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PEER VICTIMIZATION, SOCIAL SUPPORT, AND INTERNALIZING SYMPTOMS: THE ROLE OF ORGANIZED OUT-OF-SCHOOL ACTIVITY PARTICIPATION

by

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PEER VICTIMIZATION, SOCIAL SUPPORT, AND INTERNALIZING SYMPTOMS: THE ROLE OF ORGANIZED OUT-OF-SCHOOL ACTIVITY PARTICIPATION

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Peer victimization is associated with and predictive of internalizing symptoms, such as loneliness and depression. Social support has been found to moderate the relationship between victimization and internalizing symptoms, with increased levels of support related to lower levels of internalizing symptoms for victims of peer abuse. The current study examined if organized out-of-school activity participation was associated with lower levels of internalizing symptoms for adolescents in general and for those victimized by peers. Possible gender differences were also explored. Results indicated that participating in a broader range of activities (breadth of participation) was generally associated with higher levels of internalizing symptoms, but participating in more days per week of activities (intensity of participation) was generally associated with lower levels of internalizing symptoms. The interactions between victimization and both breadth and intensity differentially predict internalizing symptoms based on gender. Implications and future directions are discussed.

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Introduction

Adolescent victims of peer abuse are at greater risk for the development of depression and feelings of loneliness (Hawker & Boulton, 2000). Social support has been found to be protective against such negative effects of peer victimization (Davidson & Demaray, 2007; Papafratzeskakou, Kim, Longo, & Riser, 2011). As contexts of potential peer social support, organized out-of-school activities (e.g., team sports, volunteering, after-school clubs, etc.) may therefore serve as a context for social support and participation may fulfill a protective role against internalizing symptoms. The current study will examine whether or not such out-of-school activities are likely to serve as a source of support for victims of peer aggression.

Peer victimization is defined as the experience of being a target of aggressive behavior by non-sibling peers (Hawker & Boulton, 2000), and is a negative peer experience that many, if not most, children and adolescents will encounter during their school-age years. When an individual perceives a situation as threatening, such as peer victimization, and cannot access an appropriate coping response, stress arises (Cohen & Wills, 1985). Social support offers means for alleviating such stress (Davidson & Demaray, 2007; Jackson, 1992). Unfortunately, research findings show that victims tend to have less social support than non-victims, suggesting that victimization may disrupt one's existing social network and hinder one's ability to establish connections that can provide social support (Demaray & Malecki, 2003, Holt & Espelage, 2007; Sharp, Thompson, & Arora, 2000). Peer victimization is deeply concerning then, as it causes stress and may encumber one's ability to relieve or cope with such stress.

Victimization has also been consistently linked to internalizing symptoms, such as loneliness and depression (Hawker & Boulton, 2000; Poulwese et al, 2011; Zwierzynska, Wolke, & Lereya, 2013). Social support has been shown to moderate this relationship, with greater social support attenuating the effect of victimization on internalizing symptoms (Cheng, Cheung, & Cheung, 2008; Flashpohler et al, 2009; Kochenderfer-Ladd & Skinner, 2002; Licitra-Klecker, & Waas, 1993; Papafratzeskakou, Kim, Longo, & Riser, 2011). However, some studies have failed to find such an interaction effect (Pouwelse et al, 2011; Rigby, 2000). Most studies examining the impact of social support on internalizing symptoms examine to role of other individuals in providing support, for example teachers, parents, or best friends (e.g., Cheng, Cheung, Cheung, 2008; Demaray & Malecki, 2003; Holt & Espelage, 2007; Papafratzeskakou et al., 2011). An alternative approach to studying social support is to look at at the contexts in which support is available. For instance, there is some evidence that organized out-of-school activity participation may play a similar protective role to that of social support in hindering the development of internalizing symptoms (Mahoney, Schweder, & Stattin, 2002; Randall & Bohnert, 2009). Organized activities are certainly potential contexts for social support, providing individuals with access to support from peers and adults. Indeed, involvement in organized activities provides more opportunities to develop adult networks and social capital (Larson, Hansen, & Moneta, 2006) and is often related to positive social outcomes, such as increased acceptance and popularity (Sandstrom & Coie, 1999). However, some findings suggest that not all organized activities may be so beneficial. For example, instances of social exclusion and higher levels of stress have been found to be more common for participants in sports than other activities (Larson, Hansen, &

Moneta, 2006) and particularly for football and basketball (Wilson et al., 2010). Furthermore, findings by Peguero (2009) suggest that exposure to victimization and school violence may be greater for participants of certain activities, such as school clubs and other classroom-based extracurriculars, and lower for those in other activities, namely interscholastic school sports. Because evidence suggests that organized activities may be a context of social support, yet at the same time may be a source of stress for youths, it is unclear if participation is more beneficial to victims of peer abuse, or if involvement in these activities is more likely to exacerbate the internalizing symptoms associated with victimization. The purpose of this study is to explore if participation in organized out-of-school activities moderates the association between the stress of peer victimization and internalizing symptoms.

Stress and Social Support

Over the early teen years, adolescents report more frequent negative events, such as those associated with transitioning to high school and issues with dating and friendships. Accordingly, adolescents also report increasing levels of stress. Stressful events during these years are believed to put adolescents more at-risk for adverse emotional effects of stress, such as negative affect (Larson & Ham, 1993). Stress arises when one is unable to appropriately cope with a situation deemed overly demanding or threatening, and when multiple stressful events accumulate the likelihood of serious disorder increases (Cohen & Wills, 1985; Wills & Langner, 1980). Internalizing symptoms, such as depression, loneliness, and anxiety, are commonly associated with stress (for review, see: Cohen & Wills, 1985), and social support is often studied as a factor that influences the adverse effects of stress.

Social support is generally defined as knowledge that one is cared for, is esteemed, and belongs to a network of concerned people (Pearson, 1986). Evidence suggests that actual supportive actions of others and the mere perception that support is available are the mechanisms through which effects of stress are reduced, with actual support promoting better coping, and the perception of support allowing one to appraise potentially troublesome situations as less stressful (Lakey & Cohen, 2000). Greater social support is often positively associated with overall indicators of physical health, such as cardiovascular and immune functioning (a main-effect model; for review, see: Uchino, 2006). Furthermore, a buffering model suggests that social support is an important protective factor against the effects, psychological and otherwise, of stress (a buffering model; Cohen, Underwood, & Gotlieb, 2000; Cohen & Wills, 1985; Davidson & Demaray, 2007; Jackson, 1992).

Various forms of social support have been identified as potential safeguards against the negative outcomes associated with different types of stress. Forms of social support include: emotional support, that provides an individual with information that they are esteemed and accepted (Cobb, 1976; Wills, 1985); informational support, such as advice that helps one define, understand, and cope with stressful events; instrumental or tangible support, such as financial assistance, services, or material resources (Cohen & McKay, 1984); and social companionship, which involves "spending time with others in leisure and recreational activities" (Cohen & Wills, 1985, p. 313). These various forms of social support, however, may not be equally effective across different types of stressful situations. The "optimal matching model" of stress and support posits that it is necessary for the type of social support to match the needs of the recipient in order to aid the

appraisal and lessen the impact of stress (Cohen & McKay, 1984, Cutrona, 1990). For example, someone dealing with the emotional stress of losing a loved one to illness would find reassurances and caring of others (emotional support) more beneficial than a monetary gift (instrumental support). The optimal matching model of stress and support has been buttressed in various areas of study, from coping with stress in adolescence (Cicognani, 2011) to tennis performance (Rees & Hardy, 2004). It may then be the case that for individuals subjected to peer abuse, social companionship would be the "optimal match" for thwarting the emergence of internalizing symptoms: as aggression from some peers is the source of stress, companionship from other peers may provide well-matched support. Contexts of social companionship include organized out-of-school activities, as they are often leisure or recreational in nature. The degree to which individuals are exposed to the potential social companionship of organized activities may be assessed by measuring breadth of activity participation (i.e. participating in a broader range of activity types) and intensity of activity participation (i.e. the number of hours per week of participation). However, acknowledging what makes peer victimization stressful and how this stress is linked to loneliness and depression is instrumental in understanding why social companionship is beneficial to victimized youths.

