–24. http://doi.org/10.1007/s00038-009-5413-9

Crick, N. R., & Dodge, K. A. (1994). A review and reformulation of social information-processing mechanisms in children's social adjustment. *Psychological Bulletin*, *115*(1), 74–101.

Crick, N. R., Grotpeter, J. K., & Bigbee, M. A. (2002). Relationally and Physically Aggressive Children's Intent Attributions and Feelings of Distress for Relational and Instrumental Peer Provocations. *Child Development*, *73*(4), 1134–1142. http://doi.org/10.1111/1467-8624.00462

Cuevas, C. A., Finkelhor, D., Clifford, C., Ormrod, R. K., & Turner, H. (2010). Psychological distress as a risk factor for re-victimization in children. *Child Abuse & Neglect*, *34*(4), 235–243. http://doi.org/10.1016/j.chiabu.2009.07.004

Currie, C., Zanotti, C., Morgan, A., Currie, D., de Looze, M., Roberts, C., … Barnekow, V. (2012). *Social determinants of health and well-being among young people. Health behaviour in school-aged children (HSBC) study: internatiomal report from the 2009/2010 survey*. Copenhagen. Retrieved from http://www.euro.who.int/__data/assets/pdf_file/0003/163857/Social-determinants-of-health-and-well-being-among-young-people.pdf

Cyr, K., Chamberland, C., Clément, M.-È., Lessard, G., Wemmers, J.-A., Collin-Vézina, D., … Damant, D. (2013). Polyvictimization and victimization of

children and youth: Results from a populational survey. *Child Abuse & Neglect*,

37(10), 814–20. http://doi.org/10.1016/j.chiabu.2013.03.009

Daigle, L. E., Beaver, K. M., & Turner, M. G. (2010). Resiliency against

victimization: Results from the National Longitudinal Study of Adolescent Health.

Journal of Criminal Justice, *38*(3), 329–337.

http://doi.org/10.1016/j.jcrimjus.2010.03.007

Dembo, R., Williams, L., Wothke, W., Schmeidler, J., & Brown, C. H.

(1992). The role of family factors, physical abuse, and sexual victimization

experiences in high-risk youths' alcohol and other drug use and delinquency: a

longitudinal model. *Violence and Victims*, *7*(3), 245–66. Retrieved from

http://www.ncbi.nlm.nih.gov/pubmed/1294239

Dempsey, M., Stacy, O., & Moely, B. (2000). "Approach" and "avoidance"

coping and PTSD symptoms in innercity youth. *Current Psychology*, *19*(1), 28–45.

http://doi.org/10.1007/s12144-000-1002-z

Diener, E. (1994). Assessing subjective well-being: Progress and

opportunities. *Social Indicators Research*, *31*(2), 103–157.

http://doi.org/10.1007/BF01207052

Dodge, K. A. (2006). Translational science in action: hostile attributional

style and the development of aggressive behavior problems. *Development and

Psychopathology*, *18*(3), 791–814. Retrieved from

http://www.pubmedcentral.nih.gov/articlerender.fcgi?artid=2745254&tool=pmcentre

z&rendertype=abstract

Dodge, K. A., Lansford, J. E., Burks, V. S., Bates, J. E., Pettit, G. S.,

Fontaine, R., & Price, J. M. (2003). Peer Rejection and Social Information-

Processing Factors in the Development of Aggressive Behavior Problems in

Children. *Child Development*, *74*(2), 374–393. http://doi.org/10.1111/1467-8624.7402004

Dong, F., Cao, F., Cheng, P., Cui, N., & Li, Y. (2013). Prevalence and associated factors of poly-victimization in Chinese adolescents. *Scandinavian Journal of Psychology*, *54*(5), 415–22. http://doi.org/10.1111/sjop.12059

Doroszewicz, K., & Forbes, G. B. (2008). Experiences With Dating Aggression and Sexual Coercion Among Polish College Students. *Journal of Interpersonal Violence*, *23*(1), 58–73. http://doi.org/10.1177/0886260507307651

Dubow, E. F., & Rubinlicht, M. (2011). Coping. In B. B. Brown & M. Prinstein (Eds.), *Encyclopedia of adolescence* (pp. 109–118). San Diego, CA, CA: Academic Press.

Dumont, M., & Provost, M. A. (1999). Resilience in Adolescents: Protective Role of Social Support, Coping Strategies, Self-Esteem, and Social Activities on Experience of Stress and Depression. *Journal of Youth and Adolescence*, *28*(3), 343–363. http://doi.org/10.1023/A:1021637011732

Duncan, D. F. (1996). Growing up under the gun: Children and adolescents coping with violent neighborhoods. *The Journal of Primary Prevention*, *16*(4), 343–356. http://doi.org/10.1007/BF02411740

Ebesutani, C., Regan, J., Smith, A., Reise, S., Higa-McMillan, C., & Chorpita, B. F. (2012). The 10-Item Positive and Negative Affect Schedule for Children, Child and Parent Shortened Versions: Application of Item Response Theory for More Efficient Assessment. *Journal of Psychopathology and Behavioral Assessment*, *34*(2), 191–203. http://doi.org/10.1007/s10862-011-9273-2

Echols, L. (2015). Social consequences of academic teaming in middle school: The influence of shared course taking on peer victimization. *Journal of Educational Psychology*, *107*(1), 272–283. http://doi.org/10.1037/a0037440

Eisenberg, N., & Fabes, R. A. (1992). Emotion, regulation, and the development of social competence. In M. Clark (Ed.), *Emotion and social behavior. Review of personality and social psychology* (pp. 119–150). Thousand Oaks, CA: SAGE Publications.

Eisenberg, N., Fabes, R. A., Nyman, M., Bernzweig, J., & Pinuelas, A. (1994). The Relations of Emotionality and Regulation to Children's Anger-Related Reactions. *Child Development*, *65*(1), 109. http://doi.org/10.2307/1131369

Eisenberg, N., & Morris, A. S. (2002). Children's emotion-related regulation. *Advances in Child Development and Behavior*, *30*, 189–229. Retrieved from http://europepmc.org/abstract/med/12402675

Ellickson, P. L., & Hawes, J. A. (1989). An Assessment of Active Versus Passive Methods for Obtaining Parental Consent. *Evaluation Review*, *13*(1), 45–55. http://doi.org/10.1177/0193841X8901300104

Ellonen, N., & Salmi, V. (2011). Poly-Victimization as a Life Condition: Correlates of Poly-Victimization among Finnish Children. *Journal of Scandinavian Studies in Criminology and Crime Prevention*, *12*(1), 20–44. http://doi.org/10.1080/14043858.2011.561621

Elsesser, K., Sartory, G., & Tackenberg, A. (2005). Initial symptoms and reactions to trauma-related stimuli and the development of posttraumatic stress disorder. *Depression and Anxiety*, *21*(2), 61–70. http://doi.org/10.1002/da.20047

Fani, N., Bradley-Davino, B., Ressler, K. J., & McClure-Tone, E. B. (2010). Attention Bias in Adult Survivors of Childhood Maltreatment with and without Posttraumatic Stress Disorder. *Cognitive Therapy and Research*, *35*(1), 57–67. http://doi.org/10.1007/s10608-010-9294-2

Fergusson, D. M., Boden, J. M., & Horwood, L. J. (2008). Exposure to childhood sexual and physical abuse and adjustment in early adulthood. *Child Abuse & Neglect*, *32*(6), 607–19. http://doi.org/10.1016/j.chiabu.2006.12.018

Fergusson, D. M., Horwood, L. J., & Lynskey, M. T. (1996). Childhood sexual abuse and psychiatric disorder in young adulthood: II. Psychiatric outcomes of childhood sexual abuse. *Journal of the American Academy of Child and Adolescent Psychiatry*, *35*(10), 1365–74. http://doi.org/10.1097/00004583-199610000-00024

Field, A. (2013). *Discovering statistcis using SPSS* (4th ed). London: SAGE Publications.

Fields, L., & Prinz, R. J. (1997). Coping and adjustment during childhood and adolescence. *Clinical Psychology Review*, *17*(8), 937–976. http://doi.org/10.1016/S0272-7358(97)00033-0

Finkelhor, D. (1994). The international epidemiology of child sexual abuse. *Child Abuse & Neglect*, *18*(5), 409–417. http://doi.org/10.1016/0145-2134(94)90026-4

Finkelhor, D. (1995). The victimization of children: A developmental perspective. *American Journal of Orthopsychiatry*, *65*(2), 177–193. http://doi.org/10.1037/h0079618

Finkelhor, D. (2008). *Childhood Victimization: Violence, Crime, and Abuse in the Lives of Young People*. New York, NY: Oxford University Press.

