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# Associations between Adolescents' Family Stressors, Life Satisfaction and Substance Use

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Associations between Adolescents' Family Stressors, Life Satisfaction, and Substance  
Use

by

Ashley Chappel

A thesis submitted in partial fulfillment  
of the requirements for the degree of  
Education Specialist  
Department of Psychological and Social Foundations  
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**Associations between Adolescents' Family Stressors, Life Satisfaction,  
and Substance Use**

**Ashley Chappel**

**Abstract**

Current literature suggests that family stressors are positively related to adolescent psychopathology; however, few studies have examined the relationship between family stressors and positive indicators of mental health, such as life satisfaction. Additionally, past literature has found support for life satisfaction as a mediating variable between environmental experiences (i.e., parent-child relationships, major life events) and adolescent psychopathology. Research questions answered in the current study pertain to: (a) the relationship between family stressors (i.e., socio-economic status, family structure, major life events, interparental conflict) and adolescents' life satisfaction, (b) the overall contribution of family stressors to life satisfaction and which stressors are most strongly associated with life satisfaction, and (c) whether life satisfaction mediates the relationship between family stressors and substance use. To answer these questions, self-report surveys from 183 middle school students were analyzed. Results indicate that experiencing major life events and interparental conflict were unique predictors of life satisfaction, and all the family stressors combined accounted for 37% of the variance in life satisfaction. Additionally, the relationship between these two family stressors and substance use was shown to be mediated by life satisfaction. Implications for school psychologists and future directions are discussed.

## **Chapter I: Introduction**

### **Statement of the Problem**

The ecological model draws attention to the importance of familial influences on adolescent development (Bronfenbrenner, 1979). Further, the stage environment fit perspective purports that child and adolescent development is affected by the relationship between the needs of the child, and the resources available by several social contexts, one being the family (Gutman & Eccles, 2007). Literature on family functioning has elucidated several factors that cause stress within the family context and in turn have been shown to lead to adverse outcomes in youth. These factors include but are not limited to major life events, economic hardship, family structure, and interparental conflict. One salient facet of adolescent development is psychological functioning, or mental health. Adolescents' psychological functioning is a major concern to educators in part due to its associations with academic achievement (Duchesne, Vitaro, Larose, & Tremblay, 2008; Fergusson & Woodward, 2002; Suldo & Shaffer, 2008).

Most research examining associations between family stressors and adolescent mental health has primarily focused on negative indicators of mental health, namely forms of psychopathology. Stressors such as economic hardship and major life events (e.g., family conflict, peer conflict, moving, transition between schools/moving) can adversely affect relationships among family members, therefore exacerbating stress (Compas, Howell, Ledoux, Phares, & Williams, 1989). Studies examining the effects of economic hardship and stressful life events have concluded that both normative events

(i.e., family arguments, peer arguments, transition between schools) and non-normative events (i.e., divorce, death of a family member) put adolescents at risk for psychopathology (Conger, Conger, Matthews & Elder, 1999; Morales & Guerra, 2006; Parke, Coltrane, Duffy, Buriel, Dennis, Powers, et. al., 2004).

One particular non-normative major life event that has been researched extensively is parental divorce. Despite a widespread belief that children from intact families fare better than children from non-intact families, the effect sizes are quite small, with more significant effect sizes for externalizing behaviors (Amato & Keith, 1991). The psychological wholeness model, a framework that attempts to explain the differences between children from intact and divorced families, views family conflict as the critical variable affecting childhood adjustment (Nelson, Hughes, Paul, & Katz, 1993). Interparental conflict, in particular, is responsible for much of the differences found between children from non-intact families and intact families with regard to level of youth psychopathology (Lansford, 2009). In addition to the simple occurrence of interparental conflict, children's perceptions and interpretations of the conflict significantly influence their functioning (Ablow, Measelle, Cowan, & Cowan, 2009). In general, a substantial body of literature supports an association between family stressors and psychopathology. Less is known about the impact of family stressors on indicators of optimal youth psychological functioning, despite the fact that the positive psychology movement has called for an increased focus on positive indicators of mental health (Gilman & Huebner, 2003).

The field of positive psychology purports that psychological wellness is not just indicated by a lack of psychopathology, but the presence of individual strengths and

subjective experiences of happiness (Huebner, Gilman, & Suldo, 2007). Research in this area has focused on the construct of subjective well-being (the scientific term for happiness), which is comprised of an affective component (frequency of positive and negative emotional experiences) and a cognitive component, life satisfaction (Gilman & Huebner, 2003). Life satisfaction judgments are largely stable over time, but also vary along with life circumstances (Park, 2004). The argument for the need to attend to youth life satisfaction is supported by the empirical finding that life satisfaction serves to buffer adolescents who experience stressful life events from developing additional externalizing behavior problems (Suldo & Huebner, 2004a), which supports promoting subjective well-being in youth as a protective factor against adversity.

Preliminary studies have found that children experiencing chronic stressors (i.e., family discord), and children from low socioeconomic status report lower life satisfaction than children not experiencing chronic stress and children from high income families (Ash & Huebner, 2001). Results of the few studies that have examined family structure, another form of stress, in relation to life satisfaction indicate that children from divorced families have lower life satisfaction than children from intact families (Shek, 2007; Storksen et al., 2005).

Studies examining links between interparental conflict and youth mental health have been limited by measuring interparental conflict through a life events checklist, which is problematic because research has indicated the importance of not only examining whether the conflict occurs, but characteristics of the conflict (i.e., frequency, intensity, resolution; Grych & Fincham, 1990; Tschann, Flores, Marin, Pasch, Baisch, & Wibbelsmann, 2002; Tschann, Flores, Pasch, & Marin, 1999). A review of the literature

only revealed one study that examined children's life satisfaction in relation to their parent's marital quality and status (Gohm, Oishi, Darlington, & Diener, 1998). Gohm and colleagues (1998) found that marital quality accounted for more of the variance in life satisfaction than marital status. Notably, this study did not include important characteristics of conflict and only required children to respond to one question about which statement best described their parents' marriage. No published studies have examined interparental conflict, when defined comprehensively, in relation to children's life satisfaction. Research is needed because children's perceptions and interpretations of the conflict determine the effect of marital conflict on their overall adjustment (Ablow et al., 2009).

A growing body of research has shown that youth life satisfaction is not only a desirable outcome, but also a cognitive mechanism by which environmental experiences, including family and stress, influence adverse child outcomes (McKnight, Huebner, & Suldo 2002; Suldo & Huebner, 2004a). It is plausible that this mediating model also pertains to the pathways between family stressors and adolescent substance use. Predictors of, and pathways to, substance use during early adolescence are important to understand because the greatest escalation of alcohol use occurs between the ages of 12 and 15 years of age (Brown, 2008), the initiation of cigarette use begins as early as seventh and eighth grade (Johnston, Backman, & O'Mailey, 2008), and as many as 6% of students 12 years or older reported using marijuana within the past month (National Survey on Drug Use and Health, 2008). Further, early experimentation has been shown to be more harmful than experimentation at a later age (Fergusson et al., 1996).

Regarding studies examining family stressors in relation to substance use, the number of stressful life events experienced by youth is a positive predictor of use, above and beyond the natural increase of substance use due to increased age (Aseltine & Gore, 2000; Barrett & Turner, 2005; Hoffman, Cerbone, & Su, 2000). Links between economic hardship and substance use are less clear, as several studies found no relationship between substance use and socioeconomic status (Hoffman, Cerbone, & Su, 2000; Spijkerman, Eijnden, & Huiberts, 2008), while other research found students from high SES levels tend to use substances more than students from low SES levels (Aseltine & Gore, 2000; Barrett & Turner, 2005; Hansen & Chen, 2007; Jeynes, 2001).

With respect to family structure, living with both parents can be a protective factor against substance use (Barrett & Turner, 2005; Hayatbakhsh, Mamun, Najman, O'Callaghan, Bor, & Alati, 2008; Hayatbakhsh, Najman, Jamrozik, Mamun, & Rosa Alati, 2006), although the strength of this relationship can vary by gender and race (Paxton, Valois, & Drane, 2007). Studies that examined family structure and family relationships simultaneously found when family relationships are considered, the relationship between family structure and substance use disappears (Amato & Keith, 1991; Hayatbaksh et al., 2006; Kristjansson, Sigfusdottir, Allegrante, & Helgason, 2008). However, the few studies that have examined family relationships in relation to adolescent substance use have focused on parent-child relationships and not on interparental conflict. Although previous research has provided support for a positive relationship between interparental conflict and externalizing behaviors (Davies & Lindsay, 2004; Tschann et al., 2002), one of which is substance use, the association between interparental conflict and substance use in particular has yet to be examined.

The pathway(s) by which family stressors influence substance use is also unknown. The hypothesis that life satisfaction may serve as a mediator in this relationship (similar to the mediating role it served in prior studies of environmental experiences and negative outcomes in youth; McKnight et al., 2002; Suldo & Huebner, 2004a) requires the existence of a relationship between life satisfaction and substance use. A review of the literature yielded only four relevant published studies (Kuntsche & Gmel, 2004; Piko et al., 2005; Tu, Ratner, & Johnson, 2008), only one of which that focused exclusively on associations between substance use and life satisfaction (Zullig, Valois, Heubner, Oeltmann, & Drane, 2001). In general, these studies found an inverse relationship between life satisfaction and adolescent substance use, supporting links between the hypothesized mediator (life satisfaction) and outcome (substance use), in addition to the aforementioned relationships between the predictor (family stressors) and both the mediator and outcome. The current study intended to empirically test the hypothesized model of life satisfaction acting as a mediator between family stressors and substance use (see Figure 1).

### **Purpose of the Current Study**

The purpose of the current study was to gain further insight into the relationships between family stressors, adolescents' global life satisfaction, and their use of substances such as alcohol, tobacco, and/or marijuana. Specifically, this study aimed to provide further information on which family stressors are most strongly associated with early adolescents' life satisfaction. Further, this study expands on the small amount of literature that examines children's perceptions of interparental conflict and how this chronic stressor relates to youth outcomes, in particular positive indicators of mental

health. As previous research has been limited by measuring interparental conflict through either a one-item indicator or the inclusion of parental arguments on life events checklists, the current study examined interparental conflict using a comprehensive measure that includes children's perceptions of multiple dimensions of conflict (i.e., frequency, intensity, and resolution). Finally, this study aimed to determine if life satisfaction is a cognitive pathway by which family stressors relate to middle school students' substance use. By providing further information on which types of family stressors are more strongly related to differences in life satisfaction, and identifying the mechanisms by which family risk factors link to problematic outcomes (i.e., substance use), educators can gain further insight into which students are at risk in order to facilitate early prevention and intervention efforts.

### **Definition of Key Terms**

**Major life events.** Major life events refer to experiencing stressful events in one's life, such as the death of a family member, the loss of a job, changing schools, moving to a new neighborhood, and divorce. These stressors often result in a loss of social support or other resources, such as money.

**Economic hardship.** Economic hardship refers to a lack of financial resources that result in the struggle to appropriately address daily responsibilities. Both chronic and acute economic hardship exerts negative effects on youth development (Parke et al., 2004).

**Family structure.** Family structure refers to the adults with whom a child lives. Typical configurations include living with one's mother and father, mother alone, father alone, mother and significant other, father and significant other, and/or other relatives



(Breivik & Olweus, 2006). Family structure can also change as a result of instances such as divorce, remarriage, and death.

**Perceived interparental conflict.** Perceived interparental conflict refers to children's perceptions regarding the quality of the relationship between their parents. Interparental conflict consists of multiple dimensions: frequency, intensity, content, and resolution (Grych & Fincham, 1990; Tschann et al., 2002; Tschann et al., 1999). Frequency refers to the amount of exposure to overt interparental conflict experienced by children. Intensity describes the level or power of the conflict, which can range from mild discussions to physical abuse. Content refers to the topic(s) with which the conflict is associated. Resolution refers to how the conflict is resolved; this dimension can range from successful, to poor or unresolved (Grych & Fincham, 1990)

**Life satisfaction.** Life Satisfaction is the cognitive component of subjective well-being (SWB). High SWB is comprised of three components (high levels of positive affect, low levels of negative affect, and high satisfaction with life). SWB is defined as an individual's subjective assessment of the quality of his/her life, and is commonly referred to as the scientific term for happiness.

**Substance use.** Substance use refers to the frequency with which youth use specific substances that are forbidden by law, including alcohol, tobacco, inhalants, inappropriate use of over the counter or prescription drugs, and illicit drugs such as marijuana and cocaine.

## **Research Questions**

The current study aimed to answer the following research questions:

1. What is the nature of the relationships between adolescents' life satisfaction and the following family stressors:
  - a. Major life events
  - b. Low socioeconomic status (SES)
  - c. Family structure
  - d. Perceived interparental conflict?
2. What is the overall contribution of family stressors to life satisfaction?
3. Which family stressors are uniquely and most strongly associated with adolescents' life satisfaction?
4. Does adolescent life satisfaction mediate the relationship between family stressors and substance use?

## **Hypotheses**

Regarding research question 1, it was hypothesized that two family variables (major life events and perceived interparental conflict) would be negatively and significantly associated with students' self-reported life satisfaction, while a small, positive relationship will exist between SES and life satisfaction. It was also hypothesized that youth from non-intact families will report lower levels of life satisfaction.

Regarding research question 2, it was hypothesized that the combination of all family stress variables will explain a significant and meaningful amount of the variance in youth life satisfaction.

Regarding research question 3, it was hypothesized that low SES and interparental conflict would be the two variables most uniquely associated with life satisfaction. According to Ash and Huebner (2001), chronic stressors predicted 19% of the variance in life satisfaction above and beyond the variance already accounted for by stressful life events, suggesting that the unique influence of chronic stressors is more than double the unique influence of acute stressful events. Having a low socio-economic status and experiencing frequent interparental conflict are both examples of chronic stressors. Therefore, weaker relationships between life satisfaction and stressful life events were anticipated, consistent with Ash and Huebner's (2001) findings. It was also expected that family structure would not have a significant influence on life satisfaction beyond what could be accounted for with the inclusion of interparental conflict. Additionally, family structure was hypothesized as having the weakest influence on life satisfaction due to previous research findings that state marital quality (i.e., relationship characterized by high levels of conflict, poor communication skills) is associated with lower life satisfaction more so than marital status (Gohm et al., 1998).

Regarding research question 4, it was hypothesized the life satisfaction will serve as a mediator between family stressors and substance use because research has indicated that there is a link between life satisfaction and family stressors as well as a link between life satisfaction and substance use. In order for a variable to be considered a mediator, it first must be related to both the predictor and outcome variables (Baron & Kenny, 1986). Research indicates that life satisfaction has a negative relationship with experiencing major life events (Ash & Huebner, 2001) and interparental conflict (Gohm, Oishi, Darlington & Diener, 1998). Additionally, there is support for lower life satisfaction

among adolescents from non-intact families (Stroksen, Roysamb, Moum, & Tambs, 2005) and from a lower socio-economic status (Ash & Huebner, 2001). Literature also supports a negative relationship between life satisfaction and substance use among adolescents (Tu, Ratner, & Johnson, 2008).

### **Importance of the Current Study to School Psychologists**

Adolescents' psychological functioning is of utmost concern to school psychologists in part due to the fact that students with the best mental health have the greatest academic functioning (Suldo & Shaffer, 2008). Adolescent mental health is compromised by the presence of many types of family stressors (Amato, 2001; Ash & Huebner, 2001; Gohm et al., 1998; Lansford, 2009; Morales & Guerra, 2006; Shek, 2007). By delineating specific family stress variables (i.e., major life events, interparental conflict) that link to students' mental health, this study provides an empirically-based rationale for where school psychologists should focus their efforts in terms of youth or family-focused prevention and intervention targets.

Additionally, although there is empirical support for life satisfaction as a mediator between family stressors and other negative outcomes in youth (McKnight et al., 2002; Suldo & Huebner, 2004b), the current study identified whether life satisfaction acted as a mediator between family stressors and substance use. This particular outcome is of interest because of the extent and consequences of the problem of substance use among adolescents. Therefore, the current study provides support for the identification of the mechanisms (i.e., life satisfaction) by which family stressors (i.e., major life events, interparental conflict) link to problematic outcomes (i.e., substance use), which provides

school psychologists with further insight into which students are at risk for future substance use in order to facilitate early prevention and intervention efforts.

### **Contributions to the Literature**

The current study augmented the available knowledge on the associations between family stressors and adolescents' global life satisfaction, particularly with regard to links between early adolescents' perceptions of interparental conflict (i.e., frequency, intensity, resolution) and life satisfaction. To date, this is the only study to investigate the specific relationships between certain family stressors and life satisfaction. The results support that interparental conflict as the strongest and most unique predictor of life satisfaction, followed by major life events. Furthermore, this study tested the hypothesis that life satisfaction acts as a mediator between family stressors and adolescent substance use. The current study provides support for a mediating relationship between major life events and substance use, as well as interparental conflict and substance use. Although past research provides support for such models (McKnight et al., 2002; Suldo & Huebner, 2004b), this is the only study to examine these particular family stressors as well as focus on adolescent substance use.