Peer Victimization, Stress, and Internalizing Symptoms

Peer victimization may take many forms. Classifications of victimization experiences have been created to distinguish various forms of negative social experiences, such as harm inflicted by peers both verbally or physically, damage to one's social connections, and hurtful teasing (for overview, see: Hawker & Boulton, 2000). Peer aggression is another characterization of victimization, referring to either predatory

(e.g., planned and controlled) or affective (e.g., impulsive and uncontrolled) behaviors toward another with intent to harm (Vitiello, et al, 1990). Regardless of form, peer victimization tends to be a negative experience for school-aged youth. While type of abuse received may vary, there are deleterious correlates and outcomes associated with all types of peer victimization. Compared to non-victims, victims are more likely to feel less safe at school, like school less, and report lower levels of school belongingness and trust in school relationships (Furlong et al., 1995). Furthermore, victims are more likely to indicate lower levels of perceived peer social support (Holt & Espelage, 2007) and report having no teacher connections (Furlong et al., 1995). Gender differences have been found relating to victimization experiences as well, specifically, boys are more likely than girls to be victims of physical aggression (Crick & Bigbee, 1998; Crick & Grotpeter, 1996; Prinstein, Boergers, & Vernbert, 2001, Rigby, 2000).

Victimization is unfortunately a fairly common occurrence in the schools. For instance, in one study of elementary aged children, 60% of the sample could be classified as a victim for at least one time point during a four year period (Kochenderfer-Ladd & Wardrop, 2001). While estimates suggest that between about 25% and 50% of middle- and high-school students could be considered victims at any one point in time (Holt & Espelage, 2007; Zweierzynska, Wolke, & Lereya, 2013; Papafratzeskakou, Kim, Longo, & Riser, 2011), one study found that more than three quarters (77%) of adolescents surveyed reported having been verbally or physically victimized at some point during their school years (Hoover, Oliver, & Hazler, 1992).

Peer abuse, peer aggression, and bullying are all terms found in the literature describing victimization by peers. While *peer abuse* and *peer aggression* are often used

interchangeably, the term *bullying* is much narrower in scope, encompassed by the former constructs. Bullying is defined as occurring when a person with greater power physically, emotionally, or relationally harms another, systematically and over a period of time (Olweus, 1993). Peer abuse and peer aggression are more broadly defined. Specifically, only the act is relevant for an event to be considered abuse or aggression. The intent of the victimizer, duration of abuse, or existence of a power differential, do not qualify such events as is done for bullying. Research examining the correlates and outcomes associated with abuse, aggression, and bullying, however defined, is pertinent in understanding how youths are affected by peer victimization.

Peer victimization can negatively impact one's social bonds (Popp & Peguero, 2012), and as Baumeister and Leary (1997) theorized, threats to social bonds can lead to internalizing symptoms. Stress is one proposed mechanism underlying the connection between victimization and internalizing symptoms. Stress arises when one appraises a situation as threatening or demanding, and does not have an appropriate response (Cohen & Wills, 1985). If a victim does not have a suitable response or coping strategy, peer abuse should be stressful, and the victim would then exhibit some of the symptoms associated with stress. Indeed, victims who employ certain types of coping strategies still exhibit loneliness and depression, with some strategies associated with higher internalizing symptoms, such as worrying and feeling sorry for oneself (Kochenderfer-Ladd & Skinner, 2002). An inability to cope with victimization can contribute to feelings of helplessness and diminished self-esteem. Indeed, victims often report lower levels of self-esteem than their non-victim counterparts (Hawker & Boulton, 2000; O'Moore & Kirkham, 2001). Peer victimization without an appropriate response is both stressful and

predictive of lower esteem, and therefore may elicit negative psychosocial emotions such as loneliness (Kochenerfer-Ladd & Skinner, 2002), depression, fear, and anger (Cassidy & Taylor, 2005; Zautra, 2003).

Social-psychological correlates and outcomes of peer victimization are often studied, and it is well established that internalizing symptoms, such as loneliness and depression, are moderately to strongly associated with victimization during the school years (Baldry & Winkel, 2004; Benjet et al., 2010; Hawker & Boulton, 2000; Kaltiala-Heino, Fröjd, & Marttunen, 2001; Kochenderfer-Ladd & Wardrop, 2001; Leadbeater & Hoglund, 2009; Peskin et al., 2007; Poulwese et al., 2011; Prinstein, Boergers, & Vernberg, 2001; Storch, Brassard, & Masia-Warner, 2003; Zwierzynska, Wolke, & Lereya, 2013). In a cross-sectional meta-analysis of studies using various forms of peer victimization as predictors, large mean effect sizes were found when predicting both depression ($r^2 = .45$, $p < .0001$) and loneliness ($r^2 = .32$, $p < .0001$; Hawker & Boulton, 2000). Gender has also been found to moderate the effects of victimization on internalizing symptoms, although findings are mixed. Some findings tend to show a stronger relationship between victimization and depression for girls (Bond , Carlin, & Thomas, 2001; Peskin et al, 2007). This effect may depend on type of victimization, with one study showing that male victims of overt abuse displayed greater depressive symptoms than non-victim males, and female victims of relational abuse showed significantly higher depressive symptoms (and levels of loneliness) than female non-victims (Prinstein, Boergers, & Vernbert, 2001).

Additional evidence reveals a directional relationship between victimization and internalizing symptoms, with victimization during adolescence increasing the likelihood

of experiencing depressive symtpoms (Zwierzynska, Wolke, & Lereya, 2013) and loneliness (Kochenderfer-Ladd & Wardrop, 2001). Chronic victimization has also been associated with the incidence, degree, and persistence of internalizing symptoms (Leadbeater & Hoglund, 2009). Conversely, there is some evidence of a reciprocal relationship between internalizing symptoms and victimization, with depression predicting victimization for adolescent boys (Sweeting, Young, West, & Der, 2006), perhaps because adolescents may become less vulnerable to victimization with age (Rigby, 1999) or because atypical behaviors associated with internalizing symptoms may put an adolescent at greater risk for victimization (Young & Sweeting, 2004). However, studies that show victimization predicting internalizing symptoms generally show stronger effect sizes than those showing the reciprocal relationship.

Internalizing Symptoms

Loneliness is defined as the feeling that emerges when the quantity or quality of social relationships does not fulfill one's social needs (Pinquart & Sorensen, 2001). Human beings need to be around others and experience lasting and positive interpersonal relationships (Baumeister & Leary, 1995). Baumeister and Leary proposed that people are inherently driven to establish frequent and enjoyable contact with at least a few other people, and the most beneficial relationships to satisfy this drive are those that are stable, enduring, and involve care for one another's well being. Loneliness arises when these social needs are unmet and an individual perceives an actual deficit in their desired amount of interpersonal contact (Archibald, Bartholomew, & Marx, 1995; Hawkley & Cacioppo, 2010; Weiss, 1973).

While loneliness is considered a type of social maladjustment, depression is considered a type of psychological maladjustment (Hawker & Boulton, 2000). Depressive symptoms, or operationally referred to as "subsyndromal depression," is defined in clinical settings as "any two or more simultaneous symptoms of depression, present for most or all of the time, at least two weeks in duration, associated with evidence of social dysfunction, occurring in individuals who do not meet the criteria for diagnoses of minor depression, major depression, or dysthmyia" (Judd et al, 1994). Many studies examining depression, however, do not use such a clinical definition. The term *depression* can be practically defined as encompassing the range of symptoms associated with depression, including not liking oneself, having little self-worth, and frequent sadness. This distinction is important to make for research involving normative populations with likely low incidence of clinical depression. For instance, the present study uses the Children's Depression Inventory Short Form (CDI-S), a non-clinical instrument for assessing the presence and degree of depressive symptoms, as there is no indication a high incidence of clinical depression is present in this sample. The items of the CDI-S ask the respondent to select one of three statements that best describes themselves during the past two weeks. For example, question 4 asks the respondent to select from one of three statements: "I hate myself," "I do not like myself," and "I like myself." Factor analysis suggests the items on the CDI that load strongest on the "depressive symptom" construct for both children and adolescents include such statements as "I hate myself," "Nothing will ever work out for me," "Things bother me all the time," and "I feel alone all of the time" (Cole & Martin, 2005). While the CDI is not use to diagnose depression, scores obtained from this measure do indicate the relative

degree to which a child exhibits depressive symptoms, and it is these symptoms on which researchers studying peer victimization generally focus.