Finkelhor, D. (2011). Prevalence of child victimization, abuse, crime, and violence exposure. In J. W. White, M. P. Koss, & A. E. Kazdin (Eds.), *Violence against women and children, Vol 1: Mapping the terrain* (pp. 9–29). Washington, DC: American Psychological Association. http://doi.org/dx.doi.org/10.1037/12307-001

Finkelhor, D. (2013). Developmental Victimology: The comprehensive study of childhood victimization. In R. C. Davis, A. J. Lurigio, & S. Herman (Eds.), *Victims of Crime* (4th editio, pp. 75–106). Thousand Oaks, CA: Sage Publications.

Finkelhor, D., & Asdigian, N. L. (1996). Risk factors for youth victimization: beyond a lifestyles/routine activities theory approach. *Violence and Victims*, *11*(1), 3–19. Retrieved from http://www.ncbi.nlm.nih.gov/pubmed/8870212

Finkelhor, D., & Dziuba-Leatherman, J. (1993). Victimization of Children. *American Psychologist*, *49*(3), 173–83. Retrieved from http://eric.ed.gov/?id=EJ485808

Finkelhor, D., & Dziuba-Leatherman, J. (1995). Victimization prevention programs: A national survey of children's exposure and reactions. *Child Abuse & Neglect*, *19*(2), 129–139. http://doi.org/10.1016/0145-2134(94)00111-7

Finkelhor, D., Hamby, S., Ormrod, R., & Turner, H. (2005). The Juvenile Victimization Questionnaire: Reliability, Validity, and National Norms. *Child Abuse and Neglect: The International Journal*, *29*(4), 383–412. Retrieved from http://eric.ed.gov/?id=EJ698122

Finkelhor, D., Hamby, S., Turner, H., & Ormrod, R. (2011). *The Juvenile Victimization Questionnaire: 2nd Revision (JVQ-R2)*. Durham, NH: Crimes Against Children Research Center.

Finkelhor, D., & Hotaling, G. T. (1984). Sexual abuse in the national incidence study of child abuse and neglect: An appraisal. *Child Abuse & Neglect*, *8*(1), 23–32. http://doi.org/10.1016/0145-2134(84)90046-2

Finkelhor, D., & Ormrod, R. (1999). Reporting Crimes Against Juveniles. Juvenile Justice Bulletin. Retrieved from http://eric.ed.gov/?id=ED437451

Finkelhor, D., & Ormrod, R. (2001). *Child abuse reported to the police* (Juvenile Justice Bulletin No. NCJ 187238). Washington, DC.

Finkelhor, D., Ormrod, R. K., & Turner, H. (2007a). Poly-victimization: A neglected component in child victimization. *Child Abuse & Neglect*, *31*(1), 7–26. Retrieved from http://www.sciencedirect.com/science/article/pii/S0145213406003346

Finkelhor, D., Ormrod, R. K., & Turner, H. (2007b). Polyvictimization and trauma in a national longitudinal cohort. *Development and Psychopathology*, *19*(1), 149–66. http://doi.org/10.1017/S0954579407070083

Finkelhor, D., Ormrod, R. K., & Turner, H. (2007c). Re-victimization patterns in a national longitudinal sample of children and youth. *Child Abuse & Neglect*, *31*(5), 479–502. http://doi.org/10.1016/j.chiabu.2006.03.012

Finkelhor, D., Ormrod, R. K., & Turner, H. (2009a). Lifetime assessment of poly-victimization in a national sample of children and youth. *Child Abuse & Neglect*, *33*(7), 403–411. http://doi.org/10.1016/j.chiabu.2008.09.012

Finkelhor, D., Ormrod, R. K., & Turner, H. (2009b). The developmental epidemiology of childhood victimization. *Journal of Interpersonal Violence*, *24*(5), 711–31. http://doi.org/10.1177/0886260508317185

Finkelhor, D., Ormrod, R. K., Turner, H., & Hamby, S. (2005a). Measuring poly-victimization using the Juvenile Victimization Questionnaire. *Child Abuse & Neglect*, *29*(11), 1297–1312. http://doi.org/10.1016/j.chiabu.2005.06.005

Finkelhor, D., Ormrod, R., Turner, H., & Hamby, S. (2005b). The victimization of children and youth: a comprehensive, national survey. *Child Maltreatment*, *10*(1), 5–25. http://doi.org/10.1177/1077559504271287

Finkelhor, D., Ormrod, R., Turner, H., & Holt, M. (2009). Pathways to poly-victimization. *Child Maltreatment*, *14*(4), 316–29. http://doi.org/10.1177/1077559509347012

Finkelhor, D., Turner, H., Hamby, S., & Ormrod, R. (2011). Polyvictimization: Children's exposure to multiple types of violence, crime, and abuse. *Free Inquiry in Creative Sociology*. Retrieved from http://ojs.library.okstate.edu/osu/index.php/FICS/article/view/1649

Finkelhor, D., Turner, H., Ormrod, R., & Hamby, S. (2009a). Violence, Abuse, and Crime Exposure in a National Sample of Children and Youth. *Pediatrics*, *124*(5), 1411–1423. http://doi.org/10.1542/peds.2009-0467

Finkelhor, D., Turner, H., Ormrod, R., Hamby, S., & Kracke, K. (2009b). Children's Exposure to Violence: A Comprehensive National Survey. *Public Health Resources*. Retrieved from http://digitalcommons.unl.edu/publichealthresources/104

Finkelhor, D., Vanderminden, J., Turner, H., Hamby, S., & Shattuck, A. (2014). Upset among youth in response to questions about exposure to violence, sexual assault and family maltreatment. *Child Abuse & Neglect*, *38*(2), 217–23. http://doi.org/10.1016/j.chiabu.2013.07.021

Fitzpatrick, K. M., & Boldizar, J. P. (1993). The Prevalence and Consequences of Exposure to Violence among African-American Youth. *Journal of the American Academy of Child & Adolescent Psychiatry*, *32*(2), 424–430. http://doi.org/10.1097/00004583-199303000-00026

Fleurkens, P., Rinck, M., & van Minnen, A. (2011). Specificity and generalization of attentional bias in sexual trauma victims suffering from posttraumatic stress disorder. *Journal of Anxiety Disorders*, *25*(6), 783–7. http://doi.org/10.1016/j.janxdis.2011.03.014

Fogleman, N. D., Walerius, D. M., Rosen, P. J., & Leaberry, K. D. (2016). Peer victimization linked to negative affect in children with and without ADHD. *Journal of Applied Developmental Psychology*, *46*, 1–10. http://doi.org/10.1016/j.appdev.2016.05.003

Ford, J. D., Chapman, J., Mack, J. M., & Pearson, G. (2006). Pathways from Traumatic Child Victimization to Delinquency: Implications for Juvenile and Permanency Court Proceedings and Decisions. *Juvenile and Family Court Journal*, *57*(1), 13–26. http://doi.org/10.1111/j.1755-6988.2006.tb00111.x

Ford, J. D., Elhai, J. D., Connor, D. F., & Frueh, B. C. (2010). Poly-victimization and risk of posttraumatic, depressive, and substance use disorders and involvement in delinquency in a national sample of adolescents. *The Journal of Adolescent Health : Official Publication of the Society for Adolescent Medicine*, *46*(6), 545–52. http://doi.org/10.1016/j.jadohealth.2009.11.212

Fowler, P. J., Tompsett, C. J., Braciszewski, J. M., Jacques-Tiura, A. J., & Baltes, B. B. (2009). Community violence: a meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. *Development and Psychopathology*, *21*(1), 227–59. http://doi.org/10.1017/S0954579409000145

Fredstrom, B. K., Adams, R. E., & Gilman, R. (2011). Electronic and School-Based Victimization: Unique Contexts for Adjustment Difficulties During Adolescence. *Journal of Youth and Adolescence*, *40*(4), 405–415. http://doi.org/10.1007/s10964-010-9569-7

Frías, S. M., & Finkelhor, D. (2017). Victimizations of Mexican youth (12–17 years old): A 2014 national survey. *Child Abuse & Neglect*, *67*, 86–97. http://doi.org/10.1016/j.chiabu.2017.02.013

Frydenberg, E., & Lewis, R. (2000). Teaching Coping to Adolescents: When and to Whom? *American Educational Research Journal*, *37*(3), 727–745. http://doi.org/10.3102/00028312037003727

Garner, P. W., & Lemerise, E. A. (2007). The roles of behavioral adjustment and conceptions of peers and emotions in preschool children's peer victimization.