## **Chapter II: Review of the Literature**

This chapter outlines the importance of considering family stressors when examining the development of children and adolescents due to the essential role the family context plays in determining youth outcomes. It is important to understand how these family stressors relate to the functioning of adolescents, both positively (i.e., influence life satisfaction) as well as negatively (i.e., influence psychopathology, substance use). The literature relevant to the relationships between family stressors and negative indicators of mental health will first be outlined, followed by the literature on the relationship between family stressors and life satisfaction. Next, research on the link between family stressors and one particular negative outcome, substance use, is reviewed and gaps in the literature are identified. Additionally, literature examining life satisfaction as a mediating variable is discussed to provide support for the current study.

### **Variables that Constitute Family Functioning**

Bronfenbrenner (1979) introduced the ecological perspective of human development, which proposes that humans develop as a result of the interactions they have with their environment. Children and adolescents are influenced by many environmental contexts, both proximal and distal. The ecological environments outlined by this perspective include four nested structures: micro, meso, exo, and macro-systems (Bronfenbrenner, 1979). The micro-system includes any interactions within the immediate environment that occur face-to-face, such as the family or school. The meso-system refers to any linkages between two micro-systems, for example the link between

school and home. The exo-system focuses on the linkage between two settings, including one with which the child does not interact, for example the home and a parent's work environment. Lastly, the macro-system refers to the overarching influence of a culture or subculture (Bronfenbrenner, 1994). This theoretical perspective outlines the many different contexts that children operate within, and provides a framework to understand how the environment influences child and adolescent development. Most researchers have focused on the home and school contexts, and the interaction between the two, because the more proximal the environment, the greater the influence (Walker & Shinn, 2002). Given the proximal role that the family has on the developing child, difficulties in this environmental context can adversely affect the micro-system of the child, hindering success in school. The current study will thus further evaluate how the home ecological environment affects adolescents' psychological functioning. Adolescents' psychological functioning is of utmost concern to educators in part due to the fact that students with the best mental health have the greatest academic functioning (Duchesne, Vitaro, Larose, & Tremblay, 2008; Fergusson & Woodward, 2002)

The family is a very complex context consisting of relationships between family members, the relationship between the family as a whole and other social systems, and the environmental fit between the two contexts. The stage-environment fit perspective purports that adolescents' development is affected by the relationship between the needs of the developing adolescent, and the resources offered by several social environments in which the adolescent lives, one being the family environment (Gutman & Eccles, 2007). When considering family functioning, it is not as simple as understanding each individual part in isolation from the whole system (Walsh, 2003). Several models have been

proposed to explain normative family functioning, two of which are the McMaster Model of Healthy Family Functioning and the Circumplex Model of Family Systems (Walsh, 2003). The McMaster Model outlines the significance of not only considering healthy family functioning as the absence of problems, but also the inclusion of positive aspects. In addition, a definition of what constitutes “normal” family functioning is impossible because such judgments would be highly subjective and greatly depend on the family and their culture. The McMaster Model states that there is a reciprocal, bi-directional relationship between the interactions and behaviors of family members (Walsh, 2003). McMaster outlined six important domains related to family functioning: problem solving, communication, roles, affective responsiveness, affective involvement, and behavior control. These domains are related to what encompasses the Circumplex Model, which focuses on flexibility, cohesion, and communication. Flexibility accounts for how families balance change through family roles, rules, and negotiations. Cohesion refers to the relationships between family members and the balance of boundaries. The last variable, communication, is the major aspect that allows families to change their levels of cohesion and flexibility, due to its importance in the problem-solving process (Walsh, 2003). Both models of family functioning highlight the significance of communication, the relationships between family members, and how families function in the presence of change and transitions.

Two types of transitions, normative and non-normative, can be experienced by families and can affect their functioning (Walsh, 2003). Normative transitions are characterized by typical developmental patterns such as emerging from childhood into adolescence or transitioning between middle school and high school. Non-normative



transitions refer to major life events that are out of the person's control, such as the loss of a job or the death of a family member. How families interact and adapt to the changes caused by life transitions is a vital aspect related to the overall functioning of the family. Families that are successful at dealing with transitions are able to formulate and take advantage of their resources which assists them in managing stress (Stephenson, Henry, & Robinson, 1996). Optimal functioning among family members can be characterized by many variables outlined in the previous models of family functioning, some of which include, the ability to realize one's behavior affects others, the realization that conflict is inevitable but family members have the skills necessary to problem solve and come to a solution, and the ability to negotiate and respect others boundaries and roles (Walsh, 2003). Many families that face stressors from environments both within and outside the family may lack the skills and resources needed for healthy family functioning, which in turn can cause additional family stress.

**Parent-child relationship.** In times of transition, be it normative or non-normative, stress is at its greatest (Walsh, 2003). One transition that has been the center of an abundant amount of research is the transition into adolescence and how it affects the parent-child relationship. Much of the preliminary research on this topic drew upon the psychoanalytical perspective that characterized adolescence as a time of "storm and stress" caused by the hormonal changes that occur during puberty (Arnett, 1999). Adolescence was considered a time when children detached from their families in search of more autonomy, causing an increase in conflict and disharmony within the family. However, Steinberg (1990, p. 260) believes this view to be pessimistic and states that

“only a very small proportion of families- somewhere between 5% and 10%-experience a dramatic deterioration in the quality of the parent-child relationship during adolescence”.

Research has since drifted from focusing on the ways in which adolescents detach themselves from their parents and has concentrated on how different parent-child relationships affect adolescent development. By focusing on the stability and changes that occur among the relationship as adolescents develop, research has begun to examine to continuity of the parent-child relationship, with more continuity leading to positive outcomes (Collins & Larson, 2004). The topic of parenting styles has drawn from the seminal studies by Baumrind (1991) that describe three parenting styles (specifically, permissive, authoritarian, and authoritative), each characterized by certain parental behaviors that differentially relate to child development. Parenting styles are a key variable related to the quality of the parent-child relationship, with research suggesting that authoritative parenting is the most effective as it has been associated with a wide range of psychological and social advantages (Baumrind, 1991; Steinberg, 1990; Steinberg & Morris, 2001). Authoritative parenting is characterized by parental control by setting age appropriate expectations and standards, while still acknowledging the child’s view, needs, and interests (Baumrind, 1991). Authoritative parents often assist in successfully balancing the child’s need for autonomy and the necessity to maintain control during the transition to and during adolescence. Because the positive outcomes associated with authoritative parenting among ethnic minorities is lacking, and support exists for the benefits of a more authoritarian style (Amato & Fowler, 2002; Steinberg, Mounts, Lamborn, & Dornbusch, 1991), the macrosystem, or cultural context should be considered when examining family variables such as parent-child relationships.

There is an abundant amount of literature examining parent-child relationships, specifically looking at the link between authoritative parenting and outcomes in youth. Although this is an important part of family functioning, parenting style occurs independently from family stressors, in that the stressors included in the current study (i.e., major life events, economic hardship, family structure, perceived interparental conflict) can be observed in any family regardless of the parenting style. Therefore, the literature on parent-child relationships will be outlined in the following sections, however this variable will not be included in the current study.

**Major life events and economic hardship.** Life transitions that may cause family stress include major life events such as the death of a family member, the loss of a job, and divorce, among other changes. These stressors often result in a loss of social support or other forms of resources, such as finances. Loss of parental employment can affect multiple ecological systems and dramatically change the context in which the family functions. Both chronic and acute economic hardship has been shown to have detrimental effects on child and adolescent development (Parke et al., 2004). Economic hardship results in fewer resources that families could use to effectively deal with stress. Additionally, parents that are chronically stressed about finances often become less engaged and nurturing, focusing their attention to monetary issues instead of their relationships within the family (Collins & Larson, 2004). Other factors associated with chronic poverty and parent behavior include harsher discipline practices, low supervision, increased emotional states, and higher levels of marital conflict (Collins & Larson, 2004; Conger, Ge, Elder, Lorenz, & Simons, 1994). The change in parental behavior directly and indirectly affects children's developmental outcomes. Economic hardship has been

associated with antisocial behaviors and school failure; however, researchers suggest that negative outcomes are mediated by conflicts and disruptions of familial relationships (Conger, Ge, Elder, Lorenz, & Simons, 1994; Parke, et al., 2004; Walsh, 2003). Minority families are at an even greater risk for economic hardship, with poverty rates for African American and Latino families averaging three times as high as White families (Proctor & Dalaker, 2002). This chronic stress among minority families can increase conflict among family members resulting in an even greater risk for negative outcomes (Park et al., 2004).

**Changes in family structure.** Changes in family structure and the consequences this transition has on child and adolescent development has been a major topic of research throughout the past decades. Studies comparing children from intact and divorced families have demonstrated negative outcomes such as lower academic achievement, increased delinquency and internalizing problems, and lower self-esteem (Amato & Keith, 1991; Hetherington & Stanley-Hagan, 1999). The increased risk for developmental problems among children from divorced families may be due to the many changes that occur as a direct result of the divorce. For instance, following marital dissolution children may lose social support from a parent, experience loss of income that may cause higher mobility, be exposed to increased parental conflict, and many other risk factors that can be associated with negative outcomes (Hetherington et al., 1999). Family disruption is a very complex phenomenon that causes stress throughout many different contexts in children's lives. However, the effects of divorce are not always adverse and outcomes can be mediated by the interaction between risk and protective factors of children and the family environment (Barber & Eccles, 1992). The negative outcomes

that have been associated with divorce can not be strictly due to changes in family structure. Process variables that are related to divorce must be taken into consideration when examining the relationship between divorce and its consequences on family members (Needle, Su, & Doherty, 1990).

**Perceived parental conflict.** One specific variable that has been shown to mediate the effects of divorce is exposure to parental conflict. Nye (1957) suggested the need to not look at the family structure in isolation, but rather the functioning of the family in general. By comparing “broken families” to “unbroken, unhappy families”, as characterized by high parental conflict, it was found that adolescents from “broken” homes displayed less psychosomatics illness and better adjustment than children from “unbroken, unhappy families” (Nye, 1957, p. 361). Walsh (2003) summarized that the quality of marital interaction accounted for 10-15% of the variance in children’s development; children that perceived high amounts of parental conflict scored higher on externalizing and internalizing behaviors and lower in academic achievement. How children perceive their environment and the relationship between their parents has a significant impact on their developmental outcomes. Both the amount and type of conflict that children are exposed to are key variables to consider. Hetherington and Stanley-Hagan (1999) found that children who were exposed to parental conflict, especially conflict that put children in the middle or consisted of physical violence, had worse outcomes than if the conflict was segregated from the children. In addition, if divorce is followed by continued conflict between the parents rather than an escape from the highly stressful situation, the childhood outcomes are far worse (Hetherington & Stanley-Hagan, 1999). These findings support the psychological-wholeness model that views family

conflict as the critical variable affecting childhood adjustment and could explain why children from divorced families have been associated with such adverse effects (Nelson et al., 1993).

In sum, research has indicated several classes of family variables contribute to healthy family functioning. These types of variables include: parent-child relationships, major life events and economic hardship, family structure, and perceived interparental conflict. The following section discusses negative youth outcomes (i.e., psychopathology) in relation to each of these classes of variables pertinent to family functioning.

### **Family Functioning and Psychopathology**

When considering how family functioning relates to mental health outcomes in children and adolescents, previous research has generally defined mental health as the absence of psychopathology. However, mental health is actually an overall state of well-being conceptualized within two dimensions: “the positive (well-being and coping in the face of adversities), and the negative (symptoms and disorders). Positive mental health is therefore not merely an absence of negative symptoms such as depression or anxiety, but also includes aspects of control of self and events, happiness, social involvement, self-esteem and sociability” (Morgan, Currie, Due, Gabhain, Rasmussen, Samdal et al., 2007, p. 13). Although mental health is defined using both positive and negative indicators of functioning, research has historically focused on psychopathology (i.e., internalizing and externalizing disorders). Therefore, the following section summarizes the empirical links found between family functioning and psychopathology. Following the review of family functioning and psychopathology, current literature that examines the relationship

between family functioning and positive indicators of optimal mental health, such as life satisfaction, is reviewed.

**Parent-child relationships and psychopathology.** Research yields a general consensus that authoritative parenting is associated with positive psychological outcomes for youth. Parenting that is characterized by warmth, marked expectations, granting of autonomy, and bidirectional communication has been related to higher levels of maturity, responsibility, and age appropriate behavior (Boutelle, Eisenberg, Gregory, & Neumark-Sztainer, 2009; Milevsky, Schlechter, Netter, & Keehn, 2007). In contrast, parenting that is unresponsive, lacking clear expectations, low in involvement and is neglectful has been associated with delinquent antisocial behavior, drug use, and lower levels of achievement (Barnes, Reifman, Farrell, & Dintcheff, 2000).

Silk, Morris, Kanaya, and Steinberg (2003) examined the relationship between parenting practices, specifically psychological control and autonomy granting (measured via the Acceptance/Involvement and Psychological Autonomy Granting Scale), and adolescent psychopathology: low self-esteem (measured through the Rosenberg Self-Esteem Inventory), internalizing (measured via the Center for Epidemiological Students Depression Scale [CES-D]), and externalizing behaviors (measured via 13 items regarding minor delinquency, drug use, and school misconduct), in high school students. Psychological control is characterized by coercive manipulative, guilt inducing efforts to control adolescents' behavior. This is unlike behavior control in which parents set limits and monitor their child's behavior. For the purposes of this study, Silk and colleagues (2003) aimed to distinguish between psychological control and lack of autonomy granting instead of thinking of these parenting behaviors on a continuum. The results

indicated that higher psychological control was related to more psychopathology, specifically, internalizing behaviors, among adolescents.

Parents that are authoritative place a high value in developing their children's autonomy and therefore include their children in the decision making process. By including adolescents in the decision making process, the parent-child relationship can be more positive. Gutman and Eccles (2007) examined autonomy (measured by one item assessing perception of decision making opportunities) and adolescent psychopathology in both African American and European American students. To assess psychopathology, participants completed measures of depression (Children's Depression Inventory; CDI), self-esteem (three items, such as "How often do you wish you were different than you are"), and delinquent behaviors (examined through six items regarding behaviors such as stealing and gang involvement). This longitudinal study followed students from 7<sup>th</sup> grade until three years post high school graduation. Results concluded that more decision making was related to higher self esteem across gender and ethnicity. However, while African American youth who had more decision making opportunities had less depression, a similar link was not evident for European Americans even though they reported being involved in decision making more than African Americans. This study provides support for providing developmentally appropriate levels of autonomy, because adolescents who were involved in making decisions had more adaptive outcomes, namely elevated self-esteem and sometimes less depression. Additionally, what constitutes the appropriate level of autonomy partially depends on the gender and ethnicity of the adolescent.



The level of communication that occurs between adolescents and their parents and whether or not the adolescent feels they can use their parents as a resource and talk to them are other important variables in parent-child relationships. Boutelle, Eisenberg, Gregory, and Neumark-Sztainer (2009) examined the relationship between parent-child connectedness and adolescent psychopathology. A sample of 1,472 students ranging from 12 to 20 years old responded to questions regarding parent-connectedness (examined through 4 items measuring perceived parental caring and communication), self-esteem (Rosenberg Self-Esteem Inventory), body dissatisfaction (Body Shape Satisfaction Scale), and depressive symptoms (examined through six items regarding level of dysthymic mood, tension/nervousness, fatigue, worry, sleep disturbance, and hopelessness). Results demonstrate that parent-connectedness was related to increased self-esteem (for males only) and decreased depressive symptoms for both males and females.

The results of these studies elucidate the important influence of parent-child relationships on youth psychopathology. Although there have been inconsistent results as to which parenting style (authoritative or authoritarian) is best to utilize for children from diverse backgrounds, studies support the utilization of authoritative parenting practices for families of varying ethnicities (Amato & Fowler, 2002; Querido, Warner, & Eyberg, 2002; Steinberg et al., 1991). Children's perception that their parents are caring about their feelings, allow autonomy, and permit bi-directional communication is important in order for children to feel that they can utilize their parents as a resource throughout their development. The quality of the relationship and the amount of decision making that is given to children have been shown to impact youth psychopathology. It is important that

throughout child and adolescent development, there is continuity within the parent-child relationship in order to protect against the negative outcomes that may occur. In the following section, family situations that are inversely related to adaptive functioning among children and adolescents are summarized.