It is clear that victimization is closely linked to loneliness and depressive symptoms. A stress and support model suggests that social support may serve a protective function against the emergence of these internalizing symptoms, both in general and for stressed individuals. For highly stressed adolescents, higher levels of social support are related to lower depression scores than stressed adolescents with low levels of social support (Licitra-Kleckler & Waas, 1993). For victimized youths, evidence of the buffering effect of social support—victimization by support interaction—is mixed. Studies have shown that the effects of peer social support may depend on gender or type of victimization as well, although these findings vary greatly by sample characteristics and tend to be inconsistent. For instance, in a sample of Hong Kong adolescents, social support was found to serve as a moderator for male but not female victims, with depression scores decreasing for boys with more support (Cheng, Cheung, & Cheung, 2008). Contrastingly, in a sample of obese adolescents, peer social support had a buffering effect against depression for victimized girls but not victimized boys (Lim et al, 2011). For victims of physical peer aggression, less social support was linked to higher levels of subsequent depressive symptoms (Papafratzeskakou, Kim, Longo, & Riser, 2011). Interestingly, one study found that for both low and high levels of social support, victimization predicted greater anxiety and depression compared to victims with moderate levels of social support (Holt & Espelage, 2007).

There is also evidence suggesting the moderating effect of social support may depend on the type of support available, although again, findings are mixed. While

Prinstein, Boergers, and Vernbert (2001) found no interaction between close friend social support and victimization for predicting internalizing symptoms, Davidson and Demaray (2007) found teacher, classmate, and school support to moderate the relationship between victimization and internalizing symptoms for boys, but only parent support served the same role for girls. Another study found that for bullied youth, greater peer support and peer support coupled with teacher support predicted higher life satisfaction than victims with less support (Flashpohler et al, 2009). Unfortunately, while social support may be a potential buffer against loneliness and depression, for victims such support is more difficult to attain. Victims report lower levels of social support than their non-victimized peers (Demaray & Malecki, 2003; Furlong et al., 1995), and interestingly, girls perceive receiving higher levels of social support than do boys (Furman, 1996; Holt & Espelage, 2007; Malecki & Elliot, 1999). Additionally, victims of peer abuse also value social support more so than non-victims (Demaray & Malecki, 2003), perhaps in recognition that such support may help them cope with those stressful events.

While many studies provide evidence of the protective role of social support, a few have found no such evidence. One study conducted in The Hague, Netherlands found, controlling for gender and duration of bullying, no support for a moderation effect but rather a meditation effect of social support for boys only (Poulwese et al, 2011). Another study analyzing an Australia sample with a 2 (high v. lower levels of victimization) by 2 (high v. low social support) ANOVA found no evidence for a moderating effect of social support for victimization on internalizing symptoms (Rigby, 2000). These studies, however, employed median-splits to convert interval-scaled independent variables to categorical variables (victimization and bullying for Poulwese et

al, 2011; social support for Rigby, 2000), and this practice has been reproached by statisticians because it reduces variability and thus the likelihood of detecting effects (Cohen, 1990).

More research—especially studies using continuous predictors—is needed to clarify how and whether or not social support affects the relationship between victimization and internalizing symptoms. One area of study that needs more attention is how certain contexts may provide the social support needed by victimized youths. Although some research has examined teacher and classmate support (e.g., Davidson & Demaray, 2007; Flashpohler et al., 2009; Furlong et al., 1995), few studies have investigated out-of-school contexts as sources of social support. Organized out-of-school activities are particularly important non-familial contexts to youths (see: Mahoney, Larson, & Eccles, 2005), and may provide social support not found in the schools.

Organized Out-Of-School Activities

Many studies examine the way children and adolescents use their time outside of school. It has been estimated that youths spend approximately 40-50% of their waking hours in non-school discretionary activities (Larson & Richards, 1994; Larson & Verma, 1999), and a large majority of them spend at least some time in organized out-of-school activities. One study found that 75% of 14-year-olds participated in some form of organized out-of-school activity (Mahoney, Shweder, & Stattin, 2002). Larson and Verma (1999) found that North American adolescents spend on average of 30-60 minutes per day in sports, and 10-20 minutes per day in other organized activities. How these activities are classified and studied in the extant literature varies widely, but most often the comparisons are made between structured or organized out-of-school activities and

unstructured activities. *Organized activities* are non-familial activities that are overseen and organized by an adult figure (e.g., team sports, clubs, or music lessons), whereas *unstructured activities* are those with no direct adult supervision (e.g., hanging out with friends, playing video games, or shopping). An additional distinction of *extracurricular activities* is made, denoting organized activities that are either school sponsored or otherwise academically relevant. Varsity sports, student council, Future Business Leaders of America (FBLA), or drama club would all be considered extracurricular activities as they are all school-based out-of-school activities with some amount of participation taking place before or after school hours. Organized activities include those extracurriculars, and in addition would encompass other out-of-school activities such as volunteer work, bible study, "pee-wee" sports leagues, and girl scouts.

Participation in organized activities often provides positive developmental experiences for adolescents, and is associated with various favorable social and psychological outcomes. For example, organized activities have been associated with the development of emotional self-regulation, peer knowledge, social skills, interpersonal competence and the initiative to set and attain goals (Dworkin, Larson, & Hansen, 2003; Mahoney, Cairnes, & Farmer, 2003). Organized activity participation may expose adolescents to positive social networks that promote school- and community-based values by building social capital with age-mates and non-familial adults (Feldman & Matjasko, 2005). Furthermore, organized activities may have unique developmental benefits compared to time spent in school. Larson, Hansen, and Moneta (2006) found that compared to being in class, adolescents reported that participating in other organized

activities was associated with more opportunities to develop teamwork and social skills, greater social capital, positive relationships with peers, and access to adult networks.

In addition to providing some social benefits, organized activity participation has also been associated with lower levels of internalizing problems, such as loneliness and depressive symptoms (Mahoney, Schweder, & Stattin, 2002, Randall & Bohnert, 2009). Level of activity participation is predictive of depressive symptoms: compared to youths who participated primarily in sports, those with high and low rates of participation in organized activities displayed higher levels of depressive symptoms (Zarrett et al., 2009). Interestingly, Holt and Espelage (2007) found a similar curvilinear predictive relationship between level of social support for victims of peer aggression and levels of anxiety and depression. While structured out-of-school activities may be a source for social support to alleviate stress and depressive symptoms, too much activity engagement may place greater demands, time and otherwise, on the individuals thus causing greater stress and possibly negating the buffering role of the support. Additionally, while organized activities are generally perceived as a positive social context, some activities may be associated with deleterious outcomes. For example, football and basketball have been found to be associated with higher levels of stress and social exclusion compared to non-sports (Wilson et al., 2010), and compared to time spent in class, adolescents participating in community oriented activities (e.g., YMCA, Future Farmers of America, scouts, etc.) were more likely to be exposed to inappropriate adult behavior, social exclusion, and negative group dynamics (Larson, Hansen, & Moneta, 2006).

Organized activities also offer participants access to social support and companionship. Cohen and Wills (1985) wrote that spending time with others in leisure

or recreational activities "may reduce stress by fulfilling a need for affiliation and contact with others, by helping to distract persons from worrying about problems, or facilitating positive affective moods" (p. 313). Indeed, the evidence available, albeit sparse, suggests certain features of and degree of involvement in organized activities can be protective against internalizing symptoms for adolescents dealing with stress. For instance, for adolescents with detached relations to their parents that participate in organized after-school activities reported lower levels of depression than their non-participating counterparts (Mahoney, Schweder, & Stattin, 2002). Another study found that victimized children who frequently participated in team sports showed fewer depressive symptoms than victims who seldom participated in such activities (Perron et al., 2012). However, no such moderating effect was found for victims who participated in individual sports. This finding perhaps reflects the inherently cooperative nature of team sports, and potentially greater availability of social interactions and support compared to the more individualized nature of sports such as golf and tennis. Unfortunately, no studies to date have examined overall organized activity participation as a source of social support, buffering youths from the internalizing symptoms associated with peer victimization. It is the purpose of this study to examine this complex relationship.

