PEER VICTIMIZATION AMONG ADOLESCENTS:

A COMPARISON BETWEEN INTERNET AND NON-INTERNET

VICTIMIZATION

CHEN QIQI

PhD

The Hong Kong Polytechnic University

2020

The Hong Kong Polytechnic University

Department of Applied Social Sciences

Peer Victimization among Adolescents:

A Comparison between Internet and Non-Internet Victimization

CHEN Qiqi

A thesis submitted in partial fulfillment of

the requirements for the degree of Doctor of Philosophy

March 2020

CERTIFICATE OF ORIGINALITY

I hereby declare that this thesis is my own work and that, to the best of my knowledge and belief, it reproduces no material previously published or written, nor material that has been accepted for the award of any other degree or diploma, except where due acknowledgement has been made in the text.

(Signed)

Qiqi Chen_____(Name of student)

Abstract of dissertation entitled

Peer Victimization among Adolescents:

A Comparison between Internet and Non-Internet Victimization

Submitted by

CHEN Qiqi

for the degree of Doctor of Philosophy
at The Hong Kong Polytechnic University

in March 2020

Background: Adolescents represent one-fifth of the world's population. More than one million adolescents die each year with interpersonal violence being one of the leading causes of death in adolescents. Peer interactions can lead to aggression among adolescents and plays an important role in socio-emotional development in the adolescence period. These interactions can sometimes result in detrimental consequences. Prevention of internet and non-internet victimization requires more rigorous assessments to provide impetus to community partners to collaborate and monitor important social determinants of health.

Methods: This dissertation is informed by the public health approach, covering two cross-sectional investigations conducted in mainland China and Hong Kong, with the objectives of analyzing the prevalence, risk factors, and health consequences of peer victimization among adolescents, comparing Internet and non-Internet victimization. Study One recruited 18,341 adolescents aged 15-17 from five major cities in mainland China and Hong Kong and examined the risk factors and health correlates of peer victimization. Study Two used 2,120 adolescent samples recruited in Hong Kong and investigated the relationships between Internet victimization and emotional problems. Structured multiphase logistic regression was used for the statistical analysis.

Results: 1) Prevalence of peer victimization: 42.9% of adolescents in China experienced peer victimization in their lifetime. A total of 37.6% reported non-Internet victimization and 4.6% reported Internet victimization (0.7% missing data on the venues). 2) Risk factors of peer victimization: Being a male, young age, and having siblings at home bring great risks to the possibility of peer victimization. Parents' divorce, separation and widowhood, mother's low education level, father's unemployment, and family's below-median income are associated with greater risks of peer victimization. 3) Connections between family victimization and peer victimization: All types of family violence, including experiences of parental intimate partner violence, abuse by elders, child maltreatment, and in-law conflict were associated with adolescents` peer victimization. 4) Health and mental- health correlates of peer victimization: Peer victims reported higher rates of Post-traumatic Stress Disorder (PTSD) and depressive symptoms, deliberate self-harm and suicide ideation, low self-esteem, and health-related quality of life. No significant difference is noted between victims who reported internet and non-internet victimization in regard to these health items.

Conclusion: Adolescence is a critical period of life. Preventing peer victimization requires comprehensive approaches to address the social determinants of violence, including health inequality, rapid social change, and disadvantages of social protection. The findings from the two studies in this dissertation contribute to the understanding of the associated characteristics between Internet and non-Internet victimization among adolescents. The empirical results complemented several underrepresented relationships and clarified specific mechanisms of the peer victimization related health impacts. Implications for future research, practice, and policy are discussed based on the research findings.

(442 words)

PUBLICATIONS ARISING FROM THE THESIS

Chen, Q.Q., Chan, K., & Cheung, A. (2018). Doxing victimization and emotional problems among secondary school students in Hong Kong. *International Journal of Environmental Research and Public Health, 15*, 2665.

Chen, Q. Q., Chen, M. T., Zhu, Y. H., Chan, K. L., & Ip, P. (2018). Health correlates, addictive behaviors, and peer victimization among adolescents in China. *World Journal of Pediatrics, 14*, 454-460.

Chen, Q.Q., Lo, C. K., Zhu, Y., Cheung, A., Chan, K. L., & Ip, P. (2018). Family poly-victimization and cyberbullying among adolescents in a Chinese school sample. *Child Abuse & Neglect, 77*, 180-187.

ACKNOWLEDGEMENTS

I am indebted to my chief supervisor, Prof. Edward Ko Ling Chan, who believed me in like nobody else in every stage of my academic pursuit. Prof. Chan trained me in fundamentals of conducting scientific research and inspired me by his passionate attitude to advance toward my determination to be an exceptional researcher.

My heartful appreciation goes to my co-supervisor Dr. Jasmine Zhu, for her expert advice to my study, my mentor Prof. Mark Courtney at the University of Chicago, for sharing his tremendous experience and insightful guidance to my research. I am also appreciative of my dissertation committee for the invaluable comments.

I would like to sincerely thank the professors and research fellows for their contributions to the two studies as parts of this project. I wish to thank my fellow friends and colleagues for standing by me during the journey.

I owe my deepest gratitude to my family for their love and unconditional support throughout the years.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

CHAPTER 1: INTRODUCTION

1.1 Peer interactions in real world and cyberspace

Peer interactions play an important role in the socio-emotional development of an individual since early childhood, and enables the development of social skills, enhances adaptive behaviors and provides social support (Zych, Ortega-Ruiz, & Del Rey, 2015a). Peer relationships have a much stronger impact on school-aged children in shaping their attitudes and actions (Erikson 1968). These relationships potentially contribute to a child's sense of well-being and social competence, but is also associated with exposure to new forms of conflict and bullying victimization. School and community environments may therefore become the major influential settings for bullying victimization. Peer victimization is one of the most common types of aggression among adolescents and a major stressor that could hamper victims` physical and mental health (Ybrandt & Armelius, 2010).

The younger generation is now more imbued with cyberspace, and the cyber-saturated environment provides them with a more dynamic grasp of information technology and citizen participation through this new platform (United Nations Children's Fund, 2014). In China, 95.1% of adolescents under the age of 18 had access to Internet at home through mobile phones or laptops (CINIC, 2016). In the US, 75% of teenagers have a smartphone with access to Internet and 92% report that they go online on a daily basis (Lenhart, 2015). Social interactions have been significantly transformed by the increasing use of social network sites such as Facebook, Twitter and other forums (Kwan & Skoric, 2013). The disclosure of personal data, broadcasting of adolescents' own lives, and leaving comments on others' posts have improved the efficiency of social interactions and dissemination of personal

information; however, it also inevitably facilitates the risks of undermined privacy or cyberbullying (Hong et al., 2016).

1.2 Scope of peer victimization

Interpersonal violence is the third leading cause of death in adolescents globally, which leads to nearly one-third of male adolescents` deaths in low and middle-income countries (WHO, 2018). Peer victimization has attracted increasing attention and has been documented in various countries and districts. Researchers have found that prevalence rates of peer victimization and perpetration peak during middle school, as adolescents manage to establish their place in the social hierarchy and gain control over peers (Sharp & Smith, 1991; Cross et al., 2009; Olweus, 2013; Kowalski et al., 2014). Adolescence is an important developmental stage for cognitive and moral development, when children often imitate and experiment on their social strategies towards others to determine their role and identity (Erikson, 1968). Victimization experiences are common types of aggressive stimuli among adolescents and major stressors that could hamper their physical health and lead to difficulties in emotion regulation (Kochenderfer-Ladd, 2004; Ybrandt & Armelius, 2010).

Cyberspace is one of the venues where bullies are able to gain self-control, while long internet usage was found to be related to higher possibilities of cyberbullying perpetration and victimization (Sanzone-Goodrich, 2013). The need to seek social approval and status often intensifies information disclosure and other risk-taking behaviors, and the victims of non-Internet violence may also use Internet-based tools to seek revenge by doxing other's privacy (Smith et al., 2008; Chen et al., 2018). Of course, not all victims of violence are willing to disclose their experiences, many victims of violence suffer in silence. Studies show

that at least 30% of those suffering from victimization at school do not reveal their experiences to anyone (WHO, 2015). Therefore, a better understanding of the causes, risk and protective factors is essential for the early screening of peer victims and is pivotal to the development of prevention programs.

1.3 Family violence and peer victimization

Victimization within the family environment may bring a greater risk for children to learn violent behaviors and internalize their weakness as a stable personal trait, which may then increase future possibilities of being bullied outside the family (Wilczenski et al., 1997; Hong et al., 2016). Witnessing family violence was found associated with an increased belief in the effectiveness of violence as a way of solving disputes, which in turn was related to higher aggressive behaviors or higher levels of avoidant coping towards victimization (Schwartz & Proctor, 2000). Children brought up by family members with own unresolved trauma or victimization often experience a lack of intimacy with caregivers, and play out to disobey instructions and exhibit more behavioral problems, more likely to lack confidence and consequently with higher risk to later well-being (Ertem, Leventhal, & Dobbs, 2000; Sroufe, Egeland, Carlson, & Collins, 2005; Wood & Sommers, 2011; Kochanska & Kim, 2013; Song, Wenzel, Kim, & Nam, 2017; Song, Wenzel, Kim, & Nam, 2017).

Parents' and teachers' beliefs and responses may indirectly affect children's peer relationships since they usually provide the most immediate source of support and advice for strategic peer interactions. In Chinese societies with strict supervision culture, parents and teachers often hold some misconceptions about peer violence (Chan et al., 2013). One prevailing misconception is that peer conflicts are inevitable and acceptable, and harassment

is deemed a natural part of growing up, especially for boys (Moore et al., 2014). This may encourage violent behaviors for boys to develop masculinity and girls` indirect violations (Ewing Lee & Troop-Gordon, 2011; Crick & Grotpeter, 1995). Aggression towards peers appears to be an approval of group identity, where they often hold the belief that peer aggression enhances their social image, and victims deserve the suffering (Aspenlieder et al., 2009). Therefore, adolescents with lower interests in masculine activities were more likely to be physically and verbally bullied or excluded by peer groups (Aspenlieder, Buchanan, McDougall & Sippola, 2009). As a result, some adolescents may endorse avoidance as an effective way of coping with the problem by simply walking away or ignoring the aggressors (Aspenlieder et al., 2009). Education on appropriate interpersonal strategies is essential to combat peer violence. A deeper understanding of the prevalence and health-related associations of the problem is essential for researchers, social workers, parents and teachers to respond more efficiently to peer victimization (Copeland et al., 2013).

1.4 Growing evidence of internet victimization

With the advancement of technology, the younger generation is likely to spend more time in cyberspace, where they sense more social support than at home. Studies reported that the prevalence rates of Internet victimization among adolescents vary from 10% to 53% globally (Finkelhor, Turner, Hamby, & Ormrod, 2011; Robers, Kemp, Rathbun, & Morgan, 2014; Smith et al., 2008; Wolak et al., 2007). A recent systematic review revealed that approximately 25% of adolescents in the United States have reported experiencing online victimization, with 35% of harassment victims having received threatening posts and messages at some point (Wolak, Mitchell, & Finkelhor, 2007). Regarding the prevalence of Internet and non-Internet victimization, non-Internet victimization has been found more

prevalent than Internet victimization globally in the past decade, such as the US (Wang, Iannotti & Nansel, 2011), Germany (Riebel, Jäger & Fischer, 2009), and the UK (Smith et al., 2008).

Studies have revealed that Internet and non-Internet victimization share some common characteristics and may overlap with the prevalence. The equivalence in both modalities of bullying manifest in compliance of the same roles as perpetrators or victims, (Modecki et al., 2014) where both sides are found to have higher risks of depressive symptoms (Gamez-Guadix, Orue, Smith, & Calvete, 2013), anger, low self-esteem, self-harm, suicidal ideation, academic difficulties, and problems with peer relations (Daine et al., 2013). Contextual variables have been broadly studied in non-Internet victimization. However, the context of Internet bullying and connections with non-Internet victimization is far less explored in previous literature, and family/community risk factors of Internet victimization is yet to be explored in detail.

1.5 Rationale of the project

The World Health Organization (WHO) in 2020 has set out a list of 13 global health challenges for the next 10 years and underscored the priority of investing in these public health issues. The challenges in the list require responses not only from the health sector but also the shared responsibilities across government, communities, and international stakeholders. This project is in response to the challenge on "keeping adolescents safe". Adolescents represent one-fifth of the world's population (WHO, 2017), and more than one million adolescents die each year (WHO, 2020). Interpersonal violence is among the leading causes of death in adolescence, and addictive use of drugs and alcohol and previous exposure

to child maltreatment are described as risk factors (WHO, 2020). Peer relationships are extremely important in adolescence, while peer victimization is a major source of detrimental consequences in this period (Geoffroy et al., 2016).

With the increasing availability and reliance on electronic technology among adolescents, the issues on healthy peer interactions online and offline are clearly worthy of far greater understanding. Prevention of Internet and non-Internet victimization requires more rigorous assessments to provide impetus collaboration among community partners to work together to monitor important social determinants of health. As outlined above, the lack of knowledge and measurement of online and offline peer victimization is critical, and there is a clear need for further in-depth research addressing issues of presence, motivation, and impacts in peer victimization episodes. This project originated from the research interests in initiating the dialogue on 1) theoretical and conceptual understanding of Internet and non-Internet victimization, 2) knowledge about connections between peer victimization and family victimization, and henceforth implications for development of prevention and intervention strategies.

As discussed above, previous research and media attention have provided information on peer victimization while relatively little is known about the nature of Internet victimization or the comparison of effects to non-Internet victimization. This may be due to the lack of theoretical clarity and conceptual examination of the similarities and differences between Internet and non-Internet victimization (Dooley, Pyżalski, & Cross, 2009). Despite the growing attention on peer victimization, many questions about victimization on the Internet are yet to be answered and require continuous exploration. For example, is Internet victimization conceptually and theoretically analogous to non-Internet bullying? Do children

from conflict family environment have higher risk of being bullied by peers? Are the motivations of Internet bullying originating from non-Internet victimization experiences? To date, there has been limited discussion of theoretical construct and empirical evidence to address this victimization issue among young people.

Regarding peer victimization prevention at school level, for example, studies found that school climates that foster peer cohesion and support respect are much less conducive to peer aggression (Frey, Newman, Nolen, & Hirschstein, 2012; Goldweber, Waasdorp, & Bradshaw, 2013). Parents` and teachers` understanding and beliefs about adolescents` victimization risks are pivotal to providing guidance and timely intervention for adolescents` health and well-being. School psychologists, school social workers and administrators expect effective screening tools and knowledge on peer victimization among students. Schools should also master information about students` family environment in identifying specific strategies for creating supportive school-family systems that incorporate bullying-free norms for students' all-round development. Therefore, more evidence is needed from empirical evidence to examine the family factors and impacts of family victimization experiences on children's victimization beyond family. The empirical literature may also be used to guide governments` child protection policy formulation and resource allocation for implementation of programs on bullying prevention.

1.6 Chapter summary

This chapter briefly introduces the scope of peer victimization in real life and in cyberspace, and discusses the interconnections with family factors. Tracing the intercorrelations over time among factors and patterns of associations can shed light on the common and unique

mechanisms and strong linkages for victimization studies. For practice and policy, early victimization screening may promise better coordination of community responses and agency cooperation for more effective and efficient services. A comprehensive and integrated co-occurrence framework is best suited for distinguishing factors and correlates that may be unique in comparing and specifying Internet and non-Internet victimization.

CHAPTER 2: LITERATURE REVIEW

2.1 Definition of peer victimization

2.1.1 Forms of peer victimization

Peer victimization is a public health problem. Previous research has shown a wide range of prevalence, where 3–90% of children have been victimized by peers at some point in their life, depending on the variance in definitions and methodologies (Chan, Yan, Brownridge, & Ip, 2013). Researchers incorporate both direct and indirect forms of bullying behaviors. For example, hitting, name-calling, and intimidating gestures are examples of the direct forms of peer victimization, whereas social exclusion and spreading of rumors are common indirect forms of the problem (Graham & Bellmore, 2007). The dimensions are also delineated into physical violence, emotional or psychological victimization, sexual assault, or property offense (Finkelhor, Turner, & Hamby, 2012).

2.1.2 Terms of peer violence

The literature in the field of aggressive peer relations has used different terms, such as bullying, harassment, aggression and victimization (Eisenberg & Aalsma, 2005; Copeland, Wolke, Angold, & Costello, 2013). These subtly different terms represent the magnitude of the problem, but also cause difficulties in interpreting the inconsistent results among researchers across studies. Only recently did some researchers attempt to release a uniform definition. For example, Olweus (1993) provided a framework to cover three components of bullying behaviors, including the intention to harm, repeated and over time behaviors toward others, and a power imbalance interpersonal relationship. These three components have been

widely used for almost 30 years in the field to measure bullying and associated problems, while researchers have long been pointing out the limitations of the concept. For example, some aggressive behaviors among schoolmates do not necessarily include power differential or repeated bullying behaviors (Vaillancourt et al., 2008), harassment in the cyberspace is also hard to define the relationships between the perpetrators and victims (Finkelhor, Turner, & Hamby, 2012). There are also increasing discussions on additional components to be included in the definition, such as motivation and power dynamics of the perpetration (Vivolo-Kantor, Martell, Holland, & Westby, 2014).

2.1.3 Definition of peer victimization in this project

As more recent studies have focused on Internet victimization, future definition of victimization should go far beyond the dominant tradition within school environment. These inconsistencies across studies might provide conflicting prevalence estimates and increase the difficulty of public health surveillance of the problem. In all, a more empirical and comprehensive approach should be adopted in peer aggression research to define the behaviors and various contextual characteristics. In this dissertation, we will employ the term "peer victimization", which goes beyond bullying to include other subcategories of victimization such as gang violence and sexual violence. We counted the rates of internet victimization experiences separately from those non-internet cases to allow for direct comparisons between these two forms of victimization.

2.2 Internet and non-Internet victimization

2.2.1 Commonalities of Internet and non-Internet victimization

Internet and non-Internet victimization share some connections and common characteristics and may overlap with the prevalence, with the equivalence manifested in compliance of the same roles as perpetrators or victims in both modalities of victimization (Modecki, Minchin, Harbaugh, Guerra, & Runions, 2014). Similar to non-Internet victimization, messages or comments can be released without consent in the virtual public and be available to acquaintances or strangers of children involved in peer victimization, which to some extent , is comparable to the role of bystanders (Strabic et al., 2016). The released information may include private or even intimate data as an individual's name, residential address, academic or business record, and personal photographs and videos (Douglas, 2016). The definitions of internet victimization also vary widely, changing with the transition of social interactions from electronic text to various mediums, and therefore contribute to an inconsistency in findings (Hinduja & Patchin, 2007; Patchin & Hinduja, 2015). Some researchers regard Internet victimization as a form of non-Internet victimization, while others treat cyberspace as a special space equivalent to non-Internet communities (Wang et al., 2009; Ybarra et al., 2012).

2.2.2 Differences between Internet and non-Internet victimization

Compared to non-Internet bullying, Internet victimization is mostly anonymous and based on cyberspace, which makes it easier to occur but more difficult to identify the perpetrator than bullying through face-to-face contact. Victimization in cyberspace can take place online 24/7, leaving the victims no escape from victimization (Patchin & Hinduja, 2015). Moreover, the imbalance of power in cyberspace between bullies and victims is difficult to determine, where power is not necessarily related to anything physical. The typical motives for Internet

victimization include holding the targeted individuals to account for their wrongdoings, humiliating them for some reason, and online stalking (Douglas, 2016). The information being released without consent is often shared and easily accessed through blogs, social networking sites, email, and/or online forums, thereby facilitating collective internet victimization online (Snyder, Doerfler, Kanich, & McCoy, 2017). Correlations are often drawn and developed among disparate pieces of information gathered from several sources, thereby enabling inferences to be made about the victim's identity and even physical location (Khanna, Zavarsky, & Lindskog, 2016). When victims are identified by their name and address offline, it becomes easier for others to infer further identifiable information, which constitutes a breach of victims' right to data privacy (Douglas, 2016). In this way, online privacy harassment could be a form of connection between Internet and non-Internet bullying.