Development and Psychopathology, *19*(1), 57–71.
http://doi.org/10.1017/S0954579407070046

Garnett, B. R., Masyn, K. E., Austin, S. B., Williams, D. R., & Viswanath, K.
(2015). Coping styles of adolescents experiencing multiple forms of discrimination
and bullying: evidence from a sample of ethnically diverse urban youth. *The Journal
of School Health*, *85*(2), 109–17. http://doi.org/10.1111/josh.12225

Gibb, B. E., Schofield, C. A., & Coles, M. E. (2009). Reported history of
childhood abuse and young adults' information-processing biases for facial displays
of emotion. *Child Maltreatment*, *14*(2), 148–56.
http://doi.org/10.1177/1077559508326358

Gilbert, R., Widom, C. S., Browne, K., Fergusson, D., Webb, E., & Janson,
S. (2009). Burden and consequences of child maltreatment in high-income countries.
Lancet, *373*(9657), 68–81. http://doi.org/10.1016/S0140-6736(08)61706-7

Gómez, J. E., Johnson, B. A., Selva, M., & Sallis, J. F. (2004). Violent crime
and outdoor physical activity among inner-city youth. *Preventive Medicine*, *39*(5),
876–81. http://doi.org/10.1016/j.ypmed.2004.03.019

Gorman, A. H., Schwartz, D., Nakamoto, J., & Mayeux, L. (2011).
Unpopularity and disliking among peers: Partially distinct dimensions of
adolescents' social experiences. *Journal of Applied Developmental Psychology*,
32(4), 208–217. http://doi.org/10.1016/j.appdev.2011.05.001

Graham, S., & Juvonen, J. (1998). Self-blame and peer victimization in
middle school: An attributional analysis. *Developmental Psychology*, *34*(3), 587–
599. http://doi.org/10.1037/0012-1649.34.3.587

Gratz, K. L., & Roemer, L. (2004). Multidimensional Assessment of
Emotion Regulation and Dysregulation: Development, Factor Structure, and Initial
Validation of the Difficulties in Emotion Regulation Scale. *Journal of*

Psychopathology and Behavioral Assessment, *26*(1), 41–54. http://doi.org/10.1023/B:JOBA.0000007455.08539.94

Greenspoon, P. J., & Saklofske, D. H. (2001). Toward an Integration of Subjective Well-Being and Psychopathology. *Social Indicators Research*, *54*(1), 81–108. http://doi.org/10.1023/A:1007219227883

Greenwald, A. G., & Farnham, S. D. (2000). Using the Implicit Association Test to measure self-esteem and self-concept. *Journal of Personality and Social Psychology*, *79*(6), 1022–1038. http://doi.org/10.1037//0022-3514.79.6.1022

Greenwald, A. G., McGhee, D. E., & Schwartz, J. L. K. (1998). Measuring individual differences in implicit cognition: The implicit association test. *Journal of Personality and Social Psychology*, *74*(6), 1464–1480. http://doi.org/10.1037//0022-3514.74.6.1464

Greenwald, A. G., Nosek, B. A., & Banaji, M. R. (2003). Understanding and using the Implicit Association Test: I. An improved scoring algorithm. *Journal of Personality and Social Psychology*, *85*(2), 197–216.

Griffin, M.G., Resick, P.A. Waldrop, A.E. & Mechanic, M.B. (2003). Participation in trauma research: Is there evidence of harm? *Journal of Traumatic Stress*, 16(3), 221–227.

Gross, J. J. (1998). The emerging field of emotion regulation: An integrative review. *Review of General Psychology*, *2*(3), 271–299. http://doi.org/10.1037/1089-2680.2.3.271

Grych, J., Hamby, S., & Banyard, V. (2015). The resilience portfolio model: Understanding healthy adaptation in victims of violence. *Psychology of Violence*, *5*(4), 343–354.

Guerra, C., Ocaranza, C., & Weinberger, K. (2016). Searching for Social Support Moderates the Relationship Between Polyvictimization and Externalizing

Symptoms: A Brief Report. *Journal of Interpersonal Violence*.
http://doi.org/10.1177/0886260516642293

Guerra, C., Pereda, N., Guilera, G., & Abad, J. (2016). Internalizing
symptoms and polyvictimization in a clinical sample of adolescents: The roles of
social support and non-productive coping strategies. *Child Abuse & Neglect*, *54*, 57–
65. http://doi.org/10.1016/j.chiabu.2016.03.004

Guerra, N. G., Huesmann, L. R., & Spindler, A. (2013). Community violence
exposure, social cognition, and aggression among urban elementary school children.
Child Development, *74*(5), 1561–76. Retrieved from
http://www.ncbi.nlm.nih.gov/pubmed/14552414

Guhn, M., Schonert-Reichl, K. A., Gadermann, A. M., Hymel, S., &
Hertzman, C. (2013). A Population Study of Victimization, Relationships, and Well-
Being in Middle Childhood. *Journal of Happiness Studies*, *14*(5), 1529–1541.
http://doi.org/10.1007/s10902-012-9393-8

Hamby, S., Finkelhor, D., Ormrod, R. K., & Turner, H. (2004). *The juvenile
victimization questionnaire (JVQ): Administration and scoring manual.* Durham,
NH.

Hamby, S., & Grych, J. (2013). *The Web of Violence*. Dordrecht: Springer
Netherlands. http://doi.org/10.1007/978-94-007-5596-3

Hamby, S., Roberts, L. T., Taylor, E., Hagler, M., & Kaczkowski, W. (2017).
Families, Poly-victimization, & Resilience Portfolios: Understanding Risk,
Vulnerability & Protection Across the Span of Childhood. In D. M. Teti (Ed.),
Parenting and Family Processes in Child Maltreatment and Intervention (pp. 3–22).
Springer International Publishing. http://doi.org/10.1007/978-3-319-40920-7_1

Hamby, S., Smith, A., Mitchell, K., & Turner, H. (2016). Poly-victimization
and resilience portfolios: Trends in violence research that can enhance the

understanding and prevention of elder abuse. *Journal of Elder Abuse & Neglect*, *28*(4–5), 217–234. http://doi.org/10.1080/08946566.2016.1232182

Hamilton, J. L., Kleiman, E. M., Rubenstein, L. M., Stange, J. P., Flynn, M., Abramson, L. Y., & Alloy, L. B. (2016). Deficits in Emotional Clarity and Vulnerability to Peer Victimization and Internalizing Symptoms Among Early Adolescents. *Journal of Youth and Adolescence*, *45*(1), 183–94. http://doi.org/10.1007/s10964-015-0260-x

Hampel, P., Manhal, S., & Hayer, T. (2008). Direct and Relational Bullying among Children and Adolescents: Coping and Psychological Adjustment. *School Psychology International*, *30*(5), 474–490. Retrieved from http://eric.ed.gov/?id=EJ858843

Hanish, L. D., Eisenberg, N., Fabes, R. A., Spinrad, T. L., Ryan, P., & Schmidt, S. (2004). The expression and regulation of negative emotions: risk factors for young children's peer victimization. *Development and Psychopathology*, *16*(2), 335–53. Retrieved from http://europepmc.org/abstract/med/15487599

Hayes, A. F. (2013). *An introduction to mediation, moderation, and conditional process analysis.* New York: Guilford Press.

Herrenkohl, T. I., Hill, K. G., Chung, I.-J., Guo, J., Abbott, R. D., & Hawkins, J. D. (2003). Protective Factors against Serious Violent Behavior in Adolescence: A Prospective Study of Aggressive Children. *Social Work Research*, *27*(3), 179–91. Retrieved from http://eric.ed.gov/?id=EJ674362

Hightower, A. D., Work, W. C., Cowen, E. L., Lotyczewski, B. S., Spinell, A. P., Guare, J. C., & Rohrbeck, C. A. (1986). The Teacher–Child Rating Scale: A brief objective measure of elementary children's school problem behaviors and competencies. *School Psychology Review*, *15*(3), 393–409.

Hindelang, M. S., Gottfredson, M., & Garofalo, J. (1978). *Victims of personal crime*. Cambridge, MA, MA: Ballinger.

Hiriscau, I. E., Stingelin-Giles, N., Stadler, C., Schmeck, K., & Reiter-Theil, S. (2014). A right to confidentiality or a duty to disclose? Ethical guidance for conducting prevention research with children and adolescents. *European Child & Adolescent Psychiatry*, *23*(6), 409–416. http://doi.org/10.1007/s00787-014-0526-y

Hodges, E. V. E., Malone, M. J., & Perry, D. G. (1997). Individual risk and social risk as interacting determinants of victimization in the peer group. *Developmental Psychology*, *33*(6), 1032–1039. http://doi.org/10.1037//0012-1649.33.6.1032

Hodges, E. V. E., & Perry, D. G. (1999). Personal and interpersonal antecedents and consequences of victimization by peers. *Journal of Personality and Social Psychology*, *76*(4), 677–685. http://doi.org/10.1037//0022-3514.76.4.677

Holt, M. K., Finkelhor, D., & Kantor, G. K. (2007). Multiple victimization experiences of urban elementary school students: associations with psychosocial functioning and academic performance. *Child Abuse & Neglect*, *31*(5), 503–15. http://doi.org/10.1016/j.chiabu.2006.12.006

Hong, J. S., & Espelage, D. L. (2012). A review of research on bullying and peer victimization in school: An ecological system analysis. *Aggression and Violent Behavior*, *17*(4), 311–322. http://doi.org/10.1016/j.avb.2012.03.003

Hornowska, E. (2004). Radzenie sobie z doświadczaniem agresji [Dealing with experiencing aggression]. In A. Brzezińska & E. Hornowska (Eds.), *Dzieci i młodzież wobec agresji i przemocy* (pp. 164–180). Warszawa: Wydawnictwo Naukowe Scholar.