The Current Study

This study will examine whether or not organized activity participation moderates the relationship between victimization and internalizing symptoms for adolescent youths. The population of interest for this study is adolescents rather than children because organized activities become a much more frequent context for adolescents to spend their out-of-school time than is typical for younger children. This may be due to several

reasons: more autonomy may be afforded to adolescents by their parents; more opportunities to participate in a broader range of activities are available to adolescents; and adolescents may have more say in their selection of activities in which to participate. Additionally, adolescents increasingly spend more time with their peers than their parents (Csikszentmihalyi & Larson, 1984), and unlike children, they show greater assertion for independence which includes a desire to control issues such as choice of friends and what to do with their free time (Smetana, 2011). Therefore, the supportive role of peers in organized out-of-school activities should be more salient to adolescents rather than children. To assess youths' exposure to social support in organized out-of-school activities, simple measurements of the degree to which adolescents participate in such activities are needed. Number of hours per week (intensity of participation) and the number of different types of activities (breadth of participation) are common metrics to measure such participation (e.g., Bohnert, Fredericks, & Randall, 2010; Busseri et al., 2006; Randall & Bohnert, 2009; Rose-Kransor et al, 2006).

Furthermore, the impact of organized out-of-school activity participation must be distinguished from organized in-school activity participation, or those activities that take place during class or normal school hours. While the social support found in some of the during-school contexts has shown to be generally beneficial, and protective against internalizing symptoms for some victims of peer abuse (Davidson & Demaray, 2007), the purpose of the present study is to determine if the social support available in out-of-school activities is similarly advantageous and whether or not they constitute an additive effect. To ensure that effects primarily associated with organized out-of-school activities are assessed and not confounded by the level of support one receives during school hours,

it would be appropriate to control for effects of the support found in the school environment. One such indicator is school attachment, which is a construct defined as "an emotional feeling of affection toward and enjoyment of school" (Hill & Werner, 2006). School attachment has been found to be positively associated with peer support (Wei & Chen, 2010), and therefore by including it in the model, the impact of organized activity participation will more accurately reflect social support from participation in the activity itself by parsing out variance associated with support from the school.

As one aim of this study is to examine how victimization and social support relates to depressive symptomatology, not clinical depression, an appropriate measure would be one that measures depressive symptoms in normative populations. The Children's Depression Inventory Short Form (CDI-S; Kovacs, 1992) is one such instrument, and is an appropriate measure due to its sensitivity in detecting depressive symptoms in normative adolescent populations. To measure loneliness, the Loneliness and Social Dissatisfaction Questionnaire (LSDQ; Cassidy & Asher, 1992) was used because it is a common instrument for measuring loneliness in normative populations (e.g., Kochenderfer-Ladd & Wardrop, 2001) and has items pertaining specifically to loneliness at school as well as general loneliness. Both the CDI-S and LSDQ are appropriately self-report instruments, as parent-report measures of have been found to be less accurate in assessing internalizing symptoms (e.g., Moretti et al., 1985). In addition, self-report measures of general victimization have been shown to more accurately predict non-clinical psychiatric problems than peer-reports (Gromann et al., 2013). Furthermore, as it is not the purpose of this study to compare between forms of victimization, a self-report measure of general victimization, based on those used by Ladd and colleagues

(e.g., Kochenderfer & Ladd, 1996a, 1996b, 1997; Ladd, Kochenderfer, & Coleman, 1997), will suffice as a victimization instrument.

Because victimization can be stressful, and social support has been found to be generally beneficial to one's health as well as moderate the relationship between stress and internalizing symptoms for victimized youth, greater exposure to potential social support (i.e., via higher levels of organized out-of-school activity participation) should be associated with lower levels of loneliness and depression for victims of peer abuse. However, the contrary hypothesis is also plausible. Perhaps greater participation in organized activities may expose an adolescent to more contexts of peer victimization. Moreover, organized out-of-school activities can themselves be stressful, and thus participation itself may produce or exacerbate negative outcomes associated with stress, particularly loneliness and depression. This study will examine three questions related to the potential associations between peer victimization, organized out-of-school activity participation, and loneliness and depressive symptoms.

1. Are breadth and intensity of organized activity participation associated with lower levels of loneliness and depressive symptoms for adolescents in general?

Organized out-of-school activity participation has been found to be negatively associated with internalizing symptoms (Mahoney, Schweder & Stattin, 2002; Randall & Bohnert, 2009) and positively associated with increased peer affiliation, belongingness, and other positive social outcomes (Mahoney, Cairnes, & Farmer, 2003; Ryan, 2000; Sandstrom & Coie, 1999). As breadth of participation indicates potentially greater exposure to more contexts of social support, and intensity of participation indicating potentially more time to develop a supportive network, it is expected for both of these

measures to demonstrate negative relationships with internalizing symptoms. Findings of this nature would coincide with a main-effects model of social support, suggesting that social support is generally beneficial to psychological well being (Henderson, Byrne, Duncan-Jones, Scott, & Adcock, 1980).

2. Are breadth and intensity of organized activity participation more effective protective factors for loneliness and depressive symptoms for adolescents reporting higher levels of victimization?

Breadth of participation in organized activities represents more potential opportunities to interact with one's peers in a structured environment and under the supervision of an adult. It has been found that when adolescents have high levels of peer support, peer victimization is more weakly associated with internalizing symptoms and other negative outcomes than those with less peer support (Flashpohler et al., 2009; Papafratzeskakou, Kim, Longo, & Riser, 2011). Therefore, if organized activity participation is particularly protective against internalizing symptoms for victimized adolescents, at higher levels of victimization a greater breadth and intensity of participation should be associated with lower levels of depressive symptoms and loneliness. Findings of this nature would be consistent with contentions drawn from a buffering model of social support. This model suggests that social support is more beneficial to those under greater stress (Cohen, Gotlieb, & Underwood, 2000).

3. Do the linkages between organized activity participation and the relationship between loneliness and depression for victims of peer abuse differ by gender?

As several studies have found gender differences between the association of victimization with internalizing symptoms (e.g., Bond, Carlin, & Thomas, 2001; Cheng, Cheung, & Cheung, 2008; Lim et al., 2011; Peskin et al., 2007), the likely role of social support as a moderator (e.g., Davidson & Demaray, 2007; Pouwelse et al., 2011; Taylor et al, 2000), and patterns of organized activity participation (e.g., Mahoney, Schweder, & Stattin, 2003), we expect that the statistical effect of activity participation on the relationship between victimization and internalizing symptoms will differ for boys and girls. However, recent studies have found conflicting evidence for gender differences. For example, Lim et al (2011) found that social support moderates the link between victimization and depression for obese girls but not boys, but Cheng, Cheung, and Cheung (2008) found a moderating effect for boys but not girls in Hong Kong. In addition, no studies to date have examined gender differences in organized activity participation on the relationship between victimization and internalizing symptoms. Therefore, this research question will be addressed from an exploratory approach, rather than testing a formal, directional hypothesis. Models predicting both loneliness and depression will be estimated for boys and girls separately, to allow for a clearer comparison of effects.

Method

Participants

The current study utilizes a sample of adolescents (N = 853) from the National Institute of Child Health and Human Development (NICHD) Study of Early Child Care and Youth Development (SECCYD). The SECCYD project followed a cohort of children and their families at 10 locations throughout the United States from shortly after the

child's birth in 1991 through age 18 in 2009. Several publications describe the recruitment procedures and selection of participants (e.g., NICHD ECCRN 1997). The SECCYD dataset is not drawn from a nationally representative sample: participants are more likely to be of white/non-Hispanic ethnicity, and of higher socioeconomic status than the national average. For example, while the percentage of households in the United States receiving some form of public assistance in 2005 was 15.3% (United States, 2008), the percent of the current study sample receiving assistance in 2005 was only 4%.

The final subsample included 425 boys and 428 girls. Ethnic composition was 81% white, 12% black, 5% Hispanic, and 1% Asian ethnicities, with two participants categorized as "other." There was no indication that attrition from the initial data collection point at Age 1 Month to Age 15 Years was related to ethnicity, $\chi^2(4, N=1{,}364) = 6.62$, $p = .16$. A near-significant gender-attrition effect was found, with boys slightly more likely to drop from the study between Age 1 Month and Age 15 Years, $\chi^2(1, N=1{,}364) = 3.16$, $p = .08$. Family income, however, was significantly related to sample attrition between Age 1 Month and Age 15 Years, with those who dropped from the study having lower initial family incomes than those with continued participation, $F(1,1271) = 16.592$, $p < .001$.

