UC Santa Barbara
UC Santa Barbara Previously Published Works

Title

Associations Between Childhood Peer Victimization and Aggression and Subsequent Victimization and Aggression at College

Permalink

https://escholarship.org/uc/item/46d414qq

Journal

Psychology of Violence, 9(4)

Authors

Felix, Erika D
Holt, Melissa K
Nylund-Gibson, Karen
et al.

Publication Date

2019

Peer reviewed

Associations Between Childhood Peer Victimization and Aggression and Subsequent Victimization and Aggression at College

Erika D. Felix[1]

Melissa K. Holt[2]

Karen Nylund-Gibson[1]

Ryan Grimm[3]

Dorothy L. Espelage[4]

Jennifer Greif Green[2]

[1] University of California, Santa Barbara
[2] Boston University
[3] University of California, Davis
[4] University of Florida

Corresponding author: Dr. Erika Felix, Department of Counseling, Clinical, & School Psychology, Gevirtz Graduate School of Education, University of California Santa Barbara, Santa Barbara, CA 93106-9490. efelix@education.ucsb.edu (805) 893-5419

There are no conflicts of interest to report.

Abstract

Objective: We examined latent classes of retrospective reports of childhood peer victimization/aggression and how these classes related to subsequent risk for victimization and aggression at college. **Method:** First year students from four universities (N = 428; 73.6% female) provided retrospective reports of childhood peer victimization and aggression at initial college entry and reported on subsequent victimization and aggression over the course of the first year of college. **Results:** A latent class analysis (LCA) for childhood peer victimization/aggression supported four classes of students: *High Victimization and Aggression* (12.3%), *High Victimization/Low Aggression* (20.0%), *High Relational Victimization and Relational Aggression* (30.8%), and *Low Involvement* (36.9%). Students in the *High Victimization and Aggression* class were more likely to experience hazing and sexual victimization compared to the *Low Involvement* class. A LCA of college victimization/aggression revealed *Low Involvement* and a *Medium/High Involvement* groups. Latent transition analysis demonstrated that most participants in each childhood latent class transitioned into the *Low Involvement* class. However, there was also support for college re-victimization/aggression risk for those most highly involved in childhood peer victimization/aggression. **Conclusion:** Students with high levels of childhood peer victimization/aggression incur somewhat greater risk for victimization and aggression in college; but overall, most students transitioned to low involvement in college.

Keywords: Peer Victimization, Aggression, Revictimization, Hazing, College

Students

Author Note. A version of this study was presented as part of a symposium

at the 2017 American Psychological Association Annual Convention.

Associations Between Childhood Peer Victimization and Aggression and Subsequent Victimization and Aggression at College

College is an opportunity for new academic and social endeavors, and is a potential time for substantial growth, as youth transition into adulthood and independence. However, there is risk for victimization at college, which may include sexual assault (Bureau of Justice Statistics, 2014), dating violence, and hazing (Allan & Madden, 2012). Broadly, research suggests that experiencing victimization confers risk for revictimization (Griffin & Read, 2012) and in some cases perpetration (Duke, Pettingell, McMorris, & Borowsky, 2010). However, there is a lack of understanding about how childhood peer victimization and aggression may affect risk for victimization and aggression in college. A review found common social-ecological risk factors underpinning both youth aggression and sexual and intimate partner aggression, but very few studies have empirically tested these associations longitudinally (Basile, Espelage, Rivers, McMahon, & Simon, 2009). Childhood peer victimization and aggression occur in many forms, including verbal (e.g., teasing, name-calling), physical (e.g., hit, kick, push), relational (e.g. social exclusion, gossip, rumors, lies), and sexual harassment (unwanted sexual comments, jokes, gestures). These experiences are of particular interest in terms of revictimization risk, as college offers a new peer environment, where a previous victim or aggressor can either experience new social successes, or a repeat of past peer experiences through victimization and aggression at college. However, there is limited research

on how peer victimization and aggression towards peers (hereafter, peer aggression refers to aggression towards other peers) prior to college influence risk for victimization at college. This study aims to fill this gap by exploring how retrospective reports of childhood peer victimization/aggression at college-entry relate to victimization and aggression experiences during the first year of college.

The Social-Ecological Diathesis-Stress Model

A social-ecological diathesis-stress framework has been proposed to understand the complex dynamics of peer victimization/aggression and its consequences (Swearer & Hymel, 2015), which can be extended to include the risk for subsequent victimization and aggression. Swearer and Hymel (2015) note that social-ecological theory (Bronfenbrenner, 1979) has guided peer victimization research for decades, as it acknowledges the bidirectional interaction between youth and their multiple contexts (family, school, peer, etc.). From this perspective, the social-ecological framework posits that peer victimization is not simply an individual, or even dyadic, phenomenon; rather, it occurs within dynamic peer, family, and school contexts that can maintain, promote, or diminish future involvement. For example, bystander behavior, peer norms, and school climate are associated with risk for peer victimization (Swearer & Hymel, 2015). Further, roles (e.g., victim, aggressor, aggressor-victim, bystander, etc.) may change over time. Thus, it is possible that changing peer and school contexts, like starting the first year of college, can change a student's involvement in peer victimization and

aggression. There is support for this with research on elementary and middle school youth (e.g., Williford, Brisson, Bender, Jenson, & Forrest-Bank, 2011), as roles sometimes changed when youth changed schools. However, it has yet to be studied empirically with the transition to college. College is a unique developmental time associated with identity exploration, living apart from immediate family with less parental supervision, possible changes in peer norms, and a different social scene from high school. This confers both advantages and risks. Thus, it is critical to understand how childhood peer victimization and aggression can influence risk for victimization in college.