As outlined above, researchers assert that the prevalence of Internet and non-Internet victimization has increased dramatically in the past decade. The frequency of both forms of victimization has been increasing in parallel with the convenient accessibility to and reliance on electronic devices. With regard to the commonalities between Internet and non-Internet victimization, it is necessary to study emerging Internet victimization in the context of non-Internet victimization on shared risk and protective factors (Olweus, 2012). On the other hand, Internet victimization has unique features that are not shared by non-Internet victimization. It is also possible that the health impacts of Internet victimization may be better explained by simultaneously examining those of non-Internet victimization. Further exploration of the correlates of cyber versus non-Internet bullying is warranted for practitioners to actively address shared needs and develop preventive approaches for both forms of victimization.

2.3 Risk factors for peer victimization

Risk factors occur at individual, family and peer relationship levels, as well as community and society. A meta-analysis study found that there may be some common protective and risk factors shared by the victims of peer victimization (Griffin & Gross, 2004). Understanding the protective and risk factors within both individual and family contexts should be the preliminary step for Internet and non-Internet victimization prevention (Espelage, 2014).

2.3.1 Individual level risk factors

Gender. Research on non-internet bullying reports that girls have a higher risk of victimization involving relational aggression, such as spreading rumors, while boys are likely to experience the direct physical and verbal types of peer victimization (Griffin & Gross, 2004). Similar to non-Internet victimization, Internet victimization is also a socio-ecological phenomenon. Literature on internet bullying documents the way in which girls are more frequently bullied than boys online (Hong et al., 2016; Smith et al., 2008; Wang, Iannotti, & Nansel, 2009).

Low intelligence. Some studies found that low intelligence plays a moderate role associated with academic performance and non-Internet peer violence involvement (Lynam & Moffitt, 1993).

History of involvement in violence. Children who experience childhood aggression or have been involved in juvenile delinquency have increased risks of non-Internet peer victimization

(Loeber & Hay, 1997). Prior victimization offline, long-term psychological problems, negative social attitudes, and low self-concept are found correlated with Internet victimization (Espelage, 2014; Sanzone-Goodrich, 2013).

School performance. Low academic achievement, weak bonding with school, and learning disabilities are found to consistently predict non-Internet peer violence or delinquency (Griffin & Gross, 2004; Moore et al., 2014).

Psychological conditions or behavioral problems. Several studies revealed that low self-control, concentration problems, and attention deficit-hyperactivity disorders, may combine with adverse childhood environments to increase the risks of Internet and non-Internet peer violence involvement (Bernat, Oakes, Pettingell, & Resnick, 2012; Olweus, 2012).

Closeness to friends. Studies suggest that children with a low level of closeness to friends gain less support from friends, which may contribute to the risks of all types of Internet and non-Internet victimization (Kendrick, Jutengren, & Stattin, 2012). Young people experiencing loneliness or having fewer quality friendships are more likely to be victimized regardless of online or offline aggression (Boulton, Trueman, Chau, Whitehand, & Amataya, 1999).

Self-efficacy. A lack of social self-efficacy might lead to the impression of easy targets and therefore increases the likelihood of non-Internet victimization (Bagwell & Schmidt, 2011; Kokkinos & Kipritsi, 2012), while no significant relationship has been found between self-efficacy and online victimization.

2.3.2 Family level risk factors

Family disadvantages. Family disadvantages, such as low socioeconomic status and poverty, which may increase parental stress levels and in turn the likelihood of harsh parenting practices, have been consistently identified as common risk factors (Rodriguez, 2010) to exposure to victimization in other contexts (Dussich & Maekoya, 2007; Zhu et al., 2018).

Parental addictive or behavioral problems. Parental problems with addiction and mental health disorders may directly impair parental functioning (Whitaker, Orzol, & Kahn, 2006), and problematic behaviors by parents are often highly comorbid and significantly interconnected with children's victimization outside family (Bailey, Webster, Baker, & Kavanagh, 2012; Ford, Elhai, Connor, & Frueh, 2010).

Family structure. Growing attention has given to the effect of family structure (often referred to as the type of family where a child is residing) on child victimization and the distress symptoms expressed by victims (Turner, Finkelhor, Hamby, & Shattuck, 2013). Children living in stepfamilies have generally reported higher risks of victimization and distress than those living in natural families with two biological parents, adopted families, or single-parent families (Turner et al., 2013).

2.3.3 Family victimization

Family victimization, including direct abuse and neglect by parents, intimate partner violence among parents, and elder abuse or in-law conflict, have been reported in recent studies to have positive relationships with victimization experiences of children (Chan, Fong, Yan,

Chow, & Ip, 2011; Chan, 2017). Cross-sectional investigations found significant associations between direct and indirect exposure to family violence and bullying behaviors (Hong et al., 2016). However, no study yet has been found to report the relationships between family victimization and adolescents` Internet victimization.

Family relationship dynamics are likely to influence children's behavior in other contexts. Family systems play an essential role in the development of behavioral patterns in adolescents. Specifically, challenges such as school and life transition during adolescence are likely to place added pressure on family systems in responding to the changing needs and responsibilities of adolescents (Cross & Barnes, 2014). Families with limited material or emotional resources may fail to respond to adolescents` needs, which could contribute to the tension within family units, and may further reinforce the use of maladaptive and violent behaviors among family members. Adolescents growing up in violent families learn to respond aggressively to protect themselves and tend to become more approving of violence as a strategy, and may extend these behavioral patterns to peer interactions or even inflict bullying behaviors upon others. Studies also found that emotional residues resulting from family victimization experiences, such as fear, depression, and hopelessness, may hinder adolescents` interpersonal skills in developing healthy peer relationships (Reinecke, Curry, & March, 2009; Finkelhor et al., 2009). In this way, examination of the risk factors for and characteristics of peer victimization should be put into the context of family systems to study the family-based mechanisms of peer victimization.

Peer victims tend to come from families with extensive conflicts, poor parental supervision, or emotional deprivation (Finkelhor et al., 2011). They "learn" violent behaviors and internalize their weakness as a stable personal trait, which has been reported as a future

possibility of being bullied (Wilczenski et al., 1997). As discussed above, non-Internet

victimization shares commonalities with Internet victimization, such as social liabilities with

people known in real life and revengeful motivation from non-Internet victimization. Given

the relative novelty of internet victimization research, the limited research output might

hinder the differences between the two forms of victimization (Low & Espelage, 2013). The

current project is an important step in the maturation of investigation that internet

victimization should be considered in the family systems , from which we can better

understand and study its correlates and underlying factors. Moreover, this project will also

pioneer efforts to investigate the associations between Internet victimization and non-Internet

victimization in the context of family victimization.

2.4 Health impacts of peer victimization

2.4.1 Health impacts of non-Internet victimization

Emotional problems. Non-internet victimization has long been reported to predict poorer

physical and mental health among victims, including more severe internalizing problems

(e.g., depression and anger), post-traumatic stress disorder (PTSD), poorer social adjustment,

poorer self-esteem, more suicidal ideation, and reduction in number of close friends

(Copeland, Wolke, Angold, & Costello, 2013). These relationships have also been proven

across cultural groups; for instance, psychological distress and depression have been found

positively associated with anxiety among Chinese international students and Korean mothers

(Wang & Mallinckrodt, 2006; Lee & Koo, 2015).

Addictive behaviors. Some studies reported increased likelihood of addictive behaviors of

victims such as gambling, smoking, alcohol abuse, and drug abuse, where adolescents who

reported higher rates of addictive behaviors were involved in more frequent violent behaviors (Copeland et al., 2013). However, some studies reported that peer victims were less likely to take drugs or alcohol than non-victimized peers, or injuries were not necessarily influenced by addictive behaviors (Goebert, Else, Matsu, Chung, & Chang, 2011).

2.4.2 Health impacts of Internet victimization

The health impacts of Internet victimization remain limited. Some studies reported that both victims and perpetrators of internet bullying are found to be at greater risk of depressive symptoms, anger, low self-esteem, self-harm, and suicidal ideation (Gamez-Guadix et al., 2013) as well as academic difficulties and problems with peer relations (Daine et al., 2013; Kowalski & Limber, 2013). Social networkers in Eastern cultures may also experience stress over the potential loss of face arising from personal privacy leakages (Li & Lin, 2016). Social media users often feel uncertain about and uncomfortable with what they share owing to the unpredictable nature of online audiences, and are therefore cautious about the content and posts they share with others (Kauer, Mangan, & Sanci, 2014). Consequently, when trusted others disclose personal information without consent, the result may be social-related anxiety and exaggerated fear, with the user victims becoming worried about being the focus of unwanted attention and the target of unwelcome evaluation (Li & Lin, 2016). Internet victimization can have devastating consequences for its victims, who fear being harassed physically in the real world and emotionally on the Internet, and abusive doxing can last for years (Smith et al., 2008).

The psychological effects of Internet victimization seem to cause as much as or more emotional harm than non-Internet bullying owing to the wider audience and potentially

devastating impacts of harassment and stalking in cyberspace (Schacter, Greenberg, & Juvonen, 2016). In view of the evidence showing complications of peer violence associated with addictive behaviors and the limited evidence on the health impacts of Internet victimization, there are good reasons to propose empirical examination to estimate and compare the health correlates of internet victimization with non-Internet victimization. Awareness of healthy online communication and privacy protection are of great importance in reducing such detrimental activities as harassment, cyberbullying, and even physical harm in the real world.

2.5 Research gaps

Peer victimization is a common but inacceptable public health problem in young generation. Peer victimization affects the well-being of millions of adolescents globally, and also brings irreversible deleterious effects on the development of society. The scope of peer victimization has been changing with the development of society. Current knowledge is lacking in the comparison between Internet and non-Internet victimization, and the associations between prior family victimization experiences and peer victimization.

As reviewed above, current literature in the field has provided abundant , diverse results on the prevalence and characteristics of internet and non-internet victimization. Although online interaction differs from face-to-face interaction in some ways, it appears that they share an overlapping social space to communicate with people known in real world (Sharples, Graber, Harrison, & Logan, 2009). Several studies have shown that internet victimization is a way of non-internet aggression using electronic communication beyond real life (Kowalski, Morgan, & Limber, 2012). As an emerging and increasing public health issue, the study of Internet

victimization warrants attention and inquiry in the context of non-internet victimization. One of the goals of the current research is to clarify the association between these two types of victimization, considering that we should not simply transfer the knowledge gained about non-Internet victimization to internet victimization.

Internet and non-Internet victimization emerge in the context of various environmental, social, and familial factors. Most of the literature has examined the risk factors and correlates of Internet and non-Internet victimization in separation. For example, research analyzing gender and siblings at home has found contradictory relationships with the level of prevalence of peer victimization. As with intelligence and self-efficacy, their associations with non-internet victimization are robust while those with internet victimization are still lacking. Research has shown mixed results and far from demonstrated that the comparisons between the predictors and health impacts associated with each type of victimization. Identifying the differences in risk factors is a necessary step for schools and policy makers in allocating resources for the prevention of both types of victimization, and identification of commonalities in the correlates is essential to designing more cost-effective and specified intervention programs for certain types of victimization. In this project, we will examine the possible contribution of individual and family factors related to peer victimization, with specific focus on the comparative analysis of Internet and non-Internet victimization.

Few studies have compared the associations with family disadvantages and parents` addictions and behavioral problems, while no study has yet reported the relationships between family victimization experiences and adolescents` Internet victimization. The family-centered perspective associated with peer victimization in this project is motivated by the consideration of adolescent maladaptive behaviors as a developmental consequence of

family dysfunction. The violent family systems that failed to respond to adolescents` needs may further reinforce the use of maladaptive behaviors among peers. Theoretical construct and empirical evidence on the mechanisms of family systems, and the focus of research from individual to family perspectives to address these relationships are crucial for enhancing understanding of peer victimization and determining the best ways to intervene. The second concentration of this project is to pioneer efforts in the field to investigate peer victimization in the context of family victimization.

2.6 Chapter summary

This chapter reviewed current literature on peer victimization and summarized knowledge gaps for further investigation. A more comprehensive definition of peer victimization, an integrative framework that includes the impacts of family functioning processes, ecological characteristics and health correlates comparison between Internet and non-Internet victims is required. Continuing efforts on peer victimization to specify and understand the dynamics and impact of this phenomenon has great potential.

CHAPTER 3: THEORETICAL FRAMEWORK

A wide range of theoretical models is available to explain the etiological processes and risk factors of peer victimization, most of which focus on non-Internet victimization. The common risk factors and correlates across Internet and non-Internet victimization are usually prior exposure to family victimization. In this chapter, we focus on the public health approach and family systems theory to illustrate how the theoretical integration could advance understanding of interactions of peer victimization across contexts.

3.1 The Public Health Approach

The WHO has set forth the public health approach to address socioeconomic determinants of health and recommend collaborative prevention implementation, which has been broadly adopted globally (Ford et al., 2018). The public health approach is rooted in a socio-ecological context that views health as an integrated continuum, and suggests the interplay of biological, behavioral, psychological, social and environmental factors contribute to health outcomes across lifespan (Pies, Parthasarathy, Kotelchuck, & Lu, 2009). It recognizes the need to improve health and safety by addressing underlying risk and protective factors that contribute to perpetration and victimization. The key objectives of the public health approach are to understand the distribution of disease, the patterns of health care practices, and to prevent and control disease in the community (WHO, 2017). The approach consists of four main characteristics:

1) Define the problem: This includes needs assessment of the problem through robust

analysis and systematic collection of information about the scope, types, characteristics and consequences associated with the problem (WHO, 2017). For example, researchers used public health surveillance to estimate the lifetime cost of child maltreatment and national maltreatment cases in the US (Fang et al., 2012). Developing a truer count of a specific issue can increase our understanding and lead to stronger policy.

2) Identify risk and protective factors This includes efforts to establish the causes of the problem and the correlates of the factors that increase or decrease the risk for the problem (WHO, 2017). There is a large body of studies on factors of public health issues, such as poverty, low socioeconomic status, and disability (Covington, 2013). Understanding the risk and protective factors could help to modify through interventions by minimizing risk factors and strengthening protective factors at population level.

3) Develop and identify interventions This includes applications to determine the strategy in response to the identified needs, and to include collaborative community works to prevent violence by designing, developing, and modifying interventions (WHO, 2017). For example, recent government reports using public health approach for maltreatment prevention described a number of primary, secondary and tertiary programs to support evidence-based practices and strengthen community partnerships (Thomas, Leicht, Hughes, Madigan, & Dowell, 2002; U.S. Administration for Children and Families, 2012).

4) Implementation on a wider scale This includes implementation of the designed interventions in a range of settings, and efforts to monitor the process through evaluation of the effectiveness, impact and cost-effectiveness (WHO, 2017). For example, the U.S. Centers for Disease Control and Prevention (2008) developed strategic direction for child

maltreatment prevention, and launched research projects on maltreatment intervention programs, including positive parenting programs (Triple P) and Project SafeCare (CDC, 2010). Such programs for the prevention of violence based on the public health approach are critically important for reducing and preventing violence at the population level, from completing surveillance discovery and identifying risk segmentation through intervention strategies for prevention efforts.

Researchers have suggested a public health approach in the past decade and published a number of reports on preventing and treating violence and injuries (Mercy, Krug, Dahlberg, & Zwi, 2003; Covington, 2013). The World Health Organization (2017) defines the public health approach to violence prevention to "improve the health and safety of all individuals by addressing underlying risk factors that increase the likelihood that an individual will become a victim or a perpetrator of violence" In violence research and prevention, public health approach provides a useful framework to investigate and understand the causes and consequences of specific problems. In bullying prevention, adopting a public health approach will provide number of benefits and will be a useful framework to meet the goal. The increasing rate of Internet and non-Internet bullying in the younger generation demands new responses that have proven successful in addressing this public health problem. On risk and protective factors exploration, public health approach to bullying prevention may lead to address modifiable risks that are not currently well understood, such as the family and parental characteristics of Internet bullying. Regarding bullying intervention strategies, the study of bullying and cyberbullying also requires an integrated and comprehensive public health approach to drive the implementation of effective intervention programs (Miles, Espiritu, Horen, Sebian & Waetzig, 2010). This approach has been proven successful in recent population-level work on bullying studies, which provided robust investigation and

drove practice implications on bullying prevention (Wang et al., 2010).

Adolescents may be particularly vulnerable when their capacities are still developing while at the same time, they need to start taking independent decisions and stepping out of their families. Adolescents` physical and psychological health status merits continuous attention not only for adolescent development but also for the benefits of global public health. Despite the work that has already been done, there are significant gaps in our knowledge of peer victimization among adolescents. For example, evidence remains limited on the associations with family characteristics and integrative comparison between Internet and non-Internet victimization. Awareness of healthy online communication and privacy protection are of great importance in reducing such detrimental activities as online victimization as well as physical harm in the real world. A public health approach is also vitally important to describe promising practices and to impact larger segments of at-risk children and families (Covington, 2013). Therefore, a direction for future studies based on the public health approach would be helpful to explore and make comparisons among the social, personality, and psychological impacts of Internet and non-Internet victimization.

3.2 Family Systems Theory

Bowen family systems theory uses systems thinking to view the family as an emotional unit and to describe the complex emotional interactions among family members (Kerr, 2000). Family systems theory shifts the focus from one individual to the patterns of interactions, transitions, and relationships within the family (Nichols & Schwartz, 2004). A central tenet of the family systems theory is that what changes in one member's functioning is predictably followed by reciprocal changes in the functioning of other members (Bowen, 1974; Kerr,

2000). The emotional interdependence in the family unit then promotes cohesiveness and cooperation to protect the family members. Therefore, Bowen suggested that individual functioning should be understood in the context of relationships with reciprocal impact on each other.

The four foundation concepts of family systems theory are anxiety, the forces towards togetherness or individuality, emotional system, and the family as an emotional unit (Bowen, 1974). Anxiety is divided into two major types, including acute anxiety, which is described as an immediate reaction to stress, and chronic anxiety, which is described as the long-lasting and cross-generational fear of stress (Kerr, 2000). Chronic anxiety also drives the force towards togetherness, which is often represented as sacrifice for or dominance over one another (Bowen, 1974). For example, a couple may have conflicts with each other or spill the tension into children in the family that subconsciously tell the other that he/she is violating the emotional dependency. Family Systems Theory regards family as an emotional unit where the emotional functioning of every family member plays a part in the occurrence of emotional functioning in other family members (Bowen, 1974). An emotional system, as the core assumption of the theory, is shaped by evolution and governs human relationship systems. Family functioning is therefore very much emotionally influenced and reflected by one another (Brown, 1999; Bowen, Yeates, & Palmer, 2018). Such common types of vicious cycles of violence can ultimately affect all members of the family, showing the importance of preventing violence through a family-centered approach in which all members are involved, regardless of whether they are identified specifically as victims.

Based on the emotional foundation, Bowen (1974) developed eight principles for the differentiation of self, triangling, nuclear family emotional process, family projection

process, multi-generational transmission process, sibling position, emotional cutoff, and emotional processes in society. Triangles reflect family members` anxiety in the emotional system, which includes a third party to relieve dyadic tension in short term but may complicate interpersonal problems in the long run (Bowen, 1974). The principles have sequential impacts on nuclear family process and multi-generational process (Xia, Li, & Liu, 2018; Paat & Markham, 2019). For example, parents transmit their fear or other emotional problems to a child in the family projection process; a child growing up with high emotional dependency with parents may have difficulty in separating feelings from thinking. When they grow up to be married and have their own children, in the multi-generational transmission process, they appear to have greater anxiety in focusing on third-generation children, who are therefore less able to regulate their emotions. These are essential to observe family characteristics, family functioning processes, and bullying victimization.

Adverse experiences with family members could increase children's subsequent vulnerability to victimization and risk of perpetration among peers. Family Systems Theory researchers advocate that family members have reciprocal influence on each other that each member is the cause and effect of the behavioral and emotional outcomes of the other members (Bowen, 1974; Rothbaum, Rosen, Ujiie, & Uchida, 2002). The interrelationships of victimization radiate out in multiple directions instead of a linear transmission, which connects across different forms of violence throughout individual life spans (Hamby & Grych, 2012). For example, researchers demonstrated that peer victims usually come from families with extensive violence, conflicts and adversities that lead to poor parental supervision and emotional deprivation, addictive behaviors and poorer mental health (Finkelhor, Turner, Hamby, & Ormrod, 2010; Chan, 2017).