Measures

Loneliness.

The Loneliness and Social Dissatisfaction Questionnaire (LSDQ; Cassidy & Asher, 1992) used in this study is a 25-item scale measuring adolescent's self-reported feelings of loneliness and social inadequacy. The paper-and-pencil LSDQ questionnaire

was completed by the adolescent in the laboratory at the Age 15 data collection point. Sixteen of the items assess loneliness and dissatisfaction with peers, while the remaining nine items were fillers that focus on adolescent's hobbies and were designed to keep the adolescent relaxed during the questionnaire. Scores were originally coded on a 1 to 5 Likert-type scale, and recoded on a 0 to 4 scale: 0 (not at all true), 1 (hardly ever true), 2 (sometimes true), 3 (most of the time true), and 4 (always true). Missing values (0.05% of total items) were imputed with proportional weighting using SAS 9.1 by the original SECCYD staff. The nine filler items were not included in the total score, which was computed as the sum of the 16 other items, six of which were reflected. The range of possible scores was 0 to 64, with higher scores associated with greater levels of loneliness. The LSDQ demonstrated high internal consistency (16 items, Cronbach's Alpha = 0.91). Means and standard deviations of the LSDQ and all other study variables are contained in Table 1.

Depressive Symptoms.

The Children's Depression Inventory Short Form (CDI-S; Kovacs, 1992) is a 10-item self-report questionnaire widely used for assessing depressive symptoms in youths. The CDI-S is a non-clinical instrument that taps a respondent's relative degree of low self-esteem, dysphoric mood, and lack of pleasure. The instrument uses the 10 most internally reliable and best discriminating items from the longer 27-item CDI form, and the correlation between the two is .89. The paper-and-pencil CDI-S was completed by adolescents at the Age 15 data collection point in the laboratory. Respondents were presented with 10 sets of three statements and asked to select the one that best described the way they felt during the past two weeks (e.g., "I hate myself," "I do not like myself,"

and “I like myself”). Items were scored on a 0 to 2 scale, with 0 representing a normative behavior or affect, 2 representing a depressive symptom, and 1 representing a neutral behavior or affect. Missing values (0.2% of total items) were imputed with proportional weighting using SAS 9.1 by the original SECCYD staff. Composite score was created by summing across items, 5 of which being reflected. The possible range of scores is from 0 to 20, with higher scores indicative of greater depressive symptoms. The CDI-S demonstrated moderate internal consistency (10 items, Cronbach’s Alpha = 0.81).

Peer Victimization.

Perceived Victimization Score is a 4-item subscale of The Kids at School Questionnaire, an instrument created specifically for use in SECCYD, and was compiled of items from questionnaires developed by Gary Ladd and colleagues and used in several studies of children’s school adjustment (e.g. Kochenderfer & Ladd, 1996a, 1996b, 1997; Ladd, Kochenderfer, & Coleman, 1997). The four items assess the extent to which a youth has experienced physical and verbal victimization behaviors from their classmates (e.g., “Do any of the kids at school: Pick on you?”). The Kids at School Questionnaire was administered in paper-and-pencil form to youths in the laboratory at the Grade 6 time point. Responses were scored on a 1 to 5 Likert-type scale and recoded on a 0 to 4 scale, where 0 = “Never”, 2 = “Hardly ever”, 3 = “Sometimes”, 4 = “Most of the time”, and 5 = “Always”. The possible range of scores was from 0 to 16, with higher scores indicative of higher levels of peer victimization. The scale demonstrated moderately high internal consistency at the Grade 6 data collection point (4 items, Cronbach’s Alpha = 0.81).

A similar 4-item measure was used for assessing peer victimization at the Age 15 data collection point. The self-report Peer Relationships Questionnaire was created

specifically for SECCYD, is a subset of questions taken from the larger University of Illinois Aggression Scale (Espelage & Holt, 2001), and measures the degree of peer aggression an adolescent had experienced over the past month. The questionnaire was administered in paper-and-pencil form to adolescents at the laboratory at the Age 15 data collection point. Responses were scored on a 0 to 4 Likert-type scale , where 0 = "Never", 1 = "1 or 2 times", 2 = "3 or 4 times", 3 = "5 or 6 times", and 4 = "7 or more times". The possible range of scores is from 0 to 16, with higher scores indicative of higher levels of peer victimization. The scale demonstrates high internal reliability (4 items, Cronbach's Alpha = 0.85).

Organized Activity Participation.

The Things I Do After School or on Weekends Questionnaire was an instrument developed for SECCYD and was administered at the Age 15 data collection point that assessed the study adolescent's out-of-school time use over the past year. The questionnaire measured the extent to which the respondent participated in each of six types of organized out-of-school activities: organized sports activities (e.g., football, soccer, golf, karate, swimming, cheerleading, etc.); performance/art activities (e.g., music, dance, drama, or art); academic clubs (e.g., debate team, math club, science club, etc.); nonacademic clubs or groups (e.g., student government, Scouts, 4-H, etc.); volunteering or community service work; and religious services, classes, or groups (e.g., church, Bible study, Hebrew class, etc.). Respondents were given the paper-and-pencil questionnaire to complete at home. For each type of activity, respondents were asked if they had participated in the activity during the past year, and if they had, how many days per week on average they had participated in the activity.

Two variables were created from these questions. *Breadth* of participation was created to measure the extent to which an adolescent engaged in a broad range of activities. Breadth was scored as the sum of number of different types of activities participated in (Bohnert, Fredericks, & Randall, 2010; Busseri et al., 2006; Denault & Poulin, 2009; Randall & Bohnert, 2009; Rose-Kransor et al, 2006). For instance, if a respondent indicated they had participated in only organized sports, volunteering, and academic clubs, their breadth score would be 3. The possible range of breadth scores is from 0 to 6. *Intensity* of participation was created to measure the total amount of time per week devoted to organized activities. Intensity was scored as the sum of the average number of participation days per week across activities (Bohnert, Fredericks, & Randall, 2010; Busseri et al., 2006; Randall & Bohnert, 2009; Rose-Kransor et al, 2006). For instance, if the same respondent reported participating an average of 3 days per week in organized sports, 1 day per week in volunteer work, and 2 days per week in academic clubs, their Intensity score would be 6.

School Attachment.

The School Attachment subscale of the self-report instrument Adolescent's Perception of School Environment was created specifically for SECCYD, is based on the work of Crosnoe and colleagues (Johnson, Crosnoe, & Elder, 2001) and uses items similar or identical to other measures of school attachment (e.g., Hill & Werner, 2006). The Adolescent's Perception of School Environment questionnaire was administered to adolescents in their homes. The School Attachment subscale consisted of five items that measured the degree to which an adolescent was attached to their school. These five items are: "I am happy to be at my school," "The teachers at my school treat students

fairly," "I feel close to others at my school," "I feel safe at my school," and "I feel like I am part of my school."Items were scored on a Likert-type scale, where 1="Not at all true", 2="Not very true", 3="Sort of true", and 4="Very true". The School Attachment composite score was created as the average of the five items with acceptable internal reliability (5 items, Cronbach's Alpha = .75), and has a possible range from 1 to 4, with higher scores associated with higher levels of school attachment.