The diathesis-stress component of the framework recognizes that individual and biological vulnerabilities for mental health problems interact with the environmental stressor of peer victimization/aggression to result in psychopathology (Swearer & Hymel, 2015). This model also suggests that cognitions about the negative life events, such as peer victimization and aggression, influence risk for internalizing and externalizing symptoms and problems with social relationships. Indeed, students entering college with victimization histories are more likely to experience college adjustment difficulties, including mental health symptoms (Elliott, Alexander, Pierce, Aspelmeier, & Richmond, 2009; author citation). These adjustment difficulties could lead to a sense of isolation and on-going mental health and social challenges that might contribute to vulnerability for revictimization. Indeed, data on revictimization risk suggest that individual (e.g., mental health), family, and/or community contextual factors interplay to confer risk

(e.g., Finkelhor, Ormrod, Turner, & Holt, 2009). In sum, the social-ecological diathesis-stress framework suggests involvement in peer victimization/aggression can vary over time and by context, and is influenced by the risk and protective factors within the current context. Hence, we expect there will be different probabilities for risk for revictimization in college, based upon different groups (latent classes) of childhood peer victimization/aggression experiences.

Empirical Work on Risk for Victimization at College

Although much of the theory and research on revictimization risk has focused on child maltreatment, some of these same factors may be at play for childhood peer victimization and aggression as well. Research on survivors of child maltreatment and their revictimization risk as adults suggest that both individual and contextual factors are at play, and this should be considered for others forms of childhood victimization as well. For example, opportunity characteristics, such as lifestyles/routines (e.g., unsupervised time, substance use/abuse, delinquent peers) and vulnerabilities of the target (Tillyer, 2015) relate to risk of subsequent victimization. Some research has found evidence for risky lifestyles as a mediator between childhood maltreatment and adolescent victimization (Tillyer, 2015).

Research on risk for victimization at college often focuses on sexual assault, dating violence, and hazing victimization, with less empirical attention on other forms of peer victimization and aggression. Physical

dating violence victimization prior to college increases risk for experiencing both physical (Smith, White, & Holland, 2003) and sexual victimization at college (Himelein, 1995). Most research on revictimization have studied sexual victimization, and primarily the experiences of women. These studies indicate that childhood sexual abuse increases risk for subsequent physical (Messman-Moore, Long, & Siegfried, 2000) and sexual victimization (Classen, Palesh, & Aggarwal, 2005; Gidycz, Hanson, & Layman, 1995; Humphry & White, 2000; Messman-Moore et al. 2000). Although there is less research on males' revictimization, findings have been consistent with those found for women (Aosved, Long, & Voller, 2011; Kalichman et al., 2001).

One limitation of revictimization research is that it has rarely considered peer victimization and aggression, which may be salient predictors of college victimization due to the challenges it may cause in the peer microsystem and social interactions more broadly. Women who experienced sexual victimization retrospectively reported more verbal childhood sexual harassment and physical victimization compared to women who did not experience sexual victimization (Stermac, Reist, Addison, & Millar, 2002). Peer victimization research consistently finds a subgroup of youth who are both frequently victimized and who frequently aggress towards others (e.g., Bettencort & Farrell, 2013; Williford et al., 2011), and this group is particularly vulnerable in terms of long term adjustment (Swearer & Hymel, 2015). This may affect risk of revictimization, and research should examine both peer victimization and aggression experiences

to determine how they relate to revictimization.

Current Study

In sum, although the body of work on child maltreatment suggests that these types of childhood experiences can affect revictimization in adulthood, there is a lack of research exploring how childhood peer victimization/aggression may affect subsequent risk for victimization and aggression at college. The current study is part of a larger research project examining adjustment to college, but the research questions presented here are novel. Longitudinal data on children and adolescents suggests substantial changes in peer victimization/aggression involvement over time, and indicates that changing school contexts can help for some, but not all students (Williford et al., 2011). However, this line of inquiry has not been extended to the unique developmental period of college. Understanding the degree to which previous peer victimization and aggression experiences may increase risk for peer victimization/aggression, hazing victimization, dating violence victimization, and sexual victimization at college would inform more targeted prevention and intervention efforts.

In addition, as there is much overlap in victimization experiences (Finkelhor, Ormrod, Turner, & Hamby, 2005), studies examining only one type of victimization may over-estimate its association with subsequent revictimization. Also, aggression and victimization experiences overlap (Swearer & Hymel, 2015) and research needs to consider both when examining risk for later victimization/aggression. Using retrospective reports

of childhood peer victimization and aggression assessed upon entry to college (Fall), we address how these impact reported peer victimization, peer aggression, hazing victimization, dating violence victimization, and sexual victimization experiences at the end of the first year of college (Spring) using latent class analysis (LCA). LCA is an example of a person-centered research approach that focuses on the processes assumed to be specific to people within a latent class, as opposed to a variable-centered approach that assumes that the process is the same across everyone (Hiatt, Laursen, Mooney, & Rubin, 2015), The use of LCA in this study provides us an opportunity to understand how the combination of different types of victimization and aggression experiences co-occur among youth, overcoming the limitations of prior research which may have studied them in isolation. LCA is becoming more widely used to explore multiple constructs at the same time. Specifically, we address the following research questions (RQ):

RQ1. What are the different latent classes of individuals involved in childhood peer victimization and aggression?

RQ2. How do these childhood latent classes relate to involvement in victimization and aggression over the first year of college in terms of individual types of peer victimization/aggression, hazing victimization, dating violence victimization, and sexual victimization?

RQ3. What are the victimization and aggression latent classes identified at the end of the first year of college?

RQ4. How do the childhood latent classes relate to the college latent classes?

Method

Participants

First year university students from two public and two private universities located across the United States (northeast, midwest, and west) participated in a study of college adjustment in fall 2012. The current study, by design, used only participants ($N = 428$) with complete data at both fall and spring time points. Most participants (73.6%) were female, and 88.3% were 18 years old, 10.3% were age 19, and 1.4% were 20 years or older. For race, 64.5% where White, 3.6% African American, 28.6% Asian/Pacific Islander, 1.4% Native American/Alaska Native, and 1.9% declined to answer. For ethnicity, 18.9% of students identified as Latino/a. The majority (93.1%) self-identified as heterosexual, and 6.9% as either lesbian, gay, bisexual, or asexual. There were no differences in attrition by race, ethnicity, or sexual orientation, but there was a significant sex difference ($\chi^2=21.64$, $p<.000$), with fewer males participating in both surveys (27.4%) compared to fall only (39.7%).