In most Asian countries and in a majority of immigrant Asian families in Western countries, three generations live together, and older adults are expected to help married children with chores and childcare (Chen, Chan, & Cheung, 2018). Caregivers for co-resident elderly individuals have been found to be associated with lower marital quality in adult couples and with more conflict between children and elders in the same household (Chen, Chan, & Cheung, 2018). Depressed parents may not be responsive to the children's expectations due to their psychological or physical unavailability (Cummings & Davies, 1994). In this way, family systems theory provides a framework to understand the individual functioning within the family unit as well as the transmission of behavioral and emotional patterns across generations.

3.3 Application of the two theories in current project

As reviewed in previous chapters, recent efforts are based on an ecological approach to understand the correlates and associated factors of peer victimization at the individual and family levels, and so forth. To prevent and intervene in Internet and non-Internet victimization, the four main characteristics of the public health approach provide insights for the early detection of common risk factors and the development of universal preventive interventions that will promote well-being and enhance resilience among adolescents. This project will also bring forward two major issues of concern based on the integrative and comprehensive public health framework.

First, on defining the Internet and non-Internet victimization, we will conduct comparative analysis on the prevalence and characteristics of the two forms of victimization with national representative examples. The less studied doxing victimization, which is deemed as the link

between Internet and non-Internet victimization will be included in the analytical framework. Recent work (Wang, Iannotti, Luk, & Nansel, 2010) are examples of the type of population-level research that is found necessary to drive effective intervention decisions and strategies with appropriate data. Second, a public health approach includes a strong emphasis on risk and protective factors that might influence the problem. This project will examine the relationships between individual-level factors, such as gender and family disadvantages, such as parents` addictive behaviors and low socioeconomic status, with adolescents` internet and non-internet victimization. An emphasis on reducing peer victimization with identified individual and social risk profiles has been a staple of interventions in Europe and the USA (Anthony et al., 2010). Finally, informed development of interventions that empower all students to promote positive behaviors and reduce peer victimization will be discussed as further implications. For example, based on the risk and protective factors, proactive assessments of individual and family characteristics should be taken into consideration in anti-bullying policies. In regard to the health and mental health correlates, emotional support will be potentially implemented to confer resilience against peer victimization.

The family systems theory shifts the focus from one individual to the patterns of interactions among family members, which should help researchers and practitioners to be more effective in identifying potential victims of family units. In this project we will explore the potential connections between various types of family victimization and adolescents` peer victimization based on the main concepts and assumptions. By studying peer victimization in the context of family systems, this project pioneers a family-based perspective in the field of peer victimization studies, and in so doing it helps to break the vicious cycle of victimization within family units, improving the allocation of resources to forestall the negative outcomes that confront at-risk families (Finkelhor, Ormrod, Turner, & Holt, 2009).

The Family Systems Theory set forth four foundation concepts in a family system, including anxiety, the forces towards togetherness or individuality, emotional system, and the family as an emotional unit (Bowen, 1974). First, this project will examine family disadvantages and limited resources, which are commonly identified as factors that increase parental stress and anxiety levels, and in turn the likelihood of harsh parenting practices that contribute to child victimization (Rodriguez, 2010). Addictive problems or mental health disorders among parents are often highly comorbid and significantly interconnected with each other (Bailey, Webster, Baker, & Kavanagh, 2012). In particular, smoking and alcohol dependence are common in intimate partner violence victims as well as in perpetrators of elder abuse (Dixon, Hamilton-Giachristsis, Browne, & Ostapuik, 2007). Child victims of these abusive parents, if not exposed to proper coping strategies, may be even vulnerable to a cumulative burden of problematic relationships with other family members, or even a subsequent victimization in school and community contexts (Dussich & Maekoya, 2007; Zhu, Chan, & Chen, 2018). Second, the Family Systems Theory views family as an emotional system; for example, children of violent parents may suffer from emotional residues of intra-familial violence. Emotional problems may interfere with appropriate peer interactions and accurate processing of social information (Shields & Cicchetti, 2001), and hinder their ability to develop healthy peer relationships. In such cases, emotional status of adolescents should be important indicator of vulnerabilities to potential peer victimization. In this project, we are about to study the relationships between peer victimization and adolescents` emotional problems, in particular, to compare the Internet and non-Internet victimization by comparative analysis of emotional status of the victims.

3.4 Chapter summary

This chapter describes the fundamentals of a public health approach and discusses how this approach has been applied to improve surveillance of public health problems. The systematic understanding of risk and protective factors and the health consequences of bullying victimization demands public health approach as an effective means of prevention. The theoretical review on Family Systems Theory also showed that family violence may detour or shift to parent-child conflict or peer victimization in school and community settings.

CHAPTER 4: RESEARCH QUESTION, HYPOTHESIS & OBJECTIVES

4.1 Conceptual framework

This dissertation aims to complement prior work in this area by using the above-described family systems theory and the public health approach as compatible foundation to examine multiple aspects of individual/family factors and health/mental correlates of peer victimization experiences among adolescents. Previous literature provides ample evidence on risk factors and health correlates of non-Internet victimization (Cook, Williams, Guerra, Kim, & Sadek, 2010; Kowalski, Giumetti, Schroeder, & Lattanner, 2014). However, it still needs to clarify specific mechanisms, such as which contextual factors contribute to highest risk of Internet victimization, and the differences and similarities of risk factors of Internet and non-Internet victimization. In addition to the scarcity of literature concerning the possible correlates of family violence and disadvantaged family characteristics, little is known about whether their relations with non-Internet victimization are also applicable among the Chinese population.

Concerning the heterogeneous nature of exposure to peer bullying, a more integrative assessment regarding the pattern and dynamic analysis of Internet and non-Internet victimization would yield valuable information for researchers, practitioners and policymakers to make a less biased determination of the situation. The objectives of this public health approach framework are to understand the prevalence, risk and protective factors as well as health correlates of peer victimization online and offline. Figure 4-1 summarizes the conceptual framework based on existing evidence.
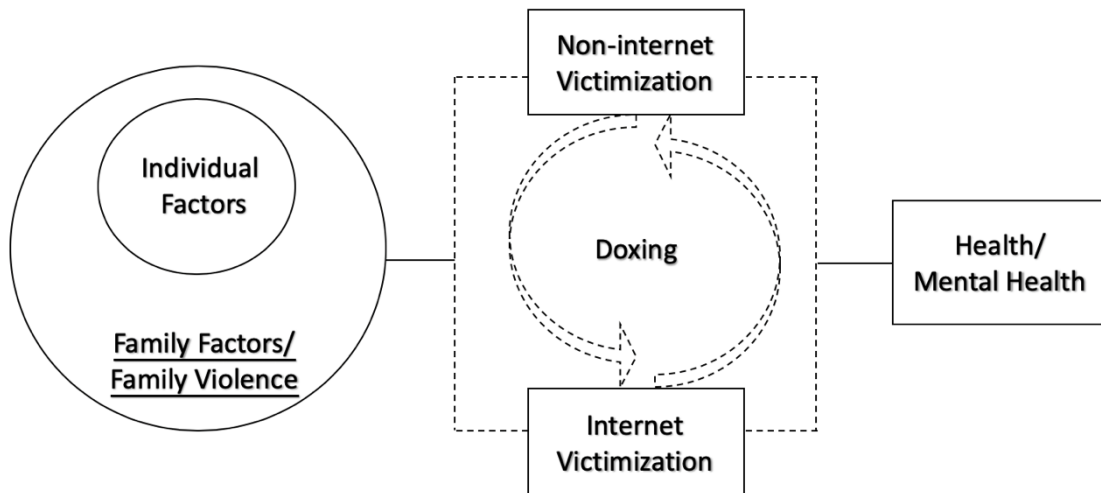
Figure 4-1 Research Conceptual framework

4.2 Research questions

The prevalence of Internet and non-Internet victimization, individual and family risk factors, health and mental health correlates, are integrated into the framework as a whole. As summarized in the literature review, there are interactions among these factors leading to important knowledge gaps yet to be answered. Arising from the existing knowledge and guided by the conceptual framework above, this dissertation aims to contribute to knowledge by investigating the prevalence and risk factors of Internet and non-Internet victimization experiences among Chinese adolescents, with a special focus on family violence and health impacts of victimization experiences. The studies in this dissertation will study the less examined associations and mechanisms, as shown in the framework, with the following research questions:

Q1: Are Internet and non-internet peer victimization similar or different in terms of prevalence and risk factors?

Q1a: Prevalence

What is the prevalence of Internet victimization and non-Internet victimization among Chinese adolescents? Which one is more prevalent?

Q1b: Risk factors

Are there any gender differences in peer victimization? If so, are these differences between Internet and non-Internet victimization?

Are adolescents from disadvantaged families having higher risks of Internet and non-Internet peer victimization? Are the risk factors common to Internet and non-Internet victimization? Or is there any risk factor unique to a particular type?

Q2: Are Internet and non-Internet peer victimization associated with each other?

Q3: Connecting family violence, Internet victimization and non-Internet peer victimization

Are there any associations between family violence and adolescents` non-Internet victimization and Internet victimization? If so, are there any differences in the effects of family violence types?

Q4: Health impact of Internet and non-Internet peer victimization

Are physical and mental health problems associated with peer victimization? If so, what

are the specific associations between victimization type and mental health problems?

4.3 Chapter summary

This chapter develops the conceptual framework and five research questions to examine in

this dissertation. To answer these research questions, the following chapters introduce two

studies that provide empirical findings from a large representative sample to estimate the

prevalence of peer victimization by using a large sample in mainland China and Hong Kong.

The first study introduces the co-occurrence of family poly-victimization and adolescents'

Internet and non-Internet victimization, contributing to the understanding of the impact of

peer victimization on adolescents' addictive behaviors and health correlates. The results of

the first study have been published as two journal papers (Chen, Lo, Zhu, Cheung, Chan, &

Ip, 2018; Chen, Chen, Zhu, Chan, & Ip, 2018).

Study two explored doxing victimization in cyberspace and the associations with adolescents`

mental health problems, with special focus on exploring specific impacts of doxed

information types, doxing perpetrators and platforms of the doxing, on adolescents' risks of

depression, anxiety, and stress. The results of this second study have been published as a

journal paper (Chen, Chan, & Cheung, 2018).

Chapter 6 summarizes the major findings of the two studies. Chapter 7 discusses how the

findings could contribute to the establishment of the illustrated framework. This chapter will

also describe the implications for general research in the bullying victimization discipline and provide recommendations for prevention and intervention practice.

CHAPTER 5: METHODOLOGY

5.1 Definition of terms

Adolescents: We used the definition of adolescents by the World Health Organization

(WHO) as people between 10 and 19 years of age.

Peer victimization: Peer victimization is here defined as "repeated harassment or bullying,

including physical, verbal, or psychological violence by perpetrators with intention", and, to

distinguish it from simple peer conflicts, the perpetrator-victim relationships in peer

victimization must exist a power imbalance (Graham & Bellmore, 2007).

Internet and non-Internet victimization: Internet victimization is defined as "willful and

repeated harm inflicted through computers, cell phones, and other electronic devices"

(Patchin & Hinduja, 2015). Non-Internet victimization is defined as peer victimization not

happened on the internet.

Doxing is defined as "searching for and publishing private or identifying information about a

particular individual on the Internet, typically with malicious intent" (Douglas, 2016).

5.2 Rationale of the two studies

The World Health Commission declared violence victimization as a major public health

issue, followed by an analysis of the health and social effects, risk and protective factors, and

types of preventive efforts (Krug, Mercy, Dahlberg, & Zwi, 2002). As discussed in previous chapters, the present project will focus on 1) the comparison between Internet and non-Internet victimization as well as 2) the examination of the associations between family victimization and peer victimization. Based on the theoretical construct and the proposed public health framework, the project will employ data from two large representative sample studies to contribute to understanding of peer victimization among adolescents in Chinese society. The two studies will be merged in the analysis to report on the prevalence of Internet and non-Internet victimization, the comparative exploration of a variety of risk factors and health correlates, and the examination of the associations with family victimization. The proposed connections between the four research questions and the two studies are summarized as follows.

Study One examined relationships between family victimization and adolescents` Internet and non-Internet victimization as well as the health correlates of Internet and non-Internet victimization. This study seeks to answer the research questions: 1) Q1a: What is the prevalence of Internet victimization and non-Internet victimization among Chinese adolescents? Which one is more prevalent? 2) Q1b: Are there any gender differences in peer victimization? If so, are these differences between Internet and non-Internet victimization? 3) Q3: Are there any associations between family violence and adolescents` non-Internet victimization and Internet victimization? If so, are there any differences in the effects of family violence types? 4) Q4: Are physical and mental health problems associated with peer victimization? If so, what are the specific associations between victimization type and mental health problems?

Cyberspace has changed significantly in the past decade, while our ability to be anonymous online remains an immutable feature. This brings along benefits for us to visit websites or exchange messages online with privacy, while it may also be a huge factor in harassment in cyberspace with no fear of real-name consequences. Once private and identifiable information is exposed online through doxing, the victims may be targeted for harassment or bullying in cyberspace or even in real life. Therefore, doxing is in parallel with Internet and non-Internet victimization and links the harassment in cyberspace to that in real life (Chen et al., 2018). Doxing is underreported in the field of peer victimization but has drawn increasing attention in recent years. In Study Two reported herein, the doxing victimization and its emotional consequences will be examined among adolescents in Hong Kong and seeks to answer the following research questions: 1) Q1b: Are there any gender differences in doxing victimization? 2) Q2: Is Internet and non-Internet peer victimization associated with each other? 3) Q4: Are mental health problems associated with doxing victimization? If so, what are the specific associations between victimization type and mental health problems?

Examining the comparative characteristics of peer victimization, victimization related health correlates and addictive behaviors may provide implications for studies on both present and future adolescent development. The examination of early experiences of family victimization may also predict Internet and non-Internet peer victimization in later life; the early detection of such evidence will have serious implications for public health interventions. The detailed hypotheses and research designs of the two studies are introduced in the following sections.

5.3 Study One

5.3.1 Research questions and hypotheses

Research questions of Study One include:

Q1a: *What is the prevalence of Internet victimization and non-Internet victimization among Chinese adolescents? Which one is more prevalent?*

Q1b: *Are there any gender differences in Internet victimization?*

Q3: *Are there any associations between family violence and adolescents` non-Internet victimization and Internet victimization? If so, are there any differences in the effects of family violence types?*

Q4: *Are physical and mental health problems associated with peer victimization? If so, what are the specific associations between victimization type and mental health problems?*

We hypothesized in this study that:

H1a: *Non-Internet victimization is more prevalent than Internet victimization among Chinese adolescents;*

H1b: *Girls tend to report more Internet victimization, while boys report more non-Internet victimization;*

H3: *Family violence is positively associated with adolescents` Internet and non-Internet victimization;*

H4: *Internet victimization has similar impact on health as non-Internet victimization; peer victimization is positively correlated with adolescents` addictive behaviors.*

5.3.2 Study design and sampling

The data in this study were collected with a large representative population study conducted in China, using a sample of 18,341 Chinese high school students aged 15–17 years. A two-stage stratified sampling method was employed in the data collection process (Chan et al., 2013). In stage one, high schools were randomly sampled from the five cities in mainland China, including Tianjin, Shenzhen, Shanghai, Xi'an , and Wuhan as well as Hong Kong special administrative region. These six cities, located in the northern, southern, eastern, western and central regions of China, represent the diversity of the nation. This design aims to maximize the diversity and representativeness of the sample. Two urban administrative districts and one rural administrative district were randomly selected from five cities in mainland China. A total of 196 high schools were contacted and 150 schools agreed to participate, with response rate of 76.7% achieved at this stage. In the second stage, one or two classes were randomly selected from the 150 participating schools. About 19,142 eligible students were approached, and 18,341 students returned the completed questionnaire, giving a response rate of 99.7% at the individual level. No significant difference was found between the participating schools and non-participating schools, nor between participating students and non-participating students. Assent forms were filled by the student participants together with the self-reported questionnaire in a private room at schools, under the instruction of trained interviewers. The mean age of the participants was 15.86 years (SD=0.97). The sample included 53.3% boys and 46.7% girls.

5.3.3 Measures

A range of survey instruments were employed in the questionnaire for the participants` self-reports. The modules of items are summarized as follows:

Demographic characteristics. This section includes self-constructed items to collect demographic and socioeconomic characteristics of the participants and family members. The sample items include age, gender, ethnicity, grade, number of siblings of the participant; parents' education levels, marital status, employment status; as well as family income.

Internet and non-Internet victimization. This section comprises two validated instruments: the Juvenile Victimization Questionnaire (JVQ) to assess direct forms of victimization, and the Relational Aggression Scale (RAS) to assess the indirect forms of victimization. The six-item peer and sibling module from the Chinese version of the 34-item JVQ (Finkelhor et al., 2011) was used to assess direct forms of victimization. This module demonstrated satisfactory internal consistency and reliability (Cronbach's α = .77). The sample item wasDid a group of kids or a gang hit, jump, or attack you?". The RAS was used to provide a more comprehensive assessment of indirect forms of victimization (Crick & Grotpeter, 1995). The Chinese version of the RAS demonstrated satisfactory internal consistency and reliability (Cronbach's α = .83). The five items of the RAS are spreading rumors, keeping the victim from being in a group, telling friends to stop liking the victim, ignoring the victim, and threatening the victim. The participants were asked if their victimization experiences occurred in the family, at school, or on the Internet. This aims to specify Internet and non-Internet victimization. Specifically, those who responded to at least one item as "Yes" and

reported the experience that happened on the Internet will be coded as "Internet Victimization", others will be coded as "Non-Internet Victimization." This was used to differentiate cyberbullying from real world bullying. All the items above were rated on a 0/1 scale, where 1 represented having the experience and 0 represented no experience.

Experience of family violence. This module includes questions to assess participants` experiences of child maltreatment, witness of parental intimate partner violence, elder abuse and in-law conflict. Participants were asked if they had been maltreated by their father or mother (child maltreatment) by means of corporal punishment, physical violence, or verbal aggression (six items). A single item asked if participants had been left unattended at home by their parents (neglect). Participants' witnessing elder abuse and neglect at home was assessed by five items, including physical violence, verbal aggression, lack of care, neglect, and abandonment. Witness of in-law conflict was assessed by the occurrence of conflict between fathers or mothers and their parents-in-law, including verbal conflict or use of force (two items). We employed the items modified from the Abuse Assessment Screen (AAS; Soeken, McFarlane, Parker, & Lominack, 1998) to assess participants` witnessing parental intimate partner violence, including fathers' or mothers' use of physical assault, or verbal aggression against each other (four items). All the items above were rated on a 0/1 scale, where 1 represented having the experience and 0 represented no experience. The reliability of the above scales was satisfactory, with Cronbach's alphas ranging from .60 to .85.

Post-traumatic Stress Disorder (PTSD). Participants` exposure to traumatic events in the preceding 30 days was assessed using the 48-item UCLA PTSD index based on the Diagnostic and Statistical Manual of Mental Disorders (4th ed.; DSM-IV) PTSD diagnostic criteria (American Psychiatric Association, 1994; Chan, 2013). Sample items of this module

are "Upsetting thoughts, pictures, or sounds of what happened come into my mind when I do

not want them to", and "I have trouble going to sleep or I wake up often during the night"

Items were translated into Chinese using a back-translation procedure and rated on a yes/no

scale and the Chinese PTSD index demonstrated good reliability (α = .95).

Depression. Participants` depressive symptoms were assessed using the Chinese version of

the Beck Depression Inventory II (Leung, 2001). This module consists of 21 groups of

statements rated on a four-point Likert-type scale, with a higher score indicating more severe

depressive symptoms. Participants were asked to choose one statement to report how they felt

in the past two weeks. This scale demonstrated good internal consistency and reliability (α

= .90).

Health-related quality of life. Participants` physical health and mental health-related status

was assessed with the Chinese 12-item Short Form Health Survey (SF-12v2; Lam, Tse, &

Gandek, 2005). Item scores were summarized into two component 0/1 scores: physical

component (PCS) and mental component (MCS) summary scores, with higher scores

indicating better health-related quality of life. This instrument demonstrated satisfactory

reliability, with a Cronbach's alpha of .75–.83.