Analysis

All cases with complete data on each composite study variable were selected for analysis. Data were analyzed using SPSS Statistics 22.0 software. Separate hierarchical univariate least-squares linear regression models, one with depression and the other with loneliness as continuous criterion variables, were estimated in the following manner: Step 1 included perceived victimization at Grade 6 and Age 15 and school attachment at Age 15; Step 2 included breadth and intensity at Age 15; Step 3 included two two-way interactions between victimization at Age 15 and breadth and intensity at Age 15. As victimization can be stable over time (Kochnederfer-Ladd, 2003) and stable victimization may contribute to increased levels of internalizing symptoms (Leadbeater & Hoglund, 2009), victimization at Grade 6 was entered as a control variable in Step 1. A main effect of perceived victimization was also tested for in Step 1. Additionally, because the focus of this study is on out-of-school activities, school attachment at Age 15 was entered as a control variable in Step 1 to ensure that estimates for breadth and intensity of participation reflected contributions above and beyond effects associated with experiences in school. Breadth and intensity of organized activity participation were entered in Step 2. Potential curvilinear effects of breadth and intensity, such as those

found by others (Busseri et al., 2006; Randall & Bohnert, 2009; Rose-Kransor et al., 2006), were tested after Step 2 in each model, however no quadratic terms were significant, and were therefore omitted from the final models. Two-way interactions between victimization and (a) breadth and (b) intensity were entered in at Step 3. Interaction terms were calculated as the product of mean-centered variables, in order to avoid collinearity issues and to facilitate interpretation. After estimating these models for the sample as a whole, each was then estimated for boys and girls separately.

Results

Descriptive Statistics and Correlations

Means and standard deviations of study variables for the total sample, boys, and girls are presented in Table 1. Zero-order correlations between study variables for the total sample are presented in Table 2, and those for boys and girls are presented in Table 3. As expected, victimization at Grade 6 and Age 15 was correlated with both Age 15 loneliness ($r = .26$, $p < .01$; $r = .36$, $p < .01$, respectively) and depression ($r = .21$, $p < .01$; $r = .31$, $p < .01$, respectively), indicating that youth reporting greater victimization also reported higher levels of internalizing symptoms. Breadth of participation was not correlated with victimization at Grade 6 and Age 15 for boys ($r = -.06$, $p = .20$; $r = -.03$, $p = .46$, respectively) or girls ($r = .02$, $p = .66$; $r = -.06$, $p = .24$, respectively). For girls, loneliness was also negatively correlated with breadth ($r = -.10$, $p < .05$), and intensity ($r = -.14$, $p < .01$), and for boys, Loneliness was negatively correlated with intensity ($r = -.16$, $p < .01$), but uncorrelated with breadth ($r = -.07$, $p = .17$). This indicates that adolescents with higher levels of loneliness also report participating in fewer days per week of organized activities, but not necessarily in fewer types of activities. Depressive

symptoms were not correlated with breadth and intensity of participation for either boys ($r = .02$, $p = .65$; $r = -.03$, $p = .58$, respectively) or girls ($r = -.08$, $p = .10$; $r = -.09$, $p = .07$).

School attachment was negatively correlated with loneliness ($r = -.44$, $p < .01$), depressive symptoms ($r = -.38$, $p < .01$), and victimization at Grade 6 ($r = -.18$, $p < .01$) and Age 15 ($r = -.27$, $p < .01$), and positively correlated with breadth ($r = .27$, $p < .01$) and intensity of participation ($r = .15$, $p < .01$). This validates the decision to include school attachment as a control variable, as it indicates that adolescents with greater school attachment report lower levels of internalizing symptoms and victimization, and higher levels of organized activity participation, accounting for a significant portion of the variance in the criteria, as well as the predictors.

Hierarchical Regressions

Hierarchical regressions with unstandardized coefficients for the total sample with criteria of loneliness and depressive symptoms are presented in Table 4. Greater breadth of participation in organized activities was predictive of higher concurrent levels of both loneliness ($\beta = .68$, $p < .05$) and depressive symptoms ($\beta = .26$, $p < .01$), above and beyond that predicted by victimization and school attachment. Greater intensity of participation in organized activities was significantly predictive of lower concurrent levels of loneliness ($\beta = -.30$, $p < .001$) and was predictive of lower concurrent levels of depressive symptoms at a magnitude that approached significance ($\beta = -.04$, $p < .10$), controlling for victimization and school attachment. However, for both models, the addition of breadth and intensity in Step 2 accounted for an increase in explained variance of only about 1%. Two-way interactions between victimization and breadth of

participation in these models were not significant for loneliness ($\beta = .04$, $p = .77$) nor depression ($\beta = .05$, $p = .20$). Two-way interactions between victimization and intensity of participation were also non-significant for both loneliness ($\beta = -.01$, $p = .80$) and depression ($\beta = -.01$, $p = .21$). These findings suggest that participation in organized out-of-school activities, in terms of number of days per week, was associated with lower levels of loneliness, and possibly lower levels of depressive symptoms. However, participating in a broader range of activities is generally associated with higher levels of loneliness and depressive symptoms. There was no evidence to indicate that breadth and intensity of participation interacted with victimization to predict loneliness or depressive symptoms for the sample as a whole.

Table 5 shows hierarchical regressions for the outcome variable loneliness for boys and girls. Greater breadth of participation was significantly predictive of higher concurrent levels of loneliness for girls ($\beta = .76$, $p < .05$), and approached significance for boys ($\beta = .70$, $p = .08$). Greater intensity of participation was significantly predictive of lower concurrent levels of loneliness for both boys ($\beta = -.31$, $p < .01$) and girls (β -.30, $p < .01$). These findings extend those from the previous model that indicated that greater participation in organized activities, in terms of number of days per week, was associated with lower levels of loneliness regardless of gender. Participation in a broader range of activities was generally associated with higher levels of loneliness for girls, and possibly for boys. Victimization by intensity interactions were marginally significant for girls ($\beta = .09$, $p = .06$) and boys ($\beta = -.11$, $p = .06$), and victimization by breadth interactions approached significance for girls ($\beta = -.33$, $p = .09$) and boys ($\beta = .30$, $p = .08$). These findings suggest, although tenuously, that for girls with higher levels of victimization,

participation in a broader range of activities may be related to lower levels of loneliness and that intensity of participation was related to higher levels of loneliness. Conversely, boys exhibit the opposite relationship, with intensity related to lower loneliness and breadth related to higher loneliness. However, both these interactions are near-significant and therefore may represent coincidental effects.

Table 6 shows hierarchical regressions for the outcome variable depressive symptoms for boys and girls. The only significant main effect in Step 2 in either model was breadth of participation for boys ($\beta = .19$, $p < .05$). However for boys, significant interactions were found between victimization and breadth ($\beta = .14$, $p < .001$) and between victimization and intensity ($\beta = -.03$, $p < .05$). These findings suggest that participating in a broader range of activities is associated with higher concurrent depressive symptoms in boys, and this effect is exacerbated for those with higher levels of victimization. However, for boys with greater levels of victimization, participating in more days per week of organized activities is associated with lower levels of depressive symptoms. It is interesting to note that the direction of victimization with breadth and intensity interactions were the same across internalizing symptoms, but differed between boys and girls, and within gender between measures of involvement.

Discussion

The current study adds to the extant literature by demonstrating that organized out-of-school activities can affect levels of internalizing symptoms for adolescents in general and for those experiencing peer victimization. The results can be explained in terms of a stress and support model (Cohen & Wills, 1985). An overview of findings from the present study suggest that intensity of participation in organized out-of-school

activities is generally associated with lower levels of loneliness and depressive symptoms in adolescents, and that breadth of participation is generally associated with higher levels of loneliness and depression. Greater intensity of participation was significantly predictive of lower levels of loneliness for boys and girls, but was not related to level of depressive symptoms. This main effect of intensity for loneliness but not depression may be explained in terms of the quality of social support received. Loneliness is more likely to be experienced when the quantity or quality of social support does not fulfill one's social needs (Pinquart & Sorensen, 2001) and has been described as a type of social maladjustment (Hawker & Boulton, 2000). Therefore, participating for a greater number of days per week in organized activities may allow more time to develop social skills, social bonds, and thus social support, fulfilling one's social needs and resulting in lower levels of loneliness. Indeed, previous studies have found intensity of participation to be positively associated with interpersonal functioning (Busseri et al., 2006; Rose-Kranso et al., 2006) which may foster the peer relationships that offer social support. In contrast, depression has been described as a type of psychological maladjustment, which may not be as easily ameliorated by more developed social bonds, and may in fact have a negative impact on social skills needed to cultivate such bonds (Segrin, 2000). Furthermore, Segrin also indicated that social skills deficits may reciprocally predict depression. Perhaps the adolescents with higher levels of depressive symptoms in this study had deficient social skills and therefore were unable to form bonds with peers and benefit from subsequent social support. While some research has examined the relationship between social support, social skills, and depressive symptoms (e.g., Nilsen et al, 2013), and how organized activities affect the development of social skills (Dworkin, Larson, &

Hansen, 2003; Larson, Hansen, & Moneta, 2006), there is little research investigating how social skills may affect involvement in these activities, and how participation may differ for those with higher levels of internalizing symptoms.

