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Parent-Adolescent Discrepancies in Ratings of Youth Victimization:

Associations with Psychological Adjustment

A dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at Virginia Commonwealth University

by

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Abstract

PARENT-ADOLESCENT DISCREPANCIES IN RATINGS OF YOUTH
VICTIMIZATION:
ASSOCIATIONS WITH PSYCHOLOGICAL ADJUSTMENT

By Kimberly L. Goodman, M.S.

A Dissertation submitted in partial fulfillment of the requirements for the degree of
Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2009.

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Epidemiological research indicates that parents report lower levels of youths' exposure to violence than youth self-report, and theory suggests that such discrepancies reflect parents' lack of knowledge of youth victimization and impaired ability to help children cope with victimization. This study extends prior research examining the implications of parent-youth informant discrepancies on ratings of victimization. Latent class analysis (LCA) was employed to identify groups of dyads distinguished by patterns of parent and youth report of victimization, uncovering heterogeneity based on patterns of parent-youth ratings of victimization. Analyses examined how latent classes reflecting parent-youth agreement on victimization were related to adjustment (i.e., depression, aggression, and delinquency) concurrently and over time. Participants were youths ages 10-15 years and their mothers (N=1,339 dyads) from the Project on Human Development in Chicago Neighborhoods (PHDCN). Parent and youth reports of six

victimization events were used as the observed indicators in latent class analysis. Youths and parents completed parallel measures of adjustment (anxiety/depression and delinquency subscales of the Child Behavior Checklist and Youth Self Report) concurrently and at follow-up assessment (~2.5 years). This study compared three classes of youths: (a) *Low Victimization* (77.0%), (b) *Youth > Parent* (13.5%), and (c) *Parent > Youth* (8.1%). Concurrently, the class in which youths reported more victimization than parents (*Youth > Parent*) demonstrated higher levels of youth-reported depression, delinquency, and aggression. Longitudinally, however, this was not the case. In fact, the *Parent > Youth* class was more likely to show increased maladjustment, relative to the *Youth > Parent* class. Specifically, these youths showed increases in both youth- and parent- reported delinquent behavior, as well as parent-report of youth anxious/depressed behavior. In the absence of a gold standard to determine which informant is over- or under- reporting victimization, a person-centered approach can offer a unique framework for integrating informant reports. Moreover, discrepant perspectives can offer useful information for understanding the effects of victimization, as well as implications for prevention and intervention.

Chapter One: Introduction

One of the most consistent findings in the social sciences is that different informants do not agree on ratings of behavior. This phenomenon has been studied extensively in both clinical and non-clinical samples. Poor cross-informant agreement can present a conundrum for researchers, as estimates regarding the prevalence of disorders may be quite different depending on the informant (e.g., Rubio-Stipec, Fitzmaurice, Murphy, & Walker, 2003; Youngstrom, Findling, & Calabrese, 2003). Models of risk and protective factors can also vary considerably depending on the informant used (Kuo, Mohler, Raudenbush, & Earls, 2000; Offord et al., 1996), and this can have implications for the design of preventive interventions. Moreover, given that caregivers are often the gatekeepers of mental health treatment for children and adolescents, parent-youth informant discrepancies on ratings of behavior and stressful experiences may have important implications for treatment referral and planning (Hawley & Weisz, 2003; Yeh & Weisz, 2001).

One striking example of this can be found in the literature on exposure to violence: parents report lower levels of youths' exposure to violence than youth self-report, and these informant discrepancies increase with age (e.g., Ceballo, Dahl, Aretakis, & Ramirez, 2001; Howard, Cross, Li & Huang, 1999; Kuo et al., 2000). Recent epidemiological research indicates that depending on whether parent or youth informants are used, researchers may draw very different conclusions about key associative characteristics (e.g., demographics such as ethnicity, age, parent education) linked with violence exposure (Kuo et al., 2000). Thus, our understanding of risk and protective

processes for violence-exposed youths may depend on the informants we rely on for gathering information.

Moreover, informant discrepancies based on epidemiological data may be a unique tool for researchers to understand implications for intervention and prevention. Informant discrepancies have numerous implications for service use initiation, treatment goal-setting, and screening prior to intervention (e.g. Hawley & Weisz, 2003; Yeh & Weisz, 2001). Interestingly, research indicates that violence exposure is likely unaddressed for many youths enrolled in mental health treatment, although the emotional and behavioral sequelae of violence exposure may be considered the “presenting problem” (Guterman & Cameron, 1999; Guterman, Hahm, & Cameron, 2002). This literature highlights that parents are typically “gatekeepers” of treatment. Unfortunately, the gatekeepers of treatment may be unaware of youths’ experiences that put them at risk for maladjustment. Based on the supposition that parent-youth discrepancies on victimization reflect circumstances in which youths feel unsupported by caregivers and therefore may lack adequate coping resources, this study investigates how parent-youth discrepancies on victimization ratings are linked to maladjustment.

Guterman et al. (2002) surmised that in instances of personal victimization, adolescents may not reveal their experiences to concerned adults and thus do not receive needed treatment. Social developmental processes in adolescence may help to explain why these discrepancies occur. Adolescence is a time marked by decreases in parental monitoring, as parents and youths spend less time together, and youths disclose less information about their whereabouts and behaviors (Collins & Laursen, 2004). Indeed,

researchers have used the word “underestimate” to describe parents’ relatively low endorsement of children’s exposure to violence, implying that youth report is more “valid” than parent report (Howard et al., 1999). One cannot definitively tease apart underestimation on the part of one informant (e.g., parent) from overestimation on the part of another (e.g., child) (Richters, 1992). As a result, several researchers have begun to use discrepancies as meaningful and useful information.

A growing body of evidence suggests that discrepancies in how parents and adolescents perceive the same behaviors may negatively affect youth adjustment (e.g., Ferdinand, van der Ende, & Verhulst, 2004; Pelton, Steele, Chance, & Forehand, 2001). Hypothesized reasons for these associations include poor communication and strained relationships. Specifically, in the context of violence exposure, parents are likely to be limited in their ability to help youths cope adaptively with violence if they are unaware of youths’ exposure to violence (Ceballo et al., 2001). Cross-sectional research provides some preliminary support for this supposition, as greater parent-youth disagreement on youth violence exposure is associated with poorer psychosocial functioning, greater PTSD symptoms, and greater perpetration of violence (e.g., Ceballo et al., 2001; Howard et al., 1999).

Interestingly, we know relatively little about parent-youth disagreement on victimization experiences relative to witnessed violence. Several studies examining parent-youth disagreement on exposure to violence have focused exclusively on witnessed violence as the domain of disagreement (e.g., Kuo et al., 2001), whereas relatively few studies have included parent-youth discrepancies on victimization ratings.

This is surprising given that recent meta-analytic research highlights that victimization, relative to witnessed violence, is most strongly linked to maladjustment (Fowler, Tompsett, Braciszewski, Jacques-Tiura, & Baltes, 2009). Research also highlights that victimization is unique from witnessed violence in its association with feelings of isolation and negative emotions such as anger and embarrassment (e.g., Nishina & Juvonen, 2005). Although caregivers are uniquely positioned to thwart the development of psychological symptoms in victimized youths through providing emotional support (Bailey, Hannigan, Delaney-Black, Covington, & Sokol, 2006; Kliewer, Lepore, Oskin, & Johnson, 1998), many youths report feeling constrained and inhibited in discussing violent events with caregivers (e.g., Ozer & Weinstein, 2004). Several researchers surmise that parent-youth discrepancies on victimization may reflect contexts in which caregivers are unaware of or do not share their children's perceptions of victimization experiences and therefore are unable to provide adequate emotional and coping resources to their children (Ceballo et al., 2001; Richters & Martinez, 1993).

Previous research examining the implications of parent-youth informant discrepancies on victimization has two dominant limitations. The first is with regard to how these discrepancies are measured: Agreement is most often examined as a summed score of items on which parents and youths agree (Ceballo et al., 2001; Howard et al., 1999). However, agreement patterns may vary for different types of youths and parents. Although these measures are useful, it is important to understand the construct of agreement from varying perspectives and methods. In a variable-centered framework, creating an agreement index assumes that the nature of "agreement" on different types of

exposure is the same for all pairs of informants. No studies have used a person-centered approach to consider how different patterns of agreement on reports of victimization experiences may emerge for different classes of dyads. The current study addresses this gap by examining heterogeneity in the population based on patterns of parent-youth ratings of victimization. Specifically, latent class analysis was employed to identify latent groups of dyads that are distinguished by patterns of parent and youth report of victimization, considering that classes may reflect different patterns of parent-youth agreement.

The second limitation is with regard to causal inference: all research examining parent-youth agreement on violence exposure related to adjustment is cross-sectional. The theoretical framework guiding this study suggests that discrepancies on victimization lead to maladjustment, although it is possible that maladjustment (e.g., depression and anxiety) contributes to discrepancies on victimization. Longitudinal research is needed to examine temporal associations between rating discrepancies and adjustment indices. This study examines how latent classes reflecting parent-youth agreement on victimization are related to changes in adjustment (i.e., depression and delinquency) over time.

Chapter Two: Review of the Literature

Definitional Issues

Two key constructs in this study—informant agreement and victimization—raise challenges to operational definition and measurement. The literature on informant agreement includes a variety of methods to operationalize agreement (e.g., De Los Reyes & Kazdin, 2004; Richters, 1992), and the literature on victimization includes a variety of methods to operationalize victimization (e.g., Tricket & Espino, 2003). Moreover, various conceptualizations of “community” exist in the literature on community violence (Guterman, Cameron, & Staller, 2000). Because this dissertation seeks to understand informant discrepancies on youths’ experiences of victimization, the following discussion will first address key definitional and measurement issues that provide a foundation for this work.

Informant Agreement

The congruence or concordance in ratings between two informants is often referred to as “informant agreement”. When two informants’ ratings on any construct are components of the metric of agreement, *agreement* itself can be considered as a *new construct*, separate from its components (Edwards, 2002). As a *metric*, informant agreement reflects the extent to which informants are congruent in their ratings on a given domain. As a *construct*, informant agreement reflects the extent to which informants share the same perspective on the domain being rated. While disagreement between self and other ratings may be attributed in part to error variance, researchers also have recently identified disagreement as a useful construct and metric that might yield

information about the contexts in which behaviors occur (e.g., De Los Reyes, Henry, Tolan, & Wachlag, 2009). In fact, agreement as a construct has been used to provide meaningful information across the social sciences, including diverse fields such as criminal justice (Kirk, 2006), social psychology (Perez, Vohs, & Joiner, 2005), and industrial-organizational psychology (Edwards, 1994).

Correspondence and discrepancies are two metrics commonly used to examine informant agreement when the data rated are ordinal or continuous. Correspondence between informants addresses whether informants' ratings are correlated, while discrepancies or difference scores between informants reflect differences in informants' reports (Richters, 1992; Treutler & Epkins, 1993). Correspondence provides no information as to whether informants indicate a similar level or severity of problems, whereas discrepancies are useful to highlight which informant reports fewer or greater problems. Correspondence can be high when informants do not agree, so long as informants disagree consistently. For example, if one informant consistently rates victimization frequency three times as high as the other informant, the correlation between informants' ratings would remain high, because correlation is not sensitive to additive or multiplicative ratings differences (Richters, 1992). Thus, sole reliance on correspondence as an index of agreement may be misleading because it does not provide information regarding the overall difference in ratings between the two informants.

As a complementary metric to correspondence, difference scores can be an intuitive and appealing approach to measuring agreement. Notably, difference scores reflect *which* informant reports fewer or greater symptoms. However, discrepancy as a

variable is not simply a continuum that reflects agreement on one end and disagreement on the other end. Rather, discrepancy is a continuum that can range from negative values to positive values, with perfect agreement (discrepancy=0) falling in the middle of the continuum. For this reason, difference scores can be useful in reflecting the direction of disagreement, but may be challenging to interpret when used as independent or dependent variables in correlation and regression analyses. Several properties of difference scores (e.g., low reliability) have also been discussed as problematic in the literature (for further discussion, see Edwards, 1994; Rogosa & Willett, 1983). Edwards (1994; 2002) also has underscored that the use of difference scores as independent or dependent variables in regression analyses creates important methodological limitations and interpretive problems. One noteworthy limitation is that the overall level of the rated construct is overlooked in discrepancy scores. This is especially important to consider along with the nature of the construct, a point I will return to below (please see *Methodological Challenges* for further discussion). In sum, the terms discrepancies and agreement can denote similar constructs, but can also denote specific metrics (e.g., correspondence, difference scores) used to operationalize the constructs. In this study, I am interested in *discrepant perspectives* between parents and youths regarding youth victimization experiences. I hereby refer to “informant discrepancies” as a construct that represents discrepant perspectives and is typically assessed using difference scores, and to “informant agreement” as a construct that represents shared perspectives and is typically assessed using correlations.

Victimization

According to one popular conceptualization, victimization is one of three types or “routes” of violence exposure (Guterman, Cameron, & Staller, 2000). In this framework, *exposure* to community violence can be categorized as *primary or direct exposure* (victimization), *secondary or indirect exposure* (witnessing violence) or *tertiary exposure* (hearing about violence). The literature on victimization in children and adolescents is rather fragmented, as victimization spans somewhat disparate literatures that focus on particular “types” of victimization (e.g., maltreatment or child abuse, peer victimization, or community violence). The background and rationale for the present study draws heavily on literature examining community violence, because empirical work that has examined parent-youth informant discrepancies on victimization considers victimization under the broader rubric of “exposure to community violence”. Below, I will describe conceptual and semantic issues for two key terms-- *violence* and *community*—that provide an important backdrop for this literature.

In the literature on community violence, *violence* is commonly conceptualized as intentional acts initiated by one person to cause another person harm (e.g., Guterman et al., 2000; Trickett & Espino, 2003). For example, one measure explicitly defines violence as “deliberate acts intended to cause physical harm against a person or persons in the community” (Cooley, Turner, & Beidel, 1995). Notably, it is not simply the act or behavior that defines violence, but also the intention to harm. Non-physically injurious acts (i.e., threats) are also included in recent definitions of violence (Brennan, Molnar, & Earls, 2007; Guterman et al., 2000). This is important, because perceptions and coping processes shape one’s interpretation of experiences deemed violent. As such, the items

on some existing measures qualify items such as “threatened” or “chased” with the stipulation that there is some intention of harm (e.g., “when you thought you could really get hurt”) in order to reduce interpretive ambiguity around violence (e.g., Brennan et al., 2007). A variety of items on existing measures reflect physical harm (e.g., being chased, threatened, beaten up, robbed, mugged, raped, shot, stabbed); however, the item pool varies considerably across measures.

Community

As Guterman et al. (2000) discussed, a sociological framework might suggest that “community” consists of social groups that share geographical space, maintain social interdependency, and are linked by a common interest. Thus, community connotes the “where” and “who”—the essence of context—that must be defined. Several researchers have commented that a clear definition of community is lacking or inconsistent in the literature on community violence (e.g., Brandt, Ward, Dawes, & Flisher, 2005; Guterman et al., 2000). For example, some studies include family violence and in-home incidents (e.g., Richters & Satzman, 1990), while other studies do not specify (e.g., Bell & Jenkins, 1993). Other studies specifically exclude victimization in the home (e.g., Cooley, Turner, & Beidel, 1995). Surprisingly, the specification of school setting within the “community violence” literature is just as inconsistent, with several measures including 1-2 items that specify school context (Brandt et al., 2005). A small handful of studies consider whether the perpetrator or the victim is a stranger, known to the child, or a friend or family member (e.g., Lynch, 2003). Some instruments include this level of specificity embedded in the item content, whereas other measures include this information as a follow-up to

positively endorsed, context-free items (Brandt et al., 2005; Brennan et al., 2007).

Figure 1 illustrates the overlap in different areas of literature. Community violence includes victimization that may overlap with other types of victimization, as the perpetrator (in italics) is often not assessed in community violence exposure. The purpose of this figure is to illustrate that community violence is heterogeneous with regard to “types” of victimization.

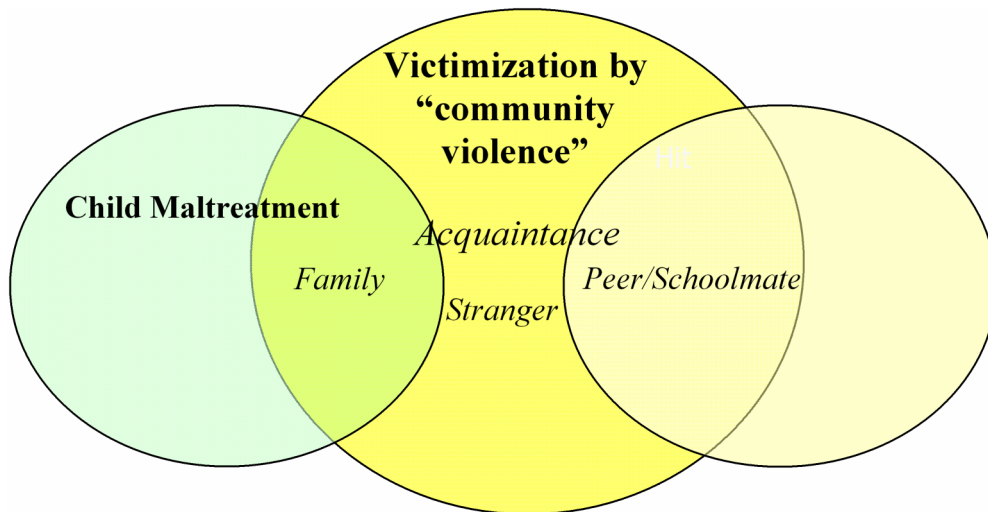


Figure 1. Conceptual figure depicting overlap in literatures on child victimization.

As shown in Figure 1, there is considerable overlap in the three areas of literature.

However, there are some important distinctions. The literature on peer victimization

often includes three types of victimization: physical, verbal, and relational. The literature sometimes delineates *overt* (physical and verbal) forms of victimization from *covert* (relational) forms of victimization. Whereas threats are often considered under the rubric of community violence (Guterman et al., 2000), verbal forms of victimization (being called names, taunted or teased) are not typically considered on community violence checklists (Brandt et al., 2005). Yet another form of violence/aggression excluded from the “community violence” literature is relational aggression. Relational aggression includes damaging or controlling the target's social relationships with peers (e.g., malicious gossip or organized social exclusion) and is typically only considered in studies of “peer victimization” (Crick & Grotpeter, 1995). With regard to child maltreatment, some aspects of maltreatment also do not overlap with community violence measures. For example, emotional abuse and neglect are two forms of maltreatment that are not typically conceptualized as “victimization” by community violence.

It is important to underscore that Figure 1 is intended only to illustrate conceptual overlap in definitions among the different forms of victimization, not shared variance in the prevalence or incidence of victimization in the population. In fact, the literature suggests that there is indeed substantial co-occurrence of different types of victimization. The concept of polyvictimization suggests that various forms of victimization likely co-occur and have cumulative impacts on child mental health outcomes (Finkelhor, Ormrod, & Turner, 2007). Indeed, some research indicates that maltreated children are more likely to be victimized by peers (Shields & Cicchetti, 2001), whereas other research indicates that peer-victimized youths are at greater risk for victimization in several other

contexts (Holt, Finkelhor, & Kantor, 2007). In sum, victimization by community violence is a heterogeneous construct that may include forms of victimization (peer victimization, maltreatment) that are often not explicitly discussed in the literature on community violence. I will discuss item content below. For now, I turn to discussing the literature that highlights informant discrepancies based on epidemiological and community samples.