Procedure

Institutional Review Board approval was obtained at each participating university. Students were invited to participate in a web-based college adjustment survey in fall of 2012. Recruitment and follow-up procedures varied by institution (see author citation for details), with some universities targeting all entering Freshmen, others targeting students in their school (e.g., Letters, Arts, & Sciences) within the university, or through residential

life. We obtained a 13-40% response rate to the initial fall survey, and 19-
40% responding to the spring survey. Some universities sent the second
survey to all fall participants, whereas some only invited a random selection
of students who undertook the first survey, so the lower response rates were
planned in those cases and are less likely to reflect attrition bias.

Measures

Peer Victimization and aggression. In the fall, the retrospective
version of the California Bully Victim Survey (CBVS; 16 items; 10 used in this
study) was used to measure the presence of four forms of peer victimization
and aggression prior to college: relational, verbal, physical, and sexual
harassment (SH). Respondents indicated *yes* or *no* about whether they
experienced each form of victimization or aggression in their elementary
through high school education experience. In spring, students again
completed the CBVS, reflecting upon their experiences since the start of
college. CBVS reliability and validity have been supported with children,
adolescents, and college students (author citation). Internal consistency
estimates for the current sample were acceptable to good (α range .66-.81).
For the LCA analysis, we used individual CBVS items for different
victimization types, or when two items asked about the same conceptual
type of victimization (e.g., relational—rumors/gossip, left out of a group on
purpose), a yes to either indicated presence of that victimization experience.
The following dichotomous peer victimization variables were created for the
LCA: relational, verbal, physical, and SH. Separate corresponding

dichotomous aggression variables were also created.

Dating violence and sexual victimization. Three items (i.e.., has a boyfriend or girlfriend or anyone you went on a date with slapped or hit you?, …called you names or put you down?; has anyone ever tried to force you to have sex?) from the Juvenile Victimization Questionnaire (Finkelhor et al., 2005) were used in the spring to assess dating and sexual victimization since starting college. The response options were *yes* or *no*. The JVQ's reliability and validity has been supported in national studies (Finkelhor et al., 2005). For the purposes of this study, two dichotomous variables were created representing experiencing dating violence victimization and sexual victimization.

Hazing. Items (13) from the National Study of Student Hazing (Allan & Madden, 2008) assessed a range of hazing experiences in the spring. Participants were asked "Did any of the following behaviors happen to you or others in the group as part of joining or belonging to a team or organization at college?" Sample items included "sing or chant by yourself or with select others in groups in public in a situation that is not a related event, game, or practice;" and "endure harsh weather conditions without appropriate clothing." Participants answered either *yes* or *no*. Items were developed from focus groups with college students, a literature review, and consultation with a research advisory group (Allan & Madden, 2008). Internal consistency estimates were acceptable with the current sample (α = .73). A yes to any item was considered experiencing hazing victimization.

Analysis Plan

We used multiple statistical approaches to address the research questions. In Part 1, we used latent class analysis (LCA; Lazarsfeld & Henry, 1968; Masyn, 2013) to estimate latent classes based on the retrospective childhood peer victimization and aggression variables. This analysis included covariates of gender and sexual orientation as predictors of class membership. We treated the college victimization and aggression variables as distal outcomes of the latent classes, which enabled us to estimate class-specific mean probabilities of these items and test for significant differences. In Part 2, we conducted another LCA using the college victimization/aggression variables and used latent transition analysis (LTA) to examine how childhood classes related to college victimization/ aggression classes. This allowed us to examine latent classes based on participants' college victimization and aggressor experiences concomitantly, rather than as individual variables, and to ascertain patterns and proportions of shifts in latent class membership during the first year of college.

Missing data. All models were estimated in M*plus* 7.14 (Muthén & Muthén, 1998-2015) using full information maximum likelihood (FIML; Enders & Bandalos, 2001) to address missingness, which allowed individuals to be included if they responded to at least one variable used in the LCAs. Additionally, as data were drawn from four universities, we accounted for nesting effects by using university of attendance as a clustering variable by adjusting the standard errors. When analyzing covariates, individuals were

not included if they were missing data on either covariate. However, as distal outcomes were analyzed individually, participants were only excluded according to whether they were missing data on a particular distal outcome. There was some item-level missing data. For the items used as indicators of the latent class variable there was no more than 6.6% missing. This missingness was assumed to be random and thus MAR was assumed. Missing data on the covariates ranged between 9.6% - 10.3% and these cases were not included in the analysis.

Modeling Steps. We modeled the childhood and college LCAs before adding covariates and distal outcomes, and then linked them using LTA. For Part 1, we fit a series of unconditional LCAs using the childhood data, beginning with a 1-class model and increasing the number of classes by one with each subsequent iteration. Model fit statistics and item-probability plots were compared to identify a preferred model supported by both statistical and substantive evidence. After choosing the preferred unconditional childhood LCA, we added gender and sexual orientation as covariates and the 11 distal outcomes (college victimization and aggression) using the three-step method (Asparouhov & Muthén, 2014). This approach was chosen to avoid unwanted influence of the covariate and distal outcomes on the estimation of the latent classes. See Figure 1 for a conceptual diagram.

For Part 2, we estimated college LCAs using the same procedures as the childhood LCAs. The college LCAs used the 11 victimization and aggression items as latent class indicators (which were the distal outcomes

in Part 1). After determining the number of classes for the college LCA, we

linked the childhood and college LCAs using LTA. This allowed us to

understand how students who experienced childhood peer victimization or

perpetrated peer aggression transitioned into latent classes based on both

victimization and aggression behaviors at the end of their first year of

college. We used the three-step approach for LTA, so the childhood latent

classes would not influence spring latent classes and vice versa (e.g., author

citation). See Figure 2 for a conceptual diagram of the LTA model.