Horowitz, M. (1979). *Stress response syndromes*. New York: Aronson.

Houston, J., & Grych, J. (2015). *Resilience in youth exposed to violence: Protective factors and underlying mechanisms.* Milwaukee, WI, WI: Marquette University.

Huebner, E. S. (1991). Initial Development of the Student's Life Satisfaction Scale. *School Psychology International*, *12*(3), 231–240. http://doi.org/10.1177/0143034391123010

Huebner, E. S., & Dew, T. (1996). The interrelationships of positive affect, negative affect, and life satisfaction in an adolescent sample. *Social Indicators Research*, *38*(2), 129–137. http://doi.org/10.1007/BF00300455

Hunter, S. C., & Boyle, J. M. E. (2004). Appraisal and coping strategy use in victims of school bullying. *The British Journal of Educational Psychology*, *74*(Pt 1), 83–107. http://doi.org/10.1348/000709904322848833

Hussey, J. M., Chang, J. J., & Kotch, J. B. (2006). Child maltreatment in the United States: prevalence, risk factors, and adolescent health consequences. *Pediatrics*, *118*(3), 933–42. http://doi.org/10.1542/peds.2005-2452

Iverson, A. M., & Iverson, G. L. (1996). Children's long-term reactions to participating in sociometric assessment. *Psychology in the Schools*, *33*(2), 103–112. http://doi.org/10.1002/(SICI)1520-6807(199604)33:2<103::AID-PITS2>3.0.CO;2-S

Jaffee, S. R., Caspi, A., Moffitt, T. E., Polo-Tomás, M., & Taylor, A. (2007). Individual, family, and neighborhood factors distinguish resilient from non-resilient maltreated children: A cumulative stressors model. *Child Abuse & Neglect*, *31*(3), 231–253. http://doi.org/10.1016/j.chiabu.2006.03.011

Játiva, R., & Cerezo, M. A. (2014). The mediating role of self-compassion in the relationship between victimization and psychological maladjustment in a sample of adolescents. *Child Abuse & Neglect*, *38*(7), 1180–1190. http://doi.org/10.1016/j.chiabu.2014.04.005

Jensen, G. F., & Brownfield, D. (1986). Gender, lifestyles, and victimization: Beyond routine activity theory. *Violence and Victims*, *1*, 85–99.

Kaminer, D., du Plessis, B., Hardy, A., & Benjamin, A. (2013). Exposure to violence across multiple sites among young South African adolescents. *Peace and Conflict: Journal of Peace Psychology*, *19*(2), 112–124.

Kelly, B. M., Schwartz, D., Gorman, A. H., & Nakamoto, J. (2008). Violent Victimization in the Community and Children's Subsequent Peer Rejection: The Mediating Role of Emotion Dysregulation. *Journal of Abnormal Child Psychology*, *36*(2), 175–185. http://doi.org/10.1007/s10802-007-9168-6

Kilpatrick, D. G., Acierno, R., Saunders, B., Resnick, H. S., Best, C. L., & Schnurr, P. P. (2000). Risk factors for adolescent substance abuse and dependence: data from a national sample. *Journal of Consulting and Clinical Psychology*, *68*(1), 19–30. Retrieved from http://www.safetylit.org/citations/index.php?fuseaction=citations.viewdetails&citatio nIds%5B%5D=citjournalarticle_351954_38

Kim, J., & Cicchetti, D. (2010). Longitudinal pathways linking child maltreatment, emotion regulation, peer relations, and psychopathology. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *51*(6), 706–16. http://doi.org/10.1111/j.1469-7610.2009.02202.x

Kimonis, E. R., Frick, P. J., Fazekas, H., & Loney, B. R. (2006). Psychopathy, aggression, and the processing of emotional stimuli in non-referred girls and boys. *Behavioral Sciences & the Law*, *24*(1), 21–37. http://doi.org/10.1002/bsl.668

Kimonis, E. R., Frick, P. J., Munoz, L. C., & Aucoin, K. J. (2008). Callous-unemotional traits and the emotional processing of distress cues in detained boys: Testing the moderating role of aggression, exposure to community violence, and

histories of abuse. *Development and Psychopathology*, *20*, 569–589. http://doi.org/10.1017/S095457940800028X

Kliewer, W., Cunningham, J. N., Diehl, R., Parrish, K. A., Walker, J. M., Atiyeh, C., … Mejia, R. (2004). Violence Exposure and Adjustment in Inner-City Youth: Child and Caregiver Emotion Regulation Skill, Caregiver–Child Relationship Quality, and Neighborhood Cohesion as Protective Factor. *Journal of Clinical Child & Adolescent Psychology*, *33*(3), 477–487. http://doi.org/10.1207/s15374424jccp3303_5

Kliewer, W., Lepore, S. J., Oskin, D., & Johnson, P. D. (1998). The role of social and cognitive processes in children's adjustment to community violence. *Journal of Consulting and Clinical Psychology*, *66*(1), 199–209. http://doi.org/10.1037//0022-006X.66.1.199

Kochenderfer-Ladd, B., & Skinner, K. (2002). Children's coping strategies: Moderators of the effects of peer victimization? *Developmental Psychology*, *38*(2), 267–278. http://doi.org/10.1037/0012-1649.38.2.267

Komendant-Brodowska, A., Giza-Poleszczuk, A., & Baczko-Dombi, A. (2011). *Przemoc w szkole. Raport z badań. Lipiec, 2011. Kto następny? Cztynniki ryzyka bycia ofiarą w szkole. [Violence in School. Research Raport. July, 2011. Who's next? Risk factors for being a victim of school violence.]*. Warszawa.

Kopp, C. B. (1989). Regulation of distress and negative emotions: A developmental view. *Developmental Psychology*, *25*(3), 343–354. http://doi.org/10.1037/0012-1649.25.3.343

Krahé, B. (2001). *The social psychology of aggression*. New York: Psychological Press.

Krahé, B., Berger, A., Vanwesenbeeck, I., Bianchi, G., Chliaoutakis, J., Fernandez-Fuertes, A. A., … Zygadio, A. (2015). Prevalence and correlates of

young people's sexual aggression perpetration and victimisation in 10 European countries: a multi-level analysis. *Culture, Health & Sexuality*, *17*(6), 682–699. http://doi.org/10.1080/13691058.2014.989265

Krahé, B., & Möller, I. (2004). Playing violent electronic games, hostile attributional style, and aggression-related norms in German adolescents. *Journal of Adolescence*, *27*(1), 53–69. http://doi.org/10.1016/j.adolescence.2003.10.006

Lang, P. J., Bradley, M. M., & Cuthbert, B. N. (2008). *International affective picture system (IAPS): Affective ratings of pictures and instruction manual*.

Langhinrichsen-Rohling, J., Arata, C., O'Brien, N., Bowers, D., & Klibert, J. (2006). Sensitive Research With Adolescents: Just How Upsetting Are Self-Report Surveys Anyway? *Violence and Victims*, *21*(4), 425–444. http://doi.org/10.1891/0886-6708.21.4.425

Lansford, J. E., Malone, P. S., Dodge, K. A., Pettit, G. S., & Bates, J. E. (2010). Developmental cascades of peer rejection, social information processing biases, and aggression during middle childhood. *Development and Psychopathology*, *22*(3), 593–602. http://doi.org/10.1017/S0954579410000301

Lätsch, D. C., Nett, J. C., & Hümbelin, O. (2017). Poly-victimization and its relationship with emotional and social adjustment in adolescence: Evidence from a national survey in Switzerland. *Psychology of Violence*, *7*(1), 1–11. http://doi.org/10.1037/a0039993

Lauritsen, J. L. (2003). *How families and communities influence youth victimization. Juvenile Justice Bulletin*. Retrieved from http://www.icpsr.umich.edu/icpsrweb/ICPSR/biblio/resources/105611?paging.startRow=1&collection=DATA&author%5B0%5D=Lauritsen%2C+Janet+L.

Lauritsen, J. L., Laub, J. H., & Sampson, R. J. (1992). Conventional and delinquent activities: implications for the prevention of violent victimization among

adolescents. *Violence and Victims*, *7*(2), 91–108. Retrieved from

http://europepmc.org/abstract/med/1419927

Lazarus, R. S. (2006). Emotions and interpersonal relationships: toward a

person-centered conceptualization of emotions and coping. *Journal of Personality*,

74(1), 9–46. http://doi.org/10.1111/j.1467-6494.2005.00368.x

Lazarus, R. S., & Folkman, S. (1984). *Stress, appraisal, and coping*. New

York, NY: Springer.