Interestingly, increased breadth of participation was associated with higher levels of loneliness for girls and was marginally predictive of greater loneliness for boys, and higher levels of depressive symptoms for boys. This finding was, in some ways, contrary to expectations. Participation in a greater number of activities should expose an adolescent to more opportunities to receive social support, and therefore help reduce internalizing symptoms. This finding was also contrary to previous findings that participation in a broader range of activities is related to lower internalizing symptoms (e.g., Bartko & Eccles, 2003), and higher well-being (Rose-Kransor et al., 2006). However, Bartko and Eccles measured breadth to include organized and unorganized activities, and performed cluster analysis using breadth, depression, and self-esteem to compare groups of adolescents, and Rose-Kransor et al. included both in-school and out-of-school activities in their analysis. As the school setting is a common context for adolescent peer victimization to occur (Popp & Peguero, 2012; Schneider et al., 2012), it may be possible that in-school activities and out-of-school activities provide dissimilar levels of social support. For example, victimized adolescents may withdraw from in-school activities if there is opportunity for them to be victimized by their in-school aggressors, whereas out-of-school activities may allow victims to be more sociable in the absence of specific aggressors. For the present study, measuring involvement in organized out-of-school activities and controlling for school attachment and victimization levels allowed for the examination of how organized activities were related to

internalizing symptoms above and beyond adolescents' association with the school and beyond what would otherwise be explained by victimization. Therefore, because internalizing symptoms are associated with victimization and school attachment, by controlling for these two constructs, a clearer picture of the independent relationship between breadth of participation and internalizing symptoms is drawn.

The interaction effects found in this study are more complex and, while relatively easy to interpret, are difficult to explain. The findings for the loneliness by gender models revealed interactions that only approached significance, but when considered in conjunction with the significant findings of the depressive symptoms by gender models, the "buffering effect" of organized activity participation may be better understood. Between outcomes, the directions of interaction effects were consistent. For boys with higher levels of victimization, participation in a broader range of activities was associated with higher levels of depressive symptoms and near-significant greater levels of loneliness, whereas for girls with higher levels of victimization, greater breadth of participation was potentially predictive of lower levels of loneliness. The opposite gender effect appears for intensity of participation at higher levels of victimization, whereas more days per week of participation in organized out-of-school activities was associated with lower levels of depression (and potentially loneliness) for boys, but higher levels of loneliness for girls, although the latter finding merely approached significance. Because these findings are only marginally significant they must be interpreted with great caution. If social support provided in organized activities does differentially affect victimized boys and girls in terms of internalizing symptoms, this may impact strategies for parents,

teachers, guidance counselors, and the adolescents themselves when dealing with peer victimization.

One potential explanation of the gender differences found in this study is linked to the different types and rates of victimization that boys and girls face in their adolescent years. Boys may be more often victims of overt victimization than girls, yet girls and boys appear to report similar rates of relational victimization (Crick & Bigbee, 1998; Crick & Grotpeter 1995; Prinstein, Boergers, & Vernbert, 2001; Rigby 2000). Perhaps the higher incidence of overall victimization in boys places additional or distinctive stress upon them, and different forms of social support are required buffer them from the associated negative outcomes. Davidson and Demaray (2007), for example, found that social support may work differently for girls and boys in terms of moderating the relationship between victimization and internalizing distress, with peer, school, and teacher support buffering victimized boys from internalizing distress. For girls, however, only parent support appeared to play such a role. As Davidson and Demaray did not investigate the role of organized activities, the present article provides additional insight into the potential supportive roles of out-of-school contexts.

Although some findings from this study support the notion that organized activities provide social support, the positive victimization by breadth interaction estimate for predicting depressive symptoms in boys indicates that this interpretation may not be comprehensive. It is entirely possible that organized activities may also be a context for victimization to occur, for certain adolescents, or for certain activity types. The finding that greater breadth of participation is related to higher depressive symptoms for more highly victimized boys could thus suggest that participation in a greater number

of activities gives exposure to more victimization and therefore more stress. The measure of peer victimization used in this study, however, probes how often an adolescent is victimized by "other students" and does not explicitly discern between school- and activity-based victimization. Although perhaps unlikely, this could have been interpreted by the respondent to refer only to in-school victimization.

Support for the buffering hypothesis, however, was found for the intensity of participation for boys when predicting depression. As Cohen and Wills (1985) noted, social support is best measured by assessing the degree of integration into a social network, and not just the size of the network. Although breadth of participation may be conceptualized as measuring the size of the network, intensity could surely be construed as measuring the degree of integration in a network, with more days of participation reflecting greater integration. Therefore, for boys at least, intensity of participation may better represent the degree of social support received, indicating that social support does moderate the relationship between victimization and depressive symptoms.

Finally, it is important to note that out-of-school activities can present additional stress for adolescents, particularly in sports (Larson, Hansen, & Moneta, 2006; Wilson et al., 2010). If organized activities are purported to provide social support yet they also cause stress, the beneficial aspects of participation in these activities may be negated by the additional strain they place on victimized adolescents. This may be a reason behind the small effect sizes of the interaction steps uncovered in this study. Further research in this area should measure the stressfulness of the individual activities in addition to direct measures of the social support provided and levels of victimization experienced within and outside of organized activities.

Future directions

Taylor et al (2000) provide an explanation as to why gender may differentially predict the effect of social support on stress, arguing that girls biologically manifest a stronger need to connect with others under stressful circumstances than do boys. In this framework, participating in more diverse organized activities and connecting with a broader range of peers and adults may render girls better able to utilize the social support provided in these contexts. However, this does not explain why girls would benefit more from a breadth of activities rather than a greater time commitment within such activities. Conventional theory on adolescent peer groups suggest that girls have smaller, more in-depth relationships than do boys (Underwood, 2003), indicating that intensity of participation should be more beneficial for girls than boys. The present study's finding that breadth is more beneficial for girls may mean that participating in more types of activities allows for greater opportunity to find smaller, more in-depth relationships, rather than the activities themselves presenting a context to develop those relationships. Qualitatively examining various types of organized activities may provide insight into how relationships are formed and developed, and what activity characteristics are associated with more beneficial social support. As several studies have found dissimilar benefits and drawbacks of different activities (e.g., Fredericks & Eccles, 2006; Larson, Hansen, & Moneta, 2006), it would be important for future researchers to analyze the social support provided in each type of activity.

One further area for future research is examining the characteristics of victimized adolescents who benefit most from organized activities. For instance, social support has been found to moderate the relationship between social skills and depression (Nilsen et

al., 2013). It is possible, then, that victimized adolescents with greater social skills are better able to utilize available social support and protect against depression. However, social skills have also been found to be predictive of depressive symptoms, victimization (Perren & Alsaker, 2009), and lower friendship quality (Crawford & Manassis, 2011). For children with fewer social skills, if victimization occurs they may not have developed the friendships to provide protective social support. By including measures of adolescents' social skills and the social bonds formed in organized activities, the nature of the relationship between victimization, organized activity participation, and internalizing symptoms may be better understood.

Limitations

Several limitations impact the interpretation of the findings presented in this study. First, the sample used in this study was not representative of the U.S. population as a whole. As the individuals recruited were more likely to be Caucasian and of moderate to higher SES, these findings may not generalize to minority populations or those with low SES backgrounds. Future studies that explore social support that organized out-of-school activities provide should look at how the results found here compare to other populations.

Second, a few methodological issues may have impaired the validity of the present study. One minor issue involves the scale used to measure victimization. Although perceived victimization was measured at both grade 6 and age 15, the two measures were not identical. The Grade 6 instrument explicitly measured in-school victimization (e.g., "Do any of the kids in your class pick on you at school?") while the age 15 instrument was not so narrowly interpretable (e.g., "How often did the following

things happen? Other students picked on me.”). Additionally, although responses at both time points were recorded on 5-point scales, the grade 6 instrument used a 5-point Likert-type scale, while the age 15 used an ordinal frequency scale. While the grade 6 scale was used merely to control for prior victimization, scales should still be kept consistent across time points. Another methodological issue may be of greater concern: the outcome variables used (loneliness and depression) presented distributions that may violate strict interpretations of normality. The residual normality plots, for example, were acceptable for loneliness, but were slightly skewed for depression. This may require use of a measure more sensitive to symptom severity or frequency or more sophisticated analyses that are more robust to violations of assumptions of normality.