Discrepancies in Epidemiological and Community Samples

The epidemiological literature provides information on both incidence and prevalence of exposure to violence, although prevalence is most frequently reported. Whereas *incidence* provides information on the *amount* of victimization that youths have experienced in a given period of time (e.g., one year), *prevalence* refers to an estimate of youths who have *ever* experienced the type of victimization under investigation. On the basis of group-level comparisons of mother and child reports of exposure to violence, several studies indicate that the prevalence rates of victimization are lower according to parent report than for child report (e.g., Ceballo et al., 2002; Howard et al., 1999; Richters & Martinez, 1993). In one of the first studies to draw attention to this finding, Richters & Martinez (1993) found that prevalence of child victimization according to parent report (44%) was significantly lower than child self-report (67%). Although the authors did not provide detailed item-level analyses to compare parent and youth report of victimization, subsequent studies have examined agreement using paired student's t-tests and mean difference scores for each item (Howard et al., 1999), and chi-square analyses and kappa statistics for each item (Ceballo et al., 2002). In an urban sample of

primarily African American youths ages 9-15 years, Howard et al. (1999) reported that youths endorsed several incidents of victimization at significantly higher rates than did parents (i.e., being raped or threatened with rape, being attacked with a knife, and being shot by someone). Children were also more likely than parents to report that they were asked to sell illegal drugs, asked to use illegal drugs, or arrested by police (the authors also conceptualized these experiences as “victimization”). Ceballo et al. (2001) reported similar findings in a multi-ethnic sample of poor, 4th and 5th grade children. For example, children were over twice as likely to report that they had been chased by gangs or threatened with serious physical harm, relative to caregiver report. There were also striking differences for reports of severe victimization. For example, whereas 13% of children reported having been attacked or stabbed with a knife, 0% of caregivers reported that their children experienced such victimization. Overall, group-level differences emerge across diverse types of victimization and across studies to suggest that youths self-report higher levels of victimization than parents report.

Nevertheless, some inconsistencies are apparent within and across studies. Whereas Richters and Martinez (1993) reported higher parent-youth correspondence on ratings of victimization for males as opposed to females, other researchers have noted lower parent-child agreement and greater discrepancies for male youths (e.g., Howard et al., 1999; Ceballo et al., 2001). In addition, although the literature generally indicates that discrepancies—in the direction of children reporting higher levels of victimization than parents—increase with age (Ceballo et al., 2001; Howard et al., 1999), this is not always the case. For example, Howard et al.’s item-level analysis of mean difference

scores revealed an anomalous finding when displaying findings separately for adolescents (ages 12-15) and children (ages 9-11). Specifically, adolescents were *significantly less likely* than their parents to report having been slapped, punched, or hit by someone, whereas this finding did not emerge for children. These inconsistencies raise important questions for future research that examines parent-youth discrepancies on exposure to violence. Specifically, it is possible that some parents report higher levels of child victimization than children self-report. Findings based on group-level differences (e.g., average difference scores) may mask the heterogeneity in the population with regard to parent-youth discrepancies. Indeed, we can derive few inferences regarding *patterns* of informant discrepancies based on the epidemiological literature. Are the patterns of discrepancies similar across types of victimization for all dyads? For example, for parent-child dyads in which mothers report more child victimization relative to child report, does this relative over-reporting tend to be consistent across items? The extant literature—even that which provides detail on mean parent-child difference scores and correspondence at the item level—does not shed light on this issue. In order to investigate the implications of informant discrepancies, it will be important to consider heterogeneity within the population in patterns of reporting discrepancies. I will return to these issues in subsequent discussion describing the present study. For now, I will consider the theoretical basis for the emergence and implications of parent-youth discrepancies on ratings of victimization.

Adolescent Social Development as Context for Discrepancies

Why do parents report less exposure than youths, with discrepancies increasing in adolescence? Numerous researchers have suggested that the discrepancies in parent and youth report of exposure to violence reflect parental unawareness of youths' exposure (e.g., Ceballo et al., 2001; Howard et al., 1999; Richters & Martinez, 1993). Several social-developmental changes in adolescence (e.g., adolescent-parent dyad processes) can provide a useful foundation for understanding why parents may not be aware of youths' experiences of exposure to violence. Decreased closeness, decreased parental monitoring, and less time spent together are characteristic changes in the caregiver-adolescent dyad during early adolescence (Collins & Laursen, 2004). Increased time spent with peers—especially deviant peers—in settings outside the home (e.g., neighborhood) without parental supervision might simultaneously increase risk for violence exposure, while decreasing caregivers' opportunities to directly observe youths' experiences. In the following discussion, I elaborate on relevant literature from adolescent development that can provide an important foundation for understanding parent-youth discrepancies in adolescents.

Monitoring and Selective Disclosure

The term “monitoring” has often been operationalized as “parental knowledge” of adolescent whereabouts and activities (Dishion & McMahon, 1998). While monitoring has been conceptualized as a parent-driven process, recent work highlights *the youth's level of disclosure* as critical to parents' knowledge of youth's experiences (Kerr & Stattin, 2000). Based on this literature, parents' knowledge of exposure to

violence may be influenced more heavily by youth disclosure than by parenting behaviors. Nevertheless, parent behaviors (e.g., active attempts to control youths' whereabouts and activities, soliciting information) also contribute to parental awareness/knowledge and are theoretically related to youth disclosure (Crouter, Bumpus, Davis, & McHale, 2005; Fletcher, Steinberg, & Williams-Wheeler, 2004).

A concept that is related to (but distinct from) disclosure is deception or lying. Recently, researchers have attempted to clarify factors that influence lying (e.g., Perkins & Turiel, 2007). Research indicates that youth distinguish between moral, personal, and prudential domains (Smetana, 2000). Deception regarding parental directives is deemed more acceptable when the directives restrict personal activities or are considered to be moral or personal concerns, and older adolescents may assert more control over personal issues (Perkins & Turiel, 2007). On the other hand, parental directives concerning prudential acts (e.g., related to safety) are considered more legitimate, and lying is deemed less acceptable for such issues. Therefore, in the context of selective disclosure and deception regarding victimization, discrepancies might also reflect the extent to which youths perceive victimization experiences as prudential, personal, or moral issues.

Overall, this literature suggests that adolescents' selective disclosure of experiences to parents is a critical aspect of adolescent development that may help to explain why parent ratings are discrepant from youth ratings of violence exposure. Recent research also indicates that factors related to quality of the parent-adolescent relationship (i.e., youth-rated "trust" in parents and youth-rated parental acceptance) are associated with more disclosure and less secrecy (Smetana, Metzger, Gettman, &

Campione-Barr, 2006). Additional cross-sectional work also underscores the importance of parental warmth and acceptance in fostering adolescent disclosure. Recent research by Darling et al. (2006) investigated reasons for adolescent nondisclosure of information, and found that fear of consequences (e.g., parental anger) and emotional concerns (e.g., parent would not understand, or adolescent would be embarrassed or uncomfortable) were dominant reasons. The construct of parental warmth (or lack thereof) seems to be an inherent aspect of adolescents' reasons for non-disclosure. In cases where parent-youth discrepancies on victimization do in fact reflect parental "unawareness" of victimization experiences, these discrepancies might also reflect impairment in parent-youth relationship quality (e.g., youths' lack of parental acceptance/warmth, or impaired trust) and communication (e.g., lack of parental solicitation, selective disclosure).

Parent-Child Relationship and Discrepancies

Not surprisingly, researchers posit that both quantity and quality of parent-child communication are related to parent-child discrepancies on ratings of behavior and psychological symptoms (e.g., Treutler & Epkins, 2003) and exposure to violence (e.g., Ceballo et al., 2001). A modest body of empirical literature has examined aspects of the parent-child relationship related to parent-child rating discrepancies. Parental acceptance is related to fewer discrepancies in psychological symptoms in both clinic-referred and nonreferred samples (Kolko & Kazdin, 1993; Treutler & Epkins, 2003). Specifically, Kolko & Kazdin (1993) found that parental acceptance was associated with parent-youth agreement for externalizing (but not internalizing behavior) in a sample of clinic-referred youths ages 6-13. In a community-based sample of youths ages 10-12 years, parental

acceptance also was related to discrepancies in reports of externalizing symptoms (Treutler & Epkins, 2003). Finally, Howard et al. (1999) examined the relationship between parent-youth relationship characteristics and informant discrepancies for youth's exposure to violence. Indeed, Howard et al. found that youth-caregiver dyads with low agreement were characterized as having less communication, less parental involvement, and less parental monitoring.

Surprisingly, there is a dearth of qualitative research that has explored reasons for parent-child informant discrepancies. In one noteworthy exception, a study conducted by Bidaut-Russell et al. (1995) investigated reasons for discrepancies in reports of psychological symptoms. Based on open-ended responses to interview questions, the authors conducted a thematic analysis of reasons for anticipated informant disagreement. Parental unawareness emerged as one common reason adolescents anticipated that parents would provide conflicting reports. Adolescents most commonly attributed lack of parental awareness to their own non-disclosure of information. Less commonly mentioned reasons for parental unawareness included adolescents' lack of emotional expressiveness, lying to parents, and lack of parental attentiveness. Notably, the themes that emerged in this study dovetail with developmental literature regarding the importance of adolescent disclosure.

Summary

In sum, the literature suggests that changes in parent-child relationship quality (e.g., decreases in youth-rated parental warmth) and communication (e.g., decreases in disclosure of information) are typical in early adolescence, and theoretically related to

discrepant perspectives on various domains of behavior. Further, some empirical research supports the idea that parent-child discrepancies reflect parent-child communication and relationship quality. If discrepant perspectives reflect “normal” adolescent development, why might discrepancies also predict abnormal behavior and psychological symptoms? The answer may depend on the domain of behavior that is rated discrepantly, as well as the direction and magnitude of discrepancy. For example, discrepancies on daily behaviors (e.g., what child ate for breakfast) likely do not carry the same implications as discrepancies on serious, potentially traumatic experiences such as interpersonal victimization. The following discussion elaborates on the theoretical support for the implications of discrepancies on ratings of interpersonal victimization.

Theoretical Support for Discrepancies in Victimization Predicting Adjustment

Although empirical literature suggests that parent-child rating discrepancies are present across both direct and indirect forms of violence exposure, the present study focuses on parent-child rating discrepancies on direct exposure (victimization) rather than indirect exposure (witnessed violence). I focus on victimization for two reasons. First, victimization is most strongly associated with maladjustment, and is uniquely associated with the development of diverse forms of psychopathology—both internalizing (Fowler et al., 2009) and externalizing (Durant, Pendergrast, & Cadenhead, 1994). The link between victimization and internalizing symptoms is especially noteworthy, given that literature suggests caregivers may be uniquely positioned to help thwart the development of internalizing symptoms in victimized youths (e.g., Kliewer et al., 1998; Ozer & Weinstein., 2004). Youths who are victimized may be especially prone to feelings of

isolation and self-estrangement that are linked to maladjustment (O'Donnell, Schwabb-Stone, & Ruchkin, 2007). With this in mind, discrepancies may reflect interpersonal contexts in which youths feel isolated and unsupported by caregivers who are either unaware of or do not share their children's perceptions of victimization experiences.

Second, relatively few studies have focused on discrepant reports of victimization. In my review of the literature, I was able to locate only six studies that examined parent-youth discrepancies on exposure to violence. Three studies included both victimization and witnessed violence as domains of informant discrepancies (i.e., Ceballo et al., 2001; Howard et al., 1999; Richters & Martinez, 2003), and three studies focused exclusively on witnessed violence as the domain of discrepancy (i.e., Hill & Jones, 1997; Kuo et al., 2001; Thomson, Roberts, Curran, Ryan, & Wright, 2002). Overall, there is a relative dearth of research that has focused on parent-youth discrepancies on victimization, and there is a need for such work to include socioeconomically-diverse epidemiological samples in addition to work that focuses on urban, "high risk" minority samples. In the following discussion, I review literature that highlights the role of the caregiver as a critical protective factor for violence-exposed youth. The literature reviewed below is illustrative and not exhaustive, but helps to bolster the theoretical foundation for investigating how parent-youth discrepancies on victimization are linked to maladjustment.

Role of Caregiver as Protective for Victimized Youths

Internalizing symptoms and family protective processes. Numerous community-based studies have examined psychosocial factors that might buffer youths from the

harmful psychological effects of violence exposure. Social support—and caregiver support in particular—has garnered attention as protective in the development of internalizing symptoms (e.g., anxiety, depression, PTSD) for victimized youths. In an urban sample of 8-12 year-old children, Kliewer, Lepore, Oskin, and Johnson (1998) found that perceptions of social support moderated associations between violence and intrusive thinking, and between intrusive thinking and internalizing symptoms. This work suggests that caregiver support may prevent the psychological sequelae of traumatic stress that leads to maladjustment. In a younger sample of urban first grade children, Bailey, Hannigan, Delaney-Black, Covington, and Sokol (2006) found that perceived maternal acceptance did not moderate associations between violence exposure and PTSD symptoms, but did moderate associations between victimization and symptoms of depression and anxiety. Kliewer et al. (2004) also found that children’s perceptions of parental acceptance moderated the relationship between exposure and internalizing symptoms (depression and anxiety) in an urban sample of 9-13 year-olds. Interestingly, the authors noted that few children had high exposure to violence *and* high felt acceptance from their caregiver, suggesting that felt acceptance might protect youths from becoming exposed to high levels of violence. Additional evidence for family support as a protective factor in adolescents comes from Ozer and Weinstein (2004). In a sample of 7th graders, these authors found that maternal support moderated the association between violence exposure and depression as well as the link between violence exposure and PTSD. Finally, Hammack, Richards, Luo, Edlynn, and Roy (2004) also found that social support moderated associations between victimization and

internalizing symptoms in 6th graders. Using experience sampling methodology and a composite measure of social support (including friends and family), Hammack et al. found that social support demonstrated a promotive-reactive moderating effect, such that under conditions of high victimization, social support was no longer protective. Similarly, in the study by Kliewer et al. (2004), felt acceptance was no longer protective at very high levels of violence exposure. Therefore, in the present study, the overall level of victimization was important to consider in addition to the degree of discrepancy between parent and youth reports of victimization.

Externalizing symptoms and family protective processes. Some research also indicates that youths' perceptions of parental acceptance moderates the relationship between violence exposure and parent-rated externalizing symptoms (Bailey et al., 2006). Based on their study of urban first graders, Bailey et al. characterized low maternal warmth/acceptance as a risk factor for the development of externalizing behavior, rather than high maternal warmth/acceptance as a protective factor. In a multi-ethnic sample of urban adolescents, Ozer (2005) found that support from mothers (but not fathers or friends) moderated the relationship between violence exposure and aggression in urban adolescents.

Unique Role of Mothers. It is important to acknowledge that although adults other than maternal caregivers can provide important support for victimized youths, the majority of research examining the role of caregivers has focused on maternal support. In fact, some research suggests that mothers are viewed as the most helpful source of social support in dealing coping with violence (Ozer & Weinstein, 2004), and the need

for maternal support to cope with violence emerged as a dominant theme in qualitative research with female adolescents (Molnar, Roberts, Browne, Gardener, & Buka, 2005). Ozer and Weinstein (2004) found that support from mothers (but not fathers or friends) moderated the relationship between violence exposure and depression, in addition to aggression. Interestingly, this literature suggests that support provided by key individuals may be differentially related to psychological functioning, and that support is provider-specific rather than functionally-equivalent across sources of support. With this in mind, the present study focused on maternal caregivers as parental informants.

Victimization and Isolation. Why might disclosure be a particularly critical protective factor in response to victimization experiences, relative to witnessed violence? Recent research highlights that victimization—more so than witnessing violence—is associated with feelings of isolation and self-estrangement (O'Donnell et al., 2007). In fact, O'Donnell et al. (2007) found that isolation and self-estrangement mediated the relationship between victimization and a composite measure of depression and anxiety. Recent research with daily diary methodology also indicates that experiencing peer victimization—relative to witnessing peer victimization—is unique in its associations with negative emotions such as anger and humiliation (Nishina & Juvonen, 2005). Nishina and Juvonen highlighted that youths who feel alone in their victimized plight may be especially susceptible to maladjustment. Because victimization is an especially strong personal affront and isolating experience, disclosure of victimization and seeking support from a supportive other may be critical to help youths process the experience, and to feel understood and less isolated.

In fact, some theorists suggest that a traumatic event will generate intrusive recollections until it can be assimilated into an individual's existing schemas of the world and self, or until the schemas can change to integrate the event (Creamer, Burgess, & Pattison, 1992). If discussing the event allows youths to express thoughts and feelings and make sense of their experiences, then this discussion may indeed help to reduce stress-related symptoms in victimized youths. However, constraints on disclosure may cause individuals to inhibit discussion of the event or suppress thoughts and thereby impair adaptive coping (Kliewer et al., 1998; Lepore et al., 1996). Support for this idea comes from the work of Kliewer et al. (1998) and Ozer and Weinstein (2004; see also Ozer, 2005) who found that violence-exposed youths who feel constrained in talking about their experiences are more likely to experience internalizing symptoms. Interestingly, research by Ozer & Weinstein (2004) revealed that many adolescents reported social constraints in talking about violent events. For example, of the adolescents who reported talking to someone else about a violent experience in the past six months, 35% perceived others as uncomfortable or unwilling to discuss violent experiences and 46% kept feelings to themselves because it made another person uncomfortable or upset. Overall, this literature provides unique theoretical support for the hypothesis that parent-youth discrepancies on victimization are linked to maladjustment.

Disclosure as coping for victimized youths. This study is based on the premise that parent-youth discrepancies on ratings of victimization likely reflect, at least in part, the resources that youths have for *coping* with victimization experiences. Because the

adaptive value of coping depends on the stressor (Compas et al., 2001), it is important to consider what the literature has to say about coping with violence exposure. Importantly, empirical research highlights the potentially adaptive value of guidance seeking (e.g., Tolan, Gorman-Smith, Henry, Chung, & Hunt, 2002) and maladaptive function of avoidance or passive coping strategies (Dempsey, Overstreet, & Moely, 2000) for violence-exposed youths. For example, in the Tolan et al. (2002) study based on a sample of 12-16 year-old urban adolescents, youths with minimal coping behaviors showed increased internalizing symptoms relative to youths who sought guidance and support. Dempsey et al. (2000) found that avoidant coping strategies moderated associations between violence exposure and PTSD. Gender may also be important to consider in the relation between coping and adjustment in victimized youths. For example, research indicates that avoidant coping is associated with increased delinquency for girls who witness violence (Rosario et al., 2003). Moreover, Rosario et al. found that for girls who experience high levels of victimization, parental support may be an especially critical protective factor against the development of delinquent behaviors. In research focused on peer-victimized youths, Vernberg et al. (1996) also highlighted the adaptive value of support seeking, especially for females in buffering the development of internalizing symptoms.

The *socialization of coping* with violence may further explain why family support is adaptive (Kliewer et al., 2006). This model suggests that children's coping strategies are influenced by three levels of socialization: family context (e.g., emotional milieu of the family), caregiver modeling, and caregiver coaching (direct suggestions for how to

cope). One might surmise that when parents do not know about their children's victimization or do not share their children's perspectives of victimization events, they are limited in their ability to suggest appropriate coping strategies. While the adaptive value of various coping strategies depends on the *context* of the stressful event (e.g., controllability of stressor; Band & Weisz, 1988), parents who do not share the same perspectives as their children on the mere *existence* of the stressor (let alone context) are likely impaired in their ability to suggest adaptive coping responses to victimization events.

Kliewer et al. engaged parents in an open-ended discussion task to elicit suggestions that caregivers use to help their children cope with violence-related stressors. Coping suggestions included active coping (akin to problem-focused coping), proactive coping (preventing a problem from occurring), resignation, seeking understanding, seeking emotional support from God or an adult. Interestingly, Kliewer et al. found that one particular type of coping—proactive coping—might have particular adaptive value in protecting youths against maladjustment. Proactive coping refers to actions to prevent stressors from occurring or to modify the stressors before they occur (Aspinwall & Taylor, 1997). This was in fact the second most frequently suggested form of coping (after active coping) by caregivers in Kliewer et al.'s (2006) study, although it is not typically assessed on coping checklists. Caregivers who are well-informed of their children's experiences with violence may be better equipped to suggest appropriate and effective proactive coping strategies. In sum, caregivers can be protective not only in

coaching youths to cope with victimization after it has occurred, but also by helping youths to cope proactively and prevent or minimize future victimization.