**Major life events/economic hardship and psychopathology.** One class of variables that has been frequently examined in relation to its impact on child and adolescent psychopathology is stressful life events. The “exposure to stressful events and circumstances is a primary pathway through which distal risk factors exert effects on adolescent mental and physical health, including the generation of stressors in neighborhood, school, peer, and family environments” (Compas, 2004, p. 270). As a result of the family being such a proximal environment, stress within this context can be hypothesized to have an even greater influence on adolescent mental and physical health. Grant, Compas, Stuhlmacher, Thurm, McMahon, and Halpert (2003) proposed a framework consisting of five hypotheses pertinent to research of stress and psychopathology. Grant and colleagues stated that (a) stressors lead to psychopathology; (b) moderators influence the relationship between stressors and psychopathology; (c) mediators influence the relationship between stressors and psychopathology; (d) the relationships among stressors, moderators, mediators, and psychopathology are reciprocal and dynamic; and (e) there is specificity in the relationship between stressors, moderators, and mediators. One moderator that affects the relationship between stressful life events and psychopathology, specifically internalizing problems, is whether the event is considered controllable or uncontrollable (Compas, 2004). Additionally, family dynamics can also play a moderating role in the relationship between major stressful

events and youth psychopathology. When one family member is affected by a major event, it can increase the amount of daily stressors among other family members and therefore lead to increased internalizing and externalizing problems among adolescents (Compas et al., 1989).

Stressful events can occur throughout any age and can lead to psychopathology regardless of the developmental stage in which the events occur. In general though, adolescence appears to be a time for increased stressful events, whether it be related to pubertal changes, increased family conflict, disputes with friends, or transitioning to a new school (Compas, 2004). Additionally, stressful life events can create a cumulative effect as a result of multiple stressors occurring at the same time; this is particularly salient for children who are economically disadvantaged (Morales & Guerra, 2006). Morales and Guerra (2006) evaluated the cumulative effects of stressful events that were experienced in three contexts: school, family, and neighborhood. This longitudinal study included a diverse sample of 2,745 students in 1<sup>st</sup>-6<sup>th</sup> grade from economically disadvantaged communities and focused on the effect of stressful events on children's depression and aggression. Stress in the school context was defined as peer rejection, peer victimization, and school problems (e.g., getting into trouble with the teacher, worrying about grades). Peer nominations were utilized to look at peer rejection and peer victimization, while the School Problems Stress subscale of Stressful Urban Life Events Scale was used to assess school problems. Family stress was defined as family poverty, measured by lunch status, and family transitions, assessed with the Family Transitions subscale of the Stressful Urban Life Events Scale. Lastly, neighborhood stress was assessed by the Neighborhood Violence Stress subscale of the Stressful Urban Life

Events Scale. The results revealed that stressors from all three contexts were associated with lower academic achievement, and increased levels of depression and aggression. In addition, cumulative stress was found to be associated with increased concurrent and longitudinal levels of psychopathology across all three contexts. Noteworthy, when examining the contribution of single stressors, it was found that the more proximal the stressor, the greater the effect on psychopathology (Morales & Guerra, 2006). Many of the stressors that were included in this study were related to living in poverty.

Economically disadvantaged families have fewer available resources and “are often forced to look for new opportunities to thrive or just survive, creating a series of transitions for themselves and their families” (Morales & Guerra, p. 908). Lack of resources can create increased conflict between family members and can affect the quality of parenting, resulting in harsher/inconsistent discipline, and less involvement and nurturance (Conger et al., 1994). The consequences of chronic economic strain have effects on youth psychopathology such as increased anxiety and depression, more conduct problems, and lower academic achievement (Steinberg, 2005).

Conger and colleagues (1994) postulated a theoretical model, termed the Family Stress Model, in an attempt to explain how family processes play a role in linking family economic stress to the psychopathology of adolescents. The authors proposed that economic hardship would affect parents’ emotions and the quality of relationships, whether it be parent-child or marital relations, through the parents’ emotional, cognitive, and behavioral responses in dealing with the economic pressure (Conger et al., 1994). This study consisted of 378 Caucasian families with two parents and children in the 7<sup>th</sup> grade with one sibling within 4 years of age from rural Iowa. Parents responded to

questions about their economic status, including family income, unstable work, and debt to asset ratios. In addition, parents were also asked questions regarding whether they felt they had sufficient money to pay for the material needs of the family such as home, clothing, and food. All family members were asked about the amount of conflict, specifically over finances, and quality of the relationships in the home. Additionally, adolescents completed measures of depression, anxiety, hostility, aggressions, and antisocial behavior (measured by the subscales from the NEO-personality inventory and the Symptom Checklist-90-Revised [SCL-90-R]). The findings of this study were supportive of the theoretical model proposed by the authors; financial conflict indirectly affected adolescent psychopathology through parent hostility. Economic pressure was directly related to parent-adolescent financial conflicts and indirectly to parents' hostile interactions and depressed mood. In sum, economic pressure negatively impacted parental behaviors and the quality of the interactions between family members, which resulted in increased internalizing and externalizing symptoms among adolescents. Thus, interactions between family members and the behavioral, emotional, and cognitive responses to economic pressure must be taken into account when looking at how economic hardship affects youth outcomes.

This line of research has been extended to include Mexican American families (Parke et al., 2004). Parke and colleagues studied 111 European American and 167 Mexican American families in an attempt to validate the results of the aforementioned study that found the effects of economic hardship on child psychopathology were mediated by parental behaviors, family interactions, and parental emotional states (Conger et al., 1994). Parents completed measures of economic stress (measured by the

Family Finances Questionnaire) and economic pressure (measured by three items about paying their bills). Parents also reported their level of depression through the Beck Depression Inventory (BDI), marital quality measured through several items referring to marital problems and marital instability, and hostile parenting, which was measured by the Schaefer's Parental Practices Questionnaire. Children's level of psychopathology was measured through parent report on the Child Behavior Checklist (CBCL). Findings include that both marital problems and parental behaviors, such as hostile paternal parenting, mediated the effect of economic pressure on child psychopathology. Notably, among the Mexican American families, marital problems were related to more negative outcomes than in European American families, perhaps due to the higher levels of cohesion and family dependence experienced by families within this culture. Increased acculturation was related to increases in marital conflict and decreases in hostile parenting. This decrease in hostile parenting may be the result of families becoming more aware of other discipline practices utilized by other families (Parke et al., 2002). Overall this study extends the work done by Conger and colleagues (1994) and supports the use of the Family Stress Model with Mexican American families.

Another study by Conger, Conger, Matthews, and Elder (1999) examined economic hardship and its effect on adolescent psychopathology and included children's perceptions on economic pressure. A total of 377 Caucasian students completed measures at two time points (8<sup>th</sup> and 10<sup>th</sup> grade). Economic pressure was measured by asking parents about three indicators: whether the families could afford the necessities, whether they struggled to pay the monthly bills, and the degree to which the families had to cut back on expenditures (Conger et al., 1999). This study also included two adolescent

outcomes: mastery (measured through seven items about the adolescent's sense of control of future outcomes) and distress (symptoms of depression and anxiety from the SCL-90-R). Additionally, adolescents' perceptions of financial problems and hardship experiences (occurrences in which the family did not have enough money to participate in activities with friends or afford necessities) were also assessed. Results revealed that increased economic pressure was related to adolescent's diminished sense of mastery and heightened distress through an indirect effect of the adolescent's increased perception of the hardship. However, adolescent hardship experiences did not affect the outcomes any more than what was associated with the adolescent's perceptions of financial problems. Noteworthy, both girls and boys were negatively affected by economic hardship, however boys had more of a decline in their sense of mastery than girls but a decrease in mastery for girls had more of an effect on their levels of distress (Conger et al., 1999). This study demonstrated that protective factors (increased sense of mastery or control) can be targeted for prevention among populations of children that are experiencing economic hardship. Mastery appears to be an important protective factor in both the ability to reduce perceived distress and reduce stress over time (Conger et al., 1999).

In sum, the few studies that have examined the relationship between stress, specifically economic hardship, and youth psychopathology demonstrate that it is not just the loss of income that is important but also the cumulative effects and experiences that are caused by the lack of resources, as well as adolescents' perceptions of their family's economic distress. Notably, adolescents have been reported to experience more major life events and transitions than any other stage in development. Major life events that are considered normative, such as disagreements with friends or family and transitions

between schools, can put adolescents at risk for psychopathology. Non-normative major life events, much of which can be caused by or result from economic hardship, can also be detrimental to child and adolescent psychopathology. One non-normative major life event that has been studied extensively in relation to youth psychopathology involves parental divorce and other changes in the family structure.

**Changes in family structure and psychopathology.** The research on the effect of parental divorce has evolved from simply assuming that children from single parent homes are worse off than children that come from intact households. Current understanding now suggests that the effects of divorce are linked to the adverse relational and economic consequences that result from divorce, such as loss of income, deteriorated quality of family relationships, and increased marital conflict (Steinberg, 2005). The general consensus in the literature is that although there are significant differences between children from divorced versus nondivorced homes in school achievement, behavior problems, psychosocial adjustment, and family relations, the effect sizes are quite small (Amato, 1991). The greatest effect sizes have been shown for externalizing behaviors with lesser effect sizes associated with internalizing symptoms (Hetherington & Stanley Hagan, 1999; Kelly & Emery, 2003).

Regarding gender differences in the effect of divorce on youth psychopathology, findings have been mixed. Hetherington and Stanley-Hagan (1999) found that behavior problems among children of divorce increase in adolescence and this increase is greater for girls than boys. However, Kelly and Emery (2003) suggested that findings on gender differences may be confounded by variables such as age at separation, sex of custodial parent, and the quality of relationships with parents. Palosaari, Aro, and Laippala (1996)



examined whether closeness with parents is a mediating factor predicting depression in late adolescents from divorced families. This study consisted of 2,194 students in 9<sup>th</sup> grade completing self-report measures of depression (BDI), self-esteem (Rosenberg Self-Esteem Inventory), and closeness to parents (one item asking participants how close they feel to their mother/father). The same measures were sent out six years later with responses from 1,656 students. Results showed that among girls, parental divorce has a negative effect on self-esteem which mediates vulnerability to depression. Specifically, girls reported lower self-esteem and a more distant relationship with fathers, which predicted later depression. Although having a close relationship with one's father was beneficial to females, it was less important among males. Males were less susceptible to depression if they were close with their mothers in both intact and divorced families. In sum, perceptions of having a close relationship with one's father can be a protective factor for girls against the long-term effects of divorce that may lead to depression.

Previous research has suggested that the effect sizes found when comparing children from divorced and intact families are quite small (Amato & Keith, 1991). A meta-analysis by Amato (2001) of 67 studies that were published between 1990 and 1999 found that even though studies in the 1990s were more methodologically sophisticated, the effect sizes were comparable to those of studies that were completed in the 1980s. This seminal article concludes that children from divorced families scored, on average, one-fourth standard deviation (-.29) lower than children from intact families on measures of academic achievement, conduct, psychological adjustment, and self-concept. With increasingly sophisticated methodology, it would be expected that effect sizes would be smaller in the 1990s than in previous decades, however this was not the case. When

methodological characteristics were controlled for, a significant curvilinear trend was found in that effect sizes were weakest in the 1980s and strongest in the 1990s on measures of academic achievement, conduct, psychological adjustment, and self-concept. Amato (2001) attempted to explain this with two possible reasons: divorce is occurring more often and among low-discord marriages, and the economic gap is increasing between those in single parent families and intact families. Although divorce can be considered positive if it provides an escape from a high conflict environment to a more harmonious environment, low discord prior to divorce have been associated with negative outcomes on children (Barber & Eccles, 1992). Amato (2001) found that marriages with primarily low discord that end in divorce can lead to psychopathology for children, given that children feel there was little warning and tend to blame themselves for the divorce. Self-blame was related to a variety of indicators of psychopathology including depression, externalizing problems, and lowered feelings of self-competence (Amato, 2001). Complicating children's attempts to cope with divorce is the fact that most children are inadequately informed by their parents about what is taking place and what changes will be occurring in the future as a result of the separation (Kelly & Emery, 2003). These children are left with little explanation as to why the separation is occurring and this can lead to confusion and self-blame because children feel they have little control over the situation that is transpiring. Being able to actively cope (e.g., use strategies such as problem solving and gathering social support) has been described as a mediating factor that can lead to positive adjustment (Amato, 2000).

In a more recent longitudinal study by Lansford and colleagues (2006), both the timing and occurrence of divorce was examined in relation to mother and teacher

reported internalizing and externalizing problems of children in kindergarten through 10<sup>th</sup> grade. A sample of 356 families at time 1 was followed throughout the following 10 years. At the end of the study, a total of 97 children experienced at least one divorce. Each child in the divorce group was matched on gender (52% males), race, and SES with a child in the non-divorced group in order to control for these confounding variables. Parents were interviewed each year as to whether they had divorced within the last 12 months. Parents and teachers also filled out the Children's Behavior Checklist (CBCL) to measure children's externalizing and internalizing behaviors. Results of teacher and parent reports indicated significant differences on externalizing and internalizing behaviors between children experiencing divorce early in life and non-divorced children, with teachers and parents reporting more internalizing and externalizing behaviors for children who experienced divorce early in life (Lansford et al., 2006).

Another important variable to be considered when examining differences between children from divorced and intact families is the family structure following the separation of parents (Amato, 2000; Hetherington & Stanley Hagan, 1999). In a study comparing children from intact, single mother, stepfather, joint custody, and single father families, there were key differences of level of psychopathology depending on the family structure (Breivik & Olweus, 2006). A sample of 2550 students from Bergen, Norway in grades 7 through 9 responded to measures of externalizing behaviors (antisocial behavior measured by the Bergen Questionnaire on Antisocial Behavior, violent behavior measured by questions about physical fighting, and referrals by teachers measured by three items) and internalizing behaviors (depression measured through seven items regarding depressive tendencies and global negative self-evaluations measured through

six items based on Rosenberg Self-Esteem Inventory). Results revealed less externalizing behaviors of children from intact families than all other family structures, with the highest externalizing behaviors reported by children from single father homes. In regards to internalizing behaviors, children from intact and joint custody families reported less internalizing problems than children from single mother and stepfather families.

**Parental conflict and psychopathology.** Children who experience parental divorce are not the only ones at risk for negative outcomes. Children who are exposed to parental conflict, possibly leading up to a divorce, are also an at-risk group. Exposure to overt marital conflict, whether it results in divorce or is experienced within intact families, can have harmful effects on youth development (Steinberg, 2005). Research found that young adults whose parents had low conflict during the years following divorce were less depressed and had fewer symptoms of psychopathology compared with those whose parents had continued high conflict (Steinberg, 2005). Recent research has shown that parental conflict is the foremost link that accounts for differences between the psychopathology of children of divorce and intact families, and that adjustment of children in high-conflict, intact families is worse than that of children of divorced families, suggesting that “exposure to high levels of conflict was more detrimental to children than was parental divorce” (Lansford, 2009, p. 145). Conflict between parents is not only a direct stressor for children but also might interfere with children’s attachment to parents, resulting in feelings of emotional insecurity (Amato, 2001). Barber and Eccles (1992) concluded that the negative consequences of being raised in a high conflict family could be avoided if parents separate. However, Hetherington and Stanley-Hagan (1999) concluded that if high conflict continues after divorce, it is more advantageous for parents

to stay together. Furthermore, they found that direct conflict between divorced parents but not covert conflict was related to behavior problems among adolescents. Continuing parental conflict is a major stressor that has been related to children acting depressed, anxious, angry, demanding, noncompliant, and antisocial (Hetherington & Stanley-Hagan, 1999).

There are several frameworks that have been advanced in an effort to further understand children who are exposed to parental conflicts and their level of psychopathology. The belief that “children’s perceptions and interpretations of conflict in their parents’ relationship play a central role in determining the effect that marital conflict has on children’s emotional and behavioral adjustment” (Ablow, Measelle, Cowan, & Cowan, 2009, p. 485), describes the cognitive-contextual framework proposed by Grych and Fincham (1990). This framework is most salient to children older than age nine due to cognitive immaturity in appraisals experienced by young children (Ablow et al., 2009). Older children are more likely to understand that they may not be the center of marital conflict and therefore can have more accurate cognitive appraisals instead of blaming themselves (Abow et al., 2009). However, older children may be more inclined to become involved in the conflict as a way to restore the family system, end the conflict, and also can be a way to cope with marital conflict. Children’s reaction to conflict is directly related to their adjustment and development.

Another important aspect of interparental conflict involves the specific dimensions of the conflict. Frequency, intensity, content, and resolution are specific elements of conflict that have been described in past research (Grych & Fincham, 1990; Tschann, Flores, Marin, Pasch, Baisch, & Wibbelsmann, 2002; Tschann, Flores, Pasch, &

Marin, 1999). Frequency is defined as the amount of exposure to interparental conflict experienced by children. Intensity describes the conflict, which can range from mild discussions to physical abuse. Content can be defined as the topic of the conflict. Lastly, Resolution refers to how the conflict is resolved; this dimension can range from successful resolution which provides a positive model of problem-solving for children, to poor conflict resolution or unresolved conflicts which can lead to further tension among family members. These four types of conflict are often measured via child and adolescent self-report on the Children's Perception of Interparental Conflict (CPIC; Grych, Seid, & Fincham, 1992). Grych and Fincham (1990) reviewed early literature on interparental conflict and found that children's psychopathology is more likely to suffer when conflict is frequent, intense, focused on topics related to the child, and unresolved.