Assessing model fit. We considered multiple indices as no single index

can be a best indicator of model fit (author citation). We examined the

Bayesian Information Criterion (BIC) and adjusted Bayesian Information

Criterion (ABIC), where lower values indicate a preferred model, as well as

the Vuong-Lo-Mendell-Rubin Likelihood Ratio Test (LMR; author citation), the

Bayes Factor (BF; Masyn, 2013), and the correct model probability (cmP;

Masyn, 2013). We report the entropy of the final chosen model, which ranges

from 0 to 1, larger values indicating better classification. Finally, we

examined the item-probability plots of our models for their conceptual

meaning, interpretability, and alignment with theory (Muthén, 2003).

Results

Childhood Peer Victimization and Aggression Classes

To address *RQ1*, we fit childhood LCA models with the number of

classes ranging from one to six. The fit statistics are presented in the top

panel of Table 1. The BIC reached a minimum value with the 3-class model

while the ABIC reached a minimum value with the 4-class model, and the

LMR *p*-value was never statistically significant, so this index did not inform

our decision. Finally, the BF and cmP both supported the 3-class model. The

BF ratio comparing the 2- and 3-class models demonstrated no evidence for

the 2-class model, while the BF ratio comparing the 3-and 4-class models

demonstrated strong evidence for the 3-class model. The probability of the

3-class model being "correct" was greater than .99 for the 3-class model and

< .01 for the rest of the models.

We compared the item-probability plots of the 3- and 4-class models in

terms of their substantive meaningfulness and interpretability. The 3-class

model consisted of three ordered classes, characterized by high, moderate,

or low endorsement of the items. The 4-class model was similar to the 3-

class model, but the relational aggressor variable became a strong

differentiator of the latent classes. That is, the heterogeneity modeled by

four classes captured the information from the 3-class model and added to it

by identifying heterogeneity in the relational aggressor variable.

Furthermore, the additional fourth class consisted of a sizeable portion of the

sample (30.8%), and the classes were conceptually similar to prior research,

which we considered to be theoretically relevant to the research questions.

Thus, considering the BIC and ABIC in tandem with the item-probability plots,

we chose the 4-class mode (see item-probability plot in Figure 3). The

classes were labeled *High Victimization and Aggression* (12.3%), *Low

Involvement* (36.9%), *High Victimization/Low Aggression* (20.0%), and *High*

Relational Victimization and Relational Aggression (30.8%).

    Gender. A multinomial logistic regression was conducted using the 3-step method to examine the effects of gender on latent class membership. The *Low Involvement* class was the reference group. Logistic regression estimates are provided in the form of logits, as well as odds ratio for ease of interpretability. There was one marginally significant difference. Females were nearly two and a half times more likely to be in the *High Relational Victimization and Relational Aggression* class than the *Low Involvement* class (0.90, $p = .06$, *OR* = 2.46).

    College Victimization and Aggression. For *RQ2,* we examined whether the childhood latent classes affected probability of individual types of victimization or aggression in spring of participants' first year of college (see Table 2). The p-value was adjusted for the number of pairwise comparisons in MPlus. The childhood *High Victimization and Aggression* group had the highest mean probability for experiencing hazing and sexual victimization during the first year of college, and these were significantly different from the *Low Involvement* group. This group also had significantly higher mean probability for experiencing sexual harassment victimization and was more likely to endorse engaging in verbal and relational aggression than the *High Relational Victimization and Relational Aggression* group. The *High Relational Victimization and Relational Aggression* group had higher mean probability for endorsing sexual harassment victimization than the *High Victimization/Low Aggression* and *Low Involvement* classes. They also

had lower mean probabilities for engaging in physical and sexual harassment aggression during the first year of college than the *Low Involvement* class, but higher mean probability for engaging in relational aggression than the *High Victimization/Low Aggression* group. The *High Victimization/Low Aggression* group had higher mean probability of experiencing verbal and sexual harassment victimization and engaging in verbal aggression in college than the *Low Involvement* group. There were no differences across childhood classes for relational, verbal, or dating violence victimization during the first year of college.

LCA: College Victimization and Aggression

To address *RQ3,* the college victimization/aggression variables (11 variables in total) were used to conduct the college LCA using the same procedure as with the childhood LCA. The fit statistics are presented in the bottom panel of Table 1. The BIC, BF, and cmP all supported a 2-class model. The ABIC supported a 3-class model, but this value was minimally different from both the 2- and 4-class models. Thus, we compared the item-probability plots of the 2- and 3-class models. Results revealed the third class was not well differentiated from another latent class on eight of the items, consisted of only 3.2% of the sample and was not considered theoretically viable. Based on the fit statistics and substantive considerations, we chose the 2-class model. We labeled and interpreted the emergent latent classes based on the item-probability plot displayed in Figure 2: *Medium-High Involvement* (22.6%) and *Low Involvement* (77.4%).

LTA: Linking Childhood and College Victimization and Aggression Classes

We linked childhood and college LCA models using LTA to address *RQ4*. To identify the patterns of transition between the childhood- and college-LCA models, we examined the transition probabilities (Table 3). The majority of participants in each childhood latent class transitioned into the *Low Involvement* class at the end of the first year of college. The others transitioned to the *Medium-High Involvement* class. The childhood class of *High Victimization and Aggression* had the fewest participants who transitioned into the *Low Involvement* class in college (63%), whereas the childhood class of *Low Involvement* had the greatest proportion (88%) who transitioned into the college *Low Involvement* class.

Discussion

Although research on childhood peer victimization and aggression has grown exponentially over the last several decades, there was a surprising lack of research on how these peer experiences translate into risk for revictimization and aggression in college. This is despite growing concern about how to reduce victimization and aggression in college. Understanding how past peer victimization and aggression experiences may influence risk in college is a needed step in designing effective prevention and intervention efforts. This study starts to fill this gap by obtaining retrospective reports of childhood peer victimization/aggression upon entry into college, and then determining how those experiences are associated with victimization and

aggression during the first year of college.