Parental Knowledge as Protective

Literature suggests that parental knowledge of youth behavior is linked to adjustment, although some studies suggest that knowledge is more strongly linked to externalizing than internalizing (e.g. Waizenhofer, Jackson-Newsom, & Buchanan, 2005). It is important to consider that the associations are bidirectional. For example, Laird, Pettit, Bates, & Dodge (2003) found that knowledge and delinquency were reciprocally related over four years. Given the supposition that parent-youth informant discrepancies likely reflect a lack of parental knowledge, delinquency may in fact be causally prior to parent-youth discrepancies in violence exposure. This is important, because researchers surmise that discrepancies on violence exposure are causally prior to perpetration of violence (e.g., Howard et al., 1999) or broadband externalizing symptoms (Ceballo et al., 2001). However, cross-sectional research can not shed light on the causal direction of the delinquency-discrepancy associations. It is important, therefore, to longitudinally examine associations between discrepancies and delinquency.

Parents' knowledge about their children's daily experiences, whereabouts, and psychosocial well-being depends largely on the parent-adolescent relationship (Crouter et al., 1999), as well as the ways parents keep themselves and one another informed about their children's experiences (Crouter et al., 2005). Overall, this research suggests that it is not simply how much parents know that is important for adolescent development, but also how parents' attain the information. Whereas in middle childhood, parents may be

more likely to directly observe their children outside the school context, decreased supervision in early adolescence means that parents must instead acquire knowledge through youth disclosure or outside sources of information. Research suggests that knowledge attained through outside sources of information, relative to youth disclosure, is less protective and more strongly associated with adolescent risky behavior (Crouter et al., 2005).

Summary

Overall, it appears that family support (e.g., warmth and felt acceptance as perceived by youth) may protect violence-exposed youth from internalizing symptoms. The protective role of caregiver support for violence-exposed youths provides an important foundation for investigating whether informant agreement is protective. Figure 2 provides a broad theoretical framework for considering how and why informant discrepancies on victimization may be linked to maladjustment. This conceptual model illustrates the ways in which some of the constructs discussed above may be interrelated, providing a theoretical foundation for studying how parent-youth discrepancies on victimization are associated with adjustment. Although this model begins with youth disclosure of victimization, it is important to consider that parental warmth is likely a precursor to youth disclosure. Youths with stronger caregiver support—for example, those who perceive caregivers as warm and accepting—may be more likely to disclose personal experiences of victimization, therefore leading to parent-youth agreement. As the model illustrates, shared perspectives on youth victimization might also allow caregivers to be responsive and supportive. Therefore, shared perspectives may lead to

adjustment through caregiver responsiveness. Caregiver responsiveness may also affect coping and appraisal processes linked with adjustment. Although this study is based on the supposition that youth disclosure of victimization contributes to shared perspectives (informant agreement), *Figure 3* illustrates factors (maternal observation and outside sources of knowledge) that may also contribute to discrepant perspectives.

Early adolescence is an ideal developmental stage for the proposed study, because parental knowledge of youth victimization increasingly depends on youth disclosure, and parents' direct observation of youths' experiences also decline in adolescence. Although numerous conceptual frameworks might be considered in future work, there is a need for empirical research to first investigate whether parent-child discrepancies on victimization are related to indices of maladjustment such as depression and delinquency. The scope of the proposed study will focus on examining the associations between parent-youth discrepancies (shared perspectives) and adjustment.

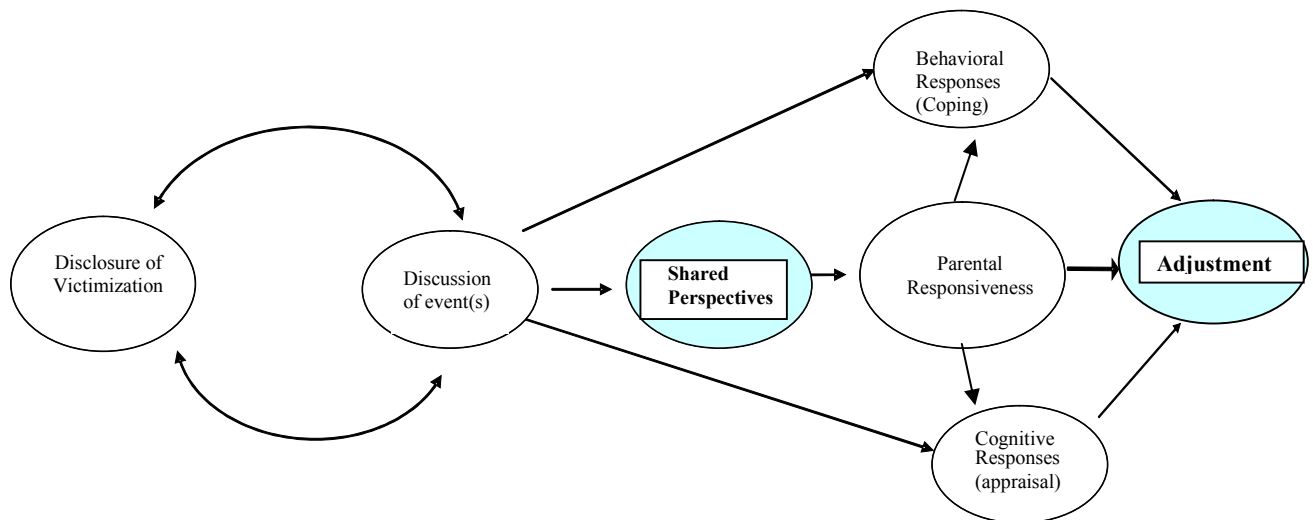


Figure 2. Conceptual Model and Theoretical Framework

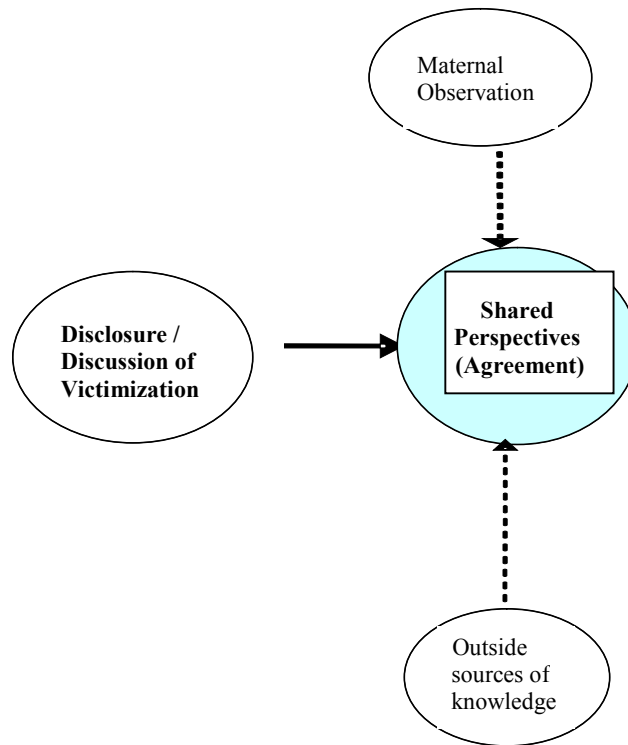


Figure 3. Factors contributing to shared perspectives on victimization

Empirical Support for Discrepancies Predicting Adjustment

An emerging body of evidence suggests that discrepancies in how parents and adolescents perceive the same behaviors negatively affect individual and dyadic functioning (e.g., Ferdinand, van der Ende, & Verhulst, 2004, 2006; Pelton, Steele, Chance, & Forehand, 2001). In the following discussion, I will discuss empirical support for examining associations between parent-youth discrepancies on victimization and adjustment. I will also highlight relevant literature that has examined parent-youth discrepancies as a risk factor for maladjustment. This discussion is illustrative and not exhaustive, and is intended to summarize important conceptual and methodological issues for future research.

Victimization Discrepancies and Adjustment

Appendix A summarizes studies that have examined associative characteristics of parent-youth rating discrepancies on youth exposure to violence. Research by Ceballo et al. (2001) investigated agreement on victimization (10 items) and witnessed violence (10 items) as predictors of psychological symptoms in 104 mother-child pairs for youths in 4th and 5th grades. This study found that parent-youth agreement on victimization significantly added to the prediction of PTSD and internalizing (but not externalizing) symptoms, after controlling for demographic variables and parent report of youth's exposure to violence. The authors suggested that processes such as family support might account for this association, although the role of family was not examined in their study. In Howard et al's study of 333 dyads in urban public housing developments, both victimization (12 items) and witnessing violence (17 items) were assessed. Howard et al. found that parent-youth agreement was related to poor parent-child communication, low parental monitoring, symptoms of distress, low self-esteem, low problem-solving, and perpetration of violence.

While the research discussed above was based on the supposition that parent-youth disagreement contributes to maladjustment, one could reasonably surmise that youth psychopathology contributes to parent-youth discrepancies on violence exposure. For example, youths who are depressed may be less likely to seek support from their adult caretakers when they experience victimization, and caretakers may therefore "under-report" youth victimization. Alternatively depression may distort youths' ratings of victimization, therefore contributing to youths' "over-reporting" of their own

victimization experiences (De Los Reyes & Prinstein, 2004). Youths who are delinquent or involved in perpetration of violence may be less likely to discuss their personal experiences of victimization, for fear of parental disapproval or sanctions on activities. In fact, youths who are involved with delinquent peers and who commit delinquent (especially violent) acts are at higher risk for victimization in the community (DuRant, Pendergrast, & Cadenhead, 1994).

In addition to the cross-sectional design, there are important limitations in the methodological approaches used to measure discrepancy for each study. In Howard et al.'s 1999 study, concordance was defined as absolute agreement between the responses of parent-youth dyads, and concordance status defined by low, medium and high concordance (<50%, 50–80%, and >80%). Importantly, this method of classifying dyads overlooked the *direction* of discrepancy, and also did not delineate between victimization and witnessing. Similar limitations were present in Ceballo et al.'s (2001) study that included separate concordance indices for victimization (10 items) and witnessing (10 items). Concordance was a continuous index used in regression, rather than Howard et al.'s approach of creating a categorical variable used in ANOVA. Nevertheless, this method also overlooked the degree and direction of discrepancy. Specifically, agreement was measured by assigning mothers a score of 1 if answers about child's exposure to a violence incident (yes/no) matched a dichotomous (never/at least once) recoding of their child's response. For each scale, scores could range from 0 (no agreement) to 10 (perfect agreement). In both approaches, discrepancy on one form of victimization (such as being chased) carries the same weight as discrepancy on a more serious form of victimization

such as being stabbed or shot at. Moreover, the degree of discrepancy was overlooked. I will return to these issues in discussing methodological issues below.

Discrepancies in other domains as risk factors for maladjustment

Interestingly, several studies have examined parent-youth disagreement on parenting in relation to maladjustment (e.g., Guion, Mrug, & Windle, 2009; Pelton, Steele, Chance, & Forehand, 2001). This literature suggests that when parents and youths perceive parenting practices differently (e.g., youths perceive that parents are more hostile and hostile than parents perceive themselves to be), this disagreement is linked to maladjustment (e.g., internalizing symptoms). The basic supposition behind this work is that discrepant perspectives on parenting and dyadic processes create additional strain for families that can adversely impact youths' psychosocial adjustment. Interestingly, some literature also suggests that discrepant perspectives between parents and youths are a healthy and normal part of adolescent development (Ohannessian, Lerner, Lerner, & von Eye, 2000; Welsh, Galliher, & Powers, 1998). Nevertheless, the empirical research suggests that discrepancies in reports of parenting do play a role in the development of psychopathology in adolescents (e.g., Guion et al., 2009; Pelton, Steele, Chance, & Forehand, 2001).

A small number of studies have examined parent-youth discrepancies on child behavior as a predictor of salient adjustment outcomes, although some literature suggests that the associations may be different for youth who are clinic-referred (e.g., psychiatric samples) and non-referred (e.g., community samples). For example, despite similar study design and nearly identical analytic approach, the work of Ferdinand et al. (2004; 2006)

suggests that discrepancies may be associated with adjustment in different ways depending on the sample characteristics. Ferdinand et al's 2006 study (clinic-referred sample) found that youths who report *more* aggressive behavior than parents are more likely to abuse substances four years later. On the other hand, Ferdinand's 2004 study (epidemiological study with a community sample) found that youths who reported *fewer* aggressive behaviors than their parents were more likely to report abusing substances at follow-up. There are numerous reasons why the processes driving discrepancies in the context of the clinic setting are unique (e.g., biases and attributions; see De Los Reyes & Kazdin, 2005), although such work is beyond the scope of this discussion.

It is important to note that the mechanisms explaining why informant discrepancies are associated with maladjustment may be different, depending on the direction of discrepancy (e.g., parents or youth reporting higher levels of symptoms) and domain of informant discrepancy. For example, informant discrepancies on child behavior problems (in the direction of parents reporting *greater* problems than youth) may lead to maternal stress and parent-child conflict that subsequently lead to maladjustment (De Los Reyes & Kazdin, 2006). Alternatively, when parents report *fewer* problems than youth, informant discrepancies may indicate a lack of parental awareness that problem behaviors exist. Discrepancies for internalizing symptoms such as depression (in the direction of parents reporting *fewer* problems than youth) may suggest a lack of youth disclosure of information about feelings or impaired communication styles (Barker, Bornstein, Putnick, Hendricks, & Suwalsky, 2007). Thus, the underlying factors (lack of parental awareness, lack of child disclosure) that are

theoretically linked with parent-youth discrepancies on ratings of psychopathology are also theoretically linked to parent-youth discrepancies on victimization.

It is also important to consider the *severity* of behavior or psychopathology of the domain rated discrepantly. For example, one might argue that when parents and youths agree on the existence of very serious traumatic experiences (e.g., victimization), this agreement is most predictive of maladjustment. Indeed, it may be too simple to view agreement as “bad” or “good” without considering the domain being rated and the sample. Prinstein, Nock, Spirito, & Grapentine (2001) examined informant discrepancies on suicidal ideation and behavior in an inpatient clinical sample of adolescence and found that parent-youth agreement was associated with a worse prognosis. However, the study was restricted to youths already identified as a high-risk population for suicidal behavior. One might argue that in community-based samples, in cases where youths report higher levels of depressive symptoms than parents report, discrepancies are in fact maladaptive because youths are less likely to get the services and support they need when depressive symptoms go unnoticed by caregivers. The present study is based on the supposition that disagreement (in the direction of parents reporting less victimization than youths report) is especially predictive of maladjustment.

Methodological limitations pose challenges to our ability to draw conclusions from the literature examining parent-youth discrepancies in relation to youth adjustment. First, when the domain of discrepancy (independent variable) is psychological symptoms or adjustment indices, this overlaps with the dependent variable (adjustment); thus the independent variable is confounded with the dependent variable. Second, a heavy

reliance on variable-centered analytic approaches (e.g., linear regression analyses with the use of a continuous variable as an index of informant discrepancies) poses some problems for interpretation. In particular, the association between informant discrepancies (e.g., parent-youth report) may show a curvilinear relationship with adjustment, if we expect that agreement (discrepancy=0) is protective or adaptive. Moreover, creating an index of discrepancy may be problematic if discrepancies for various items are not all related in the same way for all individuals in the population (see *Methodological Challenges and Measurement Issues* below for further discussion).

Summary. An emerging body of empirical literature suggests that parent-youth discrepancies on ratings of behavior are linked with maladjustment. However, despite theory to suggest that discrepant perspectives on youth behaviors and symptoms may play a causal role in the development of future dysfunction, attempts to empirically test this theory face numerous methodological limitations. In sum, parent-youth discrepancies likely influence—and are influenced by—dyadic behaviors (e.g., parent-child conflict, youth disclosure and parental monitoring and communication) associated with long-term adjustment.

Methodological Challenges and Measurement Issues

In my previous discussion, I elaborated on definitional and semantic issues in the study of victimization and informant agreement (see *Definitional Issues*). In this section, I will describe key measurement issues that ought to be considered in the study of victimization and informant discrepancies.

Measurement of Victimization

Anchors. As Brandt et al. (2005) summarized, response scales vary considerably across studies examining community violence, ranging from 2-point scales (never, 1 or more) to 3-point scales (never, sometimes, a lot) to 5-point scales (never, once, twice, three times, many times). In the widely-used Richters & Saltzman (1990) and Richters & Martinez (1990) surveys, the response options included 9-point scales to indicate frequency: (“Never”, “1,” “2,” “3 or 4,” “5 or 6,” “7 or 8,” at least once a month, at least once a week, and almost every day). Recent work has included a revised scale to assess frequency of victimization—for both past 12 months and lifetime frequency—on a six-point scale (never, once, 2 or 3 times, 4 to 10 times, 11 to 50 times, more than 50 times) for youths ages 9 and older (e.g., Brennan et al., 2007).

One critical issue for the study of discrepancies is including a response scale that minimizes interpretive ambiguity with anchor points. As Hoyt and Kerns (1999) found, bias in ratings was related to the explicitness of the rating scale. When scale scores were clearly tied to frequency counts of behavior, there was less bias than for more ambiguous scales requiring interpretation and inference. In the context of violence exposure ratings, a likert scale with subjective frequency ratings (never, rarely, sometimes, often, all the time) introduces more ambiguity than a scale that provides specific frequencies (never, once, 2 or 3 times, 4 to 10 times, 11 to 50 times, more than 50 times). For example, a child who is threatened three times in 12 months may perceive this experience as “rare”, whereas a parent may perceive this as “very often”.

Items. A variety of measures have been developed to assess victimization and community violence (for a recent review, see Brandt et al., 2005). One of many issues to consider is that the pool of victimization items varies across measures. In the pioneering work of Richters and Saltzman (1990), a long interview was developed for use with older children (4th and 5th graders) —i.e., the “Survey of Exposure to Community Violence: Self Report Version”—that included 16 items that tap some form of violence. Subsequent studies using this measure most frequently used 9 of these items (chased, threatened, hit, mugged, shot at, knifed at, clubbed at, had item thrown at, had home broken into).

Summing and Scoring. Tricket, Duran, & Horn (2003) outlined four ways in which different item-scoring methods might be conducted: (1) “implicitly and arbitrarily”, by scoring the items and adding them up without a theoretical framework (2) by theory alone, without testing assumptions implied by item-weighting; (3) scaling methods, such as factor analysis or item–response theory; and (4) by using external-analysis methods, such as regression analysis of item variables to estimate a criterion variable. The majority of studies score victimization items “implicitly and arbitrarily”, using either average frequencies or summed scores. A small number of studies have used factor-analytic methods to examine underlying factors. In a sample of 2nd and 4th graders in Isreal, Raviv et al. (2002) conducted a principle components analysis of victimization items, resulting in a “mild” factor (i.e., chased, hit, threatened) and a “severe” factor.(e.g., attacked, stabbed, shot at). Importantly, frequencies of the “severe” victimization factor were not deemed high enough to be used in subsequent analysis with the sample of

children in elementary school (Raviv et al., 2002). A second study focused on adolescence also found that these two factors also emerged in principle components analysis of victimization items (Vermeiren et al., 2003).

Because one common measurement problem in exposure to violence involves equal weighting of items despite differences in item quality (e.g., witnessing someone being shot is different from witnessing someone being “shot at”), some researchers have attempted to weight items according to item severity, in order to produce a continuous measurement of individual’s victimization or witnessing. Using pilot data from the Project on Human Development in Chicago Neighborhoods (PHDCN), O’ Hagan et al. (1998) used a Rasch model to examine how well items and youths were measured on the same scale. The Rasch model takes into account a person’s exposure frequency and extremity of the event to estimate the probability of endorsement of an item. Item difficulty (severity) and person ability (exposure frequency ratings) are the key dimensions. The authors reported that participants were clustered more towards the low end of the distribution, with extreme items (e.g., sexual assault or witnessing a murder) having higher “item calibrations” or weightings than less extreme items.

Brennan et al. (2007) also applied Rasch analysis to the study of victimization and witnessed violence, with a sample of 9-17 years from the PHDCN. The authors found that a victimization factor emerged for both parent and youth reports, with the severity of items as follows (in order of least severe to most severe items): hit, chased, threatened, attacked with a weapon, shot at, sexually assaulted, and shot. Although the authors reported low to moderate correspondence on victimization indices between parent and

child informants, this work did not shed light on the existence of informant discrepancies in the population. As discussed previously, correspondence and discrepancies are very different metrics that yield different information in the study of informant agreement.