Deliberate self-harm and suicidal ideation Participants` suicide and deliberate self-harm

ideation were assessed by asking whether they had ever contemplated committing suicide or

carrying out deliberate self-harm. The responses were examined using a four-point Likert

scale (1 = strongly agree to 4 = strongly disagree).

Self-esteem. Participants` self-rated worth of themselves was assessed using the Rosenberg Self-Esteem Scale (Rosenberg, 1965). This scale includes five positively described statements and five negatively worded statements. The total score of the 10 items was summarized, with higher scores indicating higher self-esteem. The Chinese version of the Rosenberg Self-Esteem Scale was validated in previous study (Cheng & Hamid, 1995; Shek, 1998) with the internal consistency that Cronbach's alpha reported as .73.

Addictive behaviors. Participants' addictive behaviors were measured using five items including gambling ("I often gamble"), Smoking ("I often smoke"), Alcohol abuse ("I often get drunk"), and Substance abuse ("I used drugs like cocaine, heroin or opiates" and "I abused narcotics, analgesics or other psychoactive drugs"). All the items were self-constructed and rated on a two-component "yes/no" scale.

5.3.4 Data analysis

Questionnaires from all six cities were integrated into one dataset for analysis. Descriptive statistics were used to summarize the prevalence of different types, gender, and perpetrator differences of Internet and non-Internet victimization. The demographic characteristics and prevalence rates of family violence experiences were summarized and calculated using the Fisher exact test for comparison.

Since simultaneous free regression of the variables might generate a substantial confounded inference, this study adopted a structured multiphase regression analysis. This is based on the assumption that the variables in the three phases have a sequential causal relationship, but not vice versa. Structured multiphase logistic regression analysis, with victimization as the

dependent variable, was conducted to assess the associations between victimization, demographic characteristics, addictive behaviors, and health and mental health correlates. In Phase One, we performed separate multinomial logistic regressions for each demographic variable, with the control of all the other demographic variables. Specifically, in each separate regression analysis, one of the demographic variables was treated as the independent variable, while others were controlled as covariates. In Phase Two, we calculated the associations between victimization and family violence experiences with logistic regressions, controlling all the demographic variables in Phase One. In Phase Three, we analyzed the health correlates of victimization controlling all the variables in Phase One and Phase Two.

Statistical p-value < .05 was set at statistically significant, and SPSS version 23.0 was used to perform all the statistical analyses in this study.

5.3.5 Ethical issues and approval

The study was conducted in compliance with the Hospital Authority of Hong Kong's Investigators Code of Practice in Undertaking Clinical Research. The Institutional Review Board of the Hospital Authority, Hong Kong West Cluster and the local institutional review boards of the five mainland cities granted ethical approval. The local institutional review board for each mainland city provided approval for the study at the study site.

5.4 Study Two

5.4.1 Research questions and hypotheses

This study is the first in the field to estimate the associations between doxing victimization

and depression, anxiety, and stress experienced by adolescent victims. This analysis aims to further scholarly understanding of the impacts of doxing on adolescents' mental health. The research questions of this study include:

Q1b: *Are there any gender differences in peer victimization?*

Q2: *Are Internet and non-Internet peer victimization associated with each other?*

Q4: *Are physical and mental health problems associated with peer victimization? If so, what are the specific associations between victimization type and mental health problems?*

The hypothesis in the study are:

H1b: *Girls victims report more serious emotional problems than boys do;*

H2*: Doxing links Internet and non-Internet victimization by real-world information doxed by the people whom the victims known in real life;*

H4: *Doxing victimization is positively associated with psychological problems in adolescents. The negative effects on adolescents vary with the type, form, and/or perpetrator of the doxing behavior, perpetrators, and platforms.*

5.4.2 Study design and sampling

The study employed data from a cross-sectional school survey in Hong Kong in 2018. To pursue representative socioeconomic backgrounds of the participants, we randomly selected 22 schools from various districts in Hong Kong, covering government-funded schools, government-aided schools, subsidized-scheme schools, and private schools. Secondary Two to secondary Five grade students were randomly sampled in each school, and all students in the sampled classes were invited to participate in the survey. A total of 2,120 students participated in the survey. There were more boys (N = 1,123, 52.97%) than girls (N = 997, 47.03%), and average age was 15.11 years (SD = 1.45). No significant difference was found between participating and non-participating schools or individuals. The survey assessed their lifetime and past-week psychological feelings regarding victimization. The participating students signed informed consent forms and completed self-reported questionnaires in a private room at school under the instruction of trained interviewers.

5.4.3 Measures

Demographic characteristics Participants' and their family's demographic socioeconomic characteristics were collected using self-constructed term, including age, gender, education level of the participants as well as the education level of their father and mother.

Experiences of doxing victimization The participants' experiences of doxing victimization, that is having their personal information disclosed by others without their consent, were assessed by three items including the type of information disclosed, the person who had made the disclosure, and the platform on which the disclosure had been made. All three items were multiple-answer questions, requiring participants to check all responses that applied in their

case. The number of times of such disclosures were also assessed with the possible responses, including never, 1–2, 3–6, 7–10, 11–15, and over 15 times.

Depression, anxiety, and stress Doxing-related depression, anxiety, and stress of participants were assessed using the 21-item Depression Anxiety Stress Scale (DASS-21), which is the short form of the 42-item self-report DASS (Lovibond & Lovibond, 1995). Participants were asked about their feelings when their personal information was disclosed without consent. The items were divided into three dimensions, and rated as (Never), 1 (Sometimes), 2 (Often), and 3 (Always). The DASS-21 achieved good reliability, with a total Cronbach's alpha of .93, and Cronbach's alphas of .88, .82, and .90 for the Depression, Anxiety, and Stress scales, respectively.

5.4.4 Data analysis

Participants' demographic characteristics and the prevalence rates of doxing victimization were computed using descriptive statistics and divided by gender. To estimate the associations between doxing victimization and the correlates of depression, anxiety and stress, the demographic characteristics were controlled in regression analysis, with the DAS results as the dependent variable. A probability of $p < .05$ was considered statistically significant, and SPSS version 25.0 was used to perform all of the statistical analyses in this study.

5.4.5 Ethical issues and approval

The Human Research Ethics Committee of the University of Hong Kong granted ethical approval for this study.

5.5 Chapter summary

This chapter provides the major concepts used in this dissertation, presents the rationales of the selected studies, and introduces the methodologies of the two studies. Study One examines the risk factors and health correlates of peer victimization, with comparison between those of Internet and non-Internet victimization. Study Two investigates the relationships between doxing victimization and emotional problems. The purpose is to provide strategic vision on a chain of methods, which is based on theories and conceptual framework that designed the test research hypotheses in this dissertation.

CHAPTER 6: FINDINGS

6.1 Study One

6.1.1 Demographic characteristics of participants

The demographic characteristics of the participants are summarized in Table 6-1-1. We grouped the participants according to their victimization experiences, including "no victimization", "non-Internet victimization (who reported victimization in other places than on the Internet)", and "Internet victimization".

The prevalence of non-Internet victims was significantly higher than Internet victims, with 37.6% of participants reporting non-Internet victimization and 4.6% reporting Internet victimization. In the preceding year, the pattern was similar, with 28.9% of the participants experiencing non-Internet victimization and 3.9% experiencing Internet victimization.

Participants who have one or more siblings at home, married or cohabiting parents, parents' education level no more than secondary seven, parents` who are employed, family with below median income and who do not receive social security, make up the majority of our sample. To distinguish the characteristics that contribute to peer victimization, we conducted multiple regression analysis.

Q1a: *What is the prevalence of Internet victimization and non-Internet victimization among Chinese adolescents? Which one is more prevalent?*

6.1.2 Prevalence of peer victimization

Peer victimization consists of direct and indirect forms of victimization. We assessed the prevalence of various forms of victimization in the participants' lifetime and in the preceding year.

As shown in Table 6-1-2, 42.9% of the participants reported peer victimization experience in lifetime, and 33.9% claimed victimization experiences in the preceding year. The participants reported same rates of direct physical and verbal victimization (32.6%) and indirect relational aggression (32.6%) in lifetime, but slightly higher rate of direct victimization (25.3%) than indirect ones (24.7%) in the preceding year.

The prevalence rates differ with respect to different types of victimization. Specifically, verbal bullying (18.1%) and peer or sibling assault (17.7%) are the most prevalent forms of direct victimization in lifetime and in the preceding year. With regard to indirect victimization, spreading rumors (21.6%) and ignorance (20.2%) were the most prevalent forms during the lifetime and in the preceding year.

We then analyzed the places where they confronted the perpetrators. According to the answers of the participants, the majority of the victimization occurred in the school environment (34.7%), the others were in the neighborhood (10.7%) and family (6.3%). Consistent with Table 6-1-1, about 4.6% of participants reported Internet victimization in their lifetime and 3.9% reported the same in the preceding year.

Q1b: *Are there any gender differences in peer victimization?*

6.1.3 Gender differences in peer victimization

As hypothesized in previous chapters, we made gender comparisons of peer victimization. The results are shown in Table 6-1-3-1. In general, boys reported higher rates of lifetime peer victimization (44.2%) than girls (41.3%). The pattern is the same among all items of direct victimization in lifetime, and all separate items of direct and indirect victimization except spreading rumors, in the year preceding the study. Girls reported more on indirect victimization (31.4%, 33.9%) and most of the indirect victimization items in lifetime were spreading rumors, social exclusion, and ignorance.

We then made further gender comparisons on the Internet and non-Internet victimization results. As shown in Table 6-1-3-2, boys reported significantly higher rates of Internet and non-Internet victimization in lifetime and in the preceding year than girls. The prevalence rates of boys who had no victimization experiences in lifetime and in the preceding year was also higher than those of girls.

6.1.4 Regression analysis of peer victimization and demographic factors

We then processed two structured multiphase logistic regression analysis, the first one using peer victimization as the dependent variable, and the second using Internet and non-Internet victimization as dependent variable. Tables 6-1-4 to 6-1-6 illustrate results of three phases of the first regression analysis using peer victimization as dependent variable.

In Phase One, we performed separate multinomial logistic regressions for each demographic variable, including gender, age, and siblings. Table 6-1-4 shows that being a boy (aOR = 1.16.1.26, p < .001), young age (aOR = 0.93-0.96, p < .05), and having siblings at home (aOR = 1.48-1.53, p < .001), bring great risks to the possibility of peer victimization, in lifetime and in the preceding year.

6.1.5 Regression analysis of peer victimization and addictive behaviors

In Phase Two, we performed separate multinomial logistic regressions for each addictive behavior variable, including gambling, smoking, alcohol abuse, and substance abuse. All the demographic variables in Phase One (Tables 6-1-4) and other variables were adjusted in each regression analysis. As shown in Tables 6-1-5, three types of addictive behaviors were found significant with peer victimization, including gambling (aOR = 1.21, 95% CI 1.089–1.344, p < .05), smoking (aOR = 1.73, 95% CI 1.506–1.997, P < .001) and alcohol abuse (aOR = 1.47, 95% CI 1.308–1.652, p < .001). No significant correlation was found among those addicted to substance abuse.

6.1.6 Regression analysis of peer victimization and health

In Phase Three, we adjusted all the variables in Phases One and Phase Two to analyze the associations between peer victimization and health correlates. Table 6-1-6 show that higher rates of suicide ideation and deliberate self-harm (aOR = 2.27, 95% CI 2.093–2.461), PTSD symptoms (aOR = 1.73, 95% CI 1.653–1.812), and depressive symptoms (aOR = 1.05, 95% CI 1.046–1.054) were associated with significantly higher risks of peer victimization.

Self-esteem (aOR = 0.96, 95% CI 0.952–0.968), physical health (aOR = 0.95, 95% CI 0.95.0.959), and mental health (aOR = 0.97, 95% CI 0.963–0.97) related quality of life were found to be protective factors of peer victimization (all p < .001).

6.1.7 Regression analysis of Internet/non-Internet victimization and family characteristics

For the second structured multiphase logistic regression analysis, we used Internet and non-Internet victimization as dependent variables, and examined the associations between family characteristics, family victimization, and health correlates. Tables 6-1-7 to 6-1-9 illustrate the results of this regression analysis.

Table 6-1-7 shows that parents' divorce, separation, or widowhood (aOR = 1.27–1.68, p < .05), family`s below-median income (aOR = 1.11–1.35, p < .05), mother's education level lower than secondary three (aOR = 1.37–2.00, p < .05), and father's unemployment status (aOR = 1.43–2.13, p < .01) were significantly associated with adolescents` Internet and non-Internet victimization, both in lifetime and in the preceding year.

Q3: *Are there any associations between family violence and adolescents` non-Internet victimization and Internet victimization? If so, are there any differences in the effects of family violence types?*

6.1.8 Regression analysis of Internet/non-Internet victimization and family violence

In Phase Two, we controlled all the family variables in Phase One (Tables 6-1-7) and conducted separate regression analysis for each variable in this phase, including in-law

conflict between parents and grandparents; physical and psychological parental IPV; child corporal, physical and psychological maltreatment; and physical and verbal elder abuse and neglect.

As shown in Table 6-1-8, all the above types of family victimization were significantly associated with higher risks of Internet and non-Internet victimization, in lifetime and in the preceding year (aOR = 1.99–5.36, p < .001).

Associations between family victimization except child neglect were found statistically associated with higher risks for adolescents' Internet victimization (aOR = 2.24–5.36, p < .001) than non-Internet victimization (aOR = 1.99–3.37, p < .001). It is interesting to note that elder abuse is the greatest risk factor for adolescents' Internet victimization (aOR = 3.35–5.36, p < .001).

Q4: *Are physical and mental health problems associated with peer victimization? If so, what are the specific associations between victimization type and mental health problems?*

6.1.9 Regression analysis of peer victimization and health

In Phase Three, we adjusted all the family characteristics in Phase One and family victimization in Phase Two to analyze the associations between Internet/non-Internet victimization and the physical health of the adolescents. Table 6-1-9 summarized that statistically significant correlations were found between Internet and non-Internet victimization and PTSD, depression, and suicide ideation, in lifetime and in the preceding year (aOR = 1.01.1.54, p < .05). No significant difference was found between Internet and

non-Internet victimizations in these health items. That is to say, the health associations of Internet victimization are as serious as those of non-Internet victimization.

6.2 Study Two

Q1b: *Are there any gender differences in peer victimization?*

6.2.1 Prevalence and gender differences in types of doxed information

In Study Two, we examined the relationships between various aspects of doxing victimization and the emotional problems of victims. Table 6-2-1 shows the prevalence of the various types of doxed information by gender. Overall, 15%-31% of participants reported that their personal information or privacy data were disclosed by someone without their consent. The most prevalent information being doxed is personal photos or videos (31.4%), names (29.9%), birthday dates (24.2%), and mobile phone numbers (15.1%). Gender comparison results showed that girls reported significantly higher rates of victimization in being doxed of all types of information than boys did (all $p < .05$).

6.2.2 Prevalence and gender difference of perpetrators of doxing

As shown in Table 6-2-2, over half the participants reported that the perpetrators of their doxing victimization were found to be their classmates (50.7%, $p < .05$). We also found that all the top five rankings of perpetrators of doxing were reported as familiar to the victims, such as students in the same grade (30.3%) or in the same school (28.3%), someone the victims personally knew (26.2%), friends outside school (25.7%), and parents/family members (24.6%). Girls reported higher rates than boys in all the items examined.

6.2.3 Prevalence and gender differences in doxing platforms

For the platforms on which participants reported they were doxed, Table 6-2-3 showed that over half of the doxing was conducted via Instant Messenger (61.3%) and social networking sites (54.9%). Similarly, girls reported significantly higher rates of disclosure than boys on these doxing platforms (all p < .001). Boys, on the other hand, were more likely to be doxed on the other platforms considered: email (4.9%), online forums (0.4%), and blogs (0.4%).

Q4: Are physical and mental health problems associated with peer victimization? If so, what are the specific associations between victimization type and mental health problems?

6.2.4 Relationships between doxed information types and emotional problems

We then analyzed the associations between doxing types and victims` emotional problems. As shown in Table 6-2-4, the most significant associations were DAS and doxed personal photos and videos (aORs = 12.456-13.869, all ps < .001), mobile phone numbers (aORs = 11.802–14.647, all ps < .01), intimate relationship status (aORs = 5.832–10.352, all ps < .05), and sexual life (aORs = 8.336–11.041, all ps < .01).

6.2.5 Relationships between doxing perpetrators and emotional problems

Different perpetrators were found to have different impacts on the doxing victims. Tables 6-2-5 summarize that the most significant associations were doxing perpetrated by students in the same school, with anxiety (aOR = 12.528, p < .001) and depression (aOR = 8.503, p

< .01). Doxing by people the victims personally knew were also found significantly associated with depression, anxiety, and stress symptoms (aORs = 4.428–6.072, all p < .05).

6.2.6 Relationships between doxed platforms and emotional problems

We finally examined the various associations between doxing victimization platforms and emotional problems. The most significant associations with respect to depression, anxiety, and stress were doxing victimization experiences via Instant Messenger (aORs = 4.387-9.196, p < .01). Doxing victimization via social networking sites was found statistically the second-highest risk for victims` emotional problems (aORs = 5.593-6.468, all ps < .05).

CHAPTER 7: DISCUSSION

7.1 Summary of findings

This dissertation covers two cross-sectional investigations conducted in mainland China and Hong Kong, with the objective of analyzing the prevalence and risk factors of peer victimization among adolescents, with a special focus on the comparison between Internet victimization and non-Internet victimization. The findings of the two studies are among the first in the field to contribute to the understanding of risk factors of non-Internet victimization, relationships between peer victimization and family victimization as well as its impact on health. In accordance with the hypotheses we made in previous chapters, the detailed findings of this dissertation are summarized as follows:

Q1: Are Internet and non-internet peer victimization similar or different in terms of prevalence and risk factors?

Q1a: Prevalence

What is the prevalence of Internet victimization and non-Internet victimization among Chinese adolescents? Which one is more prevalent?

The results of Study One showed that 42.9% of adolescents in China experienced peer victimization, which is consistent with the prevalence of previous large studies (Chan, 2013; Chan et al., 2013). The participants reported same rates of direct physical and verbal victimization (32.6%) and indirect relational aggression (32.6%) in their lifetime, but slightly higher rate of direct victimization (25.3%) than indirect ones (24.7%) in the preceding year.

Teachers and parents of school-aged children and adolescents in China focus more on academic performance and competition but less on emotional well-being. This neglect may lead to tricky situations for adolescents, who already face the great burden of college entrance studies. The neglect may also be responsible for self-destructive or antisocial behaviors (Chan et al., 2013).

Our study is among the first to compare the prevalence of non-internet victimization and Internet victimization of the same sample. We found that the lifetime non-internet victimization rate (37.2%) was higher than that of internet victimization (4.6%) as reported by the adolescent participants. A similar pattern was found in the preceding year experiences of the participants, with 28.9% of participants reporting non-Internet victimization and 3.9% reporting Internet victimization. These are consistent with the results from studies globally in the same study period, such as studies in the United States (Wang, Iannotti & Nansel, 2011), Germany (Riebel, Jäger & Fischer, 2009), and the UK (Smith et al., 2008).

Q1b: Are there any gender differences in peer victimization? If so, are these differences between Internet and non-Internet victimization?

The findings in Study One revealed that boys reported higher rates of peer victimization in direct forms while girls reported more on indirect victimization. This is consistent with recent studies on gender comparisons of peer victimization (Aspenlieder et al., 2009). It can be illustrated that when experiencing peer conflicts, boys tend to react with direct physical or verbal retaliation. Boys with lower interest in masculine activities may increase the possibility of being bullied by other boys. Previous studies also showed that girls report more

peer friendship and social network stress than boys, and this gender difference intensifies in adolescence (Rose & Rudolph, 2006), which may explain the tendency of girls using indirect forms of peer violence to secure their sense of security in interpersonal relationships.