Tschann and colleagues (2002) examined the relationship between dimensions of interparental conflict and adolescent psychopathology. The sample included 151 Mexican American adolescents, age 12-15 years, from intact families, and their parents. Parents and children were interviewed at baseline and six months later. Parents and adolescents reported levels of interparental conflict by completing the Multidimensional Assessment of Interparental Conflict (MAIC), which measures frequency of conflict, child-related content, conflict behavior, child involvement, and resolution. Conflict intensity was measured through the Conflict Tactics Scale- Form R. Adolescent perceptions of threat and self blame were assessed via eight items that were adapted from the CPIC.

Adolescents self-reported their symptoms of depression (BDI), anxiety (State-Trait Anxiety Inventory Form-Y), and anger (State Anger subscale of the State-Trait Anger Expression Inventory). Results indicated that frequency, content, child involvement, and

resolution were significantly related to adolescent psychopathology, with higher ratings of interparental conflict relating to increased levels of depression, anxiety, and anger.

Research by Harold, Fincham, Osborne, and Conger (1997) provides additional support for the cognitive-contextual framework. Harold and colleagues examined both the direct and indirect effect of children's perceptions of marital conflict on both externalizing and internalizing behaviors. A sample of 146 students in 6<sup>th</sup> and 7<sup>th</sup> grade reported their perceptions of interparental conflict as measured by the CPIC, parent-child relations measured by the Adolescent Perception's of Parental Hostility, and distress. Results revealed a significant relationship between children's perceptions of marital conflict and internalizing symptoms as measured by the CDI and the Revised Children's Manifest Anxiety Scale (RCMAS). Specifically, heightened perception of marital conflict was associated with increased internalizing symptoms. Also, increased perception of marital conflict related to increased externalizing behaviors (as rated by teachers via the Aggression Scale of the CBCL). However, this relationship was no longer significant when parent-child relations were included in the model, indicating that how exposure to marital conflict affects parent-child relationships is important.

A similar study conducted by Turner and Barrett (1998) explored both the indirect and direct pathways between marital conflict and adolescent adjustment with a sample of 203 students in grades 8-10. The CPIC was used to assess students' perceptions of interparental conflict. The Achenbach System of Empirically Based Assessment-Youth Self- Report Form (ASEBA-YSR; Achenbach, 1991) was used to assess social and academic functioning as well as both externalizing and internalizing behaviors. Results revealed that boys and girls who perceived greater conflict severity were more likely to

display both internalizing and externalizing problems. Additionally, girls who perceived both threat and self-blame reported more internalizing problems, while both boy and girls who perceived threat and self-blame were more likely to report externalizing behaviors (Turner & Barrett, 1998). These results are consistent with findings of Harold and colleagues (1997) and highlight the importance of perceived marital conflict on the adjustment of youth when adjustment is viewed in terms of psychopathology (i.e., negative indicators of mental health).

The role of gender in the relationship between conflict and mental health is unclear. Some researchers have suggested that boys are more quickly affected by conflicts because they are more likely to be caught in the middle of the conflict, while other researchers believe that girls are more at risk of being caught in the middle of conflict because they have a greater need to maintain their interpersonal relationships with both parents and resolve the conflict (Sarrazin & Cyr, 2007). In order to examine whether gender differences exist in the relationship between interparental conflict and child maladjustment, Davies and Lindsay (2004) examined a sample of 924 students, primarily Hispanic, in grades six through eight. The sample was evenly distributed between males and females. Participants reported their perception of interparental conflict using the CPIC; internalizing and externalizing behaviors were measured by the ASEBA-YSR. Results revealed that interparental conflict during early adolescence put girls more at risk for internalizing problems than boys. However, gender did not moderate the relationship between interparental conflict and externalizing problems. The researchers explained this finding by suggesting that girls have more socialization pressures to conform to gender roles and have increased interpersonal connectedness



which puts them at higher risk when there is conflict within those relationships (Davies & Lindsay, 2004). Further research is needed in order to understand how interparental conflict affects boys and girls differently.

In sum, extant literature has demonstrated that interparental conflict is an important variable to consider when predicting child psychopathology within both divorced and intact families. Studies have evolved from just comparing children of divorce to children of intact families, to looking at the relationship between conflict and adjustment among children from all types of families. Additionally, research suggests that specific dimensions of conflict are important to consider, including frequency, intensity, resolution, and self-blame.

### **Family Functioning and Positive Indicators of Mental Health**

When considering outcomes of children experiencing stress within the family, much of the literature focuses on a crisis perspective and assesses child outcomes in terms of the presence or absence of psychopathology (i.e., internalizing symptoms of anxiety and depression, externalizing symptoms of aggression and delinquent behaviors). The aforementioned studies have found that family stress is related to both externalizing and internalizing problems within youth. However, in recent years researchers have called for an increased focus on the study of psychological wellness. Psychological wellness can be defined as a comprehensive state that not only includes an absence of psychopathology but also the presence of individuals' strengths and subjective experiences of happiness (Huebner, Gilman, & Suldo, 2007). Although research focusing on wellness lags behind that of psychopathology, in the past two decades there has been an increased amount of studies that examine indicators of optimal functioning in youth.

Literature within the positive psychology field has concentrated on the construct of subjective well-being (SWB). SWB can be defined as an individual's subjective assessment of his or her life and includes an emotional component (i.e., high levels of positive affect, low levels of negative affect), and a cognitive component (i.e., satisfaction with life; Gilman & Huebner, 2003).

Life satisfaction is an important indicator to include in models of wellness because although life satisfaction is more stable over time, it is also sensitive enough to be affected by changes in life circumstances (Park, 2004). In addition, research has shown that life satisfaction can act as a protective factor against the development of psychopathology (Suldo & Huebner, 2004a). Recent research has underscored the relevance of SWB to children's optimal functioning. Specifically, Suldo and Shaffer (2008) found support for a dual-factor model of mental health among a sample of 349 middle school students. Students with both high SWB and low psychopathology functioned better (i.e., better physical health, student achievement, and social relationships) than those students that had low SWB as well as low psychopathology. Additionally, students with clinical levels of psychopathology but high levels of SWB had superior social functioning and physical health when compared to students with clinical levels of psychopathology and low levels of SWB (Suldo & Shaffer, 2008). These results highlight the importance of being satisfied with one's life due to its association with positive developmental outcomes in youth. The subsequent section will review studies that have examined links between family functioning and life satisfaction, a positive indicator of mental health.

**Parent-child relationships and life satisfaction.** Aspects of parent-child relationships that have been associated with life satisfaction include: attachment, parent-child conflict, and authoritative parenting (i.e. support and acceptance; Suldo, 2009). Regarding parent-child conflict, Shek (1998) examined the relationship between paternal and maternal conflict among a sample of 378 12-16 year old Chinese adolescents. This study examined the outcomes of parent-child conflict both concurrently and one-year later via self-report measures of satisfaction with life (Satisfaction with Life scale [LIFE]), general health (Chinese version of the General Health Questionnaire [GHQ]), and parent-child conflict for both parents (Parent and Child version of the Father-Adolescent Conflict Scale and Mother-Adolescent Conflict Scale). Results revealed that higher levels of parent-child conflict were associated with lower life satisfaction at both time periods. Father-child conflict had a stronger relationship with life satisfaction highlighting the importance of having a positive relationship between children and both parents.

Another important characteristic of parent-child relationships is whether the child perceives warmth and support from their parents. Suldo and Huebner (2006) studied life satisfaction (via the Students' Life Satisfaction Scale, [SLSS]) in relation to perceived social support from parents, classmates, close friends, and teachers (measured via the Child and Adolescent Social Support Scale [CASSS]) among 698, 11-19 year olds. High life satisfaction was associated with more perceived social support from parents. This finding is consistent with previous research that examined the characteristics of authoritative parenting (e.g., strictness/supervision, social support/involvement, and autonomy granting) and life satisfaction, as parental social support (measured via the

Family Support Scale [FSS]) was the dimension of authoritative parenting most highly associated with life satisfaction (Suldo & Huebner, 2004b). That study included 1188, 11-19 year old students from multiple middle and high schools. The sample was of primarily Caucasian and African American, with females equaling 64% of the total sample. Participants completed the FSS, SLSS, and the YSR, as well as measures of autonomy granting (Psychological Autonomy Granting subscale of the Authoritative Parenting Measure [APM]) and strictness (Strictness/Supervision subscale of the APM). This cross-sectional study found significant, positive links between life satisfaction and all three characteristics of authoritative parenting across early, middle, and late adolescence. Additionally, results revealed that the strength of the relationship between parenting characteristics and life satisfaction declined as age increased, suggesting that as children age, other factors in their environment play a role in their perceived life satisfaction (Suldo & Huebner, 2004b).

Milevsky, Schlechter, Netter, and Keehn (2007) examined both maternal and paternal parenting styles and their association with positive indicators of psychological adjustment (i.e., self-esteem and life satisfaction) in addition to depression. Participants in the study included 272 students, most of whom were European American, in grades 9-11. Parenting styles were measured using the acceptance/involvement and the strictness/supervision subscales of the APM. Life satisfaction was measured with only one question, asking the participants to rate their overall life satisfaction on a scale from 1 to 7, with one being extremely dissatisfied and 7 being extremely satisfied. Results revealed that both maternal and paternal authoritative parenting styles were associated with the highest life satisfaction and self-esteem, and the lowest depression scores

(Milevsky et al., 2007). This study added to the literature by looking at parenting styles separately for mothers and fathers, rather than combining scores. The findings of this study support previous research (Suldo & Huebner, 2004b), in that authoritative parenting was found to be associated with the best psychological adjustment, including higher life satisfaction.

Taken together these studies demonstrate the importance of parent-child relationships to children's life satisfaction. Children who perceive greater warmth, acceptance and support from their parents are more likely to have higher life satisfaction. On the other hand, parent-child relationships characterized by conflict have been shown to be related to lower life satisfaction.

**Major life events/economic hardship and life satisfaction.** Research has examined children's life satisfaction in relation to major life events that are acute, such as the death of a family member, as well as chronic stressful events, such as family discord. Ash and Huebner (2001) conducted a study in order to examine both acute and chronic life stressors and their relationship with life satisfaction. A total of 152 students in grades 9-12 participated, with the majority of the sample being Caucasian. Participants responded to questions regarding life stressors (measured by the Life Stressors and Social Resources Inventory-Youth Form [LISRES-Y]), environmental resources (LISRES-Y items), locus of control (measured by the Nowicki-Strickland Locus of Control Scale [LOCS]), and their life satisfaction (measured by the SLSS). Primary findings included that both chronic stressors and acute stressors were significant predictors of life satisfaction, but chronic stressors exerted more of a direct effect on children's life satisfaction. Also notable, students from low socioeconomic status (indicated by free

lunch status) had lower life satisfaction than children from high income families, suggesting that poverty or low socioeconomic status is associated with lower life satisfaction among children, perhaps due to increased family stress (Ash & Huebner, 2001).

McCullough, Huebner, and Laughlin (2000) also examined major life events and chronic stressful events and their relationship with SWB (positive affect, negative affect, and life satisfaction). A sample of 92 students in high school completed measures of positive events, negative events, daily events, and major events using the Adolescent Perceived Events Scale (APES), positive and negative affect (measured via the Positive and Negative Affect Schedule [PANAS]) and life satisfaction (measured by the SLSS). Positive daily events were the strongest contributors to life satisfaction ( $r = .40$ ), and uniquely contributed to the variance in life satisfaction above that of major life events (McCullough et al., 2000). However, major life events did not significantly predict reported positive affect.

In order to further understand how stressful events are related to life satisfaction, Suldo and Huebner (2004a) tested whether life satisfaction served as a moderating variable between stressful events and children's psychopathology. A sample of 816 students in grade 6-11 participated in a longitudinal study. The sample primarily consisted of African American students (60%); the majority of participants received free or reduced lunch (60%). Students completed the SLSS, YSR, and indicated the frequency with which they experienced adverse life events in the past year (via the Life Events Checklist [LEC]). Findings supported a model including life satisfaction as the moderating variable between stressful life events and children's externalizing behaviors.

In other words, life satisfaction acted as a buffer in that children with high life satisfaction were less prone to demonstrate externalizing behavior problems in the face of stressful life events (Suldo & Huebner, 2004a).

In sum, preliminary research suggests that whether stressful events are chronic or acute contributes to the inverse relationship between stressful events and life satisfaction (Ash & Huebner, 2001; McCullough et al., 2000). Such findings aid in further understanding the types of stressors that affect children's life satisfaction and supports the importance of distinguishing between chronic and major life events. Additionally, the finding that life satisfaction can act as a moderating variable has implications for the importance of promoting subjective well-being in youth, in that life satisfaction can be considered a protective factor in the face of adversity.

**Changes in family structure and life satisfaction.** Although the aforementioned studies found that chronic stressful events have a greater relationship with life satisfaction than major life events such as divorce, it is notable that major life events still account for variance in life satisfaction (Ash & Huebner, 2001; McCullough et al., 2000; Suldo & Huebner, 2004a). However, when examining links between changes in family structure and life satisfaction, most studies have focused on the life satisfaction of the parents. A review of the literature found only a few studies that examined family structure in relation to youth life satisfaction (Lee & Gramotnev, 2007; Lucas, 2005; Luhmann & Eid, 2009).

In a study of 2,758 Chinese students in secondary school, from both intact and divorced families, youth completed 5 items on the LIFE scale. Children from intact families indicated a higher satisfaction with life than children of divorce ( $M= 18.35$  and

$M= 16.64$ , respectively; Shek, 2007). Research with American children further distinguished between intact and divorce families and examined family structure, defined as whom the child lives with (e.g., living with both mother and father, mother only, father only, mother and stepparent, father and stepparent, mother and another adult, father and another adult, and other relatives, non-relatives, or guardians; Zullig, Valois, Huebner, & Drane, 2005). The sample included 5,021 students in grades 9-12, with 50% of the sample being Caucasian and the other 50% African American. Findings varied depending on gender and race. Caucasian females living with both parents and African American females living with their mother only were less likely to report dissatisfaction with life. Additionally, Caucasian males and females and African American females living with others besides their parents reported increased dissatisfaction with life compared to other groups. Furthermore, African American males living with their fathers only were more likely to be dissatisfied with life (Zullig et al., 2005).

Storksen and colleagues (2005) also studied whether adolescents' subjective well-being differed between children experiencing parental divorce or separation and those who have not. In this longitudinal study of 1,758 Norwegian students in grades 8-13, subjective well-being was measured through three questions (an example item includes "when you think about the way your life is going at the present, would you say that you are by and large satisfied with life or are you mostly dissatisfied?"). Self-esteem (Rosenberg Self-Esteem Inventory) and school functioning (14 questions regarding academic problems, conduct problems, and lack of joy in school) were also examined. Results revealed that there were significant group differences between children of divorce and children from intact families. Children of divorce had lower subjective well-being



and self-esteem and increased school problems. Longitudinal results indicated that between time points, children in the divorce group experienced a larger decrease in subjective well-being and a lower increase in self-esteem when compared to children from intact families. When gender was examined, subjective well-being of boys at Time 2 (4 years later) did not differ between groups, and the decline in subjective well-being was more pronounced for girls than for boys (Stroksen, Roysamb, Moum, & Tambs, 2005). This study indicates that not only is divorce associated with reduced subjective well-being in girls when it occurs, but also as long as four years following the divorce.

Overall, the literature suggests that children from intact families have higher psychological well-being than children from divorced families. Furthermore, these results elucidate the importance of examining the family composition and not just dividing children into intact versus divorced groups. In addition, results suggest that there are differences in life satisfaction as a function of family status depending on gender and race.

**Parental conflict and life satisfaction.** Most research on interparental conflict has been studied under the umbrella of research on stressful life events. Research has demonstrated that chronic life stressors, such as ongoing parental discord, are related to lower levels of life satisfaction (Ash & Huebner, 2001; McCullough et al., 2000). Marital conflict in these studies was examined through a life events checklist and no further information was obtained about the nature of the marital conflict. In a review of the literature, one study that examined children's life satisfaction in relation to their parent's marital quality and status was located. A total of 6,820 college students, ages 18-35, from 39 countries responded to questions about their global life satisfaction (as measured

by the LIFE scale) and information regarding the quality and status of their parent's relationship (assessed by having students choose from 9 choices the statement that best describes their parent's marriage). Results of this multi-national study reveal that marital quality accounted for more of the variance in life satisfaction than marital status (Gohm, Oishi, Darlington, & Diener, 1998). Similar studies with children and adolescents have not yet been conducted.