Epidemiological vs Urban “Community” Samples

One additional issue in the literature on community violence is the nearly exclusive focus on populations that are urban, inner city, low-income, and often primarily African American (Guterman et al., 2000). As such, researchers’ understanding of “community violence” may be filtered through one type of culture and context. This is important to note, if studies of “community violence” tend to only represent one type of community. More diverse, representative samples are rare in this area of research; some noteworthy exceptions include recent work by Finkelhor, Ormrod, & Turner (2007) and an epidemiological sample of community violence exposure in Chicago neighborhoods (e.g., Brennan et al., 2007; Buka et al., 2001).

Analytic Approaches in the Study of Informant Agreement

As discussed previously, difference scores and correlations are most frequently used as metrics of informant (dis)agreement (see *Definitional Issues*). However, several researchers have used alternative methods for integrating multi-informant data in order to study informant agreement. Examples include polynomial regression (Edwards, 1994), principal components analysis (Kraemer, Measelle, Ablow, Essex, Boyce, & Kupfer, 2003), latent variable modeling (Bartels, Boomsma, Hudziak, van Beijsterveldt, & van den Oord, 2007), hierarchical linear modeling (Kuo et al., 2001), and latent class analysis (De Los Reyes et al., 2009). In general, variable-centered analytic approaches assume

that the population is homogeneous with respect to how predictors operate on the outcomes (Laursen & Hoff, 2006). Variable-centered analytic approaches that employ discrepancies as predictors assume that informant discrepancies operate similarly for all individuals. A person-centered approach, on the other hand, considers that different subgroups of individuals may underlie the population, such that variables are related to one another in different ways for different groups of people (Laursen & Hoff, 2006; Magnusson, 2003). As Laursen & Hoff (2006) underscored, person-centered analyses have two key features: (1) no assumption that the population is homogeneous with respect to how variables influence each other, and (2) classification of individuals based on patterns of associations among variables, such that the associations among variables are similar within groups and different between groups.

Interestingly, latent class analysis was recently applied to the study of self-reported peer victimization, in order to differentiate victims based on type of victimization and level of victimization (Nylund, Bellmore, Nishina, & Graham, 2007). When including items as indicators in latent class analysis, it is possible to reflect heterogeneity in the population based on level of victimization and type of victimization. Nylund et al.'s (2007) study was especially useful because it indicated that students are better classified according to intensity of victimization, rather than type of victimization. This study sheds light on whether parent and youth reports combined in latent class analysis reflect overall intensity of victimization (ordered classes), or discrepant perspectives.

Disentangling level of construct rated from discrepancy. In much of the literature on informant discrepancies, it is difficult to tease apart the overall level of victimization from discrepancy. There are more opportunities for discrepant perspectives when youths experience higher levels of victimization. Ceballo et al. (2001) tried to address this by controlling for maternal report of child victimization and examining whether agreement predicted adjustment above and beyond maternal report of child victimization. However, if disagreement typically reflects children reporting higher levels of victimization than mothers, then examining the contribution of disagreement might yield an index that is statistically redundant with child report of victimization. Indeed, when the domain of discrepancy involves behaviors or experiences/stressors, it becomes challenging to tease apart the contribution of the domain being rated from the contribution of discrepancy. Applying latent class analysis would allow one to take into account the level of victimization rated by parent and child informants, and reflect patterns of discrepant perspectives.

Associative Characteristics as Covariates

It is important to consider demographic factors (e.g., age, gender, neighborhood SES, ethnicity) that may be conceptualized as “covariates” related to parent-youth (dis)agreement on victimization. Literature suggests that neighborhood SES is related to violence exposure, parenting, and poor mental health outcomes (Attar, Guerra, and Tolan, 1995; Leventhal & Brooks-Gunn, 2000). However, I was unable to find any literature to suggest that neighborhood SES was related to parent-youth discrepancies in reports of victimization. Other literature on informant discrepancies has considered family SES as

an associative characteristic of discrepancies, although the findings have been inconsistent (De Los Reyes & Kazdin, 2005). Ethnic differences in prevalence rates of violence exposure emerge in several studies, with minority youths reporting higher levels of exposure to violence (both witnessed violence and victimization) than non-minority youths (Stein et al., 2003). However, previous research suggests no relationship between ethnic status and parent-youth discrepancies on exposure to violence (Ceballo et al., 2001; Kuo et al., 2001). In fact, although Ceballo et al. (2001) surmised that ethnic differences in parent-youth discrepancies might exist, they failed to detect any differences based on their multi-ethnic sample. Finally, gender may be an important associative characteristic of parent-youth discrepancies (e.g., Kuo et al., 2001).

In this study, I conceptualize covariates in two ways. First, the covariates may predict latent classes (e.g., Lubke, & Muthén, 2005). Because age and gender have been associated with parent-youth discrepant perspectives on victimization, I included age and gender as covariates in the latent class model. Second, covariates may not be considered in the formation of latent class models, but may instead be used in subsequent analyses that examine associations between latent class and adjustment. To add another layer of complexity, some covariates (e.g., gender) may also be conceptualized as a moderator of the association between discrepancies and adjustment, in light of literature to suggest that parental support is especially protective for girls (relative to boys) exposed to violence (Rosario et al., 2003).

Chapter Three: Statement of the Problem

The rationale for investigating how parent-youth discrepancies on victimization are linked with adjustment comes from diverse areas of literature reviewed previously including epidemiological research on violence exposure, basic research on normative adolescent development, and clinical child psychology. Epidemiological and community-based studies indicate that parents report lower levels of youths' victimization experiences than youths report. At the broadest level, parent-adolescent discrepancies may reflect normative developmental trends in parent-adolescent relationships (e.g., decreases in children willingly disclosing information to their parents about their whereabouts and activities, and decreases in parental supervision of children's whereabouts and activities). Indeed, a lack of parental awareness and discrepant perspectives of adolescents' experiences may be typical and even adaptive in some domains. In the context of victimization experiences, however, parental unawareness of a child's victimization experiences may contribute to increased likelihood of developing psychosocial maladjustment. No definitive test exists to distinguish underestimation on the part of one informant (e.g., parent) from overestimation on the part of another informant (e.g., child). At the same time, the theoretical foundation for this dissertation project suggests that parents who report lower levels of child victimization than their children self-report may lack the resources and knowledge to help their children cope adaptively to the psychosocial impact of victimization experiences.

I am aware of two studies that provide preliminary evidence to suggest that parent-youth disagreement is related to indices of maladjustment, including internalizing symptoms and perpetration of violence. However, critical issues remain unaddressed. First, it remains unclear whether the direction of agreement is important to consider. For example, might it be the case that youths fare worse in terms of adjustment only when parents “underestimate” their victimization (i.e., parents report less victimization than youths), or is disagreement generally maladaptive regardless of direction of discrepancy? Similarly, are there underlying subgroups in the population with different patterns of reporting agreements? That is, are the patterns of agreement in the population heterogeneous, such that parent-child dyads vary in whether parents over- or underestimate children’s violence exposure in some domains and not others? Finally, do parent-child discrepancies in violence exposure predict variance in maladjustment over time?

The present study

The purpose of this dissertation project is to extend the literature on parent-youth discrepancies on victimization and their links to child adjustment outcomes. This study extends the literature on two fronts: (1) examine patterns of parent-youth agreement on victimization in an epidemiological sample, and (2) examine longitudinal links between parent-youth agreement on victimization and adjustment.

Research Aims

In the present study, I have two broad aims:

Aim #1. Estimate latent dyad groups distinguished by patterns of parent/youth ratings on victimization, as follows:

Aim 1a. Describe patterns of parent-youth agreement in the population.

Aim 1b. Describe prevalence of pattern groups (e.g., parent reports less victimization than youth, parent reports more victimization than youth) in the population.

Aim 1c. Describe associative characteristics (gender, neighborhood SES, youth age, ethnic status, parental education) of agreement patterns.

Aim # 2. Examine whether and how patterns of parent-youth agreement on victimization are related to changes in internalizing symptoms (anxiety/depression) and externalizing symptoms (aggression and delinquency) over time.

Hypotheses

My hypotheses were as follows:

Hypothesis #1. I anticipated that latent classes can be found that reflect patterns of parent-youth (dis)agreement on ratings of victimization. Specifically, I expected that at least two “disagreement” classes would emerge in the population, with one class in which parents report less victimization than youths self-report, and another class in which parents report higher levels of victimization than youths self-report. Further, I anticipated that level of victimization would be reflected in the latent class analysis, with some parent-child dyads typified by joint agreement in the presence or absence of victimization.

Hypothesis #2. I anticipated that agreement pattern groups reflecting parental under-reporting of youth victimization experiences (i.e., classes in which parents report less youth victimization than youths self-report) would show increased anxiety/depression, increased aggression, and increased delinquency, relative to all other classes.

Chapter Four: Methods

Overall design

This study examined data from two cohorts of youth from the Project on Human Development in Chicago Neighborhoods (PHDCN). The PHDCN is a large-scale, interdisciplinary study that examined psychosocial and demographic predictors of child and adolescent development (Earls & Buka, 1997; Leventhal & Brooks-Gunn, 2000). Within PHDCN, a series of coordinated longitudinal studies followed over 6,000 randomly selected youths and their primary caregivers to examine individual, family, and peer influences on adjustment. Data were collected in three waves over a period of seven years, at three points in time: wave 1 (1994-1997), wave 2 (1997-1999), and wave 3 (2000-2001). Each wave of data collection was separated by approximately 2.5 years. The PHDCN included seven child-focused cohorts as follows: birth (0), 3, 6, 9, 12, 15, and 18 years.

This study included cohorts 9 and 12 (ages at wave 1), and included data from wave 2 (1997-1999), and wave 3 (2000-2001) for analyses. Specifically, this study used victimization data from wave 2, and adjustment data from waves 2 and 3 of the PHDCN. A stratified probability sample of 80 Chicago neighborhoods was used in the PHDCN, sampled from 21 strata (seven racial/ethnic groups by three socioeconomic levels).

Participants

The analyses in this study are restricted to cases in which both parent and youth informant provided some data on youth's exposure to violence (Total N=1,339). In other words, this study included dyads for which both youth and caregiver informant provided at least some responses regarding youth exposure to violence. Out of 1,433 dyads providing some exposure to violence data from one or more informants, 21 cases provided no caregiver report, and 73 cases provided no youth report. Therefore, a total of 93 dyads were excluded from the analyses because these dyads contained no data for exposure to violence for one informant.

Frequencies for demographic characteristics (i.e., youth ethnicity, neighborhood SES, caregiver education level, and youth sex) for the sample are reported in Table 1. Just under half (48.2%) of the youth sample was female with an average age of 12.67 years ($SD=1.60$). As indicated in table 1, the sample was socioeconomically and ethnically diverse. Of the 1,132 informants for whom neighborhood SES data was available, 416 (29%) lived in neighborhoods with low SES, 443 (31%) lived in medium SES neighborhoods, and 273 (19%) lived in high SES neighborhoods.

Table 1. *Frequencies for Demographic Information of Final Sample*

		<i>Frequency</i>	<i>Percent</i>
<i>Ethnicity of Youth</i>	Hispanic	558	41.7
	Asian	19	1.4
	Black	418	31.2
	White	164	12.2
	Native American	5	.4
	Other	140	10.5
<i>Caregiver Education Level</i>	Below High School	249	18.6
	Some High School	264	19.7
	Finished High School	202	15.1
	Some Education Beyond High School	406	30.3
	BA	129	9.6
<i>Neighborhood SES</i>	Low	405	30.2
	Medium	424	31.7
	High	263	19.6
	Missing data	247	18.4
<i>Youth Sex</i>	Female	645	48.2
	Male	694	51.8

Procedures

The primary method of data collection was face-to-face interviewing, although participants who refused to complete the personal interview completed a phone interview. Interviewers provided all respondents with a description of the study purposes and procedures, and all participants were given the opportunity to discontinue the interview at any time. A Certificate of Confidentiality was obtained for this study, and issues of confidentiality were discussed as part of the consent and assent process. Culturally diverse staff administered interviews and assessments in English and Spanish.

Measures

Exposure to violence. My Exposure to Violence (My ETV; Selner-O'Hagan et al., 1998) examines a subject's lifetime and past-year exposure to 18 different violent events that have either been witnessed or personally experienced. This measure examines frequency of victimization in the past 12 months for both victimization and witnessing violence. This dissertation study includes only victimization items (i.e., six items that reflect interpersonal violence). Specifically, the items included being chased ("chased, but not caught, when you thought that you could really get hurt?"), hit ("hit, slapped, punched, or beaten up?"), attacked with a weapon ("attacked with a weapon?"), being shot at ("shot at?"), sexual assault ("sexually assaulted, molested, or raped?") and threatened ("someone threatened to seriously hurt you?"). Notably, sexual assault was qualified before the participant was asked about this form of victimization. In particular, the interviewer prefaced the question with the following: "A number of people experience sexual assault or unwanted sexual contact during their lifetime. In this

question we are asking about any sexual assault that was forced on you or that you were pressured into, whether it be done by a stranger or someone you know”. The last victimization item involved being threatened, as this item involved incidents not already reported (i.e., “Other than what you have already told me, in the past year, has someone threatened to seriously hurt you?”).

Although Brennan et al. (2007) reported psychometric properties of the scale and included “shot” in addition to “shot at” as interpersonal victimization, I excluded this item (“shot”) from analyses because of the extremely low base rate in the population. Frequency of exposure during the past year is measured on a six-point scale (never, once, 2 or 3 times, 4 to 10 times, 11 to 50 times, more than 50 times). Wave 2 is the only wave in which two cohorts—Cohort 9 (N=625) and Cohort 12 (N=666)—included both parent and child informants’ reports of victimization (frequency in the past year).

Adjustment Indices. At waves 2 and 3, youths and caregivers completed parallel measures (Youth Self Report and Child Behavior Checklist) of psychological symptoms. I used the anxiety/depression, aggression, and delinquency subscales of the Child Behavior Checklist (Achenbach, 1991a) and Youth Self Report (YSR; Achenbach, 1991b). Based on a 3-point scale, (0 = not true, 1 = somewhat true, and 2 = very true), respondents reported how true each item (behavior) was during the past 6 months. The CBCL is widely used and shows convergence with DSM-IV disorders (e.g., Hudziak, Copeland, Stanger, & Wadsworth, 2004).

Covariates. Items covering demographics, respondent’s age, ethnicity, and socioeconomic status were administered to the adolescent subjects, the primary caregiver,

or both. This study used child report of child demographics (ethnic status and gender) and parent report of parental education. Neighborhood SES was previously computed in the PHDCN by summing the following standardized neighborhood-level measures: median income, percentage college educated, percentage of households with income greater than \$50,000, percentage of families living below the poverty line, percentage of families on public assistance, and percentage of households with income less than \$50,000 (Fauth et al., 2007; Sampson, 1997). In previous work examining PHDCN, the three neighborhood SES strata (i.e., high, medium, and low) was related to neighborhood perceived violence (Fauth et al., 2007). In the present study, family socioeconomic status was also used as a covariate. This variable, derived from principal components analysis, is a composite of 3 variables: parental income, parental educational level, and parental occupational code. Importantly, this variable could be imputed for cases with missing data, and has been used in previous studies employing PHDCN data (Molnar, Browne, Cerda & Buka, 2005).

As described below, I conducted Latent Class Analysis (LCA) with parent and youth report of victimization experiences as indicators. I considered three demographic characteristics (age, sex, neighborhood SES) as potential covariates in the LCA model, and ultimately included age and sex as covariates in the final model. In this case, age and sex influenced the composition of the LCA model. Ethnic group and Family SES were employed as covariates in analyses of variance examining associations between latent classes and adjustment.

Chapter Five: Results

Prior work does not provide detailed information on parent-youth agreement for past-year victimization at the item level or level of specific victimization experiences. Thus, I conducted preliminary analyses to examine parent-youth concordance (agreement on past-year occurrence) on past year victimization in PHDCN. For these preliminary analyses, if both parent and youth reported that the incident occurred at all in the past year (i.e., they both indicated that frequency was “once” or more times), I identified them as agreeing on the occurrence of victimization. Parent-youth concordance on past-year occurrence of victimization is displayed in *Figure 4*. I created nominal variables that reflect agreement for each victimization item (e.g., 1=parent and youth agree that incident occurred; 2=youth reports incident occurred, parent reports incident did not occur; 3=parent reports incident occurred, youth reports incident did not occur; 4=youth and parent agree that incident did not occur). It is important to note that even when both informants agreed that a particular type of victimization occurred in the past year, they could still disagree on the frequency with which it occurred.

Taken together, the preliminary data provide some useful information. First, the data suggest that there is indeed considerable parent-youth disagreement on whether or not particular types of victimization occurred. Second, for some items (e.g., attacked with weapon, sexually assaulted, shot at), the data are *sparse*: that is, there can be disagreements but some events occur so infrequently that there are few occurrences for parent and youth to agree or disagree on.

	Hit	Threatened	Chased to hurt	Attacked with weapon	Sexually assaulted	Shot at
Both youth and mother reported	54	5	30	5	2	1
Youth only reported	155	78	97	29	5	19
Mother only reported	129	39	67	11	2	2
Neither mother nor youth reported	992	1207	1127	1287	1312	1307

Figure 4. Concordance on victimization occurrence

Descriptive Analyses

Missing Data. Of the total sample on which latent class analyses were performed (N=1,339), 257 cases had missing data on Neighborhood SES at wave 2, whereas all cases provide complete data for age and sex at wave 2. In addition, of the total sample, some cases were missing adjustment data as follows: 148 cases (11.1%) missing CBCL data and 136 cases (10.2%) missing YSR data at wave 2; 241 cases (18%) missing CBCL data and 75 cases (5.6%) missing YSR at wave 3. Of the 1191 cases with parent adjustment (CBCL) data at wave 2, 222 cases (16.6%) were missing CBCL data at wave 3. Therefore, 969 cases provided CBCL data for both waves of interest. Of the 1203 cases with youth adjustment (YSR) data at wave 2, 71 cases (5.3%) were missing CBCL data at wave 3. Therefore, 1,132 cases provided YSR data for both waves of interest.

Participants who did and did not participate in both waves of the study were compared using *t*-tests and Chi square difference tests. Attrition analyses revealed that

dyads who participated at wave 2 and discontinued participation at wave 3 were different from those who participated in both waves based on several demographic variables. Specifically, youths who continued participation at wave 3 were more likely to be older [$t(1337) = 3.12, p < .001$], to come from families with lower SES [$t(1366) = -4.07, p < .001$], and from lower SES neighborhoods [$t(1090) = -4.78, p < .001$]. Similarly, parents who continued participation at wave 3 were characterized by lower family SES [$t(1366) = -4.41, p < .001$] and lower SES neighborhoods [$t(1090) = -4.51, p < .001$]. Ethnicity was also related to attrition [$\chi^2(6) = 28.28, p < .001$], with Asian participants showing the highest attrition rates (21% for parents, and 16% for youths) and Hispanic participants showing the lowest attrition rates (5% for parents and 5% for youths). All adjustment variables were unrelated to attrition. Latent class status, to be described later, also was not related to parent attrition, ($\chi^2(3) = 1.89, p = .39$, or to youth attrition ($\chi^2(3) = 4.10, p = .25$). Notably, this pattern of findings differs from some analyses in the literature, in which poorer families are less likely to participate in longitudinal research (Spoth, Goldberg & Redmond, 1999).

Due to missing data on neighborhood SES (nearly 20% of cases), family SES was instead used as a covariate in all ANOVA analyses. As expanded upon later, family SES was negatively associated with parent-reported adjustment indices. The dominant ethnic composition of youth informants was as follows: Hispanic; 41.7%; Black, 31.2%; and White, 12.2%. These three groups were dummy-coded and included as covariates in subsequent ANOVA analyses, as there were ethnic differences in the outcomes of interest.