Specifically, we made gender comparison on internet victimization using sample in Study One, and doxing victimization using sample in Study Two. The gender comparison of doxing victimization is the first in the field of Internet victimization. Boys were found more likely than girls to have internet victimization experiences, and girls are more likely to be doxed than boys . This is consistent with results in non-internet victimization studies (Arslanet al., Fanti etal., 2012; Wong, Chan, & Cheng, 2012; Fanti, Demetriou, & Hawa, 2014). Cyberspace could be different in same setting as the real world in which boys choose to retaliate against their bullying perpetrator. Gender difference is one of the most widely studied characteristics in peer bullying discipline. Some other studies, however, provided diverging evidence that they reported no significant gender difference in internet victimization (Hinduja & Patchin, 2008; Jansen et al., 2012). This may due to the variations in internet behaviors and types of victimization that the researchers chose to study. For example, girls in our study reported much higher rates of doxing via Instant Messenger and social networking sites than boys. This could be explained by previous findings that compared with talking in person, girls are more comfortable interacting with others on social networking sites or through text messages than boys do (Pierce, 2009).

Q1b2: Are adolescents from disadvantaged families having higher risks of Internet and non-Internet peer victimization? Are the risk factors common to Internet and non-Internet victimization? Or is there any risk factor unique to a particular type?

Our study is among the first in the field that examined the relationships between family risk factors and Internet victimization, in comparison to those of non-internet victimization. In Study One, familial and parental disadvantaged characteristics were found significantly associated with adolescents` peer victimization, including internet and non-internet victimization. Specifically, parents' divorce, separation and widowhood, mothers low education level, father's unemployment, and family's below-median income, are associated with greater risks of Internet and non-Internet victimization, both in lifetime and in the preceding year. This is consistent with findings in recent studies on family factors and peer victimization (Jansen et al., 2012; Silvestri, 2015). It can be explained that low socioeconomic status and low parental educational levels limit family members` access to fewer emotional or material resources, which could be potential factors that contribute to higher risks of peer victimization. Recent studies also shown that better family support and parental protection are correlated with fewer incidences of bullying victimization (Jansen et al., 2012).

Q2: Are Internet and non-Internet peer victimization associated with each other?

This study provided empirical evidence on the close associations between Internet and non-Internet victimization, including overlaps in prevalence, risk factors, and victimization-related emotional problems. First, according to the findings in this dissertation, the prevalence of non-Internet victimization exceeds the prevalence of bullying in cyberspace. Recent studies found that only 10% of Internet victims had only been bullied online but had

no non-Internet victimization (Olweus, 2012). This implies that Internet victimization solely

and largely originates from non-Internet victimization, probably in school settings. Second,

the two studies contribute to understanding of the risk factors, family victimization, and

health correlations of Internet and non-Internet victimization among adolescents. Adolescents

who were exposed to peer victimization tended to have systematically poorer emotional

status; the negative impacts of physical health and mental health were statistically found to

have no difference between Internet and non-Internet victimization. Researchers suggested

that the level of Internet victimization dropped as significantly as that of non-Internet

victimization among those intervention programs tailored for non-Internet bullying at schools

(Olweus & Limber, 2010). In this sense, future research and practices are recommended to

direct continuous efforts on non-Internet victimization, so as to address and reduce the

pressing problem of Internet victimization.

Q3: Connecting family violence, Internet victimization and non-Internet peer victimization

Are there any associations between family violence and adolescents` non-Internet

victimization and Internet victimization? If so, are there any differences in the effects of

family violence types?

Our study is the first to assess the relationships between family violence experiences,

including experiences of parental intimate partner violence, elder abuse, child maltreatment,

and in-law conflict, with children's Internet victimization. In Study One, the results showed

that all types of family violence were associated with adolescents` Internet victimization and

non-Internet victimization. Adolescents who experienced family violence were found to have

a greater risk of having Internet victimization than those who did not. This study is also the first to examine relationships between elder abuse witness and internet victimization, which was found to be the highest risk for family violence form associated with children's Internet victimization. This can be explained with the following reasons.

Family dysfunction and impaired parental functioning, such as the witness of conflicts between parents and grandparents, or even abusive conduct to grandparents by parents within the family, stand out as the grounds for the socialization of violence in children (Chan, 2017). These children raised by violent parents may easily accept being bullied by peers, or learn violent ways of dealing with problems, since they might have observed positive consequences of parents' use of violence and formed positive expectations on the results of abusive behaviors (Bandura, 1986). Children who experience conflicts and violence at home tend to spend more time in cyberspace, while previous findings showed that longer Internet usage could be related to the involvement of cyber victimization (Sanzone-Goodrich, 2013). The longer time spent on the Internet might be related to greater exposure to negative materials or information on suicide and self-harm, which might then be associated with higher levels of depression, suicidal ideation, and self-harm (Daine et al., 2013). These risky behaviors may moderate the relationship between violence witness and violence victimization. On the other hand, limited social learning skills and coping strategies learned from parents may limit children's abilities to establish or maintain healthy relationships with peers in adolescence or adulthood.

Q4: Health impact of Internet and non-Internet peer victimization

Are physical and mental health problems associated with peer victimization? If so, what are the specific associations between victimization type and mental health problems?

The findings of the two studies showed that peer victims reported higher rates of PTSD symptoms, depressive symptoms, deliberate self-harm and suicide ideation, low self-esteem, and poorer health-related quality of life. We also found no significant difference between victims who reported Internet and non-Internet bullying in regard to these health items. The results from Study Two showed that the disclosure of almost all types of information subject to doxing are significantly associated with emotional problems including depression, anxiety, and stress. Doxing victimization by schoolmates via Instant Messenger and social networking sites have statistically significant associations with these emotional problems.

These results are in line with previous findings that peer victimization can be a catalyst for impaired mental health, that distress and fear may even increase the risk of suicidal ideation (Lindsay & Krysik, 2012). In turn, adolescents with low self-esteem and insufficient sources of emotional support may be more often targeted as peer victims. This vicious cycle further impacts physical and mental health (Goebert et al., 2011). Researchers also found that effects of victimization tend to accumulate, that those who experience multiple types of peer aggression suffer from more serious health and mental health distress (Chan, 2013), adulthood behavior problems, and mental difficulties (Ybrandt & Armelius, 2010; Goebert et al., 2011).

Social networking sites and online chatting have become increasingly important alternatives to face-to-face interactions among the younger generation (Li-Barber, 2012; Quinn & Oldmeadow, 2013). Socially anxious individuals, who may struggle to maintain relationships

and integrate into social groups in real world may take advantage of Internet platforms for daily interactions. Self-disclosure is linked to concerns over privacy and trust, and people generally share intimate information only if they are sure that the recipients are trustworthy (Mesch, 2012). On the other hand, the disclosure of such private information often makes one easily identifiable, thereby provoking anxiety over identity theft or harassment, and the sharing of location-based information can expose people to the risk of physical harm (Lyon, 2001). In addition, victims may also worry about the unpredictable negative judgment, "cyber-lynching" or personal revenge that the unauthorized information disclosure exposes them to (Chua & de la Cerna, 2014). These situations very often lead to serious repercussions and are likely to induce depression and stress for doxed victims (Li & Liu, 2016).

7.2 Implications

Implications for future research and practice should focus on raising awareness about Internet and non-Internet victimization prevention, and promotion of a family-centered approach for intervention in peer victimization. This is in response to some of the policies and regulations issued by international organizations in recent years. For example, the United Nations Convention on the Rights of the Child (2009) urges multi-disciplinary actions to protect children from all forms of violence. The WHO will also issue new a guidance "Helping Adolescents Thrive" in 2020 for policymakers, health practitioners, and educators to promote adolescents' mental health and prevent interpersonal violence. The attention of policymakers and interdisciplinary cooperation to support at-risk adolescents and families is of preliminary importance to public health.

7.2.1 Primary prevention: Preventing before occurring

7.2.1.1 Government to cover peer victimization in health promotion solutions

Peer victimization is not only detrimental to the well-being of individual victims but also to the development of society. The interconnections revealed in current project between non-Internet victimization and Internet victimization indicate that anti-bullying policies need to do more than it has to recognize the changing landscape of violence in both settings. To make progress toward bullying-free and adolescent-friendly environments, governments need to respond to the health and development needs of adolescents. The WHO (2017) launched a major initiative called accelerated action for the health of adolescents (AA-HA!), which covers a series of tangible information on facts and strategies, to serve as a guidance for local government on adolescents' health promotion solutions. It also calls for systematic inclusion of adolescents' perspectives in the health planning process. Many countries as yet have no adequate insight into the causes of adolescent ill-health. The policies and regulations from leading international organizations, and collaborations from academically developed countries should support mapping the health needs of adolescents, and bring together evidence-based policies to show what works (WHO, 2015). Young people should be protected by age-appropriate policies and programs provided by collaborative efforts in local and global communities to ensure they grow up as healthy and well-adjusted adults.

7.2.1.2 Schools to integrate Internet victimization into education programs

The results of this project showed that over half of the peer victimization occurred in school environment, and the doxing conducted by classmates and schoolmates was found to be the most significant cause for victims` emotional problems. As we discussed above, Internet victimization and non-Internet victimization share high level of origin and therefore,

prevention of Internet victimization is suggested to be combined with current non-Internet victimization intervention. Peer victimization prevention requires stakeholders from schools to facilitate a bully free environment. School teachers are expected to master knowledge about the range, types, and venues of peer victimization that adolescents are and will potentially be exposed to as well as the appropriate guidance to both the perpetrators and victims. A variety of educational strategies have been implemented by schools globally in recent years to raise young people's awareness of online risks and reduce their exposure to the associated negative experiences, with the I-SAFE Internet Safety Curriculum in the U.S. (Harshman, 2014) and Cyber Friendly Schools Project (Cross, Lester, Barnes, Cardoso, & Hadwen, 2015) in Australia being notable examples. Adolescents should learn from general curriculum about proper coping skills when witnessing doxing or cyberbullying, such as supporting the victims and reporting the offense of perpetrators. This will play a key role in protecting the mental health status of victims, and contribute to a violence-free environment in cyberspace.

7.2.1.3 Researchers to continue the examination on family factors for peer victimization
The World Health Organization (2005) pointed out that family-based research is pivotal to violence victimization prevention, as multiple forms of violence is likely to be associated with the same factors within a family. An integrated approach to study violence advocates that family is the basic unit of child and family victimization. This can be explained that family dysfunction and impaired parental functioning, such as abuse of the elderly by parents within the family, may stand out as the grounds for violence socialization of the children therefore contributing to peer violence in adolescence (Chan, 2017). Families continue to be the primary source of long-term care and support for older adults, which enables most elderly

to receive informal caregiving in their families. The mechanisms underlying this relationship should be further examined in detail. For example, parents being caregivers of co-resident elderly at home might have lower marital quality and more in-law conflicts. What`s more, the pattern of adolescents` Internet victimization also change consistently along with the increasingly growing content and forms of cyberspace. A significant proportion of the socioeconomic gradients of family characteristics examination are pending for explanation. Common types of vicious cycles of family violence, which ultimately can affect all members of the family, show the importance of preventing violence support for the whole family in which all members are involved, regardless of whether they are identified specifically as victims. Further studies may examine the underlying mechanisms of family victimization and the impact on peer victimization to provide more evidence-based support for holistic screening and intervention for peer victims.

7.2.2 Secondary prevention: Detecting and intervening

7.2.2.1 Community to promote awareness of marginalized family assistance

In this project, we found that all types of family violence, including in-law conflict, intimate partner violence, child maltreatment, and elder abuse are significantly associated with adolescents` Internet and non-Internet victimization. The results also revealed the significant relationships between family disadvantages and adolescents` peer victimization. Low socioeconomic status and parents` unemployment may increase parental stress levels and in turn contribute to children's victimization inside or outside families (Rodriguez, 2010). These findings support that the family-centered approach should help community practitioners effectively identify potential at-risk adolescents through screening at-risk families. It is recommended that they improve allocation of resources to forestall the negative outcomes

that confront familial difficulties. In this way, peer victimization should be considered in a family-centered context from which we can better understand the mechanisms between peer and family victimization, and better allocate resources in intervening with disadvantaged families.

7.2.2.2 Schools to train victims resilience against victimization experiences

Recent review studies provided a new vision on how victims cope with cyberbullying and how prosocial coping strategies are useful for victims to be resilient against their experiences (Raskauskas & Huynh, 2015). Considering the high comorbidity of Internet and non-Internet victimization, teachers and school administrators could consider implementing a general but broader violence prevention strategy to involve both types of victimization that is focused on improving the school climate. A meta-analysis showed that school-based intervention programs reduced peer victimization between 17% and 20% compared to routine school services, and the presence of parents and whole-school anti-bullying policies in the programs were proven to be effective elements and could be applied to school programs in China (Farrington & Ttofi, 2009). Researchers who systematically reviewed whole-school interventions against bullying highlighted the importance of collectivism and the effectiveness of whole-school regulation policies (Chan & Wong, 2015). The World Health Organization's (2015) calls for a family-centered perspective is of great importance to facilitate more efficient and cost-effective prevention and intervention programs. There are good reasons to believe that whole-school approach with the involvement of family members carries promise for future gains in preventing violence not only for adolescents but also for other family members. For example, this project is the first to reveal the significant relationship between elder abuse and adolescents' Internet victimization. Evidence has shown

that maladaptive coping strategies learned and reinforced from family members could extend into peer interactions and at school and increase the likelihood of peer violence involvement (Cross & Barnes, 2014; Cross, Lester, Pearce, Barnes, & Beatty, 2018). In this way, parents and teachers should also be connected in future intervention studies in response to their understanding of the phenomenon and health-correlated associations of the problem (Copeland et al., 2013). Program developers may consider the involvement of grandparents with adolescents in school workshops and programs.

7.2.2.3 Researchers to test intermediate pathways from victimization to resilience

Previous research found that the relationship between violence exposure and health impacts is complex. For example, intrinsic in many of the tested associations found intermediate pathways that complicate the tested relationships. Victimization experiences might increase the risk of negative health outcomes through certain risk behaviors as moderators (Della Cioppa, O'Neil, & Craig, 2015). For instance, understanding discontinuity between prior exposure to violence and later victimization as well as the changing roles of victim-perpetrator or perpetrator-victim on the same individual, are essential to understanding the forces that can counteract or shift the adverse effects of early violence exposure. Research on resilience has identified several constructs for children exposed to adversity (Domhardt, Münzer, Fegert, & Goldbeck, 2015; Wang, Zhang, & Zimmerman, 2015), while the trajectories on resilience function require longitudinal analysis. Therefore, more rigorously designed studies, such as longitudinal studies or RCTsand medical biomarker testing, are suggested to be included in future study designs for the measurement of victimization-related health outcomes. In statistical analysis, more properly controlled confounding variables need to be able to describe the potential pathways more conclusively (WHO, 2013). Cause-and-

effect relationships could be tested with a randomized controlled clinical trial or a cohort study, especially for effectiveness analysis of coping strategy programs. This developmental focus on violence can help identify key windows for intervention and even explore whether the malleability of some risk factors changes over the course of the lifespan.

7.2.3 Tertiary prevention: Treating from reoccurring

7.2.3.1 Community to ensure social inclusion of peer victims

Education on peer victimization should not only focus on policy regulation and management, but also on the positive force of integrative community environment. The results of current project imply that intervention on Internet safety requires continuous efforts to respond to the ever-changing cyberspace environment and some of the underscored components of Internet violence, such as bystanders and the mass audience of doxing. Previous victimization in communities could also be a risk factor for Internet violence involvement; people known in real world could be the perpetrators of Internet victimization, who therefore have more opportunities to obtain personal information and use for cyber-lynching. The gender and other inequalities addressed in this dissertation are crucial for inclusion in community services for promoting social inclusion and justice. For example, normative beliefs about gender and peer violence including masculinity influence violent and addictive behaviors among adolescents. Addressing these risk factors early can contribute to goals of social justice and inclusion. The effective interventions provided by health sectors, civil societal centers, academics, community social workers, and adolescents themselves will therefore yield lifelong benefits and long-lasting returns for the young generation.

7.2.3.2 Health sectors to monitor victims through health treatment

This project reported the significant relationships between peer victimization exposure and physical health and mental health correlates. The WHO (2017) recognizes the comorbidity of violence and health that would help health professionals to screen for violence and provide timely intervention. Closely supportive relationships in health sector are an important resource that could buffer against the negative impacts of physical and cognitive decline in later adulthood (Perissinotto, Cenzer, & Covinsky, 2012). Assessing the broad functioning and behaviors of victims could enable health practitioners to intervene early and promote the long-term health of adolescents. Medical settings should consider cooperating with research sectors to implement cohort or intervention studies through medical testing and record the changes in victimization, and to compare the specific impacts of supportive or drawbacks experiences among victims.

7.3 Limitations

The current studies pioneered the study on peer victimization in the context of family victimization, and contributed to Internet victimization research with comparative analysis with non-Internet victimization. Some limitations should be taken into account when interpreting its results.

1) Cross-sectional design may limit possible causal relations examination

The two studies were largely based on a cross-sectional examination of risk factors and health correlates among adolescents` peer victimization. The adoption of cross-sectional design might limit the investigation of causal relations between early victimization experiences and later adjustment, such as reactive aggressive behavior, intimate partner

violence and delinquency (Hipwell et al., 2014). Longitudinal designs are recommended to provide a more extensive understanding of the context of peer victimization and long-term impact on changes.

2) Participants with more diverse background are suggested for representativeness

The participants recruited for this study were secondary school students in mainland China and Hong Kong, who may not be representative of students in other countries or cultures. Due to the limited literature on the subgroup comparisons of peer victimization, it is recommended that future researchers recruit samples with a greater variety of demographic characteristics, including participants with different types of personalities, ethics, and other characteristics. The more diversified samples may also make subgroup analysis possible.

3) Control the overlapping effects between Internet and non-Internet victimization

The current project did not compare the differences in victimization-related impacts among those who were exposed to one type of victimization and those with both types of victimization. Researchers recently revealed that the additional effect of Internet victimization seemed negligible if the victim was exposed to both types of victimization (Olweus, 2012). Future studies should focus on the potentially overlapping impacts of Internet and non-Internet victimization as well as any cumulative effects of dual victimization. This subgroup comparison may contribute to further analysis of the associations between Internet and non-Internet victimization, and therefore provide implications for future preventive strategies on peer victimization.

7.4 Conclusion

Adolescence is a critical time of life, when children grow up to become independent, forge new relationships, and develop social skills to transition into adulthood. It can also be a challenging period – with the risk of violence, unhealthy products, mental health struggles, or other health issues (WHO, 2015). Study One was the first in the field that estimated the associations between family disadvantages and family victimization with Internet victimization experiences. Study Two was also the first to examine the emotional problems of doxing victimization among adolescents. Peer victimization in adolescents often has a lifelong impact on victims` physical, emotional, and social functioning. Adolescents exposed to peer and family victimization are in turn more likely to perpetuate themselves, formulating a vicious cycle. Mental health problems developed in adolescence can affect their way in parenting children, resulting in potential health consequences for generations to come.

Preventing peer victimization requires comprehensive approaches to address the social determinants of violence, including health inequality, rapid social change, and disadvantages of social protection. The findings from the two studies in this dissertation contribute to understanding in the field on prevalence, risk factors, health correlates of Internet and non-Internet victimization among adolescents, with special focus on relationships with family violence experiences, and comparison between Internet and non-Internet victimization. By applying a comprehensive and integrated framework informed by the public health approach, the empirical results complemented several underrepresented relationships and clarified specific mechanisms of peer victimization related health impacts. Implications for future research, practice, and policy are discussed based on the research findings.

The WHO (2020) announced that it will continue to work with governments globally in the coming decade to combat adolescent violence. Integrated violence prevention based on a

family context is highly recommended for schools and other service centers to support families as a whole in regard to preventing bullying victimization. For example, teachers need to participate in training programs related to family violence thereby identifying students at high risk of family violence and taking prompt prevention actions or providing therapeutic intervention. It is essential for future Internet and non-Internet prevention programs to consider living context and implement certain activities for adolescents. Studies on Internet victimization are still in infancy, more attention is needed to explore the complex phenomenon. A more systematic understanding of peer victimization is needed to decrease impulsive crimes, reduce the suffering of victims and further decrease the burden of victimization. Therefore, it is critical to explore its mechanisms and develop more effective intervention programs based on the public health implementation framework.