In sum, preliminary findings suggest that interparental conflict is an essential variable to consider when studying subjective well-being. However, more research is needed that includes measures that consider multiple characteristics of the conflict (e.g., frequency, intensity, resolution) instead of having participants indicate whether conflict occurs or not. Increased understanding is needed in order to determine the strength of the association between interparental conflict and life satisfaction.

Another general outcome studied among adolescents, besides positive and negative indicators of mental health, is substance use. Although substance use could be conceptualized as a specific externalizing behavior, casual and problematic use of illicit substances often occurs outside the context of mental illness. During adolescence, substance use is often conceptualized as a specific type of risky behavior. The following section briefly reviews the literature on the prevalence of adolescent substance use, as well as summarizes studies on the relationship between family stressors and adolescent substance use.

### **Family Stressors and Adolescent Substance Use**

One specific indicator of psychopathology that has been shown to be associated with family stressors (i.e., negative parent-child relationships, major life events/

economic hardship, changes in family structure, parental conflict) as well as low life satisfaction, is substance use (Barrett & Turner, 2005; Henry, Robinson, & Wilson, 2003; Skeer, McCormick, Normand, Buka, & Gilman, 2009; Zullig et al., 2001). Large national studies such as Monitoring the Future (2008) and the National Survey of Drug Use and Health (2008) provide important information about the general prevalence of substance use among middle and high school students. Additionally, researchers have also studied how family stressors affect substance use among adolescents. The following section begins by outlining the prevalence of adolescent substance use, and follows by reviewing the literature on the relationship between family stressors (parent-child relationships, major life events/economic hardship, family structure, and interparental conflict) and substance use among adolescents.

**Prevalence of adolescent substance use.** Research indicates that the greatest escalation of alcohol use occurs between 12 and 15 years of age (Brown, 2008), supporting the importance of examining substance use among youth. According to the results of the National Survey on Drug Use and Health (2008), 17% of students age 12-20 reported alcohol use within the past month and 9% of students age 12-17 years indicated smoking a tobacco product within the past month. Regarding marijuana use, 6% of students 12 years or older reported using marijuana within the past month, the most commonly used illicit drug (National Survey on Drug Use and Health, 2008). The Monitoring the Future survey has highlighted the early initiation of drug use among young adolescence, reporting 20% of eighth grade students indicating that they have used an illicit drug at some time, with the highest percentage (15%) for marijuana use (Johnston, Backman, & O'Mailey, 2008). In regards to alcohol use, 39% of eighth grade

students reported ever using alcohol and 16% reporting alcohol use within the past month (Johnston et al., 2008). When considering cigarette use, which is the most persistent of any drugs used, results indicate that initiation begins as early as seventh and eighth grade, with 21% of eighth grade students reporting that they have tried cigarettes and 7% reporting smoked in the past month (Johnston et al., 2008). Prevalence of substance use within different racial groups has indicated that African Americans have the lowest rates of substance use overall. Use of marijuana, cocaine, crack, and heroine use in eighth grade is highest among Hispanic students, while cigarette smoking is highest among Caucasian students (Johnston et al., 2008).

In attempts to further understand the national problem of youth substance use, studies have examined several variables, including the influence of family stressors, on adolescent substance use. The literature on this topic is reviewed in the following sections.

**Parent-child relationships and substance use.** Relationship characteristics such as greater perceived support, more time spent with the family, and greater warmth are considered protective factors against substance use (Barrett & Turner, 2005). In a study of 18 to 23 year olds, Barrett and Turner (2005) used a sample drawn from a previous study of sixth and seventh grade students to examine the effects of family stress on substance use of adolescence. The diverse sample consisted of 1760 respondents (25% Cuban, 25% Caribbean, 25% African American, and 25% White). Participants were asked to reflect on their experiences during youth and answered questions about who they lived with during ages 13 to 18 years (which was indicative of family structure), substance use, socio-economic status based on parents' income, occupational category,

and educational attainment. Respondents also self-reported perceived family support (measured by two scales: positive family relations and family cohesion), parenting style (measured by four items based on the four parenting styles), substance use by family members, and stress exposure (measured by four indices: family stress, chronic stressful events, major events within the past year, and a discrimination scale). Results revealed that high levels of perceived family support were associated with lower substance use in early adulthood. However, authoritative parenting was not predictive of lower risk for substance use. Respondents from single-parent families that had at least one other adult relative reported lower levels of substance use than respondents from single parent families without additional support from extended family. Taken together, these findings suggest the importance of a supportive family environment.

Henry, Robinson, and Wilson (2003) also found a direct negative relationship between parental support and adolescent reports of substance use. A sample of 214 high school students (90% Caucasian, 6% African American, 2% Native American, 2% other ethnic group) responded to questionnaires regarding their alcohol use, family system qualities (Family Hardiness Index and Family Coherence Index), and quality of parent-child relationships. In regards to parent-child relationships, participants reported on parental behaviors such as support, induction, love, withdrawal, and punitiveness via the Parent Behavior Measure. Results revealed that adolescents who perceived greater support from their parents reported significantly less substance use (Henry et al., 2003). Additionally, family hardiness and coherence were shown to have a negative relationship with adolescent substance use indirectly through a direct positive relationship with parental support. Parental support was the only parental variable that was significantly

related to adolescent substance use, therefore greater parental support, such as encouragement, praise, and physical affection, was associated with lower substance use (Henry et al., 2003). The aforementioned studies highlight the important relationship between perceived parental support and adolescents reported substance use. Parental behaviors that provide both emotional and resource support can be considered protective factors for adolescent substance use. Additionally, two other family system qualities that exerted an indirect relationship on adolescent substance use (through parental support) were family hardiness and coherence. Both family hardiness and coherence are indicative of how families respond to stressful events and act as a unified front to appropriately deal with stressful situations, suggesting that a family's reaction to stress is important.

**Major life events/economic hardship and substance use.** There are several theoretical models that attempt to explain adolescent substance use. One such theory that has gained attention in the adolescent substance use literature is the Social Stress Theory, which states that adolescents who incur high levels of stress, including chronic economic hardship, experience negative affect and increased substance use as a way to cope (Pearlin, Menaghan, Lieberman, & Mullan, 1981). Although some literature may overestimate that relationship between life stress and substance use, due to use of measures of stress that include items that reflect conduct problems, studies that only include uncontrollable events still show a significant relationship between stress and adolescent substance use (Chassin, Hussong, Barrera, Molina, Trim, & Ritter, 2004).

Although chronic economic hardship has been shown to exacerbate the level of stress already experienced by adolescents, the relationship between economic hardship and substance use among adolescents is unclear. The Monitoring the Future Survey

(2008) revealed a relationship between low socio-economic status (SES) and increased adolescent substance use. In regard to use of marijuana, cocaine, binge drinking, and cigarettes among eighth grade students, trends suggest negative relationships between SES (as measured by parental education level) and substance use (Monitoring the Future, 2008). This negative relationship disappeared as age increased, and at grade 12, there were no significant links between substance use and SES. These later results are consistent with several studies that also found no relationship between SES and substance use (Hoffman, Cerbone, & Su, 2000; Spijkerman, Eijnden, & Huiberts, 2008). Contrastingly, other research has found that adolescents from higher SES families use substances more in comparison to adolescents from low SES families (Aseltine & Gore, 2000; Barrett & Turner, 2005; Hansen & Chen, 2007; Jeynes, 2001). This may be due to adolescents from higher SES families having increased financial means to support substance use as well as increased access to substances.

Highlighting the positive relationship between stressful life events and adolescent substance use are results of a study using four years of data from the Family Health study (Hoffman, Cerbone, & Su, 2000). The study was primarily interested in the escalation of substance use among early to middle adolescents, so the sample was restricted to children adolescents ages 11-14 during the first year of data collection. A total of 651 adolescents, primarily Caucasian, and their parents responded to questionnaires regarding stressful life events (measured by the Junior High Life Experiences Survey and the Family Inventory of Life Events and Life Changes), Self-Efficacy (measured by the Mastery Scale), Self-Esteem (Rosenberg Self-Esteem Inventory), Family Attachment (assessed through 15-items derived from FACES-III), socio-economic status (demographic question of family

income), and drug and alcohol use (assessed through nine questions about use of substances in the past year). Results indicate a positive relationship between increases in life events and increases in drug use. Importantly, this finding was independent of increases in drug use due to age and peer drug use. Other studies have found similar positive relationships between experiencing stressful life events and adolescent substance (Aseltine & Gore, 2000; Barrett & Turner, 2005).

**Family structure and substance use.** One particular stressful event that has been examined in relation to substance use involves family structure (Barrett & Turner, 2005; Breivik & Olweus, 2006; Hemovich & Crano, 2009; Hayatbakhsh, Najman, Jamrozik, Mamun & Alati, 2006; Paxton, Valois, & Drane, 2007). One such study investigated the relationship between family structure and adolescent substance by utilizing the data from the 2004 Monitoring the Future survey (Hemovich & Crano, 2009). The sample included 37,507 eighth, tenth, and twelfth grade students who reported their lifetime use of inhalants, marijuana, and amphetamines on a range from 0 (no usage) to 6 (40 or more occasions), as well as their household composition. A total of 78% of the sample reported living in a dual-parent household and of those that reported living with only one parent, 82.5% lived with their mother. Results revealed significant differences in substance use as a function of family structure. Students from father-only structures used all three substances significantly more than either mother only or dual parent families. Additionally, children from dual parent families used significantly less marijuana and amphetamines than mother only families. This study highlights differences in illicit drug use among students from dual parent families and single parent families. The results of



the study suggest that students from single-parent families may be at greater risk for substance use when compared to those from dual parent families.

Regarding substance use among younger students, Paxton, Valois, and Drane (2007) investigated the relationship between family structure and substance use among 2,138 middle school students (43% African American and 57% Caucasian). The Middle School Youth Risk Behavior Survey (MSYRBS) was utilized to measure participants' use of alcohol, tobacco, and other drugs. Participants also self-reported their family structure (measured by one question) and socio-economic status, which was measured by the student's receipt of free/reduced price school lunch. Results on the relationship between family structure and substance use were reported according to race and gender. African American females living with both parents were less likely to try or use cigarettes in comparison to those living with their father and stepmother/other adults. African American males living with other relatives, non-relatives, or guardians were more likely to smoke cigars, cigarettes, and marijuana compared to those living with both parents. Caucasian females living with both parents were less likely to smoke cigarettes, cigars, marijuana, ever use inhalants, and ever drink compared to females living with their mother only or their mother and stepfather/other adult. Lastly, Caucasian males living with both parents were less likely to ever drink, ever use marijuana, and ever try cigarettes compared to all other family structures. The results of this study provide support for the notion that residing in a dual parent family is associated with less substance use, while single parent or blended families may place a student at risk for use of substances.

In sum, results of several studies indicate that living with both parents appears to be a protective factor against substance use (Barrett & Turner, 2005; Jeynes, 2001; Hayatbakhsh et al., 2008; Hayatbakhsh et al., 2006). One particular variable that has been shown to be more salient than family structure is conflict between parents, regardless of whether the parents are divorced or together. The following section will review the literature on the relationship between interparental conflict and substance use.

**Interparental conflict and substance use.** Although several of the aforementioned studies found a relationship between family structure and substance use, when family conflict has been included in the analyses, the relationship between family structure and substance use disappears (Amato & Keith, 1991; Hayatbakhsh et al., 2006; Kristjansson, Sigfusdottir, Allegrante, & Helgason, 2008).

One particular study that investigated links between parental divorce, adolescent substance use, and interparental conflict found that family conflict was more salient to adolescent substance use than family structure (Kristjansson et al., 2008). Results were derived from the Youth in Iceland study, which included 7,430 participants, ages 14-16 years (50% male). Students responded to questions regarding their smoking and alcohol use in the past 30 days, their parents' marital status, and the amount of family conflict (measured through four questions: "Have you been involved in a serious argument with your parents?", "Have you witnessed a serious argument by your parents?", "Have you been involved in physical violence in your home?", and "Have you witnessed physical violence in your home?"). Results revealed that students who experienced parental divorce doubled their odds of cigarette smoking and increased their odds of using alcohol by 66%. However, when family conflict variables were included in analyses, the

relationship disappeared for both cigarette and alcohol use (Kristjansson et al., 2008). All family conflict variables were significantly related to adolescent substance use, including witnessing a serious argument or physical violence between two adults in the household. This study highlights the importance of the quality of the relationship, and not just whether the parents are married or divorced, in relation to adolescent substance use.

Another relevant study found a relationship between family conflict and adolescent substance use disorders (Skeer, McCormick, Normand, Buka, & Gilman, 2009). The study utilized data from the Human Development in Chicago Neighborhoods in order to investigate whether family conflict during childhood increased the risk for adolescent substance use disorders (Skeer et al., 2009). A total of 1,421 adolescents were involved in the three wave study that followed participants from ages 10 to 22 years. Familial conflict was assessed at Wave 1 when participants were ages 10-16 years, and adolescent substance use was assessed at Wave III when participants were ages 15-22 years. Substance use disorders were assessed utilizing an adapted measure from the National Household Survey on Drug Abuse. Familial conflict was measured using the conflict-subscale of the Family Environment Scale (FES), via nine items such as: “We fight a lot in our family” and “Family members sometimes hit each other”. Results revealed a significant positive relationship between the level of familial conflict at Wave I and substance use disorders at Wave III. Although this study did not specifically look at interparental conflict, it underscores the importance of considering the quality of relationships between family members, which includes the relationship between parents, when investigating adolescent substance use.

Notably, there is a gap in the literature that is pertinent to the link between adolescent substance use and family relationship variables such as interparental conflict. The few studies that look at the quality of relationships and adolescent substance use focus on parent-child relationships (Barrett & Turner, 2005; Henry et al., 2003). Research has also examined the relationship between interparental conflict and adolescent psychopathology, specifically externalizing and internalizing symptoms (Davies & Lindsay, 2004; Harold et al., 1997; Tschann et al., 2002). Although substance use can be considered an externalizing behavior, externalizing behavior is most often measured via global measures such as the CBCL or the YSR that do not specifically measure substance use. Considering the impact that interparental conflict has been shown to have on both positive and negative indicators of adolescent mental health, it is important that future research address this gap in the literature. Specifically well-designed studies of substance use in relation to interparental conflict, using valid measures of this multi-dimensional construct, are needed.

Also, a relationship between family stressors and adolescent substance use has been shown in previous research, the mechanism by which this relationship occurs is not clear. Hypotheses may be generated from the small literature base (specifically, two studies) that suggests that students' global appraisals of life satisfaction mediate the relationship between family influences and negative outcomes. The following section reviews the current literature on this topic.

### **Life Satisfaction as a Mediator**

In the first study relevant, McKnight, Huebner, and Suldo (2002) examined relationships between stressful life events, global life satisfaction, and psychopathology

among a sample of 1,201 students in grades 6-12. The sample consisted primarily of African American (57%) and Caucasian (34%) students. Participants completed measures of life satisfaction (i.e., the SLSS), problem behavior (i.e., the YSR), stressful life events (i.e., the LEC), and personality (i.e., the Abbreviated Junior Eysenck Personality Questionnaire). Results indicated an inverse association between stressful life events and students' life satisfaction, and a positive association between stressful life events and students' levels of internalizing and externalizing symptoms. Further analyses indicated that life satisfaction partially mediated the association between stressful life events and internalizing behaviors as well as between stressful life events and externalizing behaviors. Specifically, the relationship between stressful life events and both externalizing and internalizing behaviors was decreased once life satisfaction was considered. Specifically, lower amounts of stressful life events were related to higher levels of life satisfaction, which in turn predicted lower levels of problem behaviors, particularly internalizing behaviors. As the LEC includes stressors that are directly related to the family, this study provides support that life satisfaction can serve as the pathway by which stressors in one's family life lead to psychopathology during youth.

Another study utilizing the same sample as mentioned above, by Suldo and Huebner (2004b), further supports the idea that life satisfaction can play a meditational role in the relationship between family functioning and negative outcomes. This particular study examined the relations between dimensions of authoritative parenting (psychological autonomy granting, social support/involvement, and strictness-supervision), life satisfaction, and psychopathology. Participants completed the SLSS and YSR, as well as measures of parental support (Family Support Scale), autonomy

granting, and strictness/supervision (subscales of the Authoritative Parenting Measure). Results revealed that all the dimensions of authoritative parenting were inversely related to students' levels of internalizing and externalizing forms of psychopathology. Additionally, life satisfaction was shown to fully mediate the relationship between parental social support and psychopathology, as well as partially mediate the relationship between the other two authoritative parenting dimensions and psychopathology. Thus, the influence of authoritative parenting on psychopathology was reduced once life satisfaction was considered. In the case of parental support, higher levels of parental support predicted higher life satisfaction; high life satisfaction, in turn, co-occurred with fewer symptoms of psychopathology. Further, the previously identified link between parental support and psychopathology was not evident once the mediating role of life satisfaction was included in the model. In the case of strictness/supervision and psychological autonomy granting, these dimensions of authoritative parenting yielded direct, inverse links with psychopathology, as well as indirect effects through their positive influence on life satisfaction. This study provides additional support for life satisfaction as an important mechanism in which family experiences influence adolescent psychopathology.