Aim 1: Examine latent dyads distinguished by patterns of parent-youth ratings

Analytic Approach

To address the first research aim, I used parent and youth reports of the past-year occurrence of six victimization events (12 victimization events, total) as the observed indicators in latent class analysis (LCA; Lazarsfeld & Henry, 1968; McCutcheon, 1987). LCA is useful when the construct of interest (in this study, parent-youth reporting agreement) is made up of qualitatively different groups, but the group membership must be inferred from the data because it is unobserved (Lanza, Flaherty, & Collins, 2003). Latent class analysis separates persons (here parent and youth dyad reports of victimization) into mutually-exclusive groupings such that across the ordinal indicators groups are maximally similar to each other and thus maximally dissimilar to members assigned to other groups. In this study, I hypothesized that latent classes will capture different types of informant agreement. The classes reflect “discrepancy” as a dyad level construct, without having to rely on traditional ways of representing discrepancies (e.g., difference scores). Using parent and youth ordinal raw scores as indicators in the latent class analyses provides a way to interpret different *levels* of victimization in each class. This is important because one major limitation of discrepancy or “difference scores” is that this representation does not provide unambiguous information about overall levels of the construct (Edwards, 1994). For example, a discrepancy score of 0 may indicate that two informants agree on no victimization or on high victimization. Because the level of youth victimization itself is related to child maladjustment, it is important to account for this factor.

Latent class analysis can be used with nominal, dichotomous, count, or ordinal data. The assumptions of latent class analysis are (1) that individuals in a class will have the same probability of endorsing a given item, and (2) within a class, the endorsement probabilities are statistically independent. In other words, within each latent class, each indicator is statistically independent of every other variable. Posterior probabilities are estimated and used to assign class membership and to assess the confidence with which cases are assigned (McCutcheon, 1987). For a randomly selected case in a given latent class, a recruitment probability is the probability that a given response pattern will be observed (Lazarsfeld & Henry, 1968).

I conducted LCA using Latent Gold Version 4.0 (Vermunt & Magidson, 2000), and considered the following criteria in selecting a best fitting model: Bootstrap difference test (see also bootstrap likelihood ratio test; Nylund et al., 2007b), parsimony indices (e.g., Akaike's Information Criterion, Bayes' Information Criterion), classification error, entropy (an index of classification quality) and substantive interpretation. Traditionally, these various criteria and indices are used to identify a model with the smallest number of latent classes that accounts for the associations among the manifest variables. There is no one single index for selecting the best latent class model, as several fit statistics are available and they often do not always agree as to which model is the one with the optimal number of classes (Nylund et al., 2007b).

Researchers have often used chi-square difference tests for model comparison (McCutcheon, 1987). However, the use of this type of test can be problematic when some of the reported victimization events (i.e., getting shot) yield sparse data. As an

alternative, information based tests that balance model-data misfit and parsimony (number of model parameters estimated), such as Akaike's Information Criterion (AIC), Bayes' Information Criterion (BIC), and the Consistent Akaike's Information Criterion (CAIC) are often used (Magidson & Vermunt, 2004). The model with the optimal number of classes is determined by the information criterion with the lowest value. These criteria differ only according to the weight attributed to parsimony. BIC tends to underestimate the number of classes, while AIC tends to select a model with too many classes.

Bootstrapping procedures have become more practical with recent advances in computing power. Bootstrapping involves generating a certain number of random replication samples from the maximum likelihood solution and re-estimating the model with each replication sample (Vermunt & Madigson, 2005). Specifically, the conditional bootstrap option tests whether there is a significant difference in model fit (hereby referred to as "bootstrap difference test") between 2 alternative models (e.g., between a four-class and a three-class model). Finally, Nylund et al. (2007a) have also emphasized the importance of a "substantive interpretation" to guide selection of the LCA model. That is, a model is only useful to the extent that a researcher can interpret the results in terms of substantive theory.

Selection of Latent Class Model

Because LCA is primarily a form of exploratory analyses (i.e., typically no assumptions are made about the structure a priori), the models are fit in a series of steps, starting with a one-class model (reflecting observed means in the data) and increasing the

number of classes until there is no further improvement in model fit. Latent class analysis models were fit for one through eight classes using 12 indicators (six victimization items for each informant). All victimization items (i.e., hit, chased, threatened, attacked with a weapon, sexual assault, and shot at) were re-scaled from their original 6-point scale (never, once, 2 or 3 times, 4 to 10 times, 11 to 50 times, more than 50 times) to a 3-point scale (never, once, 2 or more times) to reduce sparseness in the data.

Three models with 12 victimization items (indicators) were considered in the latent class analyses: (1) no covariates included, (2) age and sex included as covariates, and (3) age, sex, and neighborhood SES included as covariates. The LCA results for the first model (no covariates) and second model (age and sex as covariates) are summarized in Table 2 and Table 3, respectively. The third model (including neighborhood SES) was not considered for subsequent analyses for two reasons. First, neighborhood SES did not significantly contribute to the LCA model ($Wald=4.87, p >.10$). Second, neighborhood SES was missing for 247 cases, and therefore a limited number of cases with complete data could be included in the LCA model.

A diagram of the LCA model with covariates included is presented in Figure 5. For ease of presentation, this figure only includes 3 of 6 items for each informant.

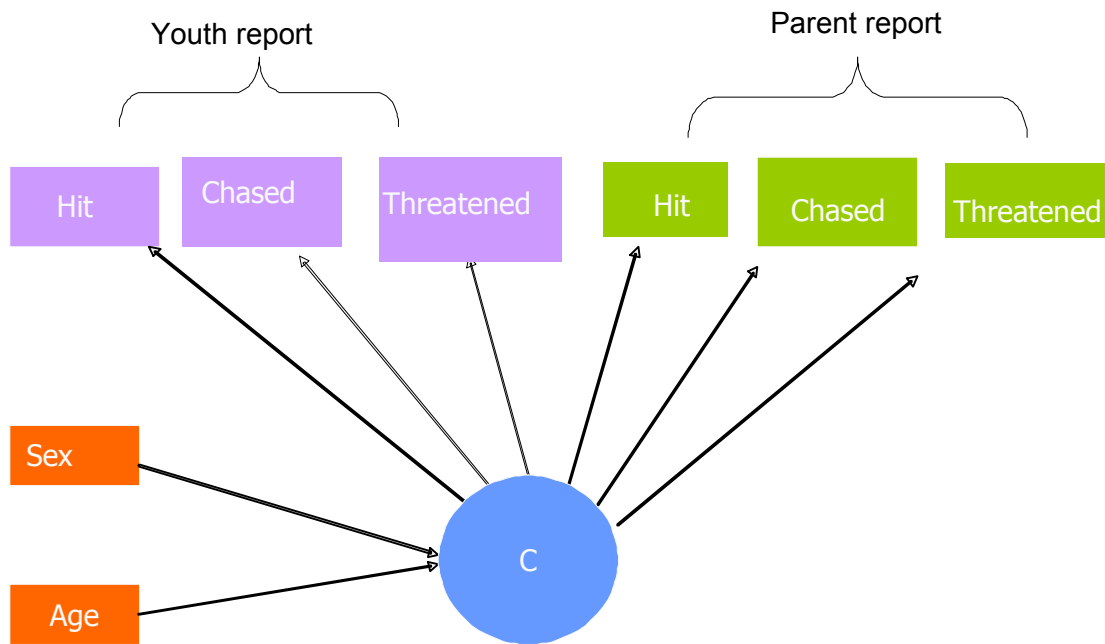


Figure 5. Illustration of Latent Class Model With Covariates

As described previously, a number of omnibus fit indexes can be used to determine a “best-fitting” model. However, the various indexes may not all converge in identifying the same model as being the one with the optimal number of classes. In both the model without covariates (Table 2) and the model with covariates (Table 3) the bootstrap difference test indicated that the best-fitting model was a 4-class solution. In both models, although the BIC was lowest for the 2-class solution, the bootstrap log-likelihood difference test indicated that the 4-class solution was optimal. Specifically, the bootstrap p-value indicated that a 4-class solution fit the data better than a 3-class solution, while a 3-class solution did not fit the data better than a 2-class solution, and a

5-class solution did not fit the data better than a 4-class solution. In both models, the AIC value was also consistently lowest for the 4-class solution.

Table 2. *Latent Class Model with No Covariates*

	LL	BIC(LL)	AIC(LL)	L ²	Number Parameters	df	Class Error
1 class	-3361.063	6894.919	6770.127	1151.142	24	1315	0.00
2 classes	-3180.922	6628.231	6435.843	790.859	37	1302	0.07
3 classes	-3150.671	6661.326	6401.342	730.358	50	1289	0.09
4 classes	-3128.144	6709.869	6382.289	685.304	63	1276	0.16
5 classes	-3117.681	6782.538	6387.363	664.378	76	1263	0.17
6 classes	-3103.396	6847.564	6384.793	635.808	89	1250	0.18
7 classes	-3097.468	6929.304	6398.937	623.952	102	1237	0.24
8 classes	-3096.959	7021.882	6423.919	622.934	115	1224	0.18

Table 3. *Latent Class Model with Sex and Age as Covariates*

	LL	BIC(LL)	AIC(LL)	L ²	Number Parameters	df	Class Error
1 class	-3361.063	6894.919	6770.127	3184.408	24	1315	0.00
2 classes	-3163.005	6606.798	6404.011	2788.292	39	1300	0.07
3 classes	-3131.732	6652.246	6371.463	2725.745	54	1285	0.08
4 classes	-3102.714	6702.205	6343.427	2667.708	69	1270	0.10
5 classes	-3090.891	6786.555	6349.782	2644.064	84	1255	0.19
6 classes	-3075.249	6863.267	6348.499	2612.780	99	1240	0.23
7 classes	-3064.927	6950.617	6357.854	2592.135	114	1225	0.34
8 classes	-3054.186	7037.130	6366.372	2570.653	129	1210	0.24

Note. Log-Likelihood (LL), Bayesian Information Criterion (BIC; Schwartz, 1978), Akaike Information Criterion (AIC), and Log-Likelihood Chi-Square (L²), Number of parameters, degrees of freedom (df), and Class Error (average error across classes) are reported. Bolded model indicates best fitting model according to bootstrap difference test.

The four-class model without covariates yielded the following four classes: (a) a class in which parents and youths both report low levels of victimization across all types of events (*Low Victimization* , 63%), (b) a class in which youths report higher levels of victimization than parents (*Youth > Parent* , 27%), (c) a class in which parents report higher levels of victimization than do youths (*Parent > Youth* , 6%) , and (d) a class in which both parents and youths report high levels of victimization (*High Victimization*, 3%). Notably, the first three classes contained 97% of the sample.

Similarly, the four-class solution including youth age and sex as covariates yielded the following four classes of parent-youth dyads (see Figure 6 for item probability plot): (a) *Low Victimization* (77.0%), (b) *Youth > Parent* (13.5%), (c) *Parent > Youth* (8.1%), and (d) *High Victimization* (1.4%). Average classification error was somewhat lower for the solution with covariates (10%), relative to the solution without covariates (16%). The probability of correct classification for the latent classes was as follows: (a) *Low Victimization* (91%), (b) *Youth > Parent* (83%), (c) *Parent > Youth* (83%), and (d) *High Victimization* (88%). In addition, sex ($Wald=13.93, p < .01$) and age ($Wald=20.87, p < .01$) contributed significantly to the latent class model with covariates (see Table 4). The four-class solution including sex and age as covariates was therefore selected as the most appropriate LCA model for subsequent analyses.

When determining the best-fitting model, there may be little empirical support for including additional classes when adding another class results in a very small class or conceptually unclear classes (Nylund et al., 2007a). Importantly, the fourth class (1.4% of sample) was very small and not conceptually clear with regard to parent-youth

agreement. However, selecting a four-class model (relative to a three-class model) did not change the conceptual interpretation of the first three classes. Therefore, although the four-class solution was selected as the best-fitting model, I retained only the first three classes (comprising ~99% of the sample) for the main analyses. I excluded the fourth class from analyses in order to enhance parsimony and interpretability of the results, focusing on three conceptually clear and theoretically meaningful groups of parent-youth dyads: (a) low or no victimization (b) youths reporting greater victimization than parents, and (c) parents reporting greater victimization than youths.

Table 4. *Wald Statistics and Significance for Indicators and Covariates in Final Model*

Items/Indicators	Wald statistic	p-value
<i>Parent Report</i>		
Shot at	3.61	0.31
Sexual Assault	7.45	0.06
Threatened	12.62	0.01
Chased	46.35	0.00
Hit	61.41	0.00
Attacked	18.78	0.00
<i>Youth Report</i>		
Shot at	30.36	0.00
Sexual Assault	8.49	0.04
Threatened	36.68	0.00
Chased	26.02	0.00
Hit	67.78	0.00
Attacked	4.72	0.19
<i>Covariates</i>		
Age	13.93	0.00
Sex	20.87	0.00

Note. Wald statistic indicates importance of indicators in LCA model. Wald statistics with associated p-value < .05 indicates that an item contributes significantly to latent class model. Higher p-values associated with this Wald statistic suggest that the indicator does not discriminate between classes in a statistically significant way (Vermunt & Madigson, 2005).

Characteristics of Victimization Classes

The key feature that distinguished the classes was the pattern and direction of discrepant ratings between parents and youths. Figure 7 illustrates this finding, supporting the substantive interpretation of the classes. Interestingly, although raw

scores (rather than discrepancy scores) were used as indicators in the latent class solution, the groups reflected parent-youth informant discrepancies. Discrepancy scores (Parent – Youth) were calculated for each victimization item, and Figure 7 displays mean discrepancy scores for victimization items within each class. Mean discrepancy scores above the x-axis (positive values) indicate that on average, parents report more victimization than youth within class. Mean discrepancy scores below the x-axis (negative values) indicate that on average, youth report more victimization than parents within class. Significant group (latent class) differences on discrepancy scores were present for each victimization item: Chased [F (3, 1332) = 200.91, $p < .0$]; Hit [F (3, 1329) = 49.14, $p < .0$]; Threatened [F (3, 1333) = 226.47, $p < .01$]; Attacked [F (3, 1335) = 40.26, $p < .01$]; Sexual Assault [F (3, 1334) = 19.66, $p < .01$]; and Shot At [F (3, 1334) = 96.37, $p < .01$]. Mean difference scores for each item were consistently and significantly different between the first three classes (“*Parent > Youth*” > “*Low/No Victimization*” > “*Youth > Parent*”), whereas the High Victimization class was not consistently distinguished from other classes based on discrepancy scores. This finding was another reason that the High Victimization class was not included in subsequent analyses.

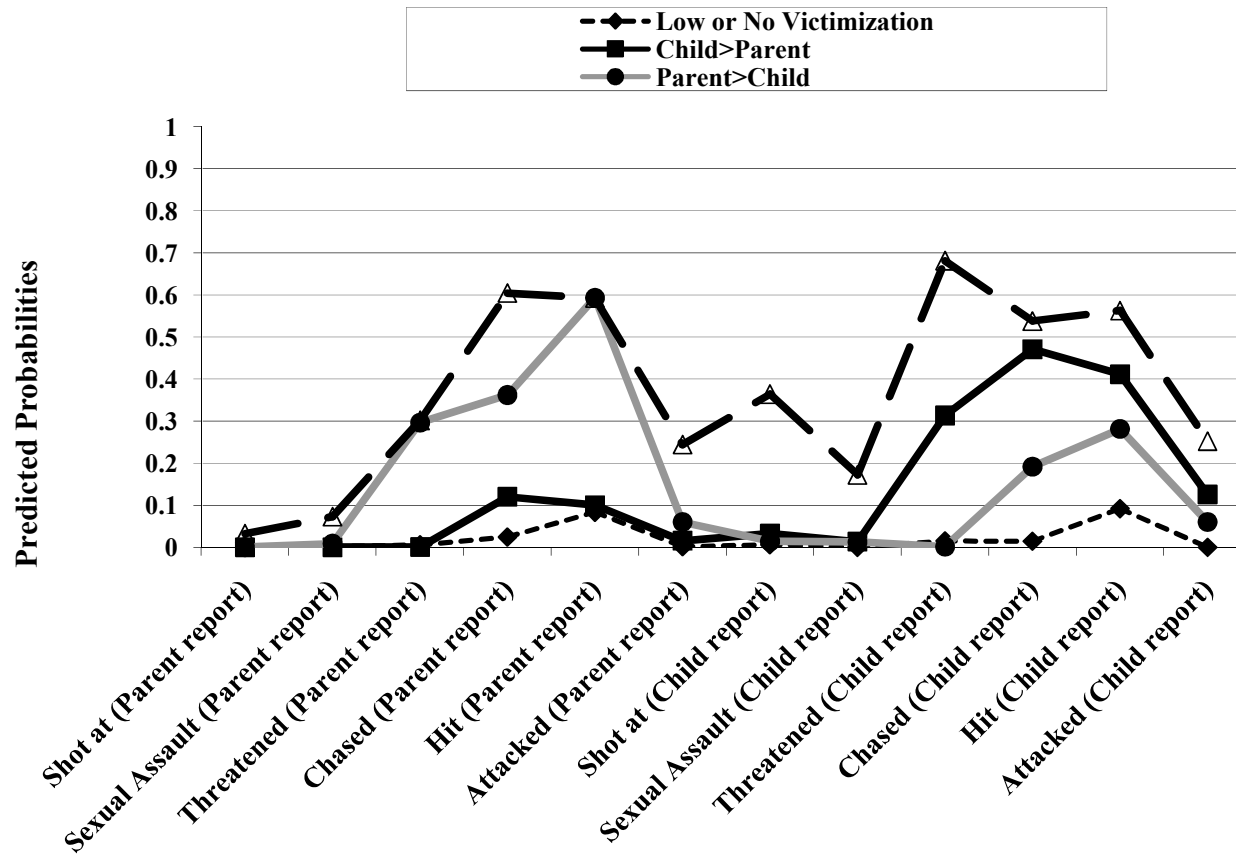


Figure 6. Item Probability Plot for Victimization Classes.

Note. The 12 response items (6 parent report and 6 youth report) comprising the four latent classes are listed along the y-axis. The probability of endorsing each item is provided by class membership. In this figure, the probability of endorsing each victimization item is collapsed across two response categories (“once” and “two or more times”) to reflect probability of informant reporting that victimization occurred at least once in past year.