Le, M. T. H., Holton, S., Nguyen, H. T., Wolfe, R., & Fisher, J. (2015). Poly-

Victimisation among Vietnamese High School Students: Prevalence and

Demographic Correlates. *PloS One*, *10*(5), e0125189.

http://doi.org/10.1371/journal.pone.0125189

LeBel, E. P., & Paunonen, S. V. (2011). Sexy But Often Unreliable: The

Impact of Unreliability on the Replicability of Experimental Findings With Implicit

Measures. *Personality and Social Psychology Bulletin*, *37*(4), 570–583.

http://doi.org/10.1177/0146167211400619

Lemerise, E. A., & Arsenio, W. F. (2000). An Integrated Model of Emotion

Processes and Cognition in Social Information Processing. *Child Development*,

71(1), 107–118. http://doi.org/10.1111/1467-8624.00124

Lewinsohn, P., Redner, J., & Seeley, J. (1991). The relationship between life

satisfaction and psychosocial variables: New perscpectives. In F. Strack, M. Argyle,

& N. Schwartz (Eds.), *Subjective well-being* (pp. 141–169). New York, NY: Plenum

Press.

Lila, M., Herrero, J., & Gracia, E. (2008). Multiple victimization of Spanish

adolescents: a multilevel analysis. *Adolescence*, *43*(170), 333–50. Retrieved from

http://www.ncbi.nlm.nih.gov/pubmed/18689105

Linehan, M. M. (1993). *Cognitive–behavioral treatment of borderline personality disorder.* New York: Guilford Press.

Lochman, J. E., & Wells, K. C. (2004). The coping power program for preadolescent aggressive boys and their parents: outcome effects at the 1-year follow-up. *Journal of Consulting and Clinical Psychology*, *72*(4), 571–8. http://doi.org/10.1037/0022-006X.72.4.571

Luthar, S. S., Cicchetti, D., & Becker, B. (2000). The Construct of Resilience: A Critical Evaluation and Guidelines for Future Work. *Child Development*, *71*(3), 543–562. http://doi.org/10.1111/1467-8624.00164

Luthar, S. S., & Goldstein, A. (2004). Children's exposure to community violence: implications for understanding risk and resilience. *Journal of Clinical Child and Adolescent Psychology : The Official Journal for the Society of Clinical Child and Adolescent Psychology, American Psychological Association, Division 53*, *33*(3), 499–505. http://doi.org/10.1207/s15374424jccp3303_7

Lynch, M., & Cicchetti, D. (1998). An ecological-transactional analysis of children and contexts: The longitudinal interplay among child maltreatment, community violence, and children's symptomatology. *Development and Psychopathology*, *10*(2), 235–257. Retrieved from http://journals.cambridge.org/abstract_S095457949800159X

Machmutow, K., Perren, S., Sticca, F., & Alsaker, F. D. (2012). Peer victimisation and depressive symptoms: can specific coping strategies buffer the negative impact of cybervictimisation? *Emotional and Behavioural Difficulties*, *17*(3–4), 403–420. http://doi.org/10.1080/13632752.2012.704310

MacLeod, C., & Mathews, A. (1988). Anxiety and the allocation of attention to threat. *The Quarterly Journal of Experimental Psychology Section A*, *40*(4), 653–670. http://doi.org/10.1080/14640748808402292

MacLeod, C., Mathews, A., & Tata, P. (1986). Attentional bias in emotional disorders. *Journal of Abnormal Psychology*, *95*(1), 15–20. http://doi.org/10.1037/0021-843X.95.1.15

Margolin, G., & Gordis, E. B. (2000). The effects of family and community, 445–479.

Marks, P. E. L., Babcock, B., Cillessen, A. H. N., & Crick, N. R. (2013). The Effects of Participation Rate on the Internal Reliability of Peer Nomination Measures. *Social Development*, *22*(3), 609–622. http://doi.org/10.1111/j.1467-9507.2012.00661.x

Martin, K., & Huebner, E. S. (2007). Peer victimization and prosocial experiences and emotional well-being of middle school students. *Psychology in the Schools*, *44*(2), 199–208. http://doi.org/10.1002/pits.20216

Martin, K., Huebner, E. S., & Valois, R. F. (2008). Does life satisfaction predict victimization experiences in adolescence? *Psychology in the Schools*, *45*(8), 705–714. http://doi.org/10.1002/pits.20336

Marusak, H. A., Martin, K. R., Etkin, A., & Thomason, M. E. (2015). Childhood trauma exposure disrupts the automatic regulation of emotional processing. *Neuropsychopharmacology : Official Publication of the American College of Neuropsychopharmacology*, *40*(5), 1250–8. http://doi.org/10.1038/npp.2014.311

Masten, A. S. (2011). Resilience in children threatened by extreme adversity: Frameworks for research, practice, and translational synergy. *Development and Psychopathology*, *23*(2), 493–506. http://doi.org/10.1017/S0954579411000198

Maszk, P., Eisenberg, N., & Guthrie, I. K. (1999). Relations of Children's Social Status to Their Emotionality and Regulation: A Short-Term Longitudinal

Study. *Merrill-Palmer Quarterly*, *45*(3), 468–492. Retrieved from

http://eric.ed.gov/?id=EJ599896

Mayeux, L., Underwood, M. K., & Risser, S. D. (2007). Perspectives on the

Ethics of Sociometric Research with Children: How Children, Peers, and Teachers

Help to Inform the Debate. *Merrill-Palmer Quarterly*, *53*(1), 53–78.

http://doi.org/10.1353/mpq.2007.0002

Mazur, J., & Małkowska, A. (2003). Bullies and victims among Polish

school-aged children. *Medycyna wieku rozwojowego*, *7*(1), 121–34. Retrieved from

http://europepmc.org/abstract/med/14704495

McLean, L. M., Toner, B., Jackson, J., Desrocher, M., & Stuckless, N.

(2006). The Relationship Between Childhood Sexual Abuse, Complex Post-

Traumatic Stress Disorder and Alexithymia in Two Outpatient Samples:

Examination of Women Treated in Community and Institutional Clinics. *Journal of

Child Sexual Abuse*, *15*(3), 1–17. http://doi.org/10.1300/J070v15n03_01

Mendez, J. J., Bauman, S., Sulkowski, M. L., Davis, S., & Nixon, C. (2016).

Racially-focused peer victimization: Prevalence, psychosocial impacts, and the

influence of coping strategies. *Psychology of Violence*, *6*(1), 103–111.

http://doi.org/dx.doi.org/10.1037/a0038161

Miethe, T. D., & Meier, R. F. (1994). *Crime and its social context: Toward

an integrated theory of offenders, victims, and situations*. Albany, NY: State

University of New York Press.

Monahan, K. C., Oesterle, S., & Hawkins, J. D. (2010). Predictors and

Consequences of School Connectedness: The Case for Prevention. *Prevention

Researcher*, *17*(3), 3–6. Retrieved from http://eric.ed.gov/?id=EJ896847

Mrug, S., & Windle, M. (2010). Prospective effects of violence exposure

across multiple contexts on early adolescents' internalizing and externalizing

problems. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*, *51*(8), 953–61. http://doi.org/10.1111/j.1469-7610.2010.02222.x

Na, H., Dancy, B. L., & Park, C. (2015). College student engaging in cyberbullying victimization: cognitive appraisals, coping strategies, and psychological adjustments. *Archives of Psychiatric Nursing*, *29*(3), 155–61. http://doi.org/10.1016/j.apnu.2015.01.008

Neumann, A., van Lier, P. A. C., Gratz, K. L., & Koot, H. M. (2010). Multidimensional Assessment of Emotion Regulation Difficulties in Adolescents Using the Difficulties in Emotion Regulation Scale. *Assessment*, *17*(1), 138–149. http://doi.org/10.1177/1073191109349579

Ng-Mak, D. S., Salzinger, S., Feldman, R. S., & Stueve, C. A. (2004). Pathologic Adaptation to Community Violence Among Inner-City Youth. *American Journal of Orthopsychiatry*, *74*(2), 196–208. http://doi.org/10.1037/0002-9432.74.2.196

Norman, R. E., Byambaa, M., De, R., Butchart, A., Scott, J., & Vos, T. (2012). The long-term health consequences of child physical abuse, emotional abuse, and neglect: a systematic review and meta-analysis. *PLoS Medicine*, *9*(11), e1001349. http://doi.org/10.1371/journal.pmed.1001349

Nurius, P. S., Russell, P. L., Herting, J. R., Hooven, C., & Thompson, E. A. (2009). Risk and Protective Profiles Among Never Exposed, Single Form, and Multiple Form Violence Exposed Youth. *Journal of Child & Adolescent Trauma*, *2*(2), 106–123. http://doi.org/10.1080/19361520902880798

Olweus, D. (1978). *Aggression in the schools: Bullies and whipping boys.* Washington, DC: Hemisphere Publishing Corp.