BIBLIOGRAPHY

Adam, E. K., Gunnar, M. R., & Tanaka, A. (2004). Adult attachment, parent emotion, and observed parenting behavior: Mediator and moderator models. *Child Development, 75,* 110-122.

Anthony, B. J., Wessler, S. L., & Sebian, J. K. (2010). Commentary: Guiding a public health approach to bullying. *Journal of Pediatric Psychology, 35*, 1113-1115.

Ainsworth, M. S. (1989). Attachments beyond infancy. *American Psychologist, 44*, 709-716.

American Psychiatric Association (1994). *Diagnostic and Statistical Manual of Mental Disorders (4th ed).* Washington, DC: American Psychiatric Association.

Appel, A. E., & Holden, G. W. (1998). The co-occurrence of spouse and physical child abuse: A review and appraisal. *Journal of Family Psychology, 12*, 578-599.

Arslan, S., Savaser, S., Hallett, V., & Balci, S. (2012). Cyberbullying among primary school students in Turkey: Self-reported prevalence and associations with home and school life. *Cyber-Psychology Behavior and Social Networking, 15*, 527–533.

Aspenlieder, L., Buchanan, C. M., McDougall, P., & Sippola, L. K. (2009). Gender nonconformity and peer victimization in pre-and early adolescence. *International Journal of Developmental Science, 3*, 3-16.

Atkinson, L., Paglia, A., Coolbear, J., Niccols, A., Parker, K. C., & Guger, S. (2000). Attachment security: A meta-analysis of maternal mental health correlates. *Clinical Psychology Review, 20*, 1019-1040.

Bagwell, C. L., & Schmidt, M. E. (2011). The friendship quality of overtly and relationally victimized children. *Merrill-Palmer Quarterly, 57*, 158–185.

Bailey, K., Webster, R., Baker, A. L., & Kavanagh, D. J. (2012). Exposure to dysfunctional parenting and trauma events and posttraumatic stress profiles among a treatment sample with coexisting depression and alcohol use problems. *Drug and Alcohol Review, 31,* 529-537.

Bandura, A. (1986). Social foundations of thought and action: A social cognitive theory. New York, NY: Prentice-Hall.

Barnes, J. C., TenEyck, M., Boutwell, B. B., & Beaver, K. M. (2013). Indicators of domestic/intimate partner violence are structured by genetic and nonshared environmental influences. *Journal of Psychiatric Research, 47*, 371-376.

Bartholomew, K., & Horowitz, L. M. (1991). Attachment styles among young adults: A test of a four-category model. *Journal of Personality and Social Psychology, 61*, 226-244.

Bidarra, Z. S., Lessard, G., & Dumont, A. (2016). Co-occurrence of intimate partner violence and child sexual abuse: Prevalence, risk factors and related issues. *Child Abuse & Neglect, 55*, 10-21.

Boulton, M. J., Trueman, M., Chau, C., Whitehand, C., & Amataya, K. (1999). Concurrent and longitudinal links between friendship and peer victimization: Implications for befriending interventions. *Journal of Adolescence, 22*, 461–466.

Bowen, M. (1974). Alcoholism as viewed through family systems theory and family psychotherapy. *Annals of the New York Academy of Sciences, 233*, 115-122.

Bowen, C., Yeates, G., & Palmer, S. (2018). Working with family systems: Tactics and

    techniques in practice. In *A Relational Approach to Rehabilitation* (pp. 187-230).

    Routledge.

Bowlby, J. (1988). Developmental psychiatry comes of age. *The American Journal of*

    Psychiatry, *145*, 1-10.

Bretherton, I., & Munholland, K. A. (1999). Internal working models in attachment

    relationships: A construct revisited. In J. Cassidy & P. R. Shaver (Eds.), *Handbook of*

    attachment: Theory, research, and clinical applications (p. 89–111). The Guilford Press.

Brown, J. (1999). Bowen family systems theory and practice: Illustration and critique.

    Australian and New Zealand Journal of Family Therapy, 20, 94-103.

Cannon, E. A., Anderson, M. L., Rivara, F. P., & Thompson, R. S. (2010). Adult health and

    relationship outcomes among women with abuse experiences during childhood. *Violence*

    and Victims, 25, 291-305.

Carver, C. S., & Connor-Smith, J. (2010). Personality and coping. *Annual Review of*

    Psychology, 61, 679-704.

Chan, H. C. O., & Wong, D. S. (2015). Traditional school bullying and cyberbullying in

    Chinese societies: Prevalence and a review of the whole-school intervention approach.

    Aggression and Violent Behavior, 23, 98-108.

Chan, K. L., Tiwari, A., Fong, D. Y., Leung, W. C., Brownridge, D. A., & Ho, P. C. (2009).

    Correlates of in-law conflict and intimate partner violence against Chinese pregnant

    women in Hong Kong. *Journal of Interpersonal Violence, 24*, 97-110.

Chan, K. L., Fong, D. Y. T., Yan, E., Chow, C. B., & Ip, P. (2011). Validation of the Chinese Juvenile Victimization Questionnaire. *Hong Kong Journal of Paediatrics, 16*, 17–24.

Chan, K. L. (2013). Victimization and poly-victimization among school-aged Chinese adolescents: prevalence and associations with health. *Preventive Medicine, 56*, 207-210.

Chan, K. L., Yan, E., Brownridge, D. A., & Ip, P. (2013). Associating child sexual abuse with child victimization in China. *The Journal of Pediatrics, 162*, 1028-1034.

Chan, K. L. (2014). Child victims and poly-victims in China: Are they more at-risk of family violence? *Child Abuse & Neglect, 38*, 1832-1839.

Chan, K. L. (2017). Family polyvictimization and elevated levels of addiction and psychopathology among parents in a Chinese household sample. *Journal of Interpersonal Violence*, *32*, 2433-2452.

Chan, K. L., Chen, M., Chen, Q., & Ip, P. (2017). Can family structure and social support reduce the impact of child victimization on health-related quality of life? *Child Abuse & Neglect, 72,* 66-74.

Chen, Q., Sun, X., Xie, Q., Li, J., & Chan, K. L. (2019). The impacts of internal migration on child victimization in China: A meta-analysis. *Trauma, Violence, & Abuse, 20*, 40-50.

Chen, Q.Q., Chan, K., & Cheung, A. (2018). Doxing victimization and emotional problems among secondary school students in Hong Kong. *International Journal of Environmental Research and Public Health, 15*, 2665.

Chen, Q. Q., Chen, M. T., Zhu, Y. H., Chan, K. L., & Ip, P. (2018). Health correlates, addictive behaviors, and peer victimization among adolescents in China. *World Journal of Pediatrics, 14*, 454-460.

Chen, Q.Q., Lo, C. K., Zhu, Y., Cheung, A., Chan, K. L., & Ip, P. (2018). Family poly-victimization and cyberbullying among adolescents in a Chinese school sample. *Child Abuse & Neglect, 77*, 180-187.

Cheng, S. T., & Hamid, P. N. (1995). An error in the use of translated scales: The Rosenberg Self-Esteem Scale for Chinese. *Perceptual and Motor Skills, 81*, 431-434.

China Internet Network Information Center (2010). A report on the internet behavior of adolescents in China. Retrieved from: http://www.cac.gov.cn/files/pdf/hlwtjbg/hlwlfzzkdctjbg025.pdf.

China Internet Network Information Center (2016). A report on the internet behavior of adolescents in China. Retrieved from: http://www.cnnic.net.cn/hlwfzyj/hlwxzbg/qsnbg/201608/P020160812393489128332.pdf

Chua, S. V., & de la Cerna Uy, K. J. (2014). The psychological anatomy of gossip. *American Journal of Management, 14*, 64-69.

Covington, T. (2013). The public health approach for understanding and preventing child maltreatment: A brief review of the literature and a call to action. *Child Welfare, 92*, 21-39.

Cook, C.R., Williams, K.R., Guerra, N.G., Kim, T.E., & Sadek, S. (2010). Predictors of bullying and victimization in childhood and adolescence: A meta-analytic investigation. *School Psychology Quarterly, 25*, 65–83.

Copeland, W. E., Wolke, D., Angold, A., & Costello, E. J. (2013). Adult psychiatric outcomes of bullying and being bullied by peers in childhood and adolescence. *JAMA Psychiatry, 70*, 419-426.

Crick, N. R., & Grotpeter, J. K. (1995). Relational aggression, gender, and social-psychological adjustment. *Child Development, 66,* 710-722.

Cross, D., Shaw, T., Hearn, L., Epstein, M., Monks, H., Lester, L., & Thomas, L. (2009). Australian covert bullying prevalence study. Perth: Child Health Promotion Research Centre, Edith Cowan University.

Cross, D., & Barnes, A. (2014). Using systems theory to understand and respond to family influences on children's bullying behavior: Friendly Schools Friendly Families Program. *Theory into Practice, 53*, 293-299.

Cross, D., Lester, L., Barnes, A., Cardoso, P., & Hadwen, K. (2015). If It's about Me, Why Do It without Me? Genuine Student Engagement in School Cyberbullying Education. *International Journal of Emotional Education, 7*, 35-51.

Cross, D., Lester, L., Pearce, N., Barnes, A., & Beatty, S. (2018). A group randomized controlled trial evaluating parent involvement in whole-school actions to reduce bullying. *The Journal of Educational Research, 111*, 255-267.

Crowell, J. A., & Treboux, D. (1995). A review of adult attachment measures: Implications for theory and research. *Social Development*, *4*, 294-327.

Davies, P. T., & Cummings, E. M. (1994). Marital conflict and child adjustment: An emotional security hypothesis. *Psychological Bulletin, 116,* 387-411.

Daine, K., Hawton, K., Singaravelu, V., Stewart, A., Simkin, S., & Montgomery, P. (2013). The power of the web: A systematic review of studies of the influence of the internet on self-harm and suicide in young people. *PLoS One, 8*(10), e77555.

Della Cioppa, V., O'Neil, A., & Craig, W. (2015). Learning from traditional bullying interventions: A review of research on cyberbullying and best practice. *Aggression and Violent Behavior, 23*, 61-68.

Dixon, L., Hamilton-Giachristsis, C., Browne, K., & Ostapuik, E. (2007). The co-occurrence of child and intimate partner maltreatment in the family: Characteristics of the violent perpetrators. *Journal of Family Violence, 22*, 675-689.

Domhardt, M., Münzer, A., Fegert, J. M., & Goldbeck, L. (2015). Resilience in survivors of child sexual abuse: A systematic review of the literature. *Trauma, Violence, & Abuse, 16*, 476-493.

Dooley, J. J., Pyżalski, J., & Cross, D. (2009). Cyberbullying versus face-to-face bullying: A theoretical and conceptual review. *Journal of Psychology, 217*, 182-188.

Douglas, D. M. (2016). Doxing: A conceptual analysis. *Ethics and Information Technology, 18*, 199-210.

Dussich, J. P., & Maekoya, C. (2007). Physical child harm and bullying-related behaviors: A comparative study in Japan, South Africa, and the United States. *International Journal of Offender Therapy and Comparative Criminology, 51*, 495-509.

Edleson, J. L., Shin, N., & Armendariz, K. K. J. (2008). Measuring children's exposure to domestic violence: The development and testing of the Child Exposure to Domestic Violence (CEDV) Scale. *Children and Youth Services Review*, *30*, 502-521.

Egan, S. K., & Perry, D. G. (1998). Does low self-regard invite victimization? *Developmental Psychology, 34*, 299-309.

Egeland, B., Jacobvitz, D., & Sroufe, L. A. (1988). Breaking the cycle of abuse. *Child Development, 59,* 1080-1088.

Emery, C. R., Thapa, S., Do, M. H., & Chan, K. L. (2015). Do family order and neighbor intervention against intimate partner violence protect children from abuse? Findings from Kathmandu. *Child Abuse & Neglect, 41*, 170-181.

Erikson, E. H. (1968). Psychoanalysis and Theories of Man. *Science, 161*, 257-258.

Ertem, I. O., Leventhal, J. M., & Dobbs, S. (2000). Intergenerational continuity of child physical abuse: How good is the evidence? *The Lancet*, *356*, 814-819.

Espelage, D. L. (2014). Ecological theory: Preventing youth bullying, aggression, and victimization. *Theory into Practice, 53*, 257–264.

Ewing Lee, E. A., & Troop-Gordon, W. (2011). Peer socialization of masculinity and femininity: Differential effects of overt and relational forms of peer victimization. *British Journal of Developmental Psychology, 29*, 197-213.

Fanti, K. A., Demetriou, A. G., & Hawa, V. V. (2012). A longitudinal study of cyberbullying: Examining risk and protective factors. *European Journal of Developmental Psychology, 9*, 168–181.

Fantuzzo, J., Boruch, R., Beriama, A., Atkins, M., & Marcus, S. (1997). Domestic violence and children: Prevalence and risk in five major US cities. *Journal of the American Academy of Child & Adolescent Psychiatry, 36*, 116-122.

Farrington, D. P., & Ttofi, M. M. (2009). School-based programs to reduce bullying and victimization. *The Campbell Collaboration, 6*, 1-149.

Feeney, J. A. (1999). Adult attachment, emotional control, and marital satisfaction. *Personal Relationships, 6*, 169-185.

Feeney, J., & Fitzgerald, J. (2019). Attachment, conflict and relationship quality: Laboratory-based and clinical insights. *Current Opinion in Psychology, 25*, 127-131.

Finkelhor, D., Ormrod, R., & Turner, H. (2007). Poly-victimization: A neglected component in child victimization. *Child Abuse & Neglect, 31*, 7-26.

Finkelhor, D., Ormrod, R., Turner, H., & Holt, M. (2009). Pathways to poly-victimization. *Child Maltreatment, 14*, 316-329.

Finkelhor, D., Turner, H., Ormrod, R., & Hamby, S. L. (2010). Trends in childhood violence and abuse exposure: Evidence from 2 national surveys. *Archives of Pediatrics & Adolescent Medicine, 164*, 238-242.

Finkelhor, D., Turner, H., Hamby, S., & Ormrod, R. (2011). *Poly-victimization: Children's Exposure to Multiple Types of Violence, Crime, and Abuse.* National Survey of Children's Exposure to Violence. Retrieved from http://scholars.unh.edu/cgi/viewcontent.cgi?article=1024&context=ccrc.

Folkman, S. (2008). The case for positive emotions in the stress process. *Anxiety, Stress, and Coping, 21*, 3-14.

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. *Journal of Adolescent Health, 46*, 545-552.

Fraley, R. (2002). Attachment stability from infancy to adulthood: Meta-analysis and dynamic modeling of developmental mechanisms. *Personality and Social Psychology Review*, *6*, 123-151.

Frey, K. S., Newman, J. B., Nolen, S. B., & Hirschstein, M. K. (2012). Reducing bullying and contributing peer behaviors: Addressing transactional relationships within the school social ecology. In S. R. Jimerson, A. B. Nickerson, M. J. Mayer, & M. J. Furlong (Eds.), *Handbook of school violence and school safety: International research and practice* (p. 383–395). Routledge, Taylor & Francis Group.

Gamez-Guadix, M., Orue, I., Smith, P. K., & Calvete, E. (2013). Longitudinal and reciprocal relations of cyberbullying with depression, substance use and problematic internet use among adolescents. *Journal of Adolescent Health, 53*, 446–452.

Geoffroy, M. C., Boivin, M., Arseneault, L., Turecki, G., Vitaro, F., Brendgen, M., ... & Côté, S. M. (2016). Associations between peer victimization and suicidal ideation and suicide attempt during adolescence: results from a prospective population-based birth cohort. *Journal of the American Academy of Child & Adolescent Psychiatry, 55*, 99-105.

Goddard, C., & Hitler, P. (1993). Child sexual abuse: Assault in a violent context. *Australian Journal of Social Issues, 28*, 20-33.

Goebert, D., Else, I., Matsu, C., Chung-Do, J., & Chang, J. Y. (2011). The impact of cyberbullying on substance use and mental health in a multiethnic sample. *Maternal and Child Health Journal, 15*, 1282-1286.

Goldweber, A., Waasdorp, T. E., & Bradshaw, C. P. (2013). Examining the link between forms of bullying behaviors and perceptions of safety and belonging among secondary school students. *Journal of School Psychology, 51*, 469-485.

Graham, S., & Bellmore, A. D. (2007). Peer victimization and mental health during early adolescence. *Theory into Practice, 46*, 138-146.

Green, T., Wilhelmsen, T., Wilmots, E., Dodd, B., & Quinn, S. (2016). Social anxiety, attributes of online communication and self-disclosure across private and public Facebook communication. *Computers in Human Behavior, 58*, 206-213.

Griffin, R. S., & Gross, A. M. (2004). Childhood bullying: Current empirical findings and future directions for research. *Aggression and Violent Behavior, 9*, 379-400.

Grossman, S. F., & Lundy, M. (2003). Use of domestic violence services across race and ethnicity by women aged 55 and older: The Illinois experience. *Violence Against Women, 9*, 1442-1452.

Hadden, B. W., Smith, C. V., & Webster, G. D. (2014). Relationship duration moderates associations between attachment and relationship quality: Meta-analytic support for the temporal adult romantic attachment model. *Personality and Social Psychology Review, 18*, 42-58.

Hamby, S., & Grych, J. (2012). The web of violence: Exploring connections among different forms of interpersonal violence and abuse. Springer Science & Business Media.

Harshman, K. L. (2014). *Assessing effectiveness of age-appropriate curriculum on internet safety education and cyberbullying prevention.* (Doctoral dissertation, Grand Canyon University).

Hazan, C., & Shaver, P. R. (1994). Attachment as an organizational framework for research on close relationships. *Psychological Inquiry, 5*, 1-22.

Herrenkohl, T. I., Leeb, R. T., & Higgins, D. (2016). The Public Health Model of Child Maltreatment Prevention. *Trauma, Violence, & Abuse, 17*, 363–365.

Hesketh, T., Zhen, Y., Lu, L., Dong, Z. X., Jun, Y. X., & Xing, Z. W. (2010). Stress and psychosomatic symptoms in Chinese school children: Cross-sectional survey. *Archives of Disease in Childhood, 95*, 136-140.

Hinduja, S., & Patchin, J. W. (2007). Offline consequences of online victimization: School violence and delinquency. *Journal of School Violence, 6*, 89–112.

Hinduja, S., & Patchin, J. W. (2008). Personal information of adolescents on the Internet: A quantitative content analysis of MySpace. *Journal of Adolescence, 31*, 125-146.

Hipwell, A. E., Stepp, S. D., Xiong, S., Keenan, K., Blokland, A., & Loeber, R. (2014). Parental punishment and peer victimization as developmental precursors to physical dating violence involvement among girls. *Journal of Research on Adolescence, 24*, 65-79.

Holmes, B. M., & Johnson, K. R. (2009). Adult attachment and romantic partner preference: A review. *Journal of Social and Personal Relationships*, *26*, 833-852.

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*, 503-515.

Hong, J. S., Lee, J., Espelage, D. L., Hunter, S. C., Patton, D. U., & Rivers Jr, T. (2016). Understanding the correlates of face-to-face and cyberbullying victimization among US adolescents: A social-ecological analysis. *Violence and Victims, 31*, 638-663.

Hutson, E. (2016). Cyberbullying in adolescence: A concept analysis. *Advances in Nursing Science, 39*, 60–70.

Jansen, P. W., Verlinden, M., Dommisse-van Berkel, A., Mieloo, C., van der Ende, J., Veenstra, R., ... Tiemeier, H. (2012). Prevalence of bullying and victimization among children in early elementary school: Do family and school neighborhood socioeconomic status matter? *BMC Public Health, 12*, 494-504.

Joinson, A. N., Reips, U. D., Buchanan, T., & Schofield, C. B. P. (2010). Privacy, trust, and self-disclosure online. *Human–Computer Interaction, 25*, 1-24.

Katz, L. F., & Low, S. M. (2004). Marital violence, co-parenting, and family-level processes in relation to children's adjustment. *Journal of Family Psychology*, *18*, 372-382.