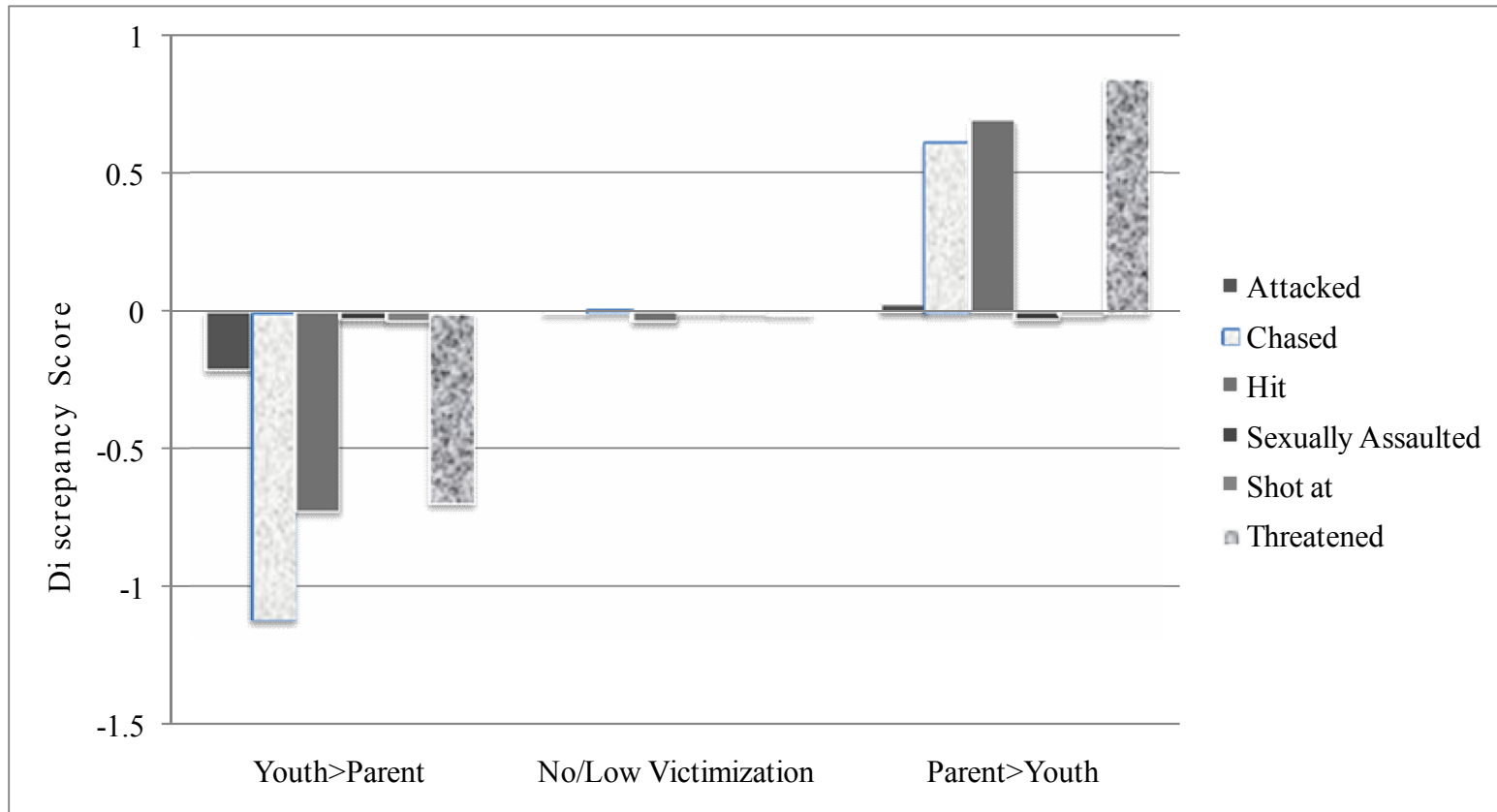


Figure 7. Mean Difference Scores (Parent – Youth) for Victimization Items by Class

Note. Mean discrepancy scores above x-axis (positive values) indicate that on average, parent reports more victimization than youth. Mean discrepancy scores below x-axis (negative values) indicate that on average, youth reports more victimization than parent.

Table 5. *Frequency Distribution of Demographic Characteristics Within Classes*

		(% total sample)	Low or No Victimization	Youth>Parent	Parent>Youth	Chi-Square Difference Test
<i>Ethnicity of Youth</i>	Hispanic	(41.7%)	45.1%	35.3%	21.4%	$\chi^2(10) = 39.44, p < .001$
	Asian	(1.4%)	1.7%			
	Black	(31.2%)	30.3%	36.1%	51.4%	
	White	(12.2%)	13.1%	10.5%	8.6%	
	Native American	(.4%)	.4%		1.4%	
	Other	(10.5%)	9.4%	18.0%	17.1%	
<i>Youth Sex</i>	Male	(48.2%)	48.5%	73.9%	60.3%	$\chi^2(2) = 34.06, p < .001$
	Female	(51.8%)	51.5%	26.1%	39.7%	

Note. Detailed Frequencies are provided only for demographic characteristics within each class for demographics that varied across classes according to chi-square difference test. Frequency distribution within total sample are displayed in parentheses. No significant differences were found for to neighborhood SES [$\chi^2(4) = 1.69, p = .79$] or parental education [$\chi^2(3) = 1.38, p = .25$].

As displayed in Table 5, latent classes varied by ethnic group ($\chi^2(10) = 39.44, p < .001$) and by youth sex ($\chi^2(2) = 34.06, p < .001$). However, class status was unrelated to neighborhood SES ($\chi^2(4) = 1.69, p = .79$) and parental education ($\chi^2(3) = 1.38, p = .25$). Classes were also related to youth age, $F(2, 1324) = 5.85, p < .01$, as youths in the *Youth>Parent* class were older ($M=13.08$ years, $SD=1.56$) than youths in the *Parent>Youth* class ($M=12.60$ years, $SD=1.51$) and older than youths in the *No/Low Victimization* class ($M=12.56$ years, $SD=1.51$). Family SES was also unrelated to the latent classes $F(3, 1323) = .536, p = .59$. The following discussion provides further detail and description of the latent classes.

Class one: “No or Very Low Victimization”

Class one ($N=1,112$) comprised 77 % of the sample, was 48.2 % female and had the lowest endorsement of victimization events. For the majority of dyads in within this class ($N=860, 77\%$) *both informants* reported that the youth experienced *no victimization* at all in the past year. However, as indicated in Tables 6 and 7, some informants within this class did report victimization, and the most frequently endorsed form of victimization was being hit. Tables 6 and 7 display conditional probabilities, or the probability of a response given that the respondent is in a particular latent class. Based on conditional probabilities, ~8% of parents within this class report that their offspring were hit within the last year, and ~9% of youth report that they were hit within the last year.

Interestingly, it was not the case that dyads within this class provided concordant reports for this form of victimization. For 7.6% ($N=85$) of dyads in this class, the *caregiver only*

reported that the youth was hit, and for 8.5% (N=94) of dyads in this class, the *youth only* reported that he/she experienced being hit.

In fact, *both parents and youths* agreed that the youth was hit in only 15 cases (1.3% of dyads within this class). Of the 15 dyads in which both youth and parent informants reported that youth was hit, only 9 parent-youth dyads agreed on the level of victimization (i.e., discrepancy score = 0), whereas 5 of the 15 cases were characterized by youths who reported that they were hit more often in the past year than their parents reported. Overall, these findings highlight that even when group-level prevalence suggests that the two informants report comparable levels of victimization (e.g., 9% of youth and 8% of parents), additional analyses are needed to understand the nature of agreement within dyads.

Class two: “Youth reports more victimization than parent Youth > Parent)”

Class two (N=137) comprised 13 % of the sample and was predominantly male (70 %). As Figure 7 illustrates, this class was characterized by discrepant dyads in which youths reported, on average, higher levels of victimization than their parents. Based on conditional probabilities (Table 6 and 7), youths in this class were most likely to endorse being chased (47%), followed by hit (41%), threatened (31%), attacked (13%), shot at (3%), and sexually assaulted (1%). Parents in this class reported lower incidence of youth victimization, with probabilities of parent-reported victimization as follows: chased (12%), hit (10%), threatened (0%), attacked (2%), shot at (0%), and sexually assaulted (0%).

All youths within this class (N=137, 100%) reported that they experienced at least one form of victimization in the past year, whereas only 26% of parents within this class reported that their children experienced at least one form of victimization. This class was often characterized by *only* the youth informant reporting victimization. For example, for 57% of dyads within this class, youth reported having been chased at least once in the past year, whereas the parent reported that the youth was not chased. In 43% of dyads within this class, the youth reported that he/she was hit in the past year, whereas the parent reported that the youth was not hit in the past year. Similarly, 43% of cases were characterized by the youth reporting having been threatened, whereas the parent denied that the youth was threatened. Finally, for 18% of cases within this class, the youth only reported that he/she was attacked in the past year. As noted previously, for dyads in which parents and youths agreed on the occurrence of a particular form of victimization, there was sometimes disagreement on the frequency with which it occurred. For example, within this class, of the 15 dyads in which both parents and youths reported that the youth was chased, only 9 dyads provided identical frequency ratings (i.e., discrepancy score = 0). In 4 of these 15 cases, youth reported that they were chased more often in the past year than their parents reported.

Class three: "Parent reports more victimization than youth (Parent > Youth)"

Class three (N=73) comprised 8% of the total sample and was 60% male. This class was comprised of youth who were 21% Hispanic and 51% Black (see Table 5). As Figure 7 illustrates, parents in this class reported higher levels of victimization than did youths. All parents within this class (N=73, 100%) reported that their offspring

experienced at least one form of victimization in the past year, whereas 57.5% of youth within this class reported that they experienced at least one form of victimization. The probabilities of parents within this class reporting forms of mild victimization (i.e., hit, chased, threatened) were noticeably higher than the probabilities of youths within this class reporting these forms of victimization. Specifically, parents were more likely to report that their offspring were hit (59%), chased (36%), and threatened (30%), relative to youths' reporting that they were hit (28%), chased (19%), and threatened (0%). The probabilities of parents reporting severe victimization (attacked, 6%; sexually assaulted, 1%; and shot at, 0%) were relatively commensurate with the probabilities of youths reporting severe victimization (attacked, 6%; sexually assaulted, 1%; and shot at, 1%).

Table 6. *Conditional Probabilities of Parent Report Victimization Items*

		<i>Low/No Victimization</i>	<i>Youth>Parent</i>	<i>Parent>Youth</i>
Class Prevalence:		(77%)	(13%)	(08%)
<i>Probability of Parent Reporting Victimization within Class</i>				
Attacked				
	Never	1.00	0.98	0.94
	Once	0.00	0.02	0.06
	Two or More Times	0.00	0.00	0.00
Chased				
	Never	0.98	0.88	0.64
	Once	0.02	0.09	0.19
	Two or More Times	0.00	0.03	0.17
Hit				
	Never	0.92	0.90	0.41
	Once	0.06	0.07	0.17
	Two or More Times	0.02	0.03	0.42
Sexually Assaulted				
	Never	1.00	1.00	0.99
	Once	0.00	0.00	0.01
	Two or More Times	0.00	0.00	0.00
Shot at				
	Never	1.00	1.00	1.00
	Once	0.00	0.00	0.00
	Two or More Times	0.00	0.00	0.00
Threatened				
	Never	0.99	1.00	0.70
	Once	0.00	0.00	0.13
	Two or More Times	0.00	0.00	0.16

Note. Conditional probabilities for each response category. Within each class, probabilities sum to 100% across rows (responses) for each indicator.

Table 7. *Conditional Probabilities of Youth Report Victimization Items and Youth Sex*

Class Prevalence:		<i>Low/No Victimization</i>	<i>Youth>Parent</i>	<i>Parent>Youth</i>
		(77%)	(13%)	(08%)
<i>Probability of Youth Reporting Victimization within Class</i>				
Attacked				
	Never	1.00	0.87	0.94
	Once	0.00	0.11	0.06
	Two or More Times	0.00	0.02	0.00
Chased				
	Never	0.99	0.53	0.81
	Once	0.01	0.16	0.11
	Two or More Times	0.00	0.31	0.09
Hit				
	Never	0.91	0.59	0.72
	Once	0.06	0.13	0.11
	Two or More Times	0.03	0.28	0.17
Sexually assaulted				
	Never	1.00	0.99	0.99
	Once	0.00	0.01	0.01
	Two or More Times	0.00	0.01	0.00
Shot at				
	Never	0.99	0.97	0.99
	Once	0.01	0.03	0.01
	Two or More Times	0.00	0.00	0.00
Threatened				
	Never	0.99	0.69	1.00
	Once	0.01	0.19	0.00
	Two or More Times	0.00	0.12	0.00
Youth Sex (covariate)				
	female	0.53	0.31	0.33
	male	0.47	0.69	0.67

Note. Conditional probabilities for each response category for parent report victimization items. Within each class, probabilities sum to 100% across rows (responses) for each indicator.

Aim 2: Examine Implications of Discrepancies on Victimization for Youth Adjustment
Analytic Approach

Each case was assigned to a latent class based on the highest estimated a posteriori probability and exported to SPSS for longitudinal analyses. I first conducted analyses on concurrent adjustment, followed by analyses predicting adjustment at Wave 3, controlling for Wave 2 adjustment. Specifically, six Analyses of Covariance (ANCOVAS) examined the ways in which latent classes are associated with adjustment outcomes for the three scales (anxiety/depression, aggression, delinquency) for each reporter. In each analysis, I included latent class as the categorical independent variable, wave 3 adjustment as the outcome variable, and the corresponding wave 2 adjustment scale as a covariate. With these analyses, I tested the hypothesis that youths who report higher levels of victimization than parents are most likely to show increases in psychological symptoms across all scales on the YSR/CBCL (anxiety/depression, aggression, and delinquency). Whereas sex and age were included as covariates in the LCA model, I included family SES and ethnicity as covariates in the ANCOVAS.

The distribution of adjustment indices overall, and distributions of adjustment indices within classes were reasonably normal (skewness < +/-1.8 for each index). Levene's tests for homogeneity of variance, however, revealed that the variances were unequal for all wave 2 adjustment (CBCL and YSR) indices and for some wave 3 adjustment indices (see Appendix B and Appendix C). Further examination of the variances revealed that the ratio of largest to smallest did not exceed 2:1. Guidelines for addressing heterogeneity of variance suggest that the ratios of largest to smallest group

variances should not exceed 3:1 (Garson, 2009). Because variance ratios were well below this 3:1 ratio, I proceeded with analyses of variance.

Analyses of Variance: Class Differences on Concurrent Adjustment

Six one-way Analyses of Variance (ANOVAS) examined concurrent associations between latent class and adjustment. Table 8 displays means and standard deviations for the three scales (anxiety/depression, aggression, delinquency) for each reporter. One-tailed Dunnett's t-test comparisons were used to test the hypothesis that youths who report higher levels of victimization than parents will show greater levels of psychological symptoms on the YSR/CBCL (anxiety/depression, aggression, delinquency), relative to all other groups. As Table 8 indicates, the data only support this hypothesis for youth-reported (YSR) adjustment indices at wave 2. The *Youth>Parent* class did show higher levels of maladjustment relative to the *No/Low Victimization* and *Parent>Youth* class on all three youth-reported (YSR) indices at wave 2.

Given the significant F-tests for all outcomes of interest (see Table 9), post-hoc comparisons were conducted. Post-hoc analyses (Bonferroni-corrected) indicate that for parent-reported (CBCL) outcomes, the *Parent>Youth* class showed significantly higher levels of maladjustment than the *Youth>Parent* class and the *No/Low Victimization* class. Table 10 displays the post-hoc analyses comparing the group means. This unanticipated finding was indeed contrary to hypotheses and will be discussed further (see *Discussion* for further consideration).

Table 8. Means and Standard Deviations on Adjustment Indices by Latent Class

	Latent Class		
	<i>Youth>Parent</i>	Low or No Victimization	<i>Parent>Youth</i>
<i>Parent report of adjustment at wave 2 (CBCL)</i>			
Delinquent Behavior	2.58 (2.24) ^A	1.62 (1.79) ^A	3.33 (2.75)
Aggression	7.01 (5.11) ^A	5.15 (4.44) ^A	5.94 (4.99)
Depression/Anxiety	5.11 (4.40) ^c	4.35 (4.20) ^c	6.62 (5.34)
<i>Youth report of adjustment at wave 2 (YSR)</i>			
Delinquent Behavior	3.91 (2.34) ^{AB}	2.25 (1.92) ^A	3.05 (2.27) ^B
Aggression	7.82 (3.86) ^{AB}	4.66 (3.30) ^A	6.45 (4.25) ^B
Depression/Anxiety	7.31 (5.11) ^{Ab}	5.15 (4.44) ^A	5.94 (4.99) ^b

Note. Values presented in table are means with standard deviations in parentheses. Superscripts denote results of comparisons based on Dunnett's *t*, examining whether CBCL/YSR values of *Youth>Parent* were significantly greater than all other groups. Means in rows sharing capital superscripts ^{A,B} are significantly different from each other at $p < .01$. Means in rows sharing lowercase superscripts ^{a,b} are significantly different at $p < .05$. Means in rows sharing lowercase superscripts ^c are marginally significant at $p = .06$.

Table 9. Summary of ANOVA Tests for Latent Class Differences on Concurrent Adjustment

		<i>SS</i>	<i>df</i>	<i>MS</i>	<i>F</i>	<i>p</i>
<i>CBCL Delinquent Behavior</i>	Between Groups	248.66	2	124.33	34.40	<.001
	Within Groups	4250.92	1176	3.61		
	Total	4499.57	1178			
<i>CBCL Aggressive Behavior</i>	Between Groups	1531.54	2	765.77	30.73	<.001
	Within Groups	29302.79	1176	24.92		
	Total	30834.33	1178			
<i>CBCL Delinquent Behavior</i>	Between Groups	340.73	2	170.37	9.27	<.001
	Within Groups	21611.21	1176	18.38		
	Total	21951.95	1178			
<i>YSR Delinquent Behavior</i>	Between Groups	329.85	2	164.93	41.75	<.001
	Within Groups	4692.84	1188	3.95		
	Total	5022.69	1190			
<i>YSR Aggressive Behavior</i>	Between Groups	1247.97	2	623.98	53.38	<.001
	Within Groups	13887.78	1188	11.69		
	Total	15135.74	1190			
<i>YSR Anxious/Depressed</i>	Between Groups	543.55	2	271.77	13.14	<.001
	Within Groups	24577.47	1188	20.69		
	Total	25121.02	1190			

Table 10. *Post-hoc Tests for Concurrent Adjustment (Parent Report)*

Latent Class	Latent Class	M_{diff}	SE	<i>p</i>
<i>CBCL Delinquent Behavior</i>				
<i>Youth>Parent</i>	<i>Low/No Victimization</i>	.96***	0.18	<.001
	<i>Parent>Youth</i>	-.75*	0.30	0.036
<i>Low/No Victimization</i>	<i>Youth>Parent</i>	-.96**	0.18	<.001
	<i>Parent>Youth</i>	-1.70***	0.25	<.001
<i>CBCL Aggressive Behavior</i>				
<i>Youth>Parent</i>	<i>Low/No Victimization</i>	1.63**	0.48	0.002
	<i>Parent>Youth</i>	-3.17***	0.78	<.001
<i>Low/No Victimization</i>	<i>Youth>Parent</i>	-1.63**	0.48	0.002
	<i>Parent>Youth</i>	-4.81***	0.66	<.001
<i>CBCL Anxious/Depressed</i>				
<i>Youth>Parent</i>	<i>Low/No Victimization</i>	0.76	0.41	0.187
	<i>Parent>Youth</i>	-1.51	0.67	0.073
<i>Low/No Victimization</i>	<i>Youth>Parent</i>	-0.76	0.41	0.187
	<i>Parent>Youth</i>	-2.27***	0.57	<.001

Note. Mean Difference (M_{diff}), Standard Error (SE), and significance (*p*) displayed. Post-hoc tests using Bonferroni adjustment.

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

Table 11. *Post-hoc tests for Concurrent Adjustment (Youth Report)*

Latent Class	Latent Class	M_{diff}	SE	p
<i>YSR Delinquent Behavior</i>				
<i>Youth>Parent</i>	<i>Low/No Victimization</i>	1.65***	0.19	<.001
	<i>Parent>Youth</i>	.86*	0.31	0.016
<i>Low/No Victimization</i>	<i>Youth>Parent</i>	-1.65***	0.19	<.001
	<i>Parent>Youth</i>	-.80**	0.26	0.007
<i>YSR Aggressive Behavior</i>				
<i>Youth>Parent</i>	<i>Low/No Victimization</i>	3.16***	0.32	<.001
	<i>Parent>Youth</i>	1.37*	0.53	0.030
<i>Low/No Victimization</i>	<i>Youth>Parent</i>	-3.16***	0.32	<.001
	<i>Parent>Youth</i>	-1.79***	0.45	<.001
<i>YSR Anxious/Depressed</i>				
<i>Youth>Parent</i>	<i>Low/No Victimization</i>	2.16***	0.43	<.001
	<i>Parent>Youth</i>	1.38	0.71	0.152
<i>Low/No Victimization</i>	<i>Youth>Parent</i>	-2.16***	0.43	<.001
	<i>Parent>Youth</i>	-0.78	0.60	0.568

Note. Mean Difference (M_{diff}), Standard Error (SE), and significance (p) displayed. Post-hoc tests using Bonferroni adjustment
 * $p < .05$, ** $p < .01$, *** $p < .001$

Analyses of Covariance: Class Differences on Changes in Adjustment

In this study, the independent variable of interest is latent class status, reflecting the parent-youth discrepancies on victimization. Given that ethnicity and SES are related to adolescent adjustment in prior literature (e.g., Evans, 2004; Rushton, Forcier, & Schectman, 2002), yet prior literature does not show consistent associations between these demographic characteristics and parent-youth agreement on victimization (Ceballo et al., 2001; Kuo et al., 2001), I included ethnicity and family SES as covariates in the ANCOVAs. Family SES was related to parent-reported adjustment indices at wave 3, including parent-reported aggressive behavior ($r=-.10, p<.01$), delinquent behavior ($r=-.91, p<.01$), and anxious/depressed symptoms ($r=-.16, p<.01$). Interestingly, family SES was not significantly related to youth-reported adjustment indices at wave 3.