Olweus, D. (1991). Bully/victim problems among school children: basic facts and effects of a school based intervention program. In D. Pepler & K. H. Rubin

(Eds.), *The Development and Treatment of Childhood Aggression* (pp. 411–448).

Mahwah, NJ: Lawrence Erlbaum Associates, Inc.

Osofsky, J. D. (1995). The effects of exposure to violence on young children.

The American Psychologist, *50*(9), 782–8. Retrieved from

http://www.ncbi.nlm.nih.gov/pubmed/7574189

Österman, K., Björkqvist, K., Lagerspetz, K. M. J., Kaukiainen, A.,

Huesmann, L. R., & Fraczek, A. (1994). Peer and Self-Estimated Aggression and

Victimization in 8-Year-Old Children From Five Ethnic Groups. *Aggressive*

Behavior, *20*(6), 411–428. http://doi.org/10.1002/1098-2337(1994)20:6<411::AID-

AB2480200602>3.0.CO;2-4

Pakaslahti, L. (2000). Children's and adolescents' aggressive behavior in

context: The development and application of aggressive problem-solving strategies.

Aggression and Violent Behavior, *5*(5), 467–490. http://doi.org/10.1016/S1359-

1789(98)00032-9

Pereda, N., Guilera, G., & Abad, J. (2014). Victimization and

polyvictimization of Spanish children and youth: results from a community sample.

Child Abuse & Neglect, *38*(4), 640–9. http://doi.org/10.1016/j.chiabu.2014.01.019

Perren, S., Ettekal, I., & Ladd, G. (2013). The impact of peer victimization

on later maladjustment: mediating and moderating effects of hostile and self-blaming

attributions. *Journal of Child Psychology and Psychiatry, and Allied Disciplines*,

54(1), 46–55. http://doi.org/10.1111/j.1469-7610.2012.02618.x

Perry, D. G., Hodges, E. V. E., & Egan, S. K. (2001). Determinants of

chronic victimization by peers: A review and new model of family influence. In J.

Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the*

vulnerable and victimized (pp. 73–104). New York: Guilford Press.

Pine, D. S., Mogg, K., Bradley, B. P., Montgomery, L., Monk, C. S., McClure, E., … Kaufman, J. (2005). Attention bias to threat in maltreated children: implications for vulnerability to stress-related psychopathology. *The American Journal of Psychiatry*, *162*(2), 291–6. http://doi.org/10.1176/appi.ajp.162.2.291

Pokorny, S. B., Jason, L. A., Schoeny, M. E., Townsend, S. M., & Curie, C. J. (2001). Do Participation Rates Change when Active Consent Procedures Replace Passive Consent. *Evaluation Review*, *25*(5), 567–580. http://doi.org/10.1177/0193841X0102500504

Pomroy, L. V. (2014). *The relationship between multiple traumatisation, emotion regulation and violent behaviour*. University of Birmingham.

Pope, A. W., & Bierman, K. L. (1999). Predicting adolescent peer problems and antisocial activities: The relative roles of aggression and dysregulation. *Developmental Psychology*, *35*(2), 335–346. http://doi.org/10.1037/0012-1649.35.2.335

Pornari, C. D., & Wood, J. (2010). Peer and cyber aggression in secondary school students: the role of moral disengagement, hostile attribution bias, and outcome expectancies. *Aggressive Behavior*, *36*(2), 81–94. http://doi.org/10.1002/ab.20336

Powell, M. A., Fitzgerald, R. M., Taylor, N., & Graham, A. (2012). International literature review: ethical issues in Undertaking research with children and young people, for the Childwatch International Research Network, Southern Cross University, Centre for Children and Young People, Lismore NSW and University of Otago, Centre for Research on Children and Families, Dunedin, NZ

Radford, L., Corral, S., Bradley, C., & Fisher, H. (2013). The prevalence and impact of child maltreatment and other types of victimization in the UK: findings

from a population survey of caregivers, children and young people and young adults. *Child Abuse & Neglect*, *37*(10), 801–13. http://doi.org/10.1016/j.chiabu.2013.02.004

Radford, L., Corral, S., Bradley, C., Fisher, H., Bassett, C., Howat, N., & Collishaw, S. (2011). *Child Abuse and Neglect in the UK Today*. London: National Society for the Prevention of Cruelty to Children. Retrieved from http://clok.uclan.ac.uk/6022/1/child_abuse_neglect_research_PDF_wdf84181.pdf

Reichert, E., Segal, C., & Flannery-Schroeder, E. (2015). Trauma, attentional biases, and revictimization among young adults. *Journal of Trauma & Dissociation : The Official Journal of the International Society for the Study of Dissociation (ISSD)*, *16*(2), 181–96. http://doi.org/10.1080/15299732.2014.975308

Reid-Quiñones, K., Kliewer, W., Shields, B. J., Goodman, K., Ray, M. H., & Wheat, E. (2011). Cognitive, affective, and behavioral responses to witnessed versus experienced violence. *American Journal of Orthopsychiatry*, *81*(1), 51–60. http://doi.org/10.1111/j.1939-0025.2010.01071.x

Rigby, K. (2000). Effects of peer victimization in schools and perceived social support on adolescent well-being. *Journal of Adolescence*, *23*(1), 57–68. http://doi.org/10.1006/jado.1999.0289

Romano, E., Bell, T., & Billette, J.-M. (2011). Prevalence and correlates of multiple victimization in a nation-wide adolescent sample. *Child Abuse & Neglect*, *35*(7), 468–479. Retrieved from http://www.sciencedirect.com/science/article/pii/S014521341100144X

Rosario, M., Salzinger, S., Feldman, R. S., & Ng-Mak, D. S. (2003). Community violence exposure and delinquent behaviors among youth: The moderating role of coping. *Journal of Community Psychology*, *31*(5), 489–512. http://doi.org/10.1002/jcop.10066

Rosario, M., Salzinger, S., Feldman, R. S., & Ng-Mak, D. S. (2008).
Intervening Processes Between Youths' Exposure to Community Violence and
Internalizing Symptoms Over Time: The Roles of Social Support and Coping.
American Journal of Community Psychology, *41*(1–2), 43–62.
http://doi.org/10.1007/s10464-007-9147-7

Rosen, P. J., Milich, R., & Harris, M. J. (2007). Victims of their own
cognitions: Implicit social cognitions, emotional distress, and peer victimization.
Journal of Applied Developmental Psychology, *28*(3), 211–226.
http://doi.org/10.1016/j.appdev.2007.02.001

Rosen, P. J., Milich, R., & Harris, M. J. (2009). Why's everybody always
picking on me? : Social cognition, emotion regulation, and chronic peer
victimization in children. In M. J. Harris (Ed.), *Bullying, Rejection, & Peer
Victimization: A Social Cognitive Neuroscience Perspective* (pp. 79–100). New
York, NY: Springer Publishing Company. Retrieved from
https://books.google.com/books?hl=en&lr=&id=TTYvFZZOynEC&pgis=1

Rosen, P. J., Milich, R., & Harris, M. J. (2012). Dysregulated negative
emotional reactivity as a predictor of chronic peer victimization in childhood.
Aggressive Behavior, *38*(5), 414–27. http://doi.org/10.1002/ab.21434

Roth, S., & Cohen, L. J. (1986). Approach, avoidance, and coping with
stress. *American Psychologist*, *41*(7), 813–819. http://doi.org/10.1037/0003-
066X.41.7.813

Rudolph, K. D. (2010). Implicit Theories of Peer Relationships. *Social
Development*, *19*(1), 113–129. http://doi.org/10.1111/j.1467-9507.2008.00534.x

Saarento, S., Kärnä, A., Hodges, E. V. E., & Salmivalli, C. (2013). Student-,
classroom-, and school-level risk factors for victimization. *Journal of School
Psychology*, *51*(3), 421–34. http://doi.org/10.1016/j.jsp.2013.02.002

Saarni, C. (1999). *The development of emotional competence*. New York: Guilford Press.

Sajkowska, M. (2010). *The Problem of Child Abuse: Attitudes and Experiences in Seven Countries of Central and Eastern Europe*. Warsaw: Nobody's Children Foundation.

Salzinger, S., Feldman, R. S., Stockhammer, T., & Hood, J. (2002). An ecological framework for understanding risk for exposure to community violence and the effects of exposure on children and adolescents. *Aggression and Violent Behavior*, *7*(5), 423–451. http://doi.org/10.1016/S1359-1789(01)00078-7

Sampson, R. J., & Lauritsen, J. L. (1994). Violent Victimization and Offending: Individual, Situational, and Community Level Risk Factors. In *Understanding and Preventing Violence: Social Influences, Vol. 3*. Washington, DC: National Academy Press.