Classification of Childhood Victimization Experiences

We empirically examined how childhood peer victimization and aggression experiences group together to reflect the heterogeneity of these experiences among youth (*RQ1*). Historically, the peer victimization research field conceptually classified students as non-involved, victims, aggressors, and aggressor-victims (e.g., Olweus, 1993). This has received some support with LCA research in childhood (Bettencourt & Farrell, 2013; Williford et al, 2011), with longitudinal research suggesting the aggressor-only class may disappear as children transition to middle school (Williford et al., 2011). However, the conceptual classification method potentially masked interrelationships among the different types of victimization and aggression experiences that may suggest distinct subgroups of victims and aggressors. Cluster analytic and LCA research on peer victimization (victims only) supports the idea of more than one grouping of victims (author citations). A study that examined peer victimization (victims only), child maltreatment, dating violence, and sexual assault, also found support for more than one polyvictim groups (author citation). Using LCA, we found four classes of students: *High Victimization and Aggression* (12.3%), *High Victimization/Low Aggression* (20.0%), *High Relational Victimization and Relational Aggression* (30.8%), and *Low Involvement* (36.9%). This empirical classification has similarities with the conceptual classification traditionally used to describe victims, but extends those models by suggesting a sub-category of

aggressor-victims, by differentiating the *High Relational Victimization and Relational Aggression* subgroup. These findings support the ground-breaking work of Crick and colleagues (1999) that added relational forms of victimization and aggression to our understanding of aggression. This group of relational aggressor-victims may need different forms of intervention services than what has been traditionally considered for the aggressor-victim class, which focused on direct verbal and physical victimization/aggression.

Childhood Classes of Victimization/Aggression & Subsequent Involvement in College

We then explored how these classes of childhood peer victimization and aggression related to victimization and aggression experiences that occurred over the first year of college. We examined both (1) individual types of victimization and aggression, as this may be of particular interest for intervention efforts trying to address, for example, hazing or sexual victimization (*RQ2*); and (2) classification of overall victimization and aggression (*RQ3*). Students in the *High Victimization and Aggression* childhood class were most likely to experience hazing and sexual victimization in college, but this was only significantly different from the *Low Involvement* class. In trying to understand this result, we must first make clear that it is never the victim's fault, and in fact, aggressors may be looking for someone to exploit (Stevens, 1994). It may be that the earlier peer experiences of the *High Victimization and Aggression* group affects target's perceptions of subsequent risky peer social situations, like hazing

victimization. Indeed, many students who experience hazing behaviors do not actually label it as hazing (Allan & Madden, 2012), and thus may perceive it as normal for the social situation. Our finding also suggests that childhood peer victimization/aggression may confer greater risk for sexual victimization in college. This extends research that examined different child maltreatment experiences as increasing risk for sexual victimization among females only (e.g., Stermac et al., 2002). Convicted sexual aggressors reported they were more likely to target people they viewed as easy to overpower, and often used subtle social cues, or aspects of the context (e.g., an unconscious person due to alcohol use, a person who is alone) to judge this (Stevens, 1994). It could be that the prior experiences of peer victimization and aggression affected either of these areas for our *High Victimization and Aggression* childhood class.

The results for sexual harassment (SH) victimization were more complex. The *High Victimization/Low Aggression* childhood class had the highest mean probability of SH victimization, and this was significantly higher than both the *High Relational Victimization and Relational Aggression* and *Low Involvement* childhood classes. SH tends to increase with age (author citation); therefore, it could be that forms of verbal or physical victimization have a more sexualized or gendered component as youth age. The *High Relational Victimization and Relational Aggression* class had a near-zero probability of endorsing experiencing SH victimization. This was an unexpected result, and before conclusions can be drawn, it should be

replicated in other research. It is possible that the near-zero probability is related to the gender of the aggressor, which should be assessed in future research. If there are female aggressors targeting female victims more often in relational aggression, and male aggressors and female victims more often in SH, perhaps they are qualitatively different groups of involved students?

There were no class-specific significant differences in risk for dating violence victimization. This suggests that all groups were equally likely (or unlikely, given its low frequency of 4.0%), to experience dating violence over the first year of college. There were also no class-specific significant differences in experiencing relational or physical peer victimization at college, although the probabilities were higher and showed more variability than what was found for dating violence victimization.

The results for engaging in aggression during the first year of college were nuanced, and given the lack of prior research on this, it is important to caution that this study needs replication before conclusions for intervention can be drawn. The *High Victimization/Low Aggression* had zero-probability of engaging in verbal aggression, which was significantly different from the *High Victimization and Aggression* and *Low Involvement* groups. Additionally, the *High Relational Victimization and Relational Aggression* class reported a higher mean probability of engaging in verbal aggression at college compared to the *Low Involvement* class. The *High Victimization and Aggression* class had the highest mean probabilities of physical and SH aggression in college, but these were not significantly higher than the means

of the other three classes. This is likely because both were very low

frequency overall (3.1% physical, 3.2% SH). However, although the childhood

Low Involvement class had low probability of endorsing physical and sexual

harassment aggression, they were still significantly higher than the *High*

Relational Victimization and Relational Aggression class because of its zero-

probability. The *High Victimization and Aggression* and *High Relational*

Victimization/Relational Aggression classes reported significantly higher

mean probabilities for relational aggression than the *High Victimization/Low*

Aggression class.

 We then examined the classes of victimization/aggression at the end of

the first year of college (*RQ3*). Surprisingly, fewer subgroups were found than

in the childhood latent class analysis, and compared to prior work on

victimization only (e.g., author citations). The classes divided simply into a

Low Involvement group and a *Medium/High Involvement* group. Although

unexpected, this does fit well into a framework exploring revictimization risk,

which we investigated with latent transition analysis (*RQ4*). The majority of

participants in each childhood latent class transitioned into the *Low*

Involvement college class. Even the groups at potentially greatest risk for

subsequent involvement in college victimization and aggression had most

students transition to the *Low Involvement* college group. This supports the

idea that college provides a new peer context where many students can start

afresh in developing positive interpersonal relationships. Likewise, a review

of research has noted the dynamic and fluid nature of involvement in peer

victimization and aggression, and that roles in the process can change frequently and vary by context (Swearer & Hymel, 2015).