Youth sex and age are also conceptualized as covariates in this study, as these demographic characteristics have important associations with the development of externalizing disorders (Jacobson, Prescott, & Kendler, 2002) and internalizing disorders (Zahn-Waxler, Kimes-Dougan, & Slattery, 2000). Because youth sex and age were included as covariates in the LCA model, I included only ethnic group status and family SES as covariates in the ANCOVAs. Specifically, the three dominant ethnic groups (Hispanic, Black, White) were dummy coded and employed as covariates. In each ANCOVA with wave 3 adjustment as the outcome, I also controlled for concurrent adjustment (i.e., respective adjustment index at wave 2).

Overall, the results examining whether parent-youth discrepancies predicted youth adjustment longitudinally were not consistent with hypotheses. As displayed in

Table 12 (adjusted marginal means of the parent-reported and youth-reported adjustment at wave 3), the differences between the *Youth > Parent* class and *No/Low Victimization* class were in the anticipated direction (i.e., *Youth>Parent* showed higher levels of maladjustment). However, these differences were not significant, as planned comparison tests indicated that the adjustment indices in the *Youth>Parent* class were not significantly higher than the *Low/No Victimization* class ($M_{diff} > -.65, ps > .11$). The relative differences between the *Youth>Parent* class and *Parent>Youth* class clearly were not in the anticipated direction, as the marginal means for adjustment indices were generally higher for youths in the *Parent>Youth* class relative to the *Youth>Parent* class (see Table 12). Post-hoc analyses (Table 14) explored these differences further.

Table 12. *Marginal Means and Standard Errors for Adjustment Indices by Latent Class*

	Latent Class		
	<i>Youth>Parent</i>	Low or No Victimization	<i>Parent>Youth</i>
<i>Parent report of adjustment at wave 3 (CBCL)</i>			
Delinquent Behavior	2.27 (.20)	2.03 (.07)	2.73 (.30)
Aggression	6.19 (.38)	5.54 (.13)	5.95 (.56)
Depression/Anxiety	4.47 (.36)	4.48 (.13)	6.06 (.53)
<i>Youth report of adjustment at wave 3 (YSR)</i>			
Delinquent Behavior	3.30 (.22)	3.07 (.08)	3.92 (.31)
Aggression	5.72 (.34)	5.23 (.12)	5.72 (.47)
Depression/Anxiety	4.88 (.39)	4.73 (.14)	5.18 (.56)

Note. Values presented in table are adjusted marginal means of adjustment at wave 3 (after controlling for ethnicity, family SES, and respective adjustment index at wave 2) with standard errors in parentheses. The adjusted means are the means that we would expect if there were no differences on the covariates.

With a critical α of .05, ANCOVAs indicated significant differences between at least two groups for the following three outcomes: CBCL Delinquent Behavior ($F(2,952) = 3.02, p = .05, \eta^2 = .006$), YSR Delinquent Behavior ($F(2,845) = 3.71, p = .03, \eta^2 = .009$), and CBCL Anxious Depressed Behavior ($F(2, 952) = 4.29, p = .01, \eta^2 = .009$). No significant between-group differences were found for the following outcomes: YSR Aggressive Behavior ($F(2,845) = 1.27, p = .28, \eta^2 = .003$), CBCL Aggressive Behavior ($F(2,952) = 1.43, p = .24, \eta^2 = .003$), and YSR Anxious/Depressed Behavior

($F(2, 845) = .34, p = .71, \eta^2 = .001$). Table 13 displays results of ANCOVAS for which there were significant between-group differences. Given the lack of significant planned contrasts, yet the overall significant F -test for three outcomes, post-hoc tests were conducted to examine all pairwise contrasts using the Bonferroni adjustment (Table 14). Since this involved four pairwise contrasts, the critical alpha level to be used for these contrasts (to control for the family-wise error rate) was $1/4$ times $.05$, that is, a critical α of $.013$.

As Table 14 indicates, only two post-hoc contrasts were significant at $p < .05$, and one contrast was marginally significant. The contrast between *No/Low Victimization* and *Parent>Youth* groups were significant for youth-reported (YSR) delinquent behavior ($M_{diff} = -.84, p = .05$) and for parent-reported (CBCL) anxious/depressed behavior ($M_{diff} = -1.58, p = .01$), and marginally significant for parent-reported (CBCL) delinquent behavior ($M_{diff} = -.70, p = .06$). These findings suggest that youths whose parent report higher levels of victimization than they self-report (i.e., youths in the *Parent>Youth* class) may be most at risk for increased maladjustment 2.5 years later, relative to youths in the *No/Low Victimization* class. Contrary to hypotheses, youths who report higher levels of victimization (i.e., youths in the *Youth>Parent* class) were not more likely to demonstrate increased levels of maladjustment, relative to other classes of youth.

Table 13. ANCOVAS Tests of Between-Subjects Effects for Latent Class Differences on Adjustment

	SS	df	MS	F	Partial η^2	p
<i>YSR Delinquent Behavior</i>						
Corrected Model	893.81	7	127.69	30.85	0.20	<.001
Family SES	1.02	1	1.02	0.25	0	0.62
White	2.82	1	2.82	0.68	0.001	0.41
Black	0.06	1	0.06	0.01	0	0.91
Hispanic	6.57	1	6.57	1.59	0.002	0.21
YSR Delinquent Behavior at Time 2	730.88	1	730.88	176.56	0.173	<.001
Latent Class	30.67	2	15.34	3.70	0.009	0.03
<i>CBCL Delinquent Behavior</i>						
Corrected Model	1636.68	7	233.81	58.96	0.302	<.001
Family SES	23.01	1	23.01	5.80	0.006	0.02
White	3.40	1	3.40	0.86	0.001	0.36
Black	4.30	1	4.30	1.09	0.001	0.30
Hispanic	34.42	1	34.42	8.68	0.009	<.001
CBCL Delinquent Behavior at Time 2	1120.29	1	1120.29	282.50	0.229	<.001
Latent Class	23.95	2	11.98	3.02	0.006	0.05
<i>CBCL Anxious/Depressed</i>						
Corrected Model	6715.345	7	959.34	74.47	0.354	<.001
Family SES	132.42	1	132.42	10.28	0.011	<.001
White	10.05	1	10.05	0.78	0.001	0.38
Black	27.37	1	27.37	2.12	0.002	0.15
Hispanic	11.52	1	11.52	0.89	0.001	0.35
CBCL Anxious/Depressed Behavior at Time 2	5629.35	1	5629.35	436.98	0.315	<.001
Latent Class	110.60	2	55.30	4.29	0.009	0.01

Table 14. *Post-Hoc Tests Comparing Latent Classes On Change In Adjustment (CBCL/YSR Indices) Controlling For Ethnicity And Family SES*

Latent Class	Latent Class	M_{diff}	SE	p
<i>CBCL Delinquent Behavior</i>				
<i>Youth>Parent</i>	<i>Low/No Victimization</i>	0.24	0.22	0.804
	<i>Parent>Youth</i>	-0.46	0.35	0.570
<i>Low/No Victimization</i>	<i>Youth>Parent</i>	-0.24	0.22	0.804
	<i>Parent>Youth</i>	-0.70 ⁺	0.31	0.064
<i>YSR Delinquent Behavior</i>				
<i>Youth>Parent</i>	<i>Low/No Victimization</i>	0.23	0.24	0.989
	<i>Parent>Youth</i>	-0.61	0.38	0.316
<i>Low/No Victimization</i>	<i>Youth>Parent</i>	-0.23	0.24	0.989
	<i>Parent>Youth</i>	-.84*	0.32	0.026
<i>CBCL Anxious/Depressed</i>				
<i>Youth>Parent</i>	<i>Low/No Victimization</i>	0.27	0.39	1.000
	<i>Parent>Youth</i>	-1.32	0.64	0.116
<i>Low/No Victimization</i>	<i>Youth>Parent</i>	-0.27	0.39	1.000
	<i>Parent>Youth</i>	-1.58*	0.55	0.011

Note. Mean Difference (M_{diff}), Standard Error (SE), and significance (p) displayed only for ANCOVAS that yielded a significant omnibus F-test. All post-hoc tests using Bonferroni adjustment. Outcomes are Wave 3 CBCL/YSR indices; covariates are Wave 2 CBCL/YSR indices, ethnic group, and family SES.

* $p < .05$, ⁺ $p = .06$

Chapter Six: Discussion

This study extends the literature investigating the phenomenon of parent-youth informant discrepancies, and the implications of discrepant perspectives for youth adjustment. Prior literature highlights poor agreement between parents and youth on exposure to violence, with preliminary evidence suggesting that discrepancies are linked with psychological maladjustment in youth. However, extant research has not examined patterns of discrepant perspectives or prevalence of these patterns in the population. Further, prior studies examining associations between discrepancies and adjustment were cross-sectional and did not shed light on whether poor adjustment is in fact an outcome or merely an associative characteristic of discrepancies.

The aims of this dissertation project were twofold. First, this study identified latent groups of dyads distinguished by patterns of parent/youth ratings on victimization. I expected that groups would be characterized by discrepant perspectives and level of victimization. Second, by examining group differences in adjustment (i.e., depression, aggression and delinquency) this study investigated the ways in which parent-youth discrepancies are related to adolescent adjustment both concurrently and over time.

Main Findings

I anticipated that at least two “disagreement” classes would emerge in the population, with one class in which parents report less victimization than youths self-report, and another class in which parents report higher levels of victimization than youths self-report. The data supported this hypothesis, as two classes reflected different

directions of discrepant perspectives. Specifically, four latent classes of parent-youth dyads emerged in this study, the first three of which characterized > 99% of the sample: (a) a class in which parents and youths both report low levels of victimization (Low Victimization), (b) a class in which youths report higher levels of victimization than parents (Youth > Parent), (c) a class in which parents report higher levels of victimization than do youths (Parent > Youth) , and (d) a class in which both parents and youths report high levels of victimization (High Victimization).

In this study, associative characteristics of latent classes were generally consistent with the literature reporting associative characteristics of parent-youth discrepancies on violence exposure. Because prior work consistently reports that age and gender are related to parent-youth discrepancies on violence exposure (Ceballo et al., 2001; Howard et al., 1999; Kuo et al., 2000), these variables were included as covariates in the LCA model (i.e., age and gender were allowed to influence the composition of the latent classes). Consistent with prior literature (Ceballo et al., 2001; Kuo et al., 2000), older youths were more likely to report higher levels of victimization, relative to their parents. That is, youths in the *Youth>Parent* class were older than youths in the other two classes (i.e., *Parent>Youth* class and *No/Low Victimization* class). Youth sex was also related to discrepancies in a direction consistent with prior work, as males reported higher levels of victimization than their parents, relative to females. Because neighborhood SES and family SES are related to violence exposure and poor psychosocial adjustment (Attar et al., 1995; Leventhal & Brooks-Gunn, 2000; Stein, 2003) these variables were conceptualized as covariates in the present study. Interestingly, latent class status was not

related to neighborhood SES or to family SES. Previous work investigating parent-youth informant agreement on violence exposure has not reported on the role of SES as an associative characteristic (Ceballo et al., 2001; Howard et al., 1999; Kuo et al., 2001; Richters & Martinez, 1993). However, with the exception of Kuo et al.'s (2001) study, previous studies have focused on high-risk, low income samples (i.e., Ceballo et al., 2001; Howard et al., 1999; Richters & Martinez, 1993). The nearly exclusive focus on low SES families and neighborhoods therefore has not enabled researchers to consider whether socioeconomic status is in fact associated with parent-youth agreement or discrepancies on violence exposure. Based on a socioeconomically diverse sample (including low, middle, and high SES neighborhoods) in the present study, there were no associations between family or neighborhood socioeconomic status and latent classes reflecting parent-youth discrepancies.

Whereas several studies highlight that parents generally report lower levels of violence exposure than youths based on comparisons of group-level prevalence rates or average difference scores (Ceballo et al., 2001; Hill & Jones, 1997; Howard et al., 1999; Richters & Martinez, 2003), the present study further examined heterogeneity in parent and youth reports of victimization. Previous studies do not shed light on whether some mothers report more victimization than their children self-report, and how prevalent this type of dyad is in the population. The present study addressed this gap by employing a person-centered analytic approach to classify dyads according to ratings of parent and youth report. Latent class analysis identified groups of dyads, such that associations among variables were similar within groups and different between groups. In this study,

findings were consistent with prior work indicating that parents tend to report less victimization than youths self-report. In fact, nearly 14% of dyads were characterized by this reporting pattern (*Youth > Parent*). However, this study revealed that a substantial number of dyads (8% of sample) were characterized by parents reporting *greater* victimization than youths self-report (*Parent > Youth*).

An important theoretical foundation for the present study is the supposition that parent-youth disagreement on victimization reflects youths' non-disclosure, parental unawareness of victimization, and a potential lack of coping resources available to youths (Ceballo et al., 2001; Howard, 1999; Richters & Martinez, 1993). With this in mind, some researchers have investigated whether disagreement on violence exposure is related to youth maladjustment (Ceballo et al., 2001; Howard, 1999). However, previous studies examining agreement have relied on variable-centered approaches (e.g., indices that reflect the total number of agreements on victimization items) that overlook the direction of disagreement (i.e., which informant reports greater or fewer events). For this reason, the literature does not shed light on how the *direction* of disagreement or discrepancy is related to adjustment, because agreement indices only reflect the extent to which parents and youths provide concordant ratings (without regard to direction of disagreement).

Whereas a variable-centered approach assumes that the population is homogeneous with respect to how predictors operate on the outcome, a person-centered approach considers that different combinations of predictors may show different associations with outcomes (i.e., variables are related to one another in different ways for different groups of people). I anticipated that latent classes reflecting parental under-

reporting of youth victimization experiences (i.e., classes in which parents report less youth victimization than youths self-report) would show increased anxiety/depression, increased aggression, and increased delinquency, relative to all other classes.

Concurrent associations provided some support for this hypothesis. In particular, youth who reported more victimization than did their parents had higher concurrent levels of aggression, delinquency, and depression/anxiety than youth in all other classes. This finding is consistent with hypotheses and with prior work that has relied on cross-sectional associations between parent-youth discrepancies on exposure to violence and adjustment.

However, longitudinal findings examining changes in adjustment after 2.5 years suggested a different picture with regard to which direction of discrepancy is most strongly associated with maladjustment. These findings did not support the hypothesis that youths who report higher levels of victimization relative to parents (i.e., youths in the *Youth > Parent* class) would exhibit increased levels of maladjustment over time, relative to any other classes of youth. Instead, the youth whose parents reported more victimization than they self-reported were most at risk for maladjustment, relative to youths in the *No/Low Victimization* class. Specifically, controlling for prior adjustment, ethnicity, and SES, these youths showed increases in both youth- and parent- reported delinquent behavior, as well as parent-report of youth anxious/depressed behavior. Notably, youth in the *Parent > Youth* class did not differ on adjustment over time from youth in the *Youth > Parent* class. Taken together, the analyses examining group differences on concurrent adjustment are consistent with prior cross-sectional work, but

the changes in adjustment over 2.5 years provide a more nuanced picture with regard to how discrepant reports of victimization are related to youth adjustment.

Cross-sectional findings suggest that poor psychosocial adjustment is indeed an associative characteristic of youths who report more victimization than parents. Further, if parents' relative under-reporting of victimization reflects a lack of parental knowledge and a lack of youth disclosure of information, then one may surmise that psychosocial maladjustment is a contributing factor. That is, youths who display elevated levels of internalizing and externalizing symptoms may be less likely to disclose information about their victimization experiences to caregivers. For example, depression may intensify motivational determinants of non-disclosure—e.g., fear of disapproval or disbelief, elevated embarrassment and self-blame, and impaired self-efficacy (lack of belief in one's ability to effectively disclose information)—factors that inhibit disclosure for victimized youth (Bussey & Grimbeek, 1995). Delinquent and aggressive characteristics may also contribute to non-disclosure, especially when delinquency and aggression play a causal role in the victimization events. Because delinquent and aggressive youths place themselves in situations that increase the likelihood of victimization (Lynch & Cicchetti, 1998), these youths may not disclose information for fear of parent-imposed restrictions or social sanctions.

Contrary to hypotheses, youths who reported *less* victimization than parents (i.e., *Parent > Youth* class) were most at risk for increases in delinquency (both parent-reported and youth-reported) over 2.5 years, relative to youths classified as *Low Victimization*.

What might account for this finding? One can surmise several possible explanations.

First, it is possible that youth informants are concealing information. For example, youths' relative under-reporting of victimization may reflect coping efforts such as repressing or denying that victimization has occurred. In fact, some literature suggests that disengagement coping—a construct that includes denial and avoidance—is related to externalizing symptoms in youth (Compas et al., 2001). Alternatively, the discrepancy may reflect youths' reservations about disclosing information in the context of an interview. It may be that youths in the *Youth>Parent* class were willing to discuss victimization events openly and candidly when asked, whereas youths in the *Parent>Youth* class were not comfortable reporting victimization in the context of an interview. If this is the case, then youths in the *Youth>Parent* class may indeed be willing to discuss their experiences and seek social support from other adults, and this comfort with disclosure may be protective.

Second, it is possible that youths' relative under-reporting reflects a form of “desensitization”, whereby youths chronically exposed to violence (including witnessed violence) perceive it as normal (Farrell & Bruce, 1997; Fitzpatrick, 1993). Youths who witness others being victimized may not be as sensitive to their own victimized plight (Nishina & Juvonen, 2005); under these circumstances, youths' perceptions of what constitutes victimization (e.g., threats) may be different from parents. However, desensitization is a phenomenon that is often used to explain reasons why violence-exposed youths do not develop internalizing symptoms, and this literature is based on the assumption that youths are in fact disclosing information about violence exposure through self-report.

Third, it is possible that parents who report higher levels of youth victimization are in fact over-reporting the extent of youth victimization, perhaps because they live in dangerous neighborhood contexts and assume that their children experience high levels of victimization. It is possible that parents were answering based on assumptions, and the appraisal of risk or threat in the neighborhood may influence their reports. If these parents believe that youths are not disclosing information to them, discrepancies may reflect a lack of parental trust, or a strong assumption that youths are experiencing victimization even in the absence of corroborating reports from youth. Some research suggests that parents' negative expectations and over-estimations of youths' risky behavior is associated with youths' poor psychosocial adjustment, although the reasons for this are not clear (Finkenauer, Frijns, Engels, & Kerkhof, 2005; Yang, 2006). Alternatively, it may be that parents in this *Youth>Parent* class are reaching out for help in reporting child victimization, relative to youths in the *Parent>Youth* class who simply choose not to discuss or acknowledge victimization events. Regardless, these discrepancies would seem to reflect, in part, a lack of shared perspectives on events that are stressful and potentially traumatic.

Finally, it is possible that parents' relative over-reporting is related to parent-reported adjustment outcomes, in part, due to shared method variance. Not surprisingly, recent meta-analytic work suggests that associations between violence exposure and adjustment are strongest within informants rather than across informants (Fowler et al., 2009). However, it is unlikely that mono-method bias accounts for the outcomes entirely, because the *Parent>Youth* class showed increases in child-reported delinquency relative

to the *Low/No Victimization* class, whereas the *Youth>Parent* class was not different from other classes. If method variance accounted for findings, then we would expect that the *Youth>Parent* class would show increased maladjustment for youth-reported behaviors.

Limitations and Future Directions

Resilience

This study was based on an assumption that discrepant perceptions are maladaptive, and the theoretical framework therefore emphasizes deficits (e.g., lack of coping resources, lack of parental knowledge and child disclosure) that may explain why disagreement is a “risk factor”. A resilience framework—focusing on positive adaptation and development despite adversity—might also be fruitful (Luthar, Cicchetti & Becker, 2000). What are the strengths—both internal and external resources—of victimized youths who experience positive outcomes in the face of increased risk? What is the role of shared perspectives (parent-youth agreement) and caregiver support for these youths? By studying the processes and resources that promote resilience in victimized youths, researchers may gain important insights into how to help these youths. Further, some measurement of felt acceptance and social support from caregivers might help to understand processes through which parent-youth agreement is adaptive.