Furthermore, there should be some concern regarding missing data. The sample used in this study, which included only cases with complete data for all study variables, was merely 63% of the original sample when the study began in 1994. While as mentioned above, no gender or racial differences between the current sample and those that had incomplete data were found, income differences were present, with families having lower incomes more likely to drop from the study. This could potentially affect organized out-of-school activity participation. Compared to class-based measures where public education is free to all those that enroll, organized out-of-school activities often have some sort of cost of involvement, potentially precluding those students without the resources to pay from participating. If this were the case, with a variable related to attrition potentially influencing a study variable, this data must be considered missing not at random thus damaging predictive validity. It would be of great value for future research to examine if SES is predictive of organized activity participation. Other

alternatives to handling missing data would be to choose a substitute method for handling missing data, such as multiple imputation. Pairwise deletion for the current study would have increased the within-subjects degrees of freedom by only 30, with the vast majority of data missing due to attrition by the Grade 6 collection point. Unfortunately, investigating the missing data for this large longitudinal dataset would be complicated and outside the scope of this study. Therefore, extrapolating interpretation of the present findings may be restricted to the population that the final sample represents; mainly middle- to upper-class Caucasian adolescents. Given the restrictive implications of the current study, future research examining lower-income and non-white populations is warranted for a clearer picture of the complex relationship between victimization, organized activities, and internalizing symptoms.

Finally, one particular theoretical issue should be discussed. Although breadth and intensity measured the level of participation in organized out of school activities, the degree to which they represent social support should be considered. In this study, they were conceptualized to represent opportunities to be exposed to social support, and not a measure of social support directly. As breadth and intensity did not directly measure social support, it could be argued that other aspects of the activities themselves (e.g., exercise, intellectual stimulation) may have contributed to the findings. However, as provided in the literature review, there is strong reason to suspect that a highly beneficial aspect of participation is the development of interpersonal skills and provision of social support. Given its strengths and considering its limitations, the present study extends the current literature on victimization and organized activity participation, to demonstrate that how adolescents participate in out-of-school activities can be associated with

concurrent levels of internalizing symptoms. Further research is needed to better understand the gender differences apparent in the interaction between victimization and participation, and what features of organized activities are most beneficial for victims of peer abuse.

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Tables

Table 1
Means and Standard Deviations for Study Variables

	Total N = 853 Mean (SD)		Boys N = 425 Mean (SD)		Girls N = 428 Mean (SD)	
Victimization - Grade 6	2.97	(2.82)	2.86	(2.89)	3.08	(2.75)
Victimization - Age 15	1.91	(2.37)	2.11	(2.49)	1.71	(2.22)
Loneliness - Age 15	10.16	(8.53)	10.48	(8.61)	9.85	(8.45)
Depressive Symptoms - Age 15	1.94	(2.61)	1.42	(2.07)	2.47	(2.97)
Breadth of Participation - Age 15	2.82	(1.28)	2.58	(1.22)	3.05	(1.29)
Intensity of Participation - Age 15	8.29	(4.42)	7.93	(4.17)	8.66	(4.62)
School Attachment - Age 15	3.32	(0.55)	3.27	(0.59)	3.37	(0.50)

Table 2
Zero-Order Correlations Among Variables

	1	2	3	4	5	6
1 Victimization - Grade 6						
2 Victimization - Age 15	0.37**					
3 Loneliness - Age 15	0.26**	0.36**				
4 Depressive Symptoms - Age 15	0.21**	0.31**	0.59**			
5 Breadth of Participation - Age 15	-0.01	-0.06	-0.09*	0.00		
6 Intensity of Participation - Age 15	-0.03	-0.04	-0.15**	-0.05	0.64**	
7 School Attachment - Age 15	-0.16**	-0.24**	-0.38**	-0.32**	0.25**	0.18**

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

Table 3
Zero-Order Correlations Among Variables for Boys and Girls

	1	2	3	4	5	6	7
1 Victimization - Grade 6		0.43**	0.25**	0.20**	0.02	0.06	-0.18**
2 Victimization - Age 15	0.33**		0.38**	0.32**	-0.06	-0.02	-0.27**
3 Loneliness - Age 15	0.27**	0.35**		0.63**	-0.10*	-0.14**	-0.44**
4 Depressive Symptoms - Age 15	0.21**	0.37**	0.61**		-0.08	-0.09	-0.38**
5 Breadth of Participation - Age 15	-0.06	-0.04	-0.07	0.02		0.63**	0.27**
6 Intensity of Participation - Age 15	-0.12*	-0.04	-0.16**	-0.03	0.64**		0.15**
7 School Attachment - Age 15	-0.15**	-0.21**	-0.33**	-0.34**	0.21**	0.20**	

Note: Correlations above the diagonal for girls, below the diagonal for boys.
* p < .05, ** p < .01

Table 4

Regression of Victimization, Breadth and Intensity of Participation, and School Attachment on Loneliness and Depressive Symptoms

	Loneliness				Depressive Symptoms			
	β	SE β	R^2	ΔR^2	β	SE β	R^2	ΔR^2
Step 1			0.23	.23***			0.17	.17***
Intercept	22.7***	1.72			5.36***	0.55		
G6 Victimization	0.37***	0.10			0.08*	0.03		
A15 Victimization	0.89***	0.12			0.23***	0.04		
A15 School Attachment	-4.61***	0.48			-1.23***	0.15		
Step 2			0.25	.01***			0.18	.01**
A15 Breadth	0.68*	0.26			0.26**	0.08		
A15 Intensity	-0.30***	0.08			-0.04†	0.02		
Step 3			0.25	.00			0.18	.00
A15 Vict * A15 Breadth	0.04	0.12			0.05	0.04		
A15 Vict * A15 Intensity	-0.01	0.03			-0.01	0.01		

Note: Beta values are unstandardized regression coefficients

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

Table 5

Regression of Victimization, Breadth and Intensity of Participation, and School Attachment on Loneliness for Boys and Girls

	Boys				Girls			
	β	SE β	R^2	ΔR^2	β	SE β	R^2	ΔR^2
Step 1			.21	.21***			.27	.27***
Intercept	19.41***	2.30			27.4***	2.61		
G6 Victimization	0.47***	0.14			0.24†	0.14		
A15 Victimization	0.84***	0.16			0.96***	0.18		
A15 School Attachment	-3.68***	0.65			-5.91***	0.73		
Step 2			.22	.01*			.29	.02**
A15 Breadth	0.70†	0.40			0.76*	0.36		
A15 Intensity	-0.31**	0.12			-0.30**	0.10		
Step 3			.23	.01			.29	.01
A15 Vict * A15 Breadth	0.30†	0.17			-0.33†	0.19		
A15 Vict * A15 Intensity	-0.11†	0.05			0.09†	0.05		

Note: Beta values are unstandardized regression coefficients

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

Table 6

Regression of Victimization, Breadth and Intensity of Participation, and School Attachment on Depressive Symptoms for Boys and Girls

	Boys				Girls			
	β	SE β	R^2	ΔR^2	β	SE β	R^2	ΔR^2
Step 1			.22	.22***			.20	.20***
Intercept	3.89***	0.14			8.03***	0.96		
G6 Victimization	0.06†	0.03			0.06	0.05		
A15 Victimization	0.24***	0.04			0.28***	0.07		
A15 School Attachment	-0.96***	0.16			-1.84***	0.27		
Step 2			.23	.01†			.20	.00
A15 Breadth	0.19*	0.10			0.16	0.13		
A15 Intensity	-0.01	0.03			-0.05	0.04		
Step 3			.25	.02**			.20	.00
A15 Vict * A15 Breadth	0.14***	0.04			-0.06	0.07		
A15 Vict * A15 Intensity	-0.03*	0.01			0.01	0.02		

Note: Beta values are unstandardized regression coefficients

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