Sartor, C. E., Waldron, M., Duncan, A. E., Grant, J. D., McCutcheon, V. V, Nelson, E. C., … Heath, A. C. (2013). Childhood sexual abuse and early substance use in adolescent girls: the role of familial influences. *Addiction (Abingdon, England)*, *108*(5), 993–1000. http://doi.org/10.1111/add.12115

Saunders, B. E. (2003). Understanding Children Exposed to Violence: Toward an Integration of Overlapping Fields. *Journal of Interpersonal Violence*, *18*(4), 356–376. http://doi.org/10.1177/0886260502250840

Scarpa, A., & Haden, S. C. (2006). Community violence victimization and aggressive behavior: the moderating effects of coping and social support. *Aggressive Behavior*, *32*(5), 502–515. http://doi.org/10.1002/ab.20151

Scarpa, A., Haden, S. C., & Hurley, J. (2006). Community violence victimization and symptoms of posttraumatic stress disorder: the moderating effects

of coping and social support. *Journal of Interpersonal Violence*, *21*(4), 446–69. http://doi.org/10.1177/0886260505285726

Schwartz, D., Dodge, K. A., & Coie, J. D. (1993). The Emergence of Chronic Peer Victimization in Boys' Play Groups. *Child Development*, *64*(6), 1755–1772. http://doi.org/10.1111/j.1467-8624.1993.tb04211.x

Schwartz, D., Dodge, K. A., Coie, J. D., Hubbard, J. A., Cillessen, A. H. N., Lemerise, E. A., & Bateman, H. (1998). Social-Cognitive and Behavioral Correlates of Aggression and Victimization in Boys' Play Groups. *Journal of Abnormal Child Psychology*, *26*(6), 431–440. http://doi.org/10.1023/A:1022695601088

Schwartz, D., Gorman, A. H., Nakamoto, J., & Toblin, R. L. (2005). Victimization in the Peer Group and Children's Academic Functioning. *Journal of Educational Psychology*, *97*(3), 425–435. Retrieved from http://eric.ed.gov/?id=EJ734277

Schwartz, D., McFadyen–Ketchum, S. A., Dodge, K. A., Pettit, G. S., & Bates, J. E. (1998). Peer group victimization as a predictor of children's behavior problems at home and in school. *Development and Psychopathology*, *10*(1), 87–99. Retrieved from http://journals.cambridge.org/abstract_S095457949800131X

Schwartz, D., & Proctor, L. J. (2000). Community violence exposure and children's social adjustment in the school peer group: The mediating roles of emotion regulation and social cognition. *Journal of Consulting and Clinical Psychology*, *68*(4), 670–683. http://doi.org/10.1037/0022-006X.68.4.670

Seiffge-Krenke, I., & Klessinger, N. (2000). Long-Term Effects of Avoidant Coping on Adolescents' Depressive Symptoms. *Journal of Youth and Adolescence*, *29*(6), 617–630. http://doi.org/10.1023/A:1026440304695

Selig, J. P., & Little, T. D. (2012). Autoregressive and cross-lagged panel analysis for longitudinal data. In B. Laursen, T. D. Little, & N. A. Card. (Eds.), *Handbook of Developmental Research Methods* (pp. 265–278). Guilford Press.

Shackman, J. E., & Pollak, S. D. (2014). Impact of physical maltreatment on the regulation of negative affect and aggression. *Development and Psychopathology*, *26*(4 Pt 1), 1021–33. http://doi.org/10.1017/S0954579414000546

Sharkey, S., Jones, R., Smithson, J., Hewis, E., Emmens, T., Ford, T., & Owens, C. (2011). Ethical practice in internet research involving vulnerable people: lessons from a self-harm discussion forum study (SharpTalk). *Journal of Medical Ethics*, *37*(12), 752–8. http://doi.org/10.1136/medethics-2011-100080

Sharp, S. (1995). How much does bullying hurt? The effects of bullying on the personal wellbeing and educational progress of secondary aged students. *Educational and Child Psychology*, *12*(2), 81–88.

Shelley, D., & Craig, W. M. (2009). Attributions and Coping Styles in Reducing Victimization. *Canadian Journal of School Psychology*, *25*(1), 84–100. http://doi.org/10.1177/0829573509357067

Shields, A., & Cicchetti, D. (1998). Reactive aggression among maltreated children: the contributions of attention and emotion dysregulation. *Journal of Clinical Child Psychology*, *27*(4), 381–95. http://doi.org/10.1207/s15374424jccp2704_2

Shields, A., & Cicchetti, D. (2001). Parental maltreatment and emotion dysregulation as risk factors for bullying and victimization in middle childhood. *Journal of Clinical Child Psychology*, *30*(3), 349–63. http://doi.org/10.1207/S15374424JCCP3003_7

Shields, A., Cicchetti, D., & Ryan, R. M. (1994). The development of emotional and behavioral self-regulation and social competence among maltreated

school-age children. *Development and Psychopathology*, 6(1), 57–75. http://doi.org/10.1017/S0954579400005885

Silverman, A. B., Reinherz, H. Z., & Giaconia, R. M. (1996). The long-term sequelae of child and adolescent abuse: A longitudinal community study. *Child Abuse & Neglect*, *20*(8), 709–723. http://doi.org/10.1016/0145-2134(96)00059-2

Skinner, E. A., Edge, K., Altman, J., & Sherwood, H. (2003). Searching for the structure of coping: a review and critique of category systems for classifying ways of coping. *Psychological Bulletin*, *129*(2), 216–69. http://doi.org/10.1037/0033-2909.129.2.216

Smith, J. D., Schneider, B. H., Smith, P. K., & Ananiadou, K. (2004). The Effectiveness of Whole-School Antibullying Programs: A Synthesis of Evaluation Research. *School Psychology Review*. Retrieved from http://psycnet.apa.org/psycinfo/2005-00702-006

Smith, P. K., Pepler, D., & Rigby, K. (2004). *Bullying in schools: How successful can interventions be?* Cambridge: Cambridge University Press.

Smith, P. K., Shu, S., & Madsen, K. (2001). Characteristics of victims of school bullying. In J. Juvonen & S. Graham (Eds.), *Peer harassment in school: The plight of the vulnerable and victimized* (pp. 332–351). New York: Guilford Press.

Smith, P. K., & Talamelli, L. (2001). How pupils cope with bullying: A longitudinal study of successful and unsuccessful outcomes. In *Paper presented at the British Psychology Society Conference, Glasgow, Scotland*.

Soler, L., Kirchner, T., Paretilla, C., & Forns, M. (2013). Impact of poly-victimization on mental health: the mediator and/or moderator role of self-esteem. *Journal of Interpersonal Violence*, *28*(13), 2695–712. http://doi.org/10.1177/0886260513487989

Soler, L., Paretilla, C., Kirchner, T., & Forns, M. (2012). Effects of poly-victimization on self-esteem and post-traumatic stress symptoms in Spanish adolescents. *European Child & Adolescent Psychiatry*, *21*(11), 645–53. http://doi.org/10.1007/s00787-012-0301-x

Springer, K. W., Sheridan, J., Kuo, D., & Carnes, M. (2007). Long-term physical and mental health consequences of childhood physical abuse: Results from a large population-based sample of men and women. *Child Abuse & Neglect*, *31*(5), 517–530. http://doi.org/10.1016/j.chiabu.2007.01.003

Sterzing, P. R., Gartner, R. E., & Mcgeough, B. L. (2018). Conducting Anonymous, Incentivized, Online Surveys With Sexual and Gender Minority Adolescents: Lessons Learned From a National Polyvictimization Study. *Journal of Interpersonal Violence*, *33*(5), 740–761. http://doi.org/10.1177/0886260517744845

Stevens, T. N., Ruggiero, K. J., Kilpatrick, D. G., Resnick, H. S., & Saunders, B. E. (2005). Variables differentiating singly and multiply victimized youth: results from the National Survey of Adolescents and implications for secondary prevention. *Child Maltreatment*, *10*(3), 211–23. http://doi.org/10.1177/1077559505274675

Stith, S. M., Liu, T., Davies, L. C., Boykin, E. L., Alder, M. C., Harris, J. M., … Dees, J. E. M. E. G. (2009). Risk factors in child maltreatment: A meta-analytic review of the literature. *Aggression and Violent Behavior*, *14*(1), 13–29. http://doi.org/10.1016/j.avb.2006.03.006

Storch, E. A., & Ledley, D. R. (2005). Peer Victimization and Psychosocial Adjustment in Children: Current Knowledge and Future Directions. *Clinical Pediatrics*, *44*(1), 29–38. http://doi.org/10.1177/000992280504400103

Tabachnick, B. G., & Fidell, L. S. (2006). *Using multivariate statistcis* (5th ed). Boston: Pearson.