Context

One salient limitation of the current study is the lack of attention to context in which victimization occurs. Examining context of violence exposure will therefore be an exciting direction for future work to understand why parents and youths differ in their

reports of child victimization. Several researchers posit that informant discrepancies reflect differences in the settings in which behavior is observed by different informants (e.g., De Los Reyes & Kazdin, 2005; Kraemer et al., 2003). Early adolescence is an interesting developmental period for this line of research, because parents spend less time directly monitoring and observing youths' whereabouts and behaviors, as youths spend more time with peers outside the home environment (Collins & Laursen, 2004).

Although recent empirical work supports theory that informant discrepancies reflect the contexts in which behaviors occur (De Los Reyes et al., 2009), the connection between context and informant-specific reports has rarely been considered in the study of exposure to violence. In one noteworthy exception, some literature suggests that parents are more likely to report youths' exposure to violence that took place in the home, whereas youths are more likely to report exposure that took place in school (Thomson et al., 2002). However, this work was limited to witnessed violence, rather than victimization. Future work that examines discrepancies within specific contexts may ultimately shed light on why discrepancies occur, and under what circumstances discrepancies are risk factors for dysfunction. One might surmise that for any given type of victimization, discrepancies specific to the home environment are particularly detrimental. For example, if parents are unaware of victimization that takes place in the home or that is perpetrated by other family members, then this may indicate a chaotic home environment or severe family dysfunction. Discrepancies might also indicate stigma or shame when only one informant discloses information.

In the case of informant discrepancies for child disruptive behavior, context may be characterized not only by the *environmental setting* for behaviors and events, but also by the *people* who elicit behaviors in various settings (De Los Reyes et al., 2009). Similarly, contexts for victimization may be characterized not only by the setting in which victimization takes place, but also according to the *perpetrator* involved in the victimization incident. Because “community” is a heterogeneous term that can include a number of settings (home, school, neighborhood) as well as a number of perpetrators (family, friends, strangers), context is frequently overlooked or inconsistently defined in the literature on youth exposure to community violence (Guterman et al., 2000). To add another layer of complexity, one may expect that contexts for victimization change over the course of childhood and adolescence. Indeed, the concept of “developmental victimology” refers to the study of children's victimizations over the course of childhood, including overlaps, common risk factors, interrelationships, and sequencings (Finkelhor, 1997).

Developing analytic frameworks that can account for heterogeneity in context as well as discrepant perceptions of victimization may present unique challenges for future research. Without a gold standard information source, the researcher must find ways to synthesize and integrate information regarding context from both information sources. One preliminary next step for research might include examining context (obtained from both informants' perspectives) as an associative characteristic of latent classes that reflect discrepancy. Alternatively, future research might consider discrepancies as an associative characteristic of classes that reflect context (e.g., latent classes that use

information on perpetrator and setting as indicators). Thus far, attempts to classify victims according to type of peer victimization (e.g., relational, physical) using latent class analysis suggest that victimization is best classified according to *level* rather than *type* of victimization (Nylund et al., 2007a). That is, ordered classes (i.e., classes for which item probability plots of latent classes do not intersect) typify peer victimization in early adolescence when only self-report is used. However, victimization assessed in this study was a very heterogeneous construct that could include (but was not limited to) peer victimization. Future research might continue to include a range of victimization types, and employ information regarding perpetrator and setting as indicators in the latent class analysis to reflect type of victimization. In this case, discrepancies and related processes (e.g., youth disclosure of victimization) may be unique associative characteristics of the latent classes.

Sources of Information. This study also would have been enriched by some investigation of *how* parents obtain information about children's victimization. Because parents spend less time directly monitoring and observing youths' whereabouts in adolescence, they must instead acquire knowledge through youth disclosure or outside sources of information (Collins & Laursen, 2004). Interestingly, not all sources of knowledge are created equal: knowledge attained through outside sources of information, relative to youth disclosure, may be less protective and more strongly associated with adolescent risky behavior (Crouter et al., 2005). In particular, this study raised questions regarding *how* parents in the *Parent > Youth* class obtain information, especially because youths in this class were reporting less victimization than parents and yet these

youths demonstrated increases in delinquent behaviors. Future research might investigate parents' information sources, perhaps by conducting interviews with a selected subset of parents in each class. Moreover, future research might conceptualize information source (e.g., school, police, direct observation) as moderators; that is, the extent to which agreement is adaptive may depend on how parents obtain information about youth victimization.

Sources of Support. Another limitation of this study is the lack of attention to other sources of social support that may moderate associations between parent-youth discrepancies and adjustment. This study was based on the supposition that discrepant perceptions of victimization reflect a lack of parental understanding and a lack of parental support. Research suggests that mothers are viewed as the most helpful source of social support in dealing coping with violence (Ozer & Weinstein, 2004), and support from mothers (but not fathers or friends) has been shown to moderate the relationship between violence exposure and adjustment (Ozer and Weinstein, 2004). Nevertheless, the present study did not account for youth disclosure of victimization events to other individuals (e.g., peers, other family members or adults) who might have provided support. At a minimum, future studies might ask youths to report whether they did in fact discuss the event with caregivers, and examine whether youth report of disclosure does systematically relate to parent-youth discrepancies.

Cultural and Ethnic Factors. Some further investigation of the role of culture is also important, as this study did not explore cultural factors that may account for or moderate outcomes. As one preliminary next step, future research might explore whether

ethnic status moderates the association between latent class status and adjustment. Although prior research had not found associations between ethnic group status and discrepancies on violence exposure (Ceballo et al., 2001), ethnic status alone is likely insufficient for understanding the role of culture in this study. For example, within parent-youth dyads who identify as Hispanic or Latino, culture of origin and acculturation might differentially impact parent-youth agreement (Thomson et al., 2002).

Notably, neighborhood SES was unrelated to latent class status; however, there may be a great deal of heterogeneity within neighborhoods categorized as “low SES”. If parents’ perceptions of danger in the neighborhood can explain their relative over-reporting of youth victimization (i.e., *Parent > Youth* class), then it may be fruitful to further investigate parents’ socialization of coping within these environments. Some parents do encourage aggressive responses to cope with violence, and these socialization processes may reflect parents’ perceptions of what is appropriate or necessary in dangerous contexts (Kliewer et al., 2006). At the same time, other socializing forces in very dangerous environments may overpower any positive influence that parental monitoring (e.g., parental solicitation of information, parental knowledge) can exert on adolescent development (Gorman-Smith et al., 1999). Future research might further consider contexts in which discrepant perspectives on victimization are adaptive, as well as contexts in which parent-youth agreement on victimization is not adaptive.

Lifetime vs Past-Year Incidence. This study focused on discrepancies for *past-year incidence* (i.e., amount of victimization that youths have experienced in past year), although future research might also consider discrepancies based on *lifetime incidence*.

Past-year incidence was considered to be an optimal timeframe for collecting informant reports in order to maximize the likelihood of accurate recall, especially because lifetime prevalence reports may be inaccurate when children are recalling stressful events that occurred at a very young age (Howe, Toth, & Cicchetti, 2006). However, as Howe et al. (2006) noted, despite reasons to believe that autobiographical memory is impaired for children recalling stressful and traumatic experience, the empirical literature surrounding this topic is quite inconsistent and inconclusive. At a minimum, it is important to acknowledge that this study overlooked discrepant perceptions of victimization that occurred over the course of the youth's lifetime.

Stability of Latent Class Status. It is possible that parent-youth discrepancies on victimization are most predictive of maladjustment when these discrepancies are stable over the course of early adolescence. This study did not consider stability of discrepant perspectives, as classes reflected discrepancies in one limited time period (i.e., past year). Future research might apply Latent Transition Analysis (LTA) to identify dyads that show stability or change in class status over time (Lanza et al., 2003). Additional work would be useful to first determine whether the conditional item probabilities are invariant across time points. That is, when identical indicators (i.e., past year victimization items) are included as indicators in the follow-up assessment, does the LCA solution yield the same number of classes and do the class profiles look similar at the two time points? Examining characteristics (e.g., parent-youth communication) of youths who transition from one class to another over time may also be fruitful to understand processes that contribute to parent-youth disagreement on victimization.

Methodological Considerations

Another limitation of this study is that the latent classes did not clearly tease apart level of victimization and discrepancy. One might argue that in the present study, a no/low victimization class is not a rigorous enough comparison group to understand the implications of informant discrepancies on victimization. The very small minority (1.4%) classified as *High Victimization* did not clearly reflect any interpretable pattern of agreement or discrepancy, and therefore was not included in subsequent analyses examining group differences. Ideally, this fourth class would have reflected high victimization *and* high agreement (or low discrepancy) in order to serve as a useful comparison group. That is, if youths who disagree with parents on ratings of victimization (i.e., one informant reports low victimization whereas another informant reports high victimization) fare worse than youths who agree with parents on ratings of victimization (i.e., both informants report high victimization), then this evidence would be most compelling to support the idea that *discrepancy per se* (rather than victimization) is associated with maladjustment.

The use of exploratory LCA allowed classes to emerge based on patterns in the population. In the future, researchers might consider the use of confirmatory LCA to specify the number of classes and data patterns according to existing theory and knowledge (Laudy & Hoijtink, 2005). Ideally, future studies would isolate four groups of dyads: one class in which parents report less victimization than youths self-report, one class in which parents report higher levels of victimization than youths self-report, one class in which parent-child dyads agree on victimization, and one class in which parent

child dyads agree on the absence of victimization. This particular model might be compared against other models (e.g., a three-class solution) to examine which framework best fits the data. In addition, analyses might account for classification error by modeling class status as a latent variable in relation to adjustment rather than using modal assignment. Classification error presents a particular problem when modal assignment is used (assigning cases to classes for data analysis), and this is an important limitation of the analytic approach in the present study.

Interestingly, when covariates (sex, age) were added to the LCA model, the classification error decreased from 16% (LCA without covariates) to 10% (LCA with covariates). The proportion of dyads in the High Victimization class also decreased from 3% to 1% when covariates were added to the model. Future research might examine in further detail the role of covariates. For example, prior work indicates that male status and youth age are related to witnessed violence more strongly for youth report than for parent report (Kuo et al., 2000). Future work might examine whether the LCA model is invariant across males and females, or whether the structure of the LCA model is different for these two groups. Given that victimization type may change throughout childhood and adolescence (Finkelhor et al., 2007), it will be important to further examine age (cohort) differences in the LCA model. To add another layer of complexity, future work that incorporates relational and verbal victimization may find that age and sex are related to victimization in different ways for parent and youth report.

Implications for Intervention and Prevention

What can we learn regarding implications for prevention? At a minimum, the findings from this study would suggest that victimized youths (i.e., youths for whom at least one informant reports youth victimization) generally fare worse on adjustment outcomes than non-victimized youths. Therefore, this study underscores the importance of primary prevention of youth victimization. However, intervening to prevent the psychological sequelae of victimization may be challenging, especially if some youths under-report victimization experiences in the context of interviews or self-report screening measures (e.g., *Parent > Youth* class). One important challenge for future work involves determining the best methods for screening youths for exposure to violence, as part of prevention efforts conducted in school or community settings. Based on group-level prevalence rates revealing that youths report higher levels of violence exposure than parents, several researchers have argued that youth report is at least as valuable—if not superior to—parent report (Buka et al., 2001; Ceballo et al., 2001; Richters & Martinez, 1993; Thomson et al., 2002). The findings from this study also suggest that parent report might add valuable information beyond youth report. Although one can not make inferences regarding the validity of either informant, this study does indicate that sole reliance on youth report of victimization may not be adequate.

Given that stakeholders (e.g., youths, parents, therapists) often do not agree on problems to be targeted in mental health treatment for children (Hawley & Weisz, 2003), future work might also examine the implications of parent-youth discrepancies on victimization for use of mental health services. Although exposure to violence may indeed play a causal role in youths' mental health problems and subsequent treatment, the

pathway to getting services may depend on caregivers' perceptions of problems (Guterman et al., 2002). In fact, Guterman et al. found that after controlling for several predictors (e.g., demographics, depression, and externalizing problems) victimization was associated with significantly lower odds of subsequent mental health service use in high school students. Literature also indicates that clinicians report lower levels of their youth clients' exposure to violence than clients self-report (Guterman & Cameron, 1999). In summary, the considerable heterogeneity in parent-youth agreement might have implications for both screening (pre-treatment) and referral, treatment initiation, and problems identified in treatment.

It is also important to consider that not all caregivers who recognize and report youth victimization will feel empowered to seek help. In the context of this study, it may be the case that caregivers who report youth victimization are reaching out for help by reporting such events. Some caregivers may not know where and how to obtain services for their children. Future work might further explore formal service use and informal sources of support that exist for the two types of "discrepant" classes in order to better understand how to help victimized youths. If *Parent > Youth* class and *Youth > Parent* class vary in the types of services and support systems that are used and/or available, then this information may have implications for both screening (pre-treatment) and referral or treatment initiation. Such research would be especially timely, given that researchers have recently lamented the lack of services to intervene for violence-exposed youth (Voisin, 2007).

Conclusion

Despite its limitations, this study advances the literature on several fronts. Researchers must frequently reconcile or use conflicting information from different informants. This study applied a person-centered approach to integrate information from parent and youth informants on ratings of youth victimization. Latent class analysis revealed considerable heterogeneity in the population with regard to parent-youth agreement on victimization. This study added to a growing body of literature that conceptualizes informant discrepancies as useful and meaningful information, and as a risk factor for poor adjustment. The findings underscore the importance of attending to direction of discrepancy (i.e., which informant reports higher levels of victimization) when examining how informant disagreement is related to youth adjustment. Surprisingly, youths who self-reported lower levels of victimization than parents reported were at risk for poor adjustment. This type of discrepant dyad may deserve more careful attention than previously considered in the literature. Findings suggest several important questions and directions for future research that seeks to understand informant discrepancies as a risk factor for youth maladjustment.

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Appendix A. Summary of Previous Literature Examining Parent-Youth Agreement on Victimization and Associations with Adjustment

	<u>POPULATION</u>	<u>METRIC FOR CALCULATING AGREEMENT</u>	<u>FINDINGS</u>
Howard et al., 1999	333 parent–youth dyads residing in urban public housing developments.	<p>Youth self-reported victimization by community violence (12 items) and their witnessing community violence (17 items) based on a four-category response format (“never” to “more than five times”)</p> <p>Concordance was defined as <i>absolute</i> agreement between the responses of parent–youth dyads. Concordance status (<50%, 50–80%, and >80%) was based on dyad agreement regarding exposures.</p> <p>Differences between parents’ perceptions and youths’ reports of exposures to violence and distress assessed using paired student’s <i>t</i>-tests.</p>	<p>Parents reported less victimization and witnessing and distress symptoms relative to youth</p> <p>Youth in the low concordance group characterized their families as exhibiting less involvement, open communication, and parental monitoring.</p>
Ceballo et al., 2001	<p>104 mother-child pairs for youths in 4th and 5th grades.</p> <p>26 mothers interviewed in Spanish allowed for some comparison of cultural/ethnic status</p>	<p>Frequency from child report, with 0 (<i>never</i>) to 11 (<i>almost every day</i>). Mother report did not assess frequency.</p> <p><i>Mother-child agreement</i> measured by assigning mothers a score of 1 if their answers about their child’s exposure to a violent incident (<i>yes/no</i>) matched a dichotomous (<i>never/at least once</i>) recoding of their child’s answers for that same event. Non-agreement for any event received a score of 0 for that event. Two scales of mother-child agreement were created: one for personal victimization and one for witnessing violent events. For each scale, scores could range from 0 (<i>no agreement</i>) to 10 (<i>perfect agreement</i>)</p>	<p>Children more than twice as likely to report being chased by gangs and more than 3 times more likely to report being beaten up or mugged.</p> <p>32% of children reported that they had seen another person stabbed vs 6% of mothers</p> <p>14% of youths reported being asked to sell drugs (vs 1% of parents)</p> <p>Kappas were very poor; only 6 items were greater than chance agreement</p> <p>In regression equations, mother-child agreement entered as a predictor after mother report. Agreement significantly contributed to prediction of internalizing and PTSD, while association with externalizing was positive but nonsignificant. No differences by ethnic group status.</p>

Appendix B. Descriptive Data for Wave 2 Adjustment Indices by Latent Class

	<i>Mean</i>	<i>SD</i>	<i>Skewness</i>	<i>Variance</i>
<i>Low/No Victimization</i>				
CBCL Aggressive Behavior	5.37	4.89	1.22	23.87
YSR Aggressive Behavior	4.66	3.30	0.85	10.90
CBCL Anxious/Depressed	4.35	4.20	1.38	17.64
YSR Anxious/Depressed	5.15	4.44	1.19	19.75
CBCL Delinquent Behavior	1.62	1.79	1.41	3.21
YSR Delinquent Behavior	2.25	1.92	0.98	3.68
<i>Parent>Youth</i>				
CBCL Aggressive Behavior	10.18	6.30	0.61	39.72
YSR Aggressive Behavior	6.45	4.25	0.72	18.06
CBCL Anxious/Depressed	6.62	5.34	0.79	28.47
YSR Anxious/Depressed	5.94	4.99	0.76	24.91
CBCL Delinquent Behavior	3.33	2.75	1.33	7.56
YSR Delinquent Behavior	3.05	2.27	0.66	5.16
<i>Youth>Parent</i>				
CBCL Aggressive Behavior	7.01	5.11	0.77	26.12
YSR Aggressive Behavior	7.82	3.86	0.04	14.88
CBCL Anxious/Depressed	5.11	4.40	0.98	19.37
YSR Anxious/Depressed	7.31	5.11	0.81	26.12
CBCL Delinquent Behavior	2.58	2.24	1.23	4.99
YSR Delinquent Behavior	3.91	2.34	0.47	5.48

Appendix C. Descriptive Data for Wave 3 Adjustment Indices by Latent Class

	<i>Mean</i>	<i>SD</i>	<i>Skewness</i>	<i>Variance</i>
<i>Low/No Victimization</i>				
CBCL Aggressive Behavior	5.28	4.79	1.31	22.90
YSR Aggressive Behavior	5.00	3.49	0.93	12.18
CBCL Anxious/Depressed	4.30	4.19	1.33	17.52
YSR Anxious/Depressed	4.61	4.07	1.15	16.56
CBCL Delinquent Behavior	1.90	2.18	1.69	4.74
YSR Delinquent Behavior	2.93	2.15	0.84	4.61
<i>Parent>Youth</i>				
CBCL Aggressive Behavior	8.68	6.35	0.95	40.26
YSR Aggressive Behavior	6.19	3.40	0.46	11.57
CBCL Anxious/Depressed	7.19	5.60	0.74	31.34
YSR Anxious/Depressed	4.92	4.07	1.15	16.58
CBCL Delinquent Behavior	3.82	3.63	1.31	13.15
YSR Delinquent Behavior	4.21	2.57	0.37	6.60
<i>Youth>Parent</i>				
CBCL Aggressive Behavior	6.96	5.31	1.08	28.14
YSR Aggressive Behavior	7.08	3.92	0.63	15.33
CBCL Anxious/Depressed	4.97	4.85	1.22	23.48
YSR Anxious/Depressed	5.65	4.56	0.83	20.77
CBCL Delinquent Behavior	2.78	2.64	1.20	6.99
YSR Delinquent Behavior	4.06	2.51	0.46	6.29

Vita

Kimberly Louise Goodman was born on December 28, 1977, in Princeton, New Jersey, and is an American citizen. She graduated from Yorktown High School, Arlington, Virginia in 1996. She received a Bachelor of Science degree in Psychology from the College of William and Mary, Williamsburg, Virginia, in 2000. She received a Master of Science in Psychology with a concentration in Clinical Child Psychology from Virginia Commonwealth University, Richmond, Virginia in 2006.