However, there is also some support for revictimization and aggression risk for those most highly involved in childhood peer victimization and aggression. This is consistent with a growing body of research exploring other forms of childhood victimization and risk for revictimization (e.g., Classen et al., 2005; Gidycz et al., 1995; Humphrey & White, 2000; Smith et al., 2003). Although most students do not go on to being highly involved in peer victimization and aggression in the first year of college, those with high levels of childhood involvement in peer victimization and aggression were more likely to do so. Our current study does not address potential mediating mechanisms that may affect the relation between childhood and college involvement in victimization and aggression. But, this research is needed to understand the mechanisms that can affect continuity and discontinuity in victimization and aggression.

Strengths & Limitations

The current study adds to the literature on peer victimization and aggression among college populations in a number of ways. Data were drawn from four universities in order to capture the wide-range of experiences first year college students might have. This study included many types of victimization, including sexual harassment, sexual victimization, dating violence, and relational aggression, which responds to the call to focus on multiple forms of victimization (Finkelhor et al. 2005). Retrospective

reports of childhood experiences were obtained at the start of college, so that recall was not influenced by peer experiences in college. Finally, the use of LCA and LTA offers the ability to identify how these forms of victimization and perpetration overlap and change over the first year of college.

Although these strengths are noteworthy, no study is without limitations. The use of retrospective reports of childhood victimization and aggression could be subject to self-report bias and limitations of recall. Other aspects of the victimization or aggression, such as the developmental time period in which it occurred, its chronicity, and the differential impact of various forms of victimization/aggression were unable to be addressed in this study. Likewise, this study does not address mediational mechanisms that may explain revictimization risk. Recruitment and retention efforts varied by university, with some randomly-sampling for follow-up and other sites recontacting all participants, and these rates affect the generalizability of the findings. Further, although some victimization experiences had low prevalence rates (less than 10%) making estimation of their effects have low power, these experiences are of interest to clinical scientists and were included to inform future research.

Research Implications

Childhood peer victimization and aggression are common, and we need to understand how these negative peer experiences affect social adjustment beyond high school. The current study establishes a relationship between childhood peer victimization and aggression with risk for

victimization and aggression in college. Additional research at universities, community colleges, and vocational training programs is needed to replicate this and provide empirical evidence to guide decisions about what kind of supports may help youth who were previously highly involved in peer victimization/aggression experience healthy peer relationships. In addition, we now need to better understand why some people who experienced high levels of childhood peer victimization and aggression towards others transitioned to low involvement in college, but others did not escape this cycle. Prospective, longitudinal research from elementary through college-age would be ideal to address these questions.

Clinical and Policy Implications

These results have implications for intervention and prevention both prior to, and at college, with regard to considering increased outreach efforts for students arriving on campus with peer victimization and aggression histories. University counseling centers may want to include items on intake forms asking about childhood peer victimization and aggression, to know if, and when, to offer supportive services, such as help navigating roommate relationships, college friendships, social events, and more. These skills can include setting boundaries in relationships, conflict resolution, assertiveness skills, and identifying and responding to risky situations. Although many students with peer victimization/aggression histories transition into a low involvement group by the end of their first year, offering additional services would benefit those students who remain involved in victimization and

aggression, and promote an enhanced adjustment to college. Many post-secondary educational programs offer an orientation to help youth transition to college life, and prevention-oriented modules can be developed to address hazing, dating violence victimization, sexual victimization, and other forms of peer victimization and aggression. The focus can be on setting expectations and social norms about appropriate behavior, creating a community that cares (bystander intervention), and the resources available on campus and in the community to address victimization and aggression when it happens. Through efforts like this, more students can find social success at college.

References

Allan, E.J. & Madden, M. (2012). The nature and extent of college student hazing. *International Journal of Adolescent Medicine and Health, 24*, 83-90. doi: 10.1515/ijamh.2012.012

Aosved, A. C., Long, P. J., & Voller, E. K. (2011). Sexual revictimization and adjustment in college men. *Psychology of Men & Masculinity, 12*, 285-296. doi:10.1037/a0020828

Asparouhov, T. & Muthén, B. (2014). Auxiliary variables in mixture modeling: Three-step approaches using M*plus*. *Structural Equation Modeling: A Multidisciplinary Journal, 21,* 329-341. doi: 10.1080/10705511.2014.915181

Basile, K.C., Espelage, D.L., Rivers, I., McMahon, P.M., & Simon, T.R. (2009). The theoretical

and empirical links between bullying behavior and male sexual

violence perpetration. *Aggression and Violent Behavior, 14*, 336-347.

doi: 10.1016/j.avb.2009.06.001

Bettencourt, A.F. & Farrell, A.D. (2013). Individual and contextual factors

associated with patterns of aggression and peer victimization during

middle school. *Journal of Youth & Adolescence, 42*, 285-302. doi:

10.1007/s10964-012-9854-8

Bronfenbrenner, U. (1979). *The Ecology of Human Development*. Cambridge,

MA: Harvard University Press.

Bureau of Justice Statistics (2014). *Rape and Sexual Assualt Victimization

Among College-Age Females, 1995-2013*. U.S. Department of Justice.

Crick, N. R., Werner, N. E., Casas, J. F., O'Brien, K. M., Nelson, D. A., Grotpeter, J.

K., & Markon, K. (1999). Childhood aggression and gender: A new look at

an old problem. *Gender and motivation.* (pp. 75-141) University of

Nebraska Press, Lincoln, NE.

Classen, C. C., Palesh, O. G., & Aggarwal, R. (2005). Sexual revictimization: A

review of the empirical literature. *Trauma, Violence, & Abuse, 6*, 103-

129.

Duke, N. N., Pettingell, S. L., McMorris, B. J., & Borowsky, I. W. (2010).