Although research indicates that life satisfaction may serve as a mediator between family functioning and negative outcomes, the potential for life satisfaction to mediate the relationship between family stressors and one type of problem behavior, substance use, has yet to be examined empirically. For a variable to serve as a mediator, it must be related to both the predictor and outcome variables (Baron & Kenny, 1986). Earlier sections of this paper established that life satisfaction is empirically associated with the

hypothesized predictor (i.e., family functioning). The following section summarizes results of the few studies that have examined adolescent life satisfaction in relation to the hypothesized outcome- substance use.

### **Life Satisfaction and Substance Use**

Although there are many studies that support a relationship between psychopathology and substance use, there are few studies that examine the association between positive indicators of well-being, such as life satisfaction, and substance use. A review of the current literature examining this relationship reveals a total of only four published studies, with only one (i.e., Zullig, Valois, Heubner, Oeltmann, & Drane, 2001) focusing exclusively on the association between life satisfaction and substance use.

Zullig and colleagues utilized data from the South Carolina Youth Risk Behavior Survey completed in 1997 to investigate adolescents' life satisfaction and how it related to their substance use. The sample consisted of 5,032 students in grades 9-12 (52.7% female, 47.3% male; 52.7% Caucasian, 47.3% African American). Students completed six items representing satisfaction in several domain of life (i.e., family, friendship, school, self, living environment, and overall life), and also self-reported their use of cigarettes, tobacco, alcohol, marijuana, cocaine, crack, inhalant, injection drug, and steroid. Analyses were conducted separately for race and gender groups. Results revealed that out of the 21 substance use behaviors, a negative relationship between life satisfaction and all 21 types of substance types was found for Caucasian females. Further, life satisfaction was inversely associated with 16 out of the 21 substance types among African American females, Caucasian males, and African American males. Although each of these groups had 16 significant inverse correlations, the specific type of

substances that were linked to life satisfaction varied by group. Overall, use of substances (particularly use of alcohol, inhalants, smoking before age 13 years, injection drug, and steroids) was related to low life satisfaction for all four gender/race groups. Whereas smoking after age 13 was only a significant predictor of reduced life satisfaction in Caucasian females and African American males, cocaine use (past 30 days) was significant for all groups except black females, and marijuana use was significant for all groups except black males (past 30 days) and black females (initiation  $\geq$  age 13). Since this study is cross-sectional in nature and involved recall of earlier behaviors, it is unknown if a causal association exists between substance use and life satisfaction. Further research is also needed because this sample may not generalize to the population as a result of consisting of only Caucasian and African American adolescents.

The second study that examined the relationship between life satisfaction and substance use among adolescents was conducted by Kuntsche and Gmel (2004). This study focused on alcohol use among students in grades 8 and 9 in Switzerland. In particular, this study grouped students according to their risky single occasion drinking (RSOD) and their level of social integration, yielding a total of four groups (social non-RSOD, social RSOD, solitary non-RSOD, solitary RSOD). Data were utilized from the 2002 Health Behavior in School-Aged children survey, consisting of 3,861 students (45.6% in grade 8; 49.3% male; 82.4% Swiss, 17.6% foreigners) who responded to questions regarding their RSOD, social life, loneliness, life satisfaction, self worth, depression, bullying, and hitting behavior. RSOD was measured via one question (“Have you ever had so much alcohol that you were really drunk?”) with a total of 5 response choices ranging from “yes once” to “drunk 2 or more times”. Life satisfaction was also



measured via one question asking students to rate their life satisfaction on a scale of 0 (*worst possible life*) to 10 (*best possible life*). In order for students to be grouped into solitary or social RSOD, they rated how often they go out with friends in a week and whether they ever feel lonely. Results revealed that the students in the RSOD groups (solitary and social) rated their life satisfaction significantly lower than non-RSOD groups. Additionally, solitary RSODs were more likely to be female and to have lower life satisfaction ratings compared to the social RSOD group. The findings of this study reveal that students who binge drink, especially those that feel socially isolated, are more likely to have lower life satisfaction. However, this study measured life satisfaction with only one question instead of utilizing a measure with strong reliability and validity.

In contrast to the aforementioned study by Kuntsche and Gmel (2004), a third study by Piko and colleagues (2005) focused on smoking behaviors among 2,387 (46% males) adolescents. The sample consisted of students ages 13-20 from Hungary (560), Poland (662), Turkey (626), and the USA (539). Participants responded to questions regarding smoking ('How many times in the last three months have you smoked cigarettes?'), which was rated on a scale from 1 (*not at all*) to 7 (*regularly, more than 20 a day*), and life satisfaction (measured via the Life Satisfaction Scale). Additionally, participants reported on other personal and social factors (future-orientedness, academic achievement, hostility, social comparison, and number of peers that smoke) that could potentially influence smoking behavior. In regards to the relationship between life satisfaction and smoking, results revealed that life satisfaction either directly related to smoking in all countries, such that high life satisfaction was related to lower rates of smoking. This study provides support for a negative relationship between tobacco use

and life satisfaction. Although this study utilized a more reliable and valid measure of life satisfaction, this study may not be generalizable due to lack of diversity within the USA sample, which consisted of students from two high schools in Iowa.

The latest study examining this relationship focused on cannabis use among 8,225 students in grades 7-12, from British Columbia (Tu, Ratner, & Johnson, 2008). The data utilized for this study were taken from the British Columbia Youth Survey on Smoking and Health 2, which included data from 49 schools: 42 high schools, 5 alternative schools, and 2 middle schools. The majority of the sample was White (72.2%), and the rest of the sample identified as Aboriginal (16.7%), and other (11.1%). Students responded on measures of life satisfaction (four domains of the MSLSS: family, friends, school, self), and cannabis use (measured via two questions: lifetime use and use within the past 30 days). Responses to frequency of cannabis use was then categorized into “never users”, “frequent users” ( $\leq 9$  times in past 30 days), and “heavy users” ( $\geq 10$  times in past 30 days). Male frequent users reported lower satisfaction with their family, friends, and school, compared to males that never used cannabis. Male heavy users reported lower satisfaction with self compared to males that never used. In regards to females, frequent and heavy users reported lower satisfaction in all domains of life compared to non-users. Noteworthy, male frequent users reported higher satisfaction with self than non-users. Authors hypothesize that this finding may be due to cannabis use leading to misperceptions about social cues which protects youth from social anxieties commonly experienced during adolescents. These findings indicate a general negative relationship between life satisfaction and cannabis use in youth.

The aforementioned studies within this section demonstrate the existence of a negative relationship between life satisfaction and substance use among adolescence. Research examining this relationship has also indicated that the strength of the relationship may vary by differences in student groups (i.e., gender, frequency of substance use). However, a review of the literature highlights several limitations that future studies should address. The studies examining this relationship lacked diverse samples; therefore future studies should examine this relationship among representative samples, of culturally and ethnically diverse students. Additionally, it is unclear which factors (such as stress within one's family) may lead to low life satisfaction which, in turn, may lead to substance use.

## **Conclusions**

A review of the extant literature indicates that family stressors (i.e., aversive parent-child relationship, major life events/economic hardship, changes in family structure, interparental conflict) are related to negative indicators of mental health (i.e., externalizing/internalizing behaviors). Although there is an abundant amount of literature examining the relationship between mental health problems and children from divorced families, recently there has been a shift in focus to interparental conflict in relation to negative indicators of mental health. Because this development is recent, there is limited research examining interparental conflict, and of studies that do investigate this family stressor, few have examined interparental conflict comprehensively via studying multiple dimensions of conflict.

Another recent shift in research reflects a growing understanding of the importance of not only examining negative indicators of mental health, but positive

indicators (for instance, life satisfaction) as well. It is perhaps equally important to gain an understanding of how family stress relates to changes in indicators of mental health that assess the full range of being, from unhappy to thriving. Life satisfaction is one such positive indicator that has been employed increasingly as an outcome variable. However, few studies have examined how family stressors, especially interparental conflict, are associated with levels of life satisfaction.

A few studies have indicated that life satisfaction serves as a mediator in the relationship between stress and negative outcomes in youth. The studies have demonstrated that the relationship between family variables (i.e., authoritative parenting, stressful life events) and problem behaviors (i.e., externalizing and internalizing forms of psychopathology) is mediated through adolescents' life satisfaction. Another negative outcome particularly relevant during adolescence is the use of substances. Although substance use can be conceptualized as an externalizing behavior, there have been no studies that have examined life satisfaction as a mediator between family experiences and substance use among adolescents. Research examining substance use among adolescents indicates that adolescents begin to initiate substance use during early adolescence (i.e., middle school). Research is warranted on how experiencing family stressors during this developmental period is related to substance use among early adolescents, as well as the mechanisms by which this relationship occurs, for instance via life satisfaction. Gaining further understanding of these relationships will provide an empirically-based rationale for where mental health professionals should focus their efforts in terms of family-focused prevention and intervention targets.

### **Chapter III: Method**

The current study examined the relationship between family stressors, adolescents' global life satisfaction, and their use of substances (i.e., alcohol, tobacco, marijuana). Specifically, this study aimed to provide further information on which family stressors (e.g., SES, major life events, family structure, interparental conflict) are most strongly associated with early adolescents' life satisfaction. Additionally, this study determined if life satisfaction is a cognitive pathway by which family stressors relate to students' substance use. The following chapter outlines the participant characteristics, the procedures used during the data collection process, the measures utilized to examine the key variables of interest, and the planned analyses for each research question. Furthermore, the ethical considerations are discussed.

#### **Participants**

Participants for this study were six through eighth grade students enrolled in two middle schools in a school district near the university that the author of the current study attends. School # 1 has a total of 1026 students and School # 2 has a total of 917 students. The two schools were chosen due to their socioeconomic variability, with one middle school consisting of 50% of students of low SES (i.e., qualifying for free or reduced price school lunch), and the other middle school consisting of 80% of students of low SES. In regard to ethnic background, 82% of the students from one school and 58% of students from the other were from an ethnic minority background. As shown in Table 1, there was

racial/ethnic and socioeconomic variability between the two middle school participating in the current study.

In regard to school context, around 15% of the school population of school #1 was enrolled in a magnet program (Science, Technology, Engineering, Mathematics [STEM]), with enrollment based on test scores and grades. Additionally, this school has a certified Advancement Via Individual Determination (AVID) program, which is a college board program that focuses on implementing study skills school wide in order to reduce the achievement gap. Also, the school serves students with cognitive impairments via three self-contained classrooms for ESE students and approximately 15-20 co-taught classrooms. During the year of data collection for the study, the school received its first school grade of a B, with previous grades as Cs. In comparison, the second school did not have a magnet program, but did have a gifted program. Additionally, school #2 does not have any self-contained classes for ESE students, but provides services to students in need via five Varying Exceptionality (VE) classrooms. Noteworthy, 25% of the student population attends school #2 due to school choice. Furthermore, in contrast to school # 1, school # 2 received a school grade of A during the year of data collection for the study and in past years has also received a school grade of A.

Table 1

*School Demographic Information*

	School 1	School 2	Total
	% (n)	% (n)	% (n)
<b>Gender</b>			
Male	52.8% (473)	47.9% (521)	50.1% (994)
Female	47.2% (422)	52.1% (567)	49.9% (989)
<b>Race/Ethnicity</b>			
American Indian or Alaskan Native	0.6% (5)	0.2% (2)	0.4% (7)
Asian or Pacific Islander	2.7% (24)	3.4% (37)	3.1% (61)
Black, Non-Hispanic	52.7% (472)	6.3% (69)	27.3% (541)
Hispanic	20.0% (179)	42.6% (463)	32.4% (642)
Multiracial	5.1% (46)	6.3% (69)	5.8% (115)
White, Non-Hispanic	18.9% (169)	41.2% (448)	31.1% (617)
<b>Free &amp; Reduced Lunch Status</b>			
Yes	80.0% (716)	53.5% (582)	65.5% (1298)
No	20.0% (179)	46.5% (506)	34.5% (685)
Receiving ESL Services	12.5% (112)	14.6% (159)	13.7% (271)
Students Enrolled in ESE	20.3% (182)	15.3% (166)	17.6% (348)
<b>Grade Level</b>			
Six	31.1% (278)	35.5% (386)	33.5% (664)
Seven	35.6% (319)	33.2% (361)	34.3% (680)
Eight	33.3% (298)	31.4% (342)	32.3% (640)
Total Enrollment	45.1% (895)	54.9% (1,088)	100.0% (1,983)

*Note.* ESL=English as a Second Language, ESE=Exceptional Student Education

The current study was part of a larger study investigating adolescents experiencing symptoms of inattention, hyperactivity, and impulsivity, and how those experiences relate to their social, academic, family, and substance use outcomes. The primary investigators, Dr. Julia Ogg and Dr. Rance Harbor, received permission to conduct the study from the Institutional Review Board (IRB) at the University of South Florida and from the participating school district. The data were collected in the Spring of 2010 by the primary investigators and a team of graduate students from USF, including the author of the current study.

**Selection of participants.** In order for a student to participate in this study, he or she was required to return a completed signed parent consent form (Appendix A), and a signed student assent form (Appendix B). The exclusionary criterion for this study were non-English speaking students and students receiving exceptional student education who were not being served in the general education classroom; all other students were invited to participate. The total number of student participants was 183, equaling a response rate of 10% of the total enrollment across the two middle schools. Table 2 represents the demographic characteristics of the samples from both middle schools.



Table 2

*Demographic of Participants (n = 183)*

Variable	School 1 Sample (n = 85)		School 2 Sample (n = 98)		Total Sample (N = 183)	
	n	%	n	%	N	%
Gender	85	100	98	100	183	100
Male	26	30.6	40	40.8	66	36.1
Female	59	69.4	58	59.2	117	63.9
Grade	85	100	98	100	183	100
6	55	64.7	30	30.6	85	46.4
7	14	16.5	33	33.7	47	25.7
8	16	18.8	35	35.7	51	28.0
Ethnicity	85	100	98	100	183	100
African-American	40	47.1	8	8.2	48	26.2
Asian/Pacific Islander	3	3.5	2	2.0	5	2.7
White	21	24.7	45	45.9	66	36.1
Hispanic	15	17.6	37	37.8	52	28.4
Native American/ Alaska Native	0	0	0	0	0	0
Other	6	7.1	6	6.1	12	6.6
Free/Reduced Price School Lunch*	85	100	98	100	183	100
Yes	62	72.9	44	44.9	106	57.9
No	23	27.1	54	55.1	77	42.1
Family Structure	82	98.8	97	99	179	98.9
Married	27	32.5	56	57.1	83	45.9
Divorced	16	19.3	19	19.4	35	19.3
Separated	20	24.1	13	13.3	33	18.2
Never Married	15	18.1	6	6.1	21	11.6
Not Married but Living Together	3	3.6	1	1.0	4	2.2
Widowed	1	1.2	2	2.0	3	1.7

*Note.* Free and reduced lunch status reported was obtained from student records

## Measures

**Demographics questionnaire.** Students completed demographic questions (Appendix C) regarding gender, ethnicity, age, grade, GPA, and family structure.

**School records.** The student's school lunch status, as indicated in their school records, was used as an indicator of the students' socio-economic status.

**Teen Alcohol and Drug Use Scale (TADUS).** In order to assess substance use among the participants, students were asked to complete ten items about their frequency of use of various substances within the past year. The TADUS (Malval, 2009; see Appendix D) consists of a list of 19 substances (e.g., cigarettes, beer, liquor, stimulants, cocaine, crack) and item 20 allows participants to respond openly about their use of any substance not included on the measure. For the purpose of this study, the TADUS was shortened to 10 items that include cigarettes, chewing tobacco, wine, beer, liquor, marijuana, inhalants, over the counter drugs, prescription drugs, and other. Responses range from 1 (*zero occasions*) to 7 (*daily*) with higher numbers indicating more frequent substance use. The reliability and validity of this measure has yet to be established because this scale was recently developed. However, a recent study by Malval (2009) found the internal consistency reliability of the 3 item alcohol composite (i.e., use of wine, beer, or liquor) to be satisfactory ( $\alpha = .77$ ).

**Students' Life Satisfaction Scale (SLSS).** The SLSS (Huebner, 1991; see Appendix E) was administered for the purpose of assessing students' global satisfaction with life. This measure was designed to be used with students in grades 3-12 (Huebner, 1991). Participants indicated their level of agreement with general statements about their life (e.g., I have a good life, I have what I want in life, My life is better than most kids').

Response options range from 1 (*strongly disagree*) to 6 (*strongly agree*). An overall life satisfaction score was attained by reverse-scoring items three and four, then summing the responses indicated and dividing by seven. Higher mean SLSS scores indicate higher global life satisfaction.