Kauer, S. D., Mangan, C., & Sanci, L. (2014). Do online mental health services improve help-seeking for young people? A systematic review. *Journal of Medical Internet Research, 16,* e66.

Kendrick, K., Jutengren, G., & Stattin, H. (2012). The protective role of supportive friends against bullying perpetration and victimization. *Journal of Adolescence, 35*, 1069–1080.

Kerr, M.E. (2000). *One Family's Story: A Primer on Bowen Theory.* The Bowen Center for the Study of the Family. Retrieved from: http://www.thebowencenter.org.

Khanna, P., Zavarsky, P., & Lindskog, D. (2016). Experimental Analysis of Tools Used for Doxing and Proposed New Transforms to Help Organizations Protect against Doxing Attacks. *Procedia Computer Science, 94*, 459-464.

Khoury-Kassabri, M., Benbenishty, R., Astor, R. A., & Zeira, A. (2004). The contributions of community, family, and school variables to student victimization. *American Journal of Community Psychology, 34*, 187-204.

Kochanska, G., & Kim, S. (2013). Early attachment organization with both parents and future behavior problems: From infancy to middle childhood. *Child Development*, *84*, 283-296.

Kochenderfer-Ladd, B. (2004). Peer victimization: The role of emotions in adaptive and maladaptive coping. *Social Development, 13*, 329-349.

Kokkinos, C. M., & Kipritsi, E. (2012). The relationship between bullying, victimization, trait emotional intelligence, self-efficacy and empathy among preadolescents. *Social Psychology of Education, 15*, 41–58.

Kowalski, R. M., Morgan, C. A., & Limber, S. P. (2012). Traditional bullying as a potential warning sign of cyberbullying. *School Psychology International, 33*, 505-519.

Kowalski, R.M., Giumetti, G.W., Schroeder, A.N., & Lattanner, M.R. (2014). Bullying in the digital age: A critical review and meta-analysis of cyberbullying research among youth. *Psychological Bulletin, 140*, 1073–1137.

Kwan, G. C. E., & Skoric, M. M. (2013). Facebook bullying: An extension of battles in school. *Computers in Human Behavior, 29*, 16–25.

Lam, C. L., Tse, E. Y., & Gandek, B. (2005). Is the standard SF-12 health survey valid and equivalent for a Chinese population? *Quality of Life Research, 14*, 539–547.

Lee, J. S., & Koo, H. J. (2015). The relationship between adult attachment and depression in Korean mothers during the first 2 years postpartum: A moderated mediation model of self-esteem and maternal efficacy. *Personality and Individual Differences, 79*, 50-56.

Lenhart, A. (2015). *Teens, Social Media & Technology Overview 2015.* Retrieved from
http://www.pewinternet.org/2015/04/09/teens-social-media-technology-2015/.

Leung, K. W. (2001). A validation of the traditional Chinese (Hong Kong) versions of the
Beck Anxiety Inventory (BAI) and the Beck Depression Inventory-II (BDI-II). Hong
Kong, China: University of Hong Kong.

Li, L., & Lin, T. T. (2016). Examining Weibo posting anxiety among well-educated youth in
China: A qualitative approach. *Information Development, 32*, 1240-1252.

Li-Barber, K. T. (2012). Self-disclosure and student satisfaction with Facebook. *Computers
in Human Behavior, 28*, 624-630.

Lindsay, M., & Krysik, J. (2012). Online harassment among college students: A replication
incorporating new Internet trends. *Information, Communication & Society, 15*, 703-719.

Lovibond, P. F., & Lovibond, S. H. (1995). The structure of negative emotional states:
Comparison of the Depression Anxiety Stress Scales (DASS) with the Beck Depression
and Anxiety Inventories. *Behavior Research and Therapy, 33*, 335-343.

Low, S., & Espelage, D. (2013). Differentiating cyber bullying perpetration from non-
physical bullying: Commonalities across race, individual, and family predictors.
Psychology of Violence, 3, 39–52.

Lyon, D. (2001). Under my skin: From identification papers to body surveillance. In Caplan,
J.; Torpey, J.C.; Torpey, J. (Eds.), *Documenting Individual Identity: The Development of
State Practices in the Modern World.* Princeton University Press: NJ, USA. pp. 291-310.
ISBN: 9780691009124.

McCarthy, G., & Taylor, A. (1999). Avoidant/ambivalent attachment style as a mediator between abusive childhood experiences and adult relationship difficulties. *The Journal of Child Psychology and Psychiatry and Allied Disciplines, 40*, 465-477.

Mesch, G. S. (2012). Is online trust and trust in social institutions associated with online disclosure of identifiable information online? *Computers in Human Behavior, 28*, 1471-1477.

Mikulincer, M., & Shaver, P. R. (2007). *Attachment in adulthood: Structure, dynamics, and change.* Guilford Press.

Minuchin, P. (1985). Families and individual development: Provocations from the field of family therapy. *Child Development, 56,* 289-302.

Minuchin, S. (2013). The family in therapy. In *Counseling and family therapy with Latino populations* (pp. 74-84). Routledge.

Modecki, K. L., Minchin, J., Harbaugh, A. G., Guerra, N. G., & Runions, K. C. (2014). Bullying prevalence across contexts: A meta-analysis measuring cyber and traditional bullying. *Journal of Adolescent Health, 55*, 602-611.

Moffitt, T. E. (2003). Life-course-persistent and adolescence-limited antisocial behavior: A 10-year research review and a research agenda. In B. B. Lahey, T. E. Moffitt, & A. Caspi (Eds.), *Causes of conduct disorder and juvenile delinquency* (p. 49–75). The Guilford Press.

Moore, S. E., Norman, R. E., Sly, P. D., Whitehouse, A. J., Zubrick, S. R., & Scott, J. (2014). Adolescent peer aggression and its association with mental health and substance use in an Australian cohort. *Journal of Adolescence, 37*, 11-21.

Mrug, S., Loosier, P. S., & Windle, M. (2008). Violence exposure across multiple contexts: Individual and joint effects on adjustment. *American Journal of Orthopsychiatry, 78*, 70-84.

Nichols, M., & Schwartz, R. (2004). Structural family therapy. In M., Nichols & R., Schwartz (Series Eds.), *Family Therapy: Concepts and Methods* (6ª Ed., pp. 176-203). Boston: Allyn and Bacon.

Olweus, D., & Limber, S. P. (2010). Bullying in school: evaluation and dissemination of the Olweus Bullying Prevention Program. *American Journal of Orthopsychiatry, 80*, 124-134.

Olweus, D. (2012). Cyberbullying: An overrated phenomenon? *European Journal of Developmental Psychology, 9*, 520-538.

Olweus, D. (2013). School bullying: Development and some important challenges. *Annual Review of Clinical Psychology, 9*, 751-780.

Paat, Y. F., & Markham, C. (2019). The roles of family factors and relationship dynamics on dating violence victimization and perpetration among college men and women in emerging adulthood. *Journal of Interpersonal Violence, 34*, 81-114.

Patchin, J. W., & Hinduja, S. (2015). Measuring cyberbullying: Implications for research. *Aggression and Violent Behavior, 23*, 69–74.

Peker, A. (2015). Analyzing the risk factors predicting the cyberbullying status of secondary school students. *Egitim Ve Bilim, 40*, 57-75.

Perissinotto, C. M., Cenzer, I. S., & Covinsky, K. E. (2012). Loneliness in older persons: A predictor of functional decline and death. *Archives of Internal Medicine*, *172*, 1078-1084.

Pierce, T. (2009). Social anxiety and technology: Face-to-face communication versus technological communication among teens. *Computers in Human Behavior, 25*, 1367-1372.

Pritchard, J. (2007). Identifying and working with older male victims of abuse in England. *Journal of Elder Abuse & Neglect, 19*, 109-127.

Pynoos, R., Rodriguez, N., Steinberg, A., Stuber, M., & Frederick, C. (1998). UCLA PTSD index for DSM-IV. Los Angeles, CA: UCLA Trauma Psychiatry Service.

Quinn, S., & Oldmeadow, J. (2013). The martini effect and social networking sites: Early adolescents, mobile social networking and connectedness to friends. *Mobile Media & Communication, 1*, 237-247.

Raj, A., Livramento, K. N., Santana, M. C., Gupta, J., & Silverman, J. G. (2006). Victims of intimate partner violence more likely to report abuse from in-laws. *Violence Against Women, 12*, 936-949.

Raskauskas, J., & Huynh, A. (2015). The process of coping with cyberbullying: A systematic review. *Aggression and Violent Behavior, 23*, 118-125.

Reinecke, M. A., Curry, J. F., & March, J. S. (2009). Findings from the Treatment for Adolescents with Depression Study (TADS): What have we learned? What do we need to know? *Journal of Clinical Child & Adolescent Psychology, 38*, 761-767.

Riebel, J. R. S. J., Jäger, R. S., & Fischer, U. C. (2009). Cyberbullying in Germany–an

exploration of prevalence, overlapping with real life bullying and coping strategies.

Psychology Science Quarterly, 51, 298-314.

Riggs, S. A., & Kaminski, P. (2010). Childhood emotional abuse, adult attachment, and

depression as predictors of relational adjustment and psychological aggression. *Journal

of Aggression, Maltreatment & Trauma*, *19*, 75-104.

Robers, S., Kemp, J., Rathbun, A., & Morgan, R. E. (2014*). Indicators of School Crime and

Safety.* Retrieved from Washington, DC: National Center for Education Statistics

http://files.eric.ed.gov/fulltext/ED545223.pdf

Rodriguez, C. M. (2010). Parent-child aggression: Association with child abuse potential and

parenting styles. *Violence and Victims, 25*, 728-741.

Rose, A. J., & Rudolph, K. D. (2006). A review of sex differences in peer relationship

processes: Potential trade-offs for the emotional and behavioral development of girls and

boys. *Psychological Bulletin, 132*, 98-131.

Rosenberg, M. (1965). Society and the adolescent self-image. Princeton: Princeton

University Press.

Rothbaum, F., Rosen, K., Ujiie, T., & Uchida, N. (2002). Family systems theory, attachment

theory, and culture. *Family Process, 41*, 328-350.

Salmivalli, C. (2002). Is there an age decline in victimization by peers at school? *Educational

Research, 44*, 269-277.

Sanzone-Goodrich, M. (2013). Cyberbullying, self-concept, and perceived parental emotional
     availability in adolescents. Retrieved from
     http://search.proquest.com/docview/1448778412?accountid=14548.

Schacter, H. L., Greenberg, S., & Juvonen, J. (2016). Who's to blame? The effects of victim
     disclosure on bystander reactions to cyberbullying. *Computers in Human Behavior, 57,*
     115-121.

Schiamberg, L. B., & Gans, D. (1999). An ecological framework for contextual risk factors in
     elder abuse by adult children. *Journal of Elder Abuse & Neglect*, *11*, 79-103.

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*, 670-683.

Sharp, S., & Smith, P. K. (1991). Bullying in UK schools: The DES Sheffield bullying
     project. *Early Child Development and Care, 77*, 47-55.

Sharples, M., Graber, R., Harrison, C., & Logan, K. (2009). E-safety and Web 2.0 for
     children aged 11–16. *Journal of Computer Assisted Learning, 25*, 70-84.

Shek, D. T. (1998). A longitudinal study of the relations between parent-adolescent conflict
     and adolescent psychological well-being. *The Journal of Genetic Psychology, 159*, 53-
     67.

Shen, A. C. T. (2009). Self-esteem of young adults experiencing interparental violence and
     child physical maltreatment: Parental and peer relationships as mediators. *Journal of
     Interpersonal Violence, 24*, 770-794.

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*, 349-363.

Shipman, K. L., Rossman, B. R., & West, J. C. (1999). Co-occurrence of spousal violence and child abuse: Conceptual implications. *Child Maltreatment, 4*, 93-102.

Silverman, J. G., Balaiah, D., Ritter, J., Dasgupta, A., Boyce, S. C., Decker, M. R., ... & Raj, A. (2016). Maternal morbidity associated with violence and maltreatment from husbands and in-laws: Findings from Indian slum communities. *Reproductive Health, 13*, 109-120.

Silvestri, G. E. (2015). Socioeconomics, demographics, and cyberbullying: A quantitative study (Doctoral dissertation, Capella University).

Slep, A. M. S., & O'leary, S. G. (2001). Examining partner and child abuse: Are we ready for a more integrated approach to family violence? *Clinical Child and Family Psychology Review, 4*, 87-107.

Smith, P. K., Mahdavi, J., Carvalho, M., Fisher, S., Russell, S., & Tippett, N. (2008). Cyberbullying: Its nature and impact in secondary school pupils. *Journal of Child Psychology and Psychiatry, 49*, 376–385.

Snyder, P., Doerfler, P., Kanich, C., & McCoy, D. (2017, November). Fifteen minutes of unwanted fame: Detecting and characterizing doxing. In Proceedings of the 2017 Internet Measurement Conference (pp. 432-444).

Soeken, K. L., McFarlane, J., Parker, B., & Lominack, M. C. (1998). The abuse assessment screen: A clinical instrument to measure frequency, severity, and perpetrator of abuse against women. *Sage Series on Violence Against Women, 10*, 195–203.

Song, A., Wenzel, S. L., Kim, J. Y., & Nam, B. (2017). Experience of domestic violence

during childhood, intimate partner violence, and the deterrent effect of awareness of

legal consequences. *Journal of Interpersonal Violence*, *32*, 357-372.

Sroufe, L. A., Egeland, B., Carlson, E., & Collins, W. (2005). Placing early attachment

experiences in developmental context. *Attachment from Infancy to Adulthood: The*

Major Longitudinal Studies, (pp. 48-70). New York, NY: Guilford Press.

Strabić, N., & Tokić Milaković, A. (2016). Cyberbullying among children and its comparison

to traditional forms of peer violence. *Criminology & Social Integration Journal, 24*, 184-

201.

Tucker, C. J., Finkelhor, D., Turner, H., & Shattuck, A. M. (2014). Sibling and peer

victimization in childhood and adolescence. *Child Abuse & Neglect, 38*, 1599-1606.

Turner, H. A., Finkelhor, D., Hamby, S. L., & Shattuck, A. (2013). Family structure,

victimization, and child mental health in a nationally representative sample. *Social*

Science & Medicine, 87, 39-51.

United Nations. (2009). *Convention on the Rights of the Child*. Retrieved from

https://www.un.org/esa/socdev/unpfii/documents/CRC.GC.C.11_EN.pdf

United Nations Children`s Fund. (2014). Children's rights in the digital age. Challenges:

Newsletter on progress towards the Millennium Development Goals from a child rights

perspective. Retrieved from

http://repositorio.cepal.org/bitstream/handle/11362/37337/Challenges18_ECLAC_UNIC

EF_en.pdf?sequence=1.

Wang, C. C. D., & Mallinckrodt, B. (2006). Acculturation, attachment, and psychosocial adjustment of Chinese/Taiwanese international students. *Journal of Counseling Psychology, 53*, 422-433.

Wang, J., Iannotti, R. J., & Nansel, T. R. (2009). School bullying among adolescents in the United States: Physical, verbal, relational, and cyber. *Journal of Adolescent Health, 45*, 368-375.

Wang, J., Iannotti, R. J., Luk, J. W., & Nansel, T. R. (2010). Co-occurrence of victimization from five subtypes of bullying: Physical, verbal, social exclusion, spreading rumors, and cyber. *Journal of Pediatric Psychology, 35*, 1103-1112.

Wang, J., Nansel, T.R., & Iannotti, R.J. (2011). Cyber bullying and traditional bullying: Differential association with depression. *Journal of Adolescent Health, 48*, 415–417.

Wang, J. L., Zhang, D. J., & Zimmerman, M. A. (2015). Resilience theory and its implications for Chinese adolescents. *Psychological Reports, 117*, 354-375.

Waters, E., Hamilton, C. E., & Weinfield, N. S. (2000). The stability of attachment security from infancy to adolescence and early adulthood: General introduction. *Child Development, 71*, 678-683.

Whitaker, R. C., Orzol, S. M., & Kahn, R. S. (2006). Maternal mental health, substance use, and domestic violence in the year after delivery and subsequent behavior problems in children at age 3 years. *Archives of General Psychiatry, 63*, 551-560.

Wilczenski, F. L., Steegmann, R., Braun, M., Feeley, F., Griffin, J., Horowitz, T., ... Olson, S. (1997). Children as victims and victimizers: Intervention to promote "fairplay". *School Psychology International, 18*, 81–89.

Wolak, J., Mitchell, K. J., & Finkelhor, D. (2007). Does online harassment constitute bullying? An exploration of online harassment by known peers and online-only contacts. *Journal of Adolescent Health, 41*, S51-S58.

Wong, D. S., Chan, H. C. O., & Cheng, C. H. (2014). Cyberbullying perpetration and victimization among adolescents in Hong Kong. *Children and Youth Services Review, 36*, 133–140.

Wood, S. L., & Sommers, M. S. (2011). Consequences of intimate partner violence on child witnesses: A systematic review of the literature. *Journal of Child and Adolescent Psychiatric Nursing, 24*, 223-236.

Woodin, E. M., Sotskova, A., & O'Leary, K. D. (2013). Intimate partner violence assessment in an historical context: Divergent approaches and opportunities for progress. *Sex Roles*, *69*, 120-130.

World Health Organization. (2005). *Addressing Violence Against Women and Achieving the Millennium Development Goals*. Retrieved from http://apps.who.int/iris/bitstream/10665/43361/1/WHO_FCH_GWH_05.1.pdf

World Health Organization. (2015). *The Global Strategy For Women's, Children's And Adolescents' Health (2016-2030).* Retrieved from https://www.who.int/docs/default-source/child-health/the-global-strategy-for-women-s-children-s-and-adolescents-health-2016-2030.pdf?sfvrsn=f1dbd6f9_4

World Health Organization. (2017). *Adolescent Health and Development.* Retrieved from http://www.who.int/maternal_child_adolescent/documents/cah_adh_flyer_2010_12_en.pdf.

World Health Organization. (2019). *Social Determinants of Health*. Retrieved from:

    https://www.who.int/social_determinants/en/

Xia, Y., Li, S., & Liu, T. H. (2018). The interrelationship between family violence,

    adolescent violence, and adolescent violent victimization: An application and extension

    of the cultural spillover theory in China. *International Journal of Environmental*

    Research and Public Health, 15, 371-385.

Ybrandt, H., & Armelius, K. (2010). Peer aggression and mental health problems: Self-

    esteem as a mediator. *School Psychology International, 31*, 146-163.

Zhu, Y., Chan, K. L., & Chen, J. (2018). Bullying victimization among Chinese middle

    school students: the role of family violence. *Journal of Interpersonal Violence, 33,* 1958-

    1977.

Zink, T., & Fisher, B. S. (2007). The prevalence and incidence of intimate partner and

    interpersonal mistreatment in older women in primary care offices. *Journal of Elder*

    Abuse & Neglect, 18, 83-105.

Zych, I., Ortega-Ruiz, R., & Del Rey, R. (2015a). Scientific research on bullying and

    cyberbullying: Where have we been and where are we going. *Aggression and Violent*

    Behavior, 24, 188-198.

Zych, I., Ortega-Ruiz, R., & Del Rey, R. (2015b). Systematic review of theoretical studies on

    bullying and cyberbullying: Facts, knowledge, prevention, and intervention. *Aggression*

    and Violent Behavior, 23, 1-21.