Adolescent violence perpetration: Associations with multiple types of

adverse childhood experiences. *Pediatrics, 125*, e778-786.

doi:10.1542/peds.2009-0597

Elliott, A. N., Alexander, A. A., Pierce, T. W., Aspelmeier, J. E., & Richmond, J.

M. (2009). Childhood victimization, poly-victimization, and adjustment to college in women. *Child Maltreatment, 14*, 330-343. doi:10.1177/1077559509332262

Enders, C. K., & Bandalos, D. L. (2001). The relative performance of full information maximum likelihood estimation for missing data in structural equation models. *Structural Equation Modeling: A Multidisciplinary Journal, 8*, 430–457. doi:10.1207/S15328007SEM0803_5

Finkelhor, D., Ormrod, R., Turner, H., & Hamby, S.L. (2005). The victimization of children and youth: A comprehensive, national survey. *Child Maltreatment, 10*, 5-25.

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

Gidycz, C. A., Hanson, K., & Layman, M. J. (1995). A prospective analysis of the relationships among sexual assault experiences: An extension of previous findings. *Psychology of Women Quarterly, 19*, 5-29. doi:10.1111/j.1471-6402.1995.tb00276.x

Griffin, M. J., & Read, J. P. (2012). Prospective effects of method of coercion in sexual victimization across the first college year. *Journal of Interpersonal Violence, 27*, 2503-2524.

Hiatt, C., Laursen, B., Mooney, K.S., & Rubin, K.H. (2015). Forms of friendship: A person-centered assessment of the quality, stability, and outcomes of different types of adolescent friends. *Personality and*

Individual Differences, 77, 149-155.

Himelein, M.J. (1995). Risk factors for sexual victimization in dating: A

longitudinal study of college women. *Psychology of Women Quarterly,*

19, 31-48.

Humphry, J. A., & White, J. W. (2000). Women's vulnerability to sexual assault

from adolescence to young adulthood. *Journal of Adolescent Health,*

27, 419-424.

Kalichman, S.C., Benotsch, E., Rompa, D., Gore-Felton, C., Austin, J., Luke,

W., & Simpson D. (2001). Unwanted sexual experiences and sexual

risks in gay and bisexual men: Associations among revictimization,

substance use, and psychiatric symptoms. *Journal of Sex*

Research. 38:1–9. doi: 10.1080/00224490109552065

 Lazarsfeld, P. F., & Henry, N. W. (1968). *Latent structure analysis.* New York,

NY: Houghton Mifflin.

 Masyn, K. (2013). Latent class analysis and finite mixture modeling. In T.

Little (Ed.), *The*

Oxford handbook of quantitative methods (pp. 551-611). New York, NY:

Oxford

University Press.

Messman-Moore, T. L., Long, P. J., & Siegfried, N. J. (2000). The revictimization

of child sexual abuse survivors: An examination of the adjustment of

college women with child sexual abuse, adult sexual assault, and adult

physical abuse. *Child Maltreatment, 5*, 18-27.

Muthén, B. (2003). Statistical and substantive checking in growth mixture

   modeling: Comment   on Bauer and Curran (2003). Psychological Methods,

   8, 369-377.

Muthén, L.K. and Muthén, B.O. (1998-2015). Mplus User's Guide, 7th Ed. Los

      Angeles, CA: Muthén & Muthén.

Olweus, D. (1993). *Bullying at school: What we know and what we can do.*

      Blackwell Publishing, Malden.

Smith, P. H., White, J. W., & Holland, L. J. (2003). A longitudinal perspective

      on dating violence among adolescent and college-age women.

      American Journal of Public Health, 93, 1104-1109.

      doi:10.2105/AJPH.93.7.1104

 Stermac, L., Reist, D., Addison, M., & Millar, G.M. (2002). Childhood risk

      factors for women's sexual victimization. *Journal of Interpersonal*

      Violence,17, 647-670.

Stevens, D. J. (1994). Predatory rapists and victim selection techniques. *The*

      Social Science Journal, 31, 421-433. doi: 10.1016/0362-

      3319(94)90033-7

Swearer, S. M., & Hymel, S. (2015). Understanding the psychology of

      bullying: Moving toward a social-ecological diathesis–stress

      model. *American Psychologist, 70*, 344-353.

Tillyer, M.S. (2015). The relationship between childhood maltreatment and

      adolescent violent victimization. *Crime & Delinquency, 61*, 973-995.

      DOI: 10.1177/0011128712461121

Williford, A. P., Brisson, D., Bender, K. A., Jenson, J. M., & Forrest-Bank, S.

(2011). Patterns of aggressive behavior and peer victimization from

childhood to early adolescence: A latent class analysis. *Journal of Youth

and Adolescence, 40*, 644-655.

Table 1.

Fit Statistics of the Childhood and College Victimization and Aggression (Vic/Agg) LCA Models

# classes	LL	BIC	ABIC	LMR p-value	BF	cmP
Childhood Vic/Agg LCA						
1	-1778.72	3606.05	3580.66		<.01	<.01
2	-1542.73	3188.74	3134.79	.11	<.01	<.01
3	-1504.86	**3167.68**	3085.17	.53	**218600.25**	**0.99**
4	-1489.82	3192.27	**3081.20**	.58	46269798	<.01
5	-1480.13	3227.57	3087.90	.37	7348450.30	<.01
6	-1468.60	3259.19	3091.00	.65	0	<.01
College Vic/Agg LCA						
1	-1194.84	2456.48	2421.58		<.01	<.01
2	-1085.91	**2311.50**	2238.51	.46	**2440.60**	**0.99**
3	-1057.27	2327.10	**2216.03**	.47	48516,195	<.01
4	-1040.83	2367.10	2217.95	.50	2.649E+10	<.01
5	-1028.84	2415.10	2228.76	.61	0	<.01

6	Best log-likelihood not replicated

Note. Boldface indicates the preferred model for each fit index.

Table 2.