The SLSS has high internal consistency ( $\alpha = .82$  to  $.88$ ) and test-retest reliability at 1-2 weeks ( $r = .74$ ; Huebner, 1991). High stability across a 4 week period has also been obtained ( $r = .64$ ; Gilman & Huebner, 1997). The construct validity of the SLSS is supported by strong associations with other measures of subjective well-being, such as the Piers-Harris Happiness Subscale ( $r = .53$ ) and the Andrew-Withey Life Satisfaction Scale ( $r = .62$ ; Huebner, 1991). Additionally, a positive relationship ( $r = .54$ ) between SLSS scores and parent ratings of their children's happiness was found, supporting the convergent validity of this measure (Gilman & Huebner, 1997).

**Children's Perception of Interparental Conflict (CPIC).** The CPIC (Grych, Seid, & Fincham, 1992; see Appendix F) is a 48 item scale designed to assess children's perceptions of interparental conflict. The scale was developed using a sample of children ages 9-12, but has been used in older adolescents (ages 18-21) as well (Reese-Weber & Hesson-McInnis, 2008). Respondents indicated on a three point likert scale (2 = *true*; 1 = *sort of true*; 0 = *false*) if a given statement described the behavior of their parents during conflict. There are a total of 9 subscales: Frequency, Intensity, Resolution, Content, Perceived Threat, Coping Efficacy, Self-Blame, Triangulation, and Stability. The 9 subscales can be combined into three superordinate scales: Conflict Properties, Threat, and Self-Blame. The three subscales that were analyzed for the purposes of this study include Intensity (seven items, e.g., When my parents have an argument they yell at each

other); Frequency (six items, e.g., I often see my parents arguing); and Resolution (six items, e.g., Even after my parents stop arguing they stay mad at each other).

These three subscales (19 items) encompass the Conflict Properties Scale. A total of 8 items were reversed scored (see Appendix F) and then the sum of the items equals a total Conflict Properties score, with higher scores indicating more perceived conflict. The Conflict Properties Scale has been shown to have a high internal consistency ( $\alpha = .88$  to  $.90$ ) and test-retest reliability at two weeks ( $r = .70$ ; Grych, Seid, & Finchman, 1992). Noteworthy, the three subscales, Intensity, Frequency, and Resolution, also have high internal consistency ( $\alpha$ s =  $.89$ ,  $.86$ , and  $.91$ , respectively; Grych et al., 1992). Regarding construct validity, the Conflict Properties scale has yielded positive relationships with the O'Leary Porter Scale, which assesses parents' perception of the frequency and intensity of marital conflict ( $r = .30$ ), and the Conflict Tactics Scale, which assesses verbal and physical aggression between spouses ( $r = .39$ ; Grych et al., 1992). Reese-Weber and Hesson-McInnis (2008) explored whether the original three factor model (i.e., Conflict Properties, Threat, Self- Blame) was found when the CPIC was used with older adolescents. Researchers found support for a five factor model (i.e., Conflict Properties, Triangulation, Stability, Threat, Self-Blame) when compared to the three factor model. Due to these findings, the five factor model was used for the purpose of this study which represents Conflict Properties as consisting of the Frequency, Intensity, and Resolution subscales instead of adding two additional subscales (i.e., Triangulation, Stability).

**Life Events Checklist (LEC).** The LEC (Johnston & McCutcheon, 1980; see Appendix G) is a 48 item measure in which respondents indicate whether they have experienced certain life events within the past year. The presence of stressful life events

is based upon the “yes” or “no” responses (*yes* =1, *no* =0). For the purpose of this study, only 18 of the 48 items were administered. Items that described events related to family, friends, and events perceived as out of the child’s control were included in this study. Each student’s score can range from 0 to 18, with higher numbers indicating more frequent experiences of major stressful life events. The internal consistency of this shortened version of the LEC was found to be moderate ( $\alpha = .68$ ; Suldo, 2004). The test-retest reliability of the complete version of the LEC is adequate, with correlations after two weeks ranging from .69 to .72 (Brand & Johnson, 1982).

### **Procedures**

A consent form was sent home to all the students from both middle schools in order to obtain parent permission for their child to participate in the study. Several methods were used in order to increase response rates. Due to the high number of Hispanic students attending these schools, Spanish consent forms were provided to students whose parents did not speak English. Also, information regarding the study was provided during school-wide announcements to inform students about the study and to remind them to return consent forms. Informed consent forms were provided to the homeroom teachers at each school. Homeroom teachers collected the returned consents and turned them over to the principal at each school. Students who returned consent forms and chose to participate in the study were not paid, however they were eligible to receive incentives. For example, the students who returned the parent consent form were placed in a drawing to win one of several \$25 gift cards to a local store (two gift cards per grade level), as well as received a small gift (<\$1.00) upon completing the survey.

Prior to data collection, a list of students who returned signed parent consent forms was compiled. Students were called in groups of 10-70 students to complete the questionnaires during their elective period. Before the students began to fill out the survey, the assent form was read to the students by one of the members of the research team. The students were made aware that their participation in the study was voluntary and they could withdraw from the study at any time. Written student assent to participate was obtained and collected separate from the survey in order to maintain confidentiality of the students and their responses. Next, the students who assented to participate began filling out the survey packet, which took about 40 minutes.

The survey packet contained the measures described above, as well as additional measures not relevant to the current study. The survey packet and instructions had been previously piloted among a group of 15 students in a 7<sup>th</sup> grade English middle school classroom. Following the piloting of the survey, students were asked to identify areas in need of further clarification. The piloting revealed no areas within the measures described above that lacked clarity.

During the collection of the data from participants in the current study, the research team was available to the students who had questions throughout completion of the survey packet. Of note, the order in which measures were placed within the survey packet was counterbalanced in order to control for potential order effects. After students completed the survey packet, they were asked to review the questionnaires to ensure that there was only one response for the items in which they wanted to answer, and to make sure they did not skip any pages accidentally.

## **Variables**

**Independent variable.** Several independent variables were examined in this study to represent family stressors. Parental conflict was operationalized as the total conflict score as measured by the CPIC. Socioeconomic status was measured by the participants' school lunch status (i.e., low SES = free/reduced price school lunch, average to high = full price lunch). Stressful family life events were operationalized as the total score on the relevant items of the LEC. Lastly, family structure was assessed through the response to the demographic question as to whether the participants' parents were married, divorced, separated, never married, living together, or widowed.

**Dependent variable.** The dependent variable in research questions 1-3 was global life satisfaction, operationalized as the average score on the SLSS. The dependent variable in research question 4 was substance use, as indexed by the reported frequency of substance use on the TADUS.

**Mediator variable.** In research question 4, this study assessed whether life satisfaction was a mediating variable between participants' family stressors and their frequency of substance use. This study hypothesized that family stressors are related to a student's life satisfaction, and in turn, the student's life satisfaction is related to his or her substance use (see Figure 1).

## **Overview of Analyses**

Preliminary analyses were conducted in order to assure the reliability of the measures chosen for use within this study. The internal consistency of each measure was calculated and reported through Cronbach alphas. Descriptive analyses (i.e., mean, median, mode, standard deviation) were obtained and reported to illustrate the sample

characteristics. The coding of the variables utilized in analyses is represented in Table 3.

Table 3

*Variables Included in Analyses*

Original Variable	Recoded Variable
<b>Family Structure</b>	
Married	1
Divorced	2
Separated	2
Never Married	3
Never married but living together	1
Widowed	2
<b>Free or Reduced Lunch</b>	
No	0
Yes	1
Major Life Events	continuous 0 (none) - 15 (high amt)
Interparental Conflict	continuous 0 (none) – 38 (high amt)
Life Satisfaction Average Score	continuous 1 (low) - 6 (high amt)
Substance Use	continuous 0 (none) - 3 (high amt)

Following preliminary analyses, a series of statistical analyses were conducted in order to answer the four research questions proposed in this study. An independent *t*-test was used to examine the relationship between socio-economic status (as indicated by the students' lunch status) and life satisfaction. A one-way ANOVA was used to examine the relationship among the three family structure groups and life satisfaction. Correlational



analyses were utilized to examine the relationship between continuous family stress variables (i.e., major life events, interparental conflict) and life satisfaction.

Multiple regressions were conducted to further examine the relationship between family stressors and life satisfaction, and path analyses were used to examine whether life satisfaction serves as a mediating variable between family stressors and substance use among middle school students.

*1. What is the nature of the relationships between adolescents' life satisfaction and the following family stressors:*

- a. Major life events*
- b. Low socioeconomic status*
- c. Family structure*
- d. Perceived interparental conflict?*

In order to examine the relationship between life satisfaction and continuous variables (parent conflict and stressful life events), Pearson product moment correlations were calculated. The correlation coefficients can range from -1 to +1, with positive coefficients indicating a positive relationship between the two variables and negative coefficients indicating a negative relationship between the two variables. Coefficients that are equal to or approaching 0 indicate no relationship between the two variables.

In order to examine the relationship between life satisfaction and family structure a one-way ANOVA was conducted. The results of the ANOVA distinguished whether there were significant differences in students' reported life satisfaction based on their family structure. An independent means *t*-test was performed to examine if there were differences between socio-economic status and life satisfaction.

*2. What is the overall contribution of family stressors to life satisfaction?*

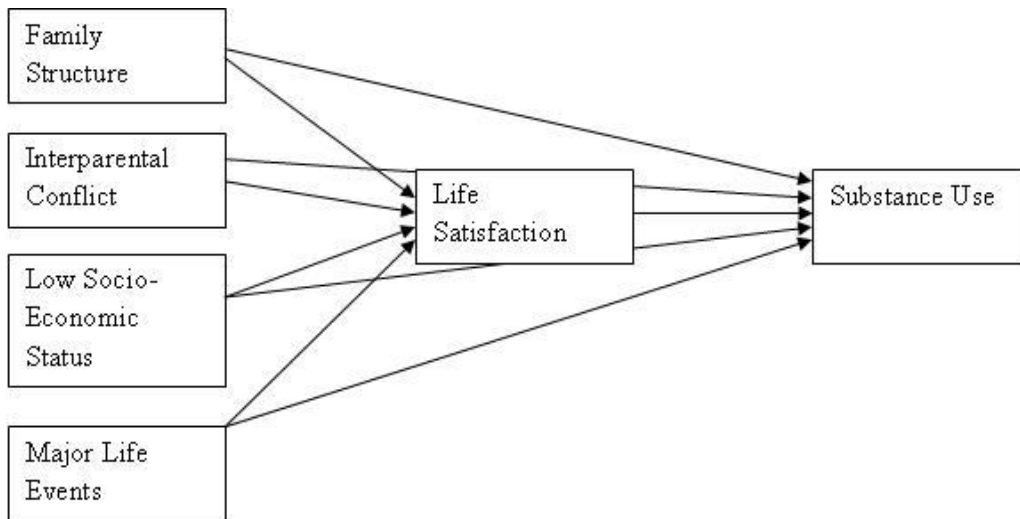
In order to calculate the overall contribution of family stress to life satisfaction, a simultaneous multiple regression was conducted. The predictor variables entered included parental conflict, socioeconomic status, stressful life events, and family structure. Of note, SES and family structure were dummy-coded. The coefficient of determination,  $R^2$ , provided the overall variability in life satisfaction that can be accounted for by all of the family stress variables that are entered into the multiple regression.

*3. Which family stressors are uniquely and most strongly associated with adolescents' life satisfaction?*

To determine which family stress variables were most predictive of life satisfaction, a simultaneous multiple regression was conducted. The predictor variables entered included parental conflict, socioeconomic status, stressful life events, and family structure. SES and family structure were dummy-coded. A simultaneous regression analysis allowed for the researcher to examine the influence of a given family stress variable while controlling for the influence of all other family stress variables. This determined the proportion of the variance of life satisfaction that can be accounted for by each family stressor independently. Beta weights and uniqueness indices represented the predicted change in life satisfaction given a one standard deviation unit change in each particular family stress variable and the strength of each predictor variable. An alpha level of .05 was used to determine the significance of the beta weight. The larger beta weights indicated more importance of a significant family stress variable in predicting life satisfaction.

*4. Does adolescent life satisfaction mediate the relationship between family stressors and substance use?*

Decisions regarding which substance use items were analyzed are described in chapter 4. The model represented in Figure 1 suggests that the four family stressors (i.e., family structure, socio-economic status, interparental conflict, and major life events) will impact students' life satisfaction, and in turn students' life satisfaction will impact their substance use. In order to analyze whether life satisfaction was a mediating variable between family stressors and substance use, path analyses were conducted. This hypothesized path model suggests that each family stressor will have both a direct and indirect effect on participants' substance use; therefore, path analyses were conducted to examine both effects. In order to complete path analyses, it was necessary to dummy code the two categorical variables, family structure and socio-economic status. The model was just identified with parameter estimates calculated for each path in the model. The  $R^2$  values indicated the direct effect each family stressor had on substance use and path coefficients indicated the indirect effects that family stressors had on substance use through the mediating variable, life satisfaction. The significance of the path coefficients were analyzed using a t-statistic, with statistically significant path coefficients equaling  $p < .05$ .



*Figure 1.* Path model to test life satisfaction as a mediating variable between family stressors and substance use

### **Ethical Considerations**

Several considerations were taken in order to protect the participants in the current study. The primary investigators received IRB approval from the University of South Florida and the participating school district prior to data collection. This precaution ensured the protection of the human participants within the study.

Second, a parental consent form (Appendix A) was sent home with each student attending the two participating middle schools. The parental consent form outlined the goals of the study as well as the benefits and risks of the children participating in the study. Additionally, once a parental consent form was received allowing the students to participate in the study, assent was also obtained prior to having the students complete the survey (Appendix B). During data collection, one of the trained research team members read aloud the student assent form in order to ensure understanding of the risks and benefits of participation. Within the student assent, confidentiality and voluntary participation were outlined.

To further ensure confidentiality of the results, each student was provided with a code number, and the information linking the student to their code number was locked and only accessible by the principal investigator. All data from participants were aggregated and only analyzed in this form. Three specific instances in which confidentiality would be broken were outlined in the parent consent and student assent forms. First and second, if the student threatened to harm themselves or another person, the student was assessed by a mental health professional within 24 hours. Third, if the student reported emotional distress, as indicated by a cutoff score of above a 23 on the Center of Epidemiological Depression Scale (CES-D, Radloff, 1977; see Appendix H), his or her name was provided to a mental health professional at each school following data collection. This information was provided to the school because a score of above a 23 on the CES-D represents a risk for depression. Each school was responsible for how they utilized this information.

## **Chapter IV: Results**

This chapter includes the results of the statistical analyses conducted to answer the four research questions of the current study. First, this chapter reports results of data screening procedures, and how errors within the data set were addressed. Then, the results of a *t*-test, a one-way ANOVA, and correlations are presented to illustrate the bivariate relationships between the family stress variables (i.e., family structure, socio-economic status, stressful family events, interparental conflict) and participants' global life satisfaction. Next, the results of a simultaneous multiple regression conducted to determine the proportion of variance in global life satisfaction that can be predicted by all family stressors, as well as each family stressor individually, are presented. The last portion of this chapter presents results of model testing conducted to determine if life satisfaction serves as a mediating variable between family stressors and substance use.

### **Data Screening**

Data from the current study were entered by hand into an Excel spreadsheet by members of the research team who were involved in data collection for the larger study. The dataset was then imported into SPSS, checked for data entry errors, and screened for univariate and multivariate outliers. To ensure accurate data entry, integrity checks were initially completed for 11% of complete surveys. When an error was found on data entry of one or more items in a given participant's packet of completed surveys, the error(s) was corrected in the database and the survey packet entered before and after the packet

with an error was checked for accuracy. A total of 14% of survey packets were checked for errors; these survey packets were ultimately judged to be entered with 100% accuracy, and trustworthiness of the data is high.

Univariate outliers were defined as participants scoring more than 3 standard deviations from the group mean on any variable of interest (i.e., life satisfaction, major life events, interparental conflict, socio-economic status, and substance use). Multivariate outliers were defined as subjects scoring higher than 20.52, the criterion determined by the Mahalanobis distance for five degrees of freedom. There were no data points that were identified as multivariate outliers. There were no univariate outliers detected, with the exception of when substance use scores were employed as the outcome variable. Out of the nine substance use items, a total of 28 participants were identified as univariate outliers on one or more of the items. Examining the 5% Trimmed Mean indicated that the mean for each item did not significantly change with the outliers removed, therefore the participants were not excluded from the data set (Pallant, 2010). Further analyses conducted to address normality of each substance use item are explained later in this chapter.

Only two participants had unacceptable levels of missing data on the CPIC and TADUS (having not answered any items on either scale); these cases were removed from the dataset, leaving a total sample of 181 participants retained for data analysis. In the event of a missing data point on the SLSS among these 181 participants, a total score was calculated utilizing the mean of the answered items for missing data of participants missing two or fewer scores. Participants who did not report on their family structure were excluded from analyses that utilized this variable. If there was missing data on the

LEC, it was assumed that the particular event did not occur. In the event of a missing data point on the CPIC, it was assumed that the particular statement was not true.