Table 6-1-1 Demographic characteristics of participants by three groups of victimization (N = 18,341)

N (%)	Lifetime				Preceding year			
Victimization	No victimization (N=10521)	Non-internet victimization (N=6832)	Internet victimization (N=823)	p^a	No victimization (N=12177)	Non-internet victimization (N=5309)	Internet victimization (N=671)	p^a
Parent Characteristics								
Marital status								
Divorced/separated/widowed	714(6.8)	609(8.9)	81(9.8)	<0.001	870(7.1)	462(8.7)	58(8.7)	<0.001
Married/cohabitating	9599(91.2)	6038(88.4)	715(86.9)		11070(90.9)	4690(88.3)	588(87.6)	
Missing	208(3.0)	185(2.7)	27(3.3)		237(2.0)	157(3.0)	25(3.7)	
Father's education level				<0.001				<0.001
Secondary three or below	3982(37.8)	3202(46.7)	373(45.3)		4686(38.5)	2561(48.2)	306(45.6)	
Secondary four to seven	2813(26.7)	1837(26.9)	236(28.7)		3281(27.0)	1404(26.4)	193(28.8)	
Tertiary or above	2247(21.4)	1076(15.8)	104(12.6)		2547(20.9)	784(14.8)	73(10.9)	
Missing	1479(14.1)	717(10.5)	110(13.4)		1663(13.6)	560(10.5)	99(14.7)	
Mother's education level				<0.001				<0.001
Secondary three or below	4492(42.8)	3602(52.7)	430(52.2)		5304(43.6)	2863(53.9)	357(53.2)	
Secondary four to seven	2614(24.8)	1691(24.8)	196(23.8)		3064(25.1)	1269(23.9)	152(22.7)	
Tertiary or above	1962(18.6)	838(12.3)	92(11.2)		2175(17.9)	634(11.9)	68(10.1)	

Missing	1453(13.8)	701(10.3)	105(12.8)		1634(13.4)	543(10.2)	94(14.0)	
Father's unemployment	468(4.4)	547(8.0)	73(8.8)	<0.001	575(4.7)	442(8.3)	63(9.4)	<0.001
Mother's unemployment	567(5.3)	454(6.7)	63(7.6)	<0.01	660(5.4)	361(6.8)	54(8.1)	<0.01
Receiving social security	696(6.6)	568(8.3)	68(8.3)	<0.01	803(6.6)	467(8.8)	56(8.3)	<0.001
Family income				<0.001				<0.001
Below median	5984(56.9)	4439(65.0)	566(68.8)		7022(57.7)	3479(65.5)	464(69.2)	
Above median	3567(33.9)	1917(28.0)	210(25.5)		4047(33.2)	1484(28.0)	169(25.2)	
Missing	970(9.2)	476(7.0)	47(5.7)		1108(9.1)	346(6.5)	38(5.6)	
Child Characteristics								
Gender				<0.001				<0.001
Boy	5477(52.1)	3637(53.2)	568(69.0)		6281(51.6)	2925(55.1)	472(70.3)	
Girl	5044(47.9)	3195(46.8)	255(31.0)		5896(48.4)	2384(44.9)	199(29.7)	
Age (mean, SD)	15.882	15.836	15.808	<0.01	15.892	15.806	15.812	<0.001
	(SD=0.97)	(SD=0.97)	(SD=0.95)		(SD=0.97)	(SD=0.96)	(SD=0.95)	
Sibling				<0.001				<0.001
Yes	5897(56.0)	4363(63.9)	509(61.8)		6912(56.8)	3416(64.3)	425(63.3)	
No	4418(42.0)	2336(34.2)	299(36.3)		5031(41.3)	1784(33.6)	233(34.7)	
Missing	206(2.0)	133(1.9)	15(1.9)		234(1.9)	109(2.1)	13(1.7)	

Note. [a] *P*-value by X^2 test or t-test.

Table 6-1-2 Prevalence of internet and non-internet peer victimization ($N = 18,341$)

Victimization	Lifetime Prevalence	Preceding-year Prevalence
Peer victimization (Overall)	42.9	33.9
Direct victimization	32.6	25.3
Gang or group assault	12.7	9.3
Peer or Sibling Assault	17.7	12.2
Nonsexual genital assault	7.1	5.6
Bullying	10.9	7.9
Verbal Bullying	18.1	13.8
Dating Violence	3.8	3.4
Indirect Victimization	32.6	24.7
Spreading rumors	21.6	15.4
Social exclusion	15.7	11.0
Threaten to obey	11.0	7.8
Ignorance	20.2	15.1
Threaten to take away belongings	9.1	7.1
Perpetrator		
In the family	6.3	5.5

In school	34.7	28.1
In neighborhood	10.7	8.8
On the internet	4.6	3.9

Table 6-1-3-1 Gender difference of peer victimization (N = 18,341)

Victimization	Lifetime Prevalence			Preceding-year Prevalence		
	Boys (n = 9,773)	Girls (n = 8,568)	p-value [a]	Boys (n = 9,773)	Girls (n = 8,568)	p-value [a]
Peer victimization (Overall)	44.2	41.3	<0.001	36.0	31.4	<0.001
Direct victimization	36.9	27.7	<0.001	29.3	20.8	<0.001
Gang or group assault	16.3	8.6	<0.001	12.0	6.2	<0.001
Peer or Sibling Assault	20.9	13.9	<0.001	14.9	9.2	<0.001
Nonsexual genital assault	10.1	3.8	<0.001	7.9	3.0	<0.001
Bullying	13.2	8.4	<0.001	9.7	5.9	<0.001
Verbal Bullying	20.2	15.6	<0.001	15.7	11.7	<0.001
Dating Violence	5.0	2.4	<0.001	4.5	2.2	<0.001
Indirect Victimization	31.4	33.9	<0.001	24.6	24.8	0.703
Spreading rumors	19.9	23.4	<0.001	15.0	15.9	0.100
Social exclusion	14.9	16.6	0.002	11.1	10.9	0.665
Threaten to obey	11.9	10.0	<0.001	9.0	6.5	<0.001
Ignorance	19.6	20.8	0.044	15.2	14.9	0.613
Threaten to take away belongings	11.4	6.5	<0.001	9.1	4.9	<0.001

Note. [a] *P*-value by χ^2 test.

Table 6-1-3-2 Gender difference of internet and non-internet victimization

Victimization	Lifetime Prevalence			Preceding-year Prevalence		
	No victimization (N=10521)	Non-internet victimization (N=6832)	Internet victimization (N=823)	No victimization (N=12177)	Non-internet victimization (N=5309)	Internet victimization (N=671)
Boys	52.1	53.2	69.0	51.6	55.1	70.3
Girls	47.9	46.8	31.0	48.4	44.9	29.7

Note. [a] *P*-value by χ^2 test.

Table 6-1-4 Regression analysis of peer victimization and demographic factors

Variable	Adjusted Odds Ratio (95% Confidence Interval)	
	Lifetime Peer Victimization	Preceding-year Peer Victimization
Phase One [a]		
Gender		
Boy	1.16***(1.089, 1.229)	1.26***(1.185, 1.346)
Girl	1.00	1.00
Age (mean)	0.96*(0.932, 0.993)	0.93***(0.9, 0.962)
Having siblings		
Yes	1.48***(1.388, 1.574)	1.53***(1.436, 1.64)
No	1.00	1.00

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

[a] Variables in Phase 1 were adjusted by other variables in the same phase.

Table 6-1-5 Regression analysis of peer victimization and addictive behaviors

Variable	Lifetime Peer Victimization	Preceding-year Peer Victimization
Phase Two [a]		
Gambling	1.21***(1.089, 1.344)	1.14*(1.02, 1.271)
Smoking	1.73***(1.506, 1.997)	1.76***(1.525, 2.021)
Alcohol abuse	1.47***(1.308, 1.652)	1.45***(1.29, 1.639)
Substance abuse	0.87(0.658, 1.138)	1.14(0.863, 1.495)

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

[a] Variables in Phase 2 were adjusted by all demographic variables in Phase 1 and other variables in Phase2.

[b] *P*-value by the Hosmer & Lemeshow test.

Table 6-1-6 Regression analysis of peer victimization and health

Variable	Lifetime Peer Victimization	Preceding-year Peer Victimization
Phase Three [a]		
PTSD	1.73***(1.653, 1.812)	1.66***(1.588, 1.745)
Self-esteem	0.96***(0.952, 0.968)	0.96***(0.95, 0.966)
Depression	1.05***(1.046, 1.054)	1.05***(1.042, 1.05)
Physical health (by SE-12)	0.95***(0.95, 0.959)	0.95***(0.95, 0.959)
Mental health (by SF-12)	0.97***(0.963, 0.97)	0.97***(0.964, 0.972)
Suicide ideation / Deliberate self-harm	2.27***(2.093, 2.461)	2.29***(2.115, 2.491)

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

[a] Variables in Phase 3 were adjusted by all demographic variables in Phase 1 and addictive factors in Phase 2.

Table 6-1-7 Regression analysis of internet/non-internet victimization and family characteristics

Variable	Adjusted OR (95% CI) [a]		Adjusted OR (95% CI) [a]	
	Lifetime Internet Victimization	Lifetime Non-Internet Victimization	Preceding-Year Internet Victimization	Preceding-Year Non-Internet Victimization
Phase One [b]				
Marital status				
Divorced/separated/widowed	1.67*	1.33**	1.68*	1.27*
	(1.116, 2.492)	(1.105, 1.606)	(1.086, 2.598)	(1.048, 1.551)
Married/cohabitating	1.00	1.00	1.00	1.00
Father's education level [c]				
Secondary three or below	1.11	1.07	1.37	1.23*
	(0.737, 1.685)	(0.909, 1.267)	(0.848, 2.219)	(1.032, 1.474)
Secondary four to seven	1.1	0.97	1.38	1.05
	(0.744, 1.626)	(0.828, 1.127)	(0.874, 2.188)	(0.887, 1.237)
Tertiary or above	1.00	1.00	1.00	1.00
Mother's education level [c]				
Secondary three or below	2.00**	1.62***	1.89*	1.37**
	(1.275, 3.152)	(1.356, 1.932)	(1.121, 3.198)	(1.13, 1.654)
Secondary four to seven	1.7*	1.52***	1.52	1.34**
	(1.108, 2.596)	(1.293, 1.79)	(0.919, 2.505)	(1.122, 1.594)

Tertiary or above	1.00	1.00	1.00	1.00
Father's unemployment	2.13***	1.49***	2.07***	1.43***
	(1.539, 2.951)	(1.264, 1.766)	(1.47, 2.908)	(1.205, 1.688)
Mother's unemployment				1.01
	0.9(0.615, 1.312)	1.01(0.849, 1.197)	0.88(0.583, 1.316)	(0.845, 1.205)
Receiving social security	1.03	1.07	1.13	1.2*
	(0.74, 1.437)	(0.924, 1.242)	(0.795, 1.601)	(1.034, 1.4)
Family income [d]				
Below median	1.28*	1.15**	1.35*	1.11*
	(1.033, 1.585)	(1.052, 1.263)	(1.067, 1.704)	(1.005, 1.218)
Above median	1.00	1.00	1.00	1.00

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

[a] Variables in Phase 2 were adjusted by all variables in Phase 1 and other variables in Phase2.

[b] Income: Below median = HKD14,999/CNY3,999 or less. Above median = HKD15,000/CNY4,000 or above. (HKD1 = ~US$0.13; CNY1 = ~US$0.16

[c] Education: Secondary three or below = grade nine or below; secondary four to seven = grade ten to 12; tertiary or above = college/university or above.

Table 6-1-8 Regression analysis of internet/non-internet victimization and family violence

	Adjusted OR (95% CI) [a]		Adjusted OR (95% CI) [a]	
	Lifetime Internet Victimization	Lifetime Non-Internet Victimization	Preceding-Year Internet Victimization	Preceding-Year Non-Internet Victimization
Phase Two [b]				
In-law conflict	2.73***	2.09***	2.79***	1.99***
	(2.161, 3.446)	(1.856, 2.352)	(2.19, 3.564)	(1.764, 2.235)
Parental IPV				
Physical	3.28***	2.58***	3.14***	2.19***
	(2.692, 4.007)	(2.344, 2.834)	(2.536, 3.88)	(1.992, 2.411)
Psychological	3.47***	2.65***	3.35***	2.3***
	(2.855, 4.223)	(2.438, 2.883)	(2.701, 4.163)	(2.105, 2.508)
Child maltreatment				
Corporal punishment	3.51***	2.96***	3.23***	2.42***
	(2.891, 4.258)	(2.718, 3.216)	(2.611, 3.998)	(2.22, 2.643)
Physical	3.7***	2.68***	3.54***	2.39***
	(3.024, 4.518)	(2.427, 2.966)	(2.862, 4.391)	(2.163, 2.644)
Psychological	3.28***	2.69***	3.02***	2.33***
	(2.717, 3.967)	(2.48, 2.927)	(2.453, 3.712)	(2.141, 2.541)

Neglect	2.42***	2.56***	2.24***	2.14***
	(1.966, 2.975)	(2.347, 2.791)	(1.777, 2.813)	(1.95, 2.342)
Elder abuse				
Physical	4.02***	2.75***	3.35***	2.31***
	(3.086, 5.232)	(2.366, 3.197)	(2.543, 4.411)	(2.001, 2.669)
Verbal	5.02***	2.86***	4.13***	2.37***
	(4.04, 6.228)	(2.537, 3.227)	(3.284, 5.183)	(2.109, 2.661)
Neglect	5.36***	3.37***	4.6***	2.88***
	(4.326, 6.647)	(2.998, 3.796)	(3.668, 5.762)	(2.574, 3.23)

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

[a] Variables in Phase 2 were adjusted by all demographic variables in Phase 1 and other variables in Phase2.

[b] *P*-value by the Hosmer & Lemeshow test.

Table 6-1-9 Regression analysis of internet/non-internet victimization and health

Phase Three [c]	Adjusted OR (95% CI) [a]		Adjusted OR (95% CI) [a]	
	Lifetime Internet Victimization	Lifetime Non-Internet Victimization	Preceding-Year Internet Victimization	Preceding-Year Non-Internet Victimization
PTSD	1.25***	1.37***	1.23***	1.31***
	(1.113, 1.399)	(1.297, 1.444)	(1.091, 1.394)	(1.242, 1.388)
Depression	1.05***	1.02***	1.05***	1.01***
	(1.043, 1.063)	(1.015, 1.026)	(1.037, 1.059)	(1.01, 1.02)
Physical health by SF-12	0.95***	0.96***	0.95***	0.97***
	(0.937, 0.958)	(0.96, 0.97)	(0.937, 0.96)	(0.96, 0.97)
Mental health by SF-12	0.99	0.99***	0.99*	0.99***
	(0.981, 1.002)	(0.984, 0.993)	(0.977, 1)	(0.983, 0.992)
Deliberate self-harm and suicide ideation	1.51***	1.43***	1.53***	1.54***
	(1.229, 1.855)	(1.302, 1.573)	(1.228, 1.914)	(1.402, 1.702)

Note. Abbreviation: CI, Confidence Interval; OR, Odds Ratio.

Boldface indicates statistical significance *$p < .05$. ** $p < .01$. *** $p < .001$.

[a] 0 = no victimization, 1 = internet victimization, 2 = non-internet victimization.

[b] *P*-value by the likelihood ratio test.

[a] Variables in Phase 3 were adjusted by all demographic variables in Phase 1 and family violence variables in Phase 2.

Table 6-2-1 Prevalence of types of doxed personal information (N=2,120)

%	Male (%)	Female (%)	Total (%)	Chi-square
Personal photos or videos	27.7	35.5	31.4	34.811***
Name	24.4	36.0	29.9	52.886***
Birthday	18.8	30.0	24.2	44.818***
Mobile phone number	12.4	18.1	15.1	28.667***
School name	10.5	19.5	14.8	47.820***
Academic performance	7.1	12.1	9.5	30.035***
Locations	7.7	11.0	9.3	13.655*
Private internet or text conversation	5.2	13.4	9.1	55.864***
Embarrassing photos or videos	6.5	11.4	8.8	18.399**
Personal email address	6.8	9.2	8.0	8.300
Relationship status	4.2	9.1	6.6	25.169***
Odd habits	3.6	7.2	5.4	18.065
Parents' names	4.6	4.2	4.4	3.250
Intimate photos or videos	3.3	5.3	4.3	7.073
Student card	4.2	4.1	4.2	2.829
Home telephone number	3.9	4.0	3.9	3.354
Home address	4.3	2.5	3.5	7.523
Sexual orientation	2.4	3.4	2.9	4.108

Usernames and passwords of online accounts	2.2	2.7	2.5	7.187
Religious beliefs	2.6	1.7	2.2	6.122
Passport number	2.5	1.3	1.9	7.496
Racial or ethnic origin	1.6	1.3	1.4	4.962
Political opinions	1.6	0.8	1.2	4.540
Obscene or indecent photos or videos	0.7	1.4	1.0	8.122
Sexual life	1.1	0.9	1.0	2.732
ID card number	1.0	0.9	1.0	17.710**
Medical records	1.1	0.4	0.7	4.737
Bank account numbers	0.6	0.6	0.6	3.470

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

Table 6-2-2 Prevalence of people who conducted the doxing (N=2,120)

	Male (%)	Female (%)	Total (%)	Chi-square
Parents/family members	20.8	28.0	24.6	7.84**
Classmates	46.5	54.3	50.7	6.26*
Other students in the same grade	28.8	31.6	30.3	0.60
Other students in your school	26.5	29.9	28.3	1.55
Teacher/Tutor	2.7	3.2	2.9	0.27
Friends outside your school	20.6	30.2	25.7	13.18***
People you personally know	21.7	30.0	26.2	10.04**
Internet friends	3.8	6.2	5.1	3.18
Strangers	3.5	4.6	4.1	1.24

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

Table 6-2-3 Prevalence of doxing platforms (N=2,120)

	Male (%)	Female (%)	Total (%)	Chi-square
Instant Messenger	53.7	67.8	61.3	21.91***
Social networking site	44.7	63.7	54.9	36.94***
Chatroom	9.7	8.8	9.2	0.05
Email	6.2	3.6	4.9	3.33
Video-sharing website	2.9	1.7	2.2	0.18
Webpage	1.5	1.5	1.5	0.00
Forum	0.7	0.2	0.4	2.17
Blog	0.5	0.3	0.4	0.33

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

Table 6-2-4 Associations between types of doxed personal information and emotional problems (N=2,120)

%	Depression	Anxiety	Stress
Personal photos or videos	13.869***	12.456***	12.699***
Name	6.502*	4.311*	4.257*
Birthday	5.854*	3.060	3.413
Mobile phone number	14.647***	13.519***	11.802**
School name	8.728**	8.579**	9.482**
Academic performance	5.506*	5.142*	5.680*
Locations	2.615	2.664	4.936*
Private internet or text conversation	8.924**	6.172*	10.607**
Embarrassing photos or videos	6.976**	4.831*	7.995**
Personal email address	5.846*	4.867*	7.109**
Relationship status	6.997**	5.832*	10.352**
Odd habits	2.197	1.617	1.838
Parents' names	8.947**	3.943*	8.207**
Intimate photos or videos	5.965*	4.364*	7.241**
Student card	8.497**	7.931**	8.097**
Home telephone number	4.556*	3.546	3.951*
Home address	6.463*	4.439*	8.065**
Sexual orientation	9.056**	9.132**	7.455**

Usernames and passwords of online accounts	6.422*	6.364*	5.900*
Religious beliefs	1.875	1.212	2.981
Passport number	5.356*	4.562*	6.074*
Racial or ethnic origin	1.081	0.443	2.641
Political opinions	1.852	1.527	3.451
Obscene or indecent photos or videos	8.306**	4.532*	8.618**
Sexual life	8.703**	8.336**	11.041**
ID card number	0.830	0.149	1.440
Medical records	7.726**	4.333*	8.391**
Bank account numbers	9.188**	7.019**	8.640**

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

Table 6-2-5 Associations between doxing perpetrators and emotional problems (N=2,120)

	Depression	Anxiety	Stress
Parents/family members	0.762	1.345	0.059
Classmates	1.522	3.472	0.368
Other students in the same grade	5.562*	5.276*	3.209
Other students in your school	8.503**	12.528***	4.882*
Teacher/Tutor	1.153	0.808	1.391
Friends outside your school	1.246	1.571	2.131
People you personally know	5.766*	6.072*	4.428*
Internet friends	0.797	0.089	2.352
Strangers	0.698	1.297	1.879

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

124

Table 6-2-6 Associations between doxed platforms and emotional problems (N=2,120)

	Depression	Anxiety	Stress
Instant Messenger	7.205**	9.196**	4.387*
Social networking site	5.593*	6.605*	6.468*
Chatroom	1.629	1.317	0.036
Email	1.728	2.574	1.505
Video-sharing website	1.540	4.709*	4.126*
Webpage	0.140	0.667	0.038
Forum	1.817	1.582	4.159*
Blog	1.817	1.582	2.640

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