Class-Specific Mean Probability Comparisons of Childhood LCA Classes to Individual College Victimization and Aggression Experiences

College Experience	(1) High Victimization and Aggression (12.3%)	(2) High Relational Victimization/Relational Aggression (30.8%)	(3) High Victimization/Low Aggression (20.0%)	(4) Low Involvement (36.9%)	Significant Differences (*p*<.05)
Relational Peer Vic	0.17	0.33	0.28	0.18	None
Verbal Peer Vic	0.19	0.21	0.17	0.06	3 vs. 4
Physical Peer Vic	0.07	0.00	0.23	0.02	None
Hazing Vic	0.52	0.23	0.44	0.24	1 vs. 4
Sexual Harassment Vic	0.21	0.00	0.34	0.06	1 vs. 2, 2 vs. 3, 2 vs. 4, 3 vs. 4
Dating Violence Vic	0.08	0.05	0.01	0.03	None
Sexual Vic	0.17	0.07	0.12	0.04	1 vs. 4
Verbal Agg	0.13	0.09	0.00	0.03	1 vs. 3, 3 vs. 4
Physical Agg	0.09	0.00	0.03	0.03	2 vs. 4
Sex Harass Agg	0.09	0.00	0.02	0.04	2 vs. 4
Relational Agg	0.23	0.25	0.05	0.12	1 vs. 3, 2 vs. 3

Table 3.

Transition Probabilities from the LTA Model

Childhood Victimization/ Aggression Classes	College Victimization/Aggression Classes	
	Medium-High Involvement	Low Involvement
High Rel Vic & Rel Agg	0.27	0.73
Low Involvement	0.12	0.88
High Vic/Low Agg	0.27	0.73
High Vic & Agg	0.37	0.63

Gen
Sexual Or

Ch

Figure 1. Conceptual diagram of the two models used in this analysis. The top model diagram represents the childhood victimization and aggression LCA with covariates and college victimization and aggression outcomes (Part 1). The bottom model diagram is the conceptual diagram of the LTA (Part 2) model, linking childhood and college victimization and aggression latent classes. C=Class
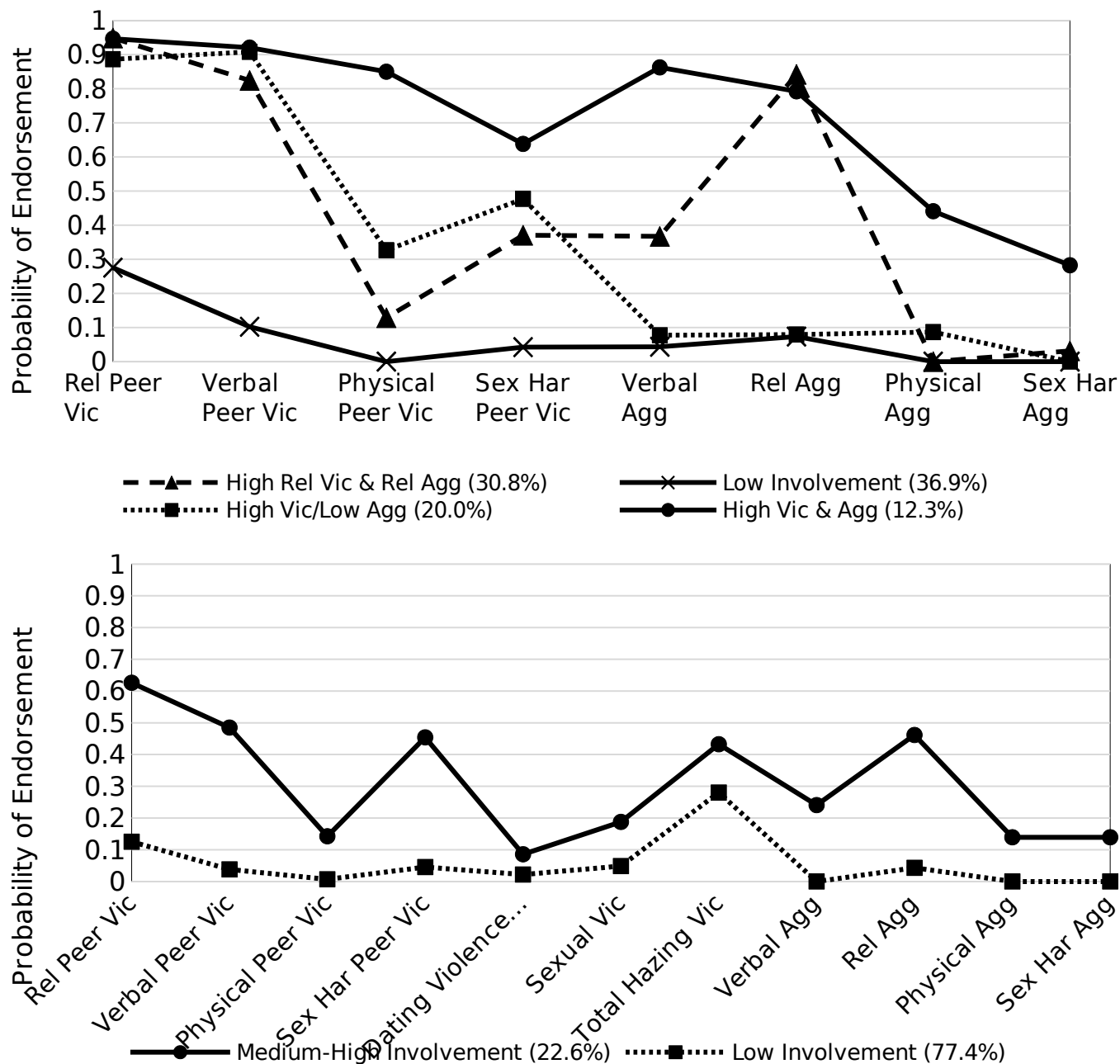
Figure 2. The two LCA item-probability plots. The top panel is the item-probability plot of the childhood victimization and aggression LCA. Rel = Relational; Vic = Victim; Sex Har = Sexual Harassment; Agg = Aggressor. The bottom panel is the Item-probability plot of college victimization and aggression LCA. Rel=Relational; Vic=Victim; Sex Har=Sexual Harassment; Agg=Aggression