Tenenbaum, L. S., Varjas, K., Meyers, J., & Parris, L. (2011). Coping strategies and perceived effectiveness in fourth through eighth grade victims of bullying. *School Psychology International*, *32*(3), 263–287. http://doi.org/10.1177/0143034311402309

Thijs, J. T., & Verkuyten, M. (2008). Peer Victimization and Academic Achievement in a Multiethnic Sample: The Role of Perceived Academic Self-Efficacy. *Journal of Educational Psychology*, *100*(4), 754. Retrieved from http://www.narcis.nl/publication/RecordID/oai:ub.rug.nl:dbi%2F4b0132dd4809b

Thompson, R. A. (1994). Emotion Regulation: A Theme In Search Of Definition. *Monographs of the Society for Research in Child Development*, *59*(2–3), 25–52. http://doi.org/10.1111/j.1540-5834.1994.tb01276.x

Thompson, R. A., & Calkins, S. D. (1996). The double-edged sword: Emotional regulation for children at risk. *Development and Psychopathology*, *8*(1), 163–182.

Toblin, R. L., Schwartz, D., Hopmeyer Gorman, A., & Abou-ezzeddine, T. (2005). Social–cognitive and behavioral attributes of aggressive victims of bullying. *Journal of Applied Developmental Psychology*, *26*(3), 329–346. http://doi.org/10.1016/j.appdev.2005.02.004

Tolan, P. H., Guerra, N. G., & Montaini-Klovdahl, L. R. (1997). Staying out of Harm's Way (pp. 453–479). Springer US. http://doi.org/10.1007/978-1-4757-2677-0_16

Tremblay, C., Hébert, M., & Piché, C. (1999). Coping strategies and social support as mediators of consequences in child sexual abuse victims. *Child Abuse & Neglect*, *23*(9), 929–945. http://doi.org/10.1016/S0145-2134(99)00056-3

Tsitsika, A., Janikian, M., Wójcik, S., Makaruk, K., Tzavela, E., Tzavara, C., … Richardson, C. (2015). Cyberbullying victimization prevalence and associations

with internalizing and externalizing problems among adolescents in six European

countries. *Computers in Human Behavior*, *51*, 1–7.

http://doi.org/10.1016/j.chb.2015.04.048

Turner, H., Finkelhor, D., & Ormrod, R. (2007). Family structure variations

in patterns and predictors of child victimization. *The American Journal of*

Orthopsychiatry, *77*(2), 282–95. http://doi.org/10.1037/0002-9432.77.2.282

Turner, H., Finkelhor, D., & Ormrod, R. (2010). Poly-victimization in a

national sample of children and youth. *American Journal of Preventive Medicine*,

38(3), 323–30. http://doi.org/10.1016/j.amepre.2009.11.012

Turner, H., Shattuck, A., Finkelhor, D., & Hamby, S. (2015). Effects of Poly-

Victimization on Adolescent Social Support, Self-Concept, and Psychological

Distress. *Journal of Interpersonal Violence*, 886260515586376.

http://doi.org/10.1177/0886260515586376

Turner, H., Shattuck, A., Finkelhor, D., & Hamby, S. (2016).

Polyvictimization and Youth Violence Exposure Across Contexts. *Journal of*

Adolescent Health, *58*(2), 208–214. http://doi.org/10.1016/j.jadohealth.2015.09.021

Turner, H., Shattuck, A., Hamby, S., & Finkelhor, D. (2013). Community

disorder, victimization exposure, and mental health in a national sample of youth.

Journal of Health and Social Behavior, *54*(2), 258–75.

http://doi.org/10.1177/0022146513479384

Ueno, K. (2005). The effects of friendship networks on adolescent depressive

symptoms. *Social Science Research*, *34*(3), 484–510.

http://doi.org/10.1016/j.ssresearch.2004.03.002

van Reemst, L., Fischer, T. F. C., & Zwirs, B. W. C. (2014). Social

Information Processing Mechanisms and Victimization: A Literature Review.

Trauma, Violence & Abuse, 1524838014557286-.
http://doi.org/10.1177/1524838014557286

Völlink, T., Bolman, C. A. W., Dehue, F., & Jacobs, N. C. L. (2013). Coping with Cyberbullying: Differences Between Victims, Bully-victims and Children not Involved in Bullying. *Journal of Community & Applied Social Psychology*, *23*(1), 7–24. http://doi.org/10.1002/casp.2142

Vynckier, G. (2012). Mid-adolescent victims: (Un)willing for help? *International Review of Victimology*, *18*(2), 109–132. http://doi.org/10.1177/0269758011432966

Watson, D., Clark, L. A., & Tellegen, A. (1988). Development and validation of brief measures of positive and negative affect: the PANAS scales. *Journal of Personality and Social Psychology*, *54*(6), 1063–70. http://doi.org/10.1037//0022-3514.54.6.1063

WHO. (2011). Standards and Operational Guidance for Ethics Review of Health-Related Research with Human Participants. Geneva: World Health Organization.

Wiener, J., & Mak, M. (2009). Peer victimization in children with Attention-Deficit/Hyperactivity Disorder. *Psychology in the Schools*, *46*(2), 116–131. http://doi.org/10.1002/pits.20358

Wigderson, S., & Lynch, M. (2013). Cyber- and traditional peer victimization: Unique relationships with adolescent well-being. *Psychology of Violence*, *3*(4), 297–309. http://doi.org/10.1037/a0033657

Wild, D., Grove, A., Martin, M., Eremenco, S., McElroy, S., Verjee-Lorenz, A., … ISPOR Task Force for Translation and Cultural Adaptation. (2005). Principles of Good Practice for the Translation and Cultural Adaptation Process for Patient-Reported Outcomes (PRO) Measures: Report of the ISPOR Task Force for

Translation and Cultural Adaptation. *Value in Health*, *8*(2), 94–104. http://doi.org/10.1111/j.1524-4733.2005.04054.x

Williamson, E., Goodenough, T., Kent, J., & Ashcroft, R. (2005). Conducting research with children: the limits of confidentiality and child protection protocols. *Children & Society*, *19*(5), 397–409. http://doi.org/10.1002/chi.852

Wójcik, M., & Kozak, B. (2015). Bullying and exclusion from dominant peer group in Polish middle schools. *Polish Psychological Bulletin*, *46*(1), 2–14. http://doi.org/10.1515/ppb-2015-0001

Wolitzky-Taylor, K. B., Ruggiero, K. J., Danielson, C. K., Resnick, H. S., Hanson, R. F., Smith, D., … Kilpatrick, D. G. (2008). Prevalence and correlates of dating violence in a national sample of adolescents. *Journal of the American Academy of Child and Adolescent Psychiatry*, *47*(7), 755–62. http://doi.org/10.1097/CHI.0b013e318172ef5f

Wright, M., Banerjee, R., Hoek, W., Rieffe, C., & Novin, S. (2010). Depression and social anxiety in children: differential links with coping strategies. *Journal of Abnormal Child Psychology*, *38*(3), 405–19. http://doi.org/10.1007/s10802-009-9375-4

Wyatt, G. E., & Peters, S. D. (1986). Issues in the definition of child sexual abuse in prevalence research. *Child Abuse & Neglect*, *10*(2), 231–240. http://doi.org/10.1016/0145-2134(86)90084-0

Yamasaki, K., Sakai, A., & Uchida, K. (2006). A Longitudinal Study of the Relationship Between Positive Affect and both Problem- and Emotion Focused Coping Strategies. *Social Behavior and Personality: An International Journal*, *34*(5), 499–510. http://doi.org/10.2224/sbp.2006.34.5.499

Ybarra, M. L., Langhinrichsen-Rohling, J., Friend, J., & Diener-West, M. (2009). Impact of Asking Sensitive Questions about Violence to Children and

Adolescents. *Journal of Adolescent Health*, *45*(5), 499–507.

http://doi.org/10.1016/J.JADOHEALTH.2009.03.009

Yeater, E. A., & Viken, R. J. (2010). Factors Affecting Women's Response

Choices to Dating and Social Situations. *Journal of Interpersonal Violence*, *25*(8),

1411–1428. http://doi.org/10.1177/0886260509354588

Zajac, K., Ruggiero, K. J., Smith, D. W., Saunders, B. E., & Kilpatrick, D. G.

(2011). Adolescent distress in traumatic stress research: Data from the National

Survey of Adolescents-Replication. *Journal of Traumatic Stress*, *24*(2), 226–229.

http://doi.org/10.1002/jts.20621

Zeman, J., & Garber, J. (1996). Display Rules for Anger, Sadness, and Pain:

It Depends on Who Is Watching. *Child Development*, *67*(3), 957–973.

http://doi.org/10.1111/j.1467-8624.1996.tb01776.x

Ziv, Y., Leibovich, I., & Shechtman, Z. (2013). Bullying and victimization in

early adolescence: relations to social information processing patterns. *Aggressive

Behavior*, *39*(6), 482–92. http://doi.org/10.1002/ab.21494

Zolotor, A. J., Runyan, D. K., Dunne, M. P., Jain, D., Péturs, H. R., Ramirez,

C., … Isaeva, O. (2009). ISPCAN Child Abuse Screening Tool Children's Version

(ICAST-C): Instrument development and multi-national pilot testing. *Child Abuse &

Neglect*, *33*(11), 833–841. http://doi.org/10.1016/J.CHIABU.2009.09.004