To permit analyses between constructs (vs. individual items), summary scores were created to index participants' levels of family stressors, life satisfaction, and substance use. Participants' mean global life satisfaction scores on the SLSS were calculated as the mean of participants' responses to the seven items on the SLSS (after items 3 and 4 were reverse-scored). A total score for interparental conflict was calculated by summing participants' responses to the 19 items on the CPIC. A total score for stressful family life events was calculated by summing participants' responses to 15 of the 18 original items on the LEC; items 3, 10, and 13 were excluded from this index because they pertained to events unrelated to the family. Regarding family structure, participants were categorized into one of three groups based on their responses to item 15 of the demographics form: Parents Together (specifically, youth who reported their biological parents were either (a) married, or (b) never married but living together), Parents Never Formally Together (specifically, youth who reported their biological parents were never married), and Changes in Family Structure (specifically, youth who reported their biological parents were either (a) divorced, (b) separated, or (c) widowed). The decision to not simply dichotomize the sample into intact versus nonintact, and instead to examine the Parents Never Formally Together category separately is consistent with literature that finds actual *changes* in family structure result in negative outcomes (Lansford et al., 2006). Last, a total substance use score was created by summing whether participants reported any use of beer, liquor, and marijuana. The decision to focus only on use of these three substances was made after considering which of nine substance use



options clustered together in an exploratory factor analysis. If participants reported any use of beer (from *less than once a month* to *daily* use), they were assigned a score of one, indicating any use of that substance. If participants reported *never using* a substance, they were assigned a score of zero on that item. Scores of zero or one on the three substance use items were then summed to yield a total substance use score that ranged from zero to three. Due to problems with normality of this variable (described later in this chapter), this total score was then transformed by taking the logarithm of the raw substance use score.

### **Scale Reliability**

All scales utilized within the current study (i.e., LEC, CPIC, SLSS, TADUS) were analyzed to determine the internal consistency of each scale. Coefficient alpha for the 15-item LEC was .67. For the 19-item CPIC, the internal consistency was .93. The coefficient alpha for the 7-item SLSS was .89. The coefficient alpha for the 3-item TADUS (i.e., participants' use of beer, liquor, and marijuana) was .80.

### **Descriptive Analyses**

To assess normality issues skewness and kurtosis of the variables of interest to the current study were calculated. Table 4 presents these results, as well as descriptive statistics for each predictor and outcome variable. A review of results indicates that the composite scores on the SLSS, LEC, and CPIC have an approximate normal distribution (skew and kurtosis between -1.0 and +1.0). However, the raw substance use variable is non-normal (TADUS non-transformed: skew = 2.85, kurtosis = 7.04), and levels of skew and kurtosis remain high even after a transformation (TADUS transformed: skew = 2.48,

kurtosis = 4.49). Thus, caution should be taken when interpreting the results of analyses that include the TADUS.

Table 4

*Means, Standard Deviations, Ranges, Skew, and Kurtosis of Variables*

Variable	<i>N</i>	<i>M</i>	<i>SD</i>	Range	Max	Skew	Kurtosis
					Value		
Stressful Events (LEC)	181	3.40	2.48	0 - 10.0	15	.55	-.47
Interparental Conflict (CPIC)	181	14.39	9.50	0 - 36.0	38	.35	-.98
Frequency subscale	176	4.77	3.36	0-12	12	.40	-.97
Intensity subscale	176	5.59	3.77	0-14	14	.46	-.69
Resolution subscale	173	4.12	3.50	0-12	12	.44	-.98
Global Life Satisfaction (SLSS)	181	4.43	1.16	1 - 6.0	6	-.71	-.13
Substance Use Raw (TADUS-R)	177	.24	0.69	0 - 3.0	3	2.85	7.04
Substance Use Transformed (TADUS-T)	177	-.50	.52	-.69 - 1.25	1.25	2.48	4.49

To assess the extent of the impact of the non-normal distribution on the results, analyses were conducted twice to determine the similarity in patterns of relationships among variables depending on if the raw or transformed version of the substance use variable was employed in analyses.

**Analysis of Bivariate Relationships**

To determine if there were mean differences on global life satisfaction as a result of socio-economic status, an independent-samples *t*-test was conducted to compare life satisfaction scores for students with low SES (free/reduced-price school lunch) to average/high SES (no free/reduced-price school lunch). Results indicate there was a statistically significant difference between SLSS scores of students from low SES (*n* =

104), as compared to students from average/high SES ( $n = 77$ ),  $t(179) = -2.55, p < .05$ . Specifically, low SES students reported lower life satisfaction ( $M = 4.21, SD = 1.19$ ) than students of average/high SES ( $M = 4.68, SD = 1.08$ ) with a small effect size ( $r = -.20$ ).

A one-way between-groups ANOVA examined life satisfaction scores for students from the three different family structures: Parents Together ( $n = 87$ ), Parents Never Formally Together ( $n = 21$ ), Change in Family Structure ( $n = 71$ ). A visual examination of means suggested relatively higher levels of life satisfaction among youth in the Parents Together ( $M = 4.56, SD = 1.09$ ) and Parents Never Formally Together ( $M = 4.62, SD = 1.05$ ) subgroups relative to the youth in the Change in Family Structure group ( $M = 4.22, SD = 1.28$ ). However, these trends in group means did not differ significantly at the  $p < .05$  level,  $F(2, 176) = 1.97, p = .14$ .

### **Correlation Analyses**

To determine the bivariate relationships between family stress variables that are continuous in nature (i.e., major life events, interparental conflict), life satisfaction, and substance use, Pearson product-moment coefficients were calculated between variables. Alpha level was set at .05 to indicate statistical significance. Correlations between the variables included in this analysis are reported in Table 5. Results indicate that both major life events and interparental conflict were significantly negatively correlated with global life satisfaction ( $r = -.48$  and  $r = -.54$ , respectively).

Table 5

*Correlations between Family Stressors and Global Life Satisfaction (N = 181)*

Variables	1	2	3	4	5
1. SES (0 = avg/high, 1 = low)	1				
2. Major Life Events	.38*	1			
3. Interparental Conflict	.22*	.47*	1		
4. Global Life Satisfaction	-.19*	-.48*	-.54*	1	
5. Substance Use	.11	.20*	.22*	-.28*	1

*Note.* \* $p < .05$

### **Regression Analyses**

A simultaneous multiple regression was conducted to determine the extent to which family stressors predicted global life satisfaction. Beta weights and uniqueness indices were reviewed to assess the importance of each predictor variable and provide information on the amount of variance in life satisfaction scores that can be accounted for by each specific family stress variable independently while holding the others constant. An alpha level of .05 was used to determine statistical significance. In order to examine the influence of the categorical variables, family structure was dummy coded. In the first set of analyses, the Parents Never Formally Together group was utilized as the reference group. In order to glean information about all the family structures, two more regressions were performed with the first utilizing the Parents Together as the reference group and the second using Changes in Family Structure as the reference group. Results indicate

that the linear combination of family stressors (low socio-economic status, family structure, major life events, and interparental conflict) explained a significant and sizable amount of variance in life satisfaction,  $F(5, 167) = 19.58, p < .05, R^2 = .37$ , adjusted  $R^2 = .36$ .

To determine which family stressors were unique predictors of global life satisfaction, the  $p$ -values for the specific beta weights of each family stressor were examined. Results indicate that two family stressors were significant unique predictors of global life satisfaction: stressful life events and interparental conflict (see Table 6). Interparental conflict emerged as the strongest predictor ( $\beta = -.41, p < .05$ ), followed by experiencing stressful life events ( $\beta = -.30, p < .05$ ). Low socio-economic status was not a significant predictor ( $\beta = -.01, p = .85$ ) of life satisfaction after the variance shared between free/reduced-price school lunch status and other predictors was taken into account. None of the family structure configurations examined were significant predictors of life satisfaction.

To assess the unique contribution of each predictor variable, squared semi-partial correlations ( $sr^2$ ) were examined (see Table 6). Squared semi-partial correlations represent a predictor's unique contribution to the outcome variable (i.e., life satisfaction) while controlling for the influence of all other predictors. Experiencing high levels of interparental conflict accounted for 12% of the variance in life satisfaction scores independent of the influence of the other predictor variables, while experiencing stressful family life events accounted for 6% of the unique variance in life satisfaction after controlling for all other predictors.

Table 6

*Family Stressors Regressed on Life Satisfaction (N = 168)*

Family Stressor	<i>B</i>	<i>SE B</i>	$\beta$	<i>sr</i> <sup>2</sup>	<i>t</i>
Family Structure <sup>a</sup>					
Parents Together	-.28	.24	-.12	.00	-1.15
Changes in Family Structure	-.16	.24	-.06	.00	-.64
Family Structure <sup>b</sup>					
Changes in Family Structure	.13	.16	.06	.00	.76
Parents Never Formally Together	.28	.24	.08	.00	1.15
Family Structure <sup>c</sup>					
Parents Together	-.12	.17	-.06	.00	-.76
Parents Never Formally Together	.16	.25	.04	.00	.64
Low Socio-Economic Status	-.03	.16	-.01	.00	-.18
Major Life Events	-.15	.04	-.30	.06	-4.00*
Interparental Conflict	-.05	.01	-.41	.12	-5.65*

*Note.* Family Structure<sup>a</sup> = Parents Never Formally Together as comparison, Family Structure<sup>b</sup> = Parents Together as comparison, Family Structure<sup>c</sup> = Changes in Family Structure as comparison, \**p* < .05. *R*<sup>2</sup> for the model = .37

### Path Analyses

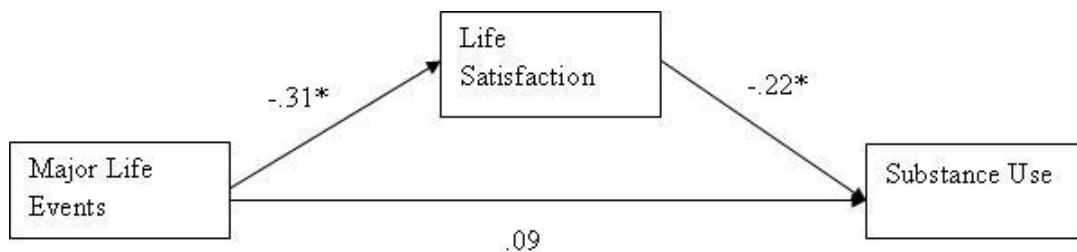
As shown in Figure 1 (see Chapter 3), it was hypothesized that students' life satisfaction would mediate any relationships between family stressors and substance use. Path analyses were conducted in Mplus 6.0 in order to test the mediating model specified in Figure 1. Family stressors represented the exogenous variables in the model, while life

satisfaction and substance use served as endogenous variables. Two path analyses were conducted to determine if results varied as a function of using the raw or transformed versions of the substance use variable.

The results from the first path analysis represent the use of the raw substance use variable (TADUS-R). First, life satisfaction was regressed on the family stress variables (i.e., family structure, low socio-economic status, major life events, interparental conflict). The results for this specific regression were presented previously in Table 6. Next, substance use was regressed on each of the family stress variables as well as life satisfaction. The combination of family stressors and life satisfaction accounted for 11% of the variance in substance use ( $R^2 = .11, p < .05$ ). Results indicate that out of the family stressors, family structure, more specifically the Parents Together family group, significantly predicted substance use when Parents Never Formally Together was used as the comparison group ( $\beta = -.12, p < .05$ ). The negative path coefficient indicates that students from intact families reported significantly less substance use than students with Parents Never Formally Together. When family structure was dummy coded with students with Parents Together as the comparison group, there was a significant positive path coefficient for students with Parents Never Formally Together. Therefore, students whose parents were Never Formally Together reported more substance use than students with Parents Together. The following family stress variables did not uniquely predict substance use: Change in Family Structure, SES, Major Life Events, and Interparental Conflict. Substance use was also significantly predicted by life satisfaction ( $\beta = -.22, p < .05$ ). Specifically, students who reported higher life satisfaction reported less substance use (see Table 7). Despite the lack of evidence for direct relationships between most

family stressors and substance use, the planned analyses of life satisfaction as a mediator are still relevant in order to determine if family stressors indirectly influence substance use through their relationship with life satisfaction. Current literature has proposed there “there need not be a significant zero-order effect of X on Y, to establish mediation” (Zhao et al., 2010, p. 199).

Next, to examine whether life satisfaction acts as a mediator between each family stressor and substance use, both the direct and indirect effects were examined. The following figures represent only the variables of interest, however the other variables were entered into the model to compute the direct and indirect effects. The estimated path coefficient for the indirect effect of major life events on substance use through life satisfaction was statistically significant ( $\beta = .07, p = .03$ ). The direct effect of major life events on substance use was not significant ( $\beta = .09, p = .36$ ), indicating an indirect-only mediation (Zhao, Lynch Jr., & Chen, 2010; see Figure 2).



*Figure 2.* Path Model Representing Indirect-Only Mediation between Major Life Events and Substance Use



Table 7

*Family Stressors and Life Satisfaction Regressed on Substance Use (N = 162)*

Family Stressor	<i>B</i>	<i>SE B</i>	$\beta$	<i>sr</i> <sup>2</sup>	<i>t</i>
Family Structure <sup>a</sup>					
Parents Together	-.35	.18	-.25	.02	-1.92*
Changes in Family Structure	-.27	.18	-.19	.01	-1.46
Family Structure <sup>b</sup>					
Changes in Family Structure	.08	.12	.06	.00	.68
Parents Never Formally Together	.35	.18	.16	.02	1.91*
Family Structure <sup>c</sup>					
Parents Together	-.08	.12	-.06	.00	-.69
Parents Never Formally Together	.26	.18	.12	.01	1.45
Low Socio-economic Status	-.04	.12	-.03	.00	-.29
Major Life Events	.02	.03	.09	.00	.72
Interparental Conflict	.00	.01	.05	.00	.57
Life Satisfaction	-.13	.06	-.22	.03	-2.35*

*Note.* Family Structure<sup>a</sup> = Parents Never Formally Together as comparison, Family Structure<sup>b</sup> = Parents Together as comparison, Family Structure<sup>c</sup> = Changes in Family Structure as comparison,  $R^2 = .11$ , \* $p < .05$

Similarly, an indirect-only mediation was found for interparental conflict, with a significant indirect effect ( $\beta = .09$ ,  $p = .02$ ) and a non-significant direct effect ( $\beta = .05$ ,  $p = .57$ ; see Figure 3).

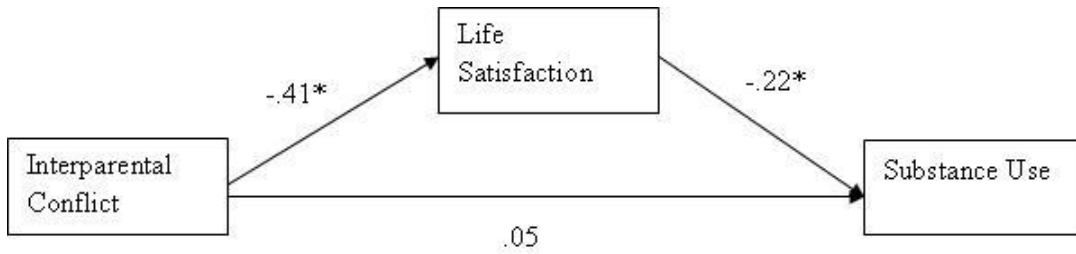


Figure 3. Path Model Representing Indirect-Only Mediation between Interparental Conflict and Substance Use

Regarding SES, both the indirect effect ( $\beta = .002, p = .87$ ) and the direct effect ( $\beta = -.03, p = .75$ ) are not statistically significant, indicating life satisfaction was not a mediator between having low socio-economic status and reported substance use (see Figure 4).

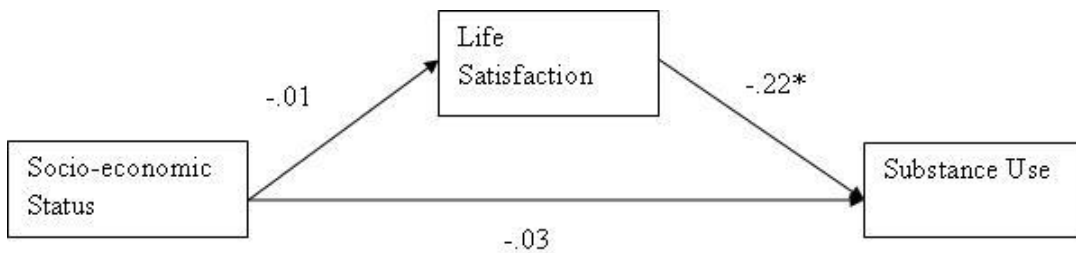


Figure 4. Path Model Representing Non-Mediation between Socio-Economic Status and Substance Use

Regarding family structure, there was a significant direct effect of having Parents Together on substance use ( $\beta = -.25, p = .04$ ), but a non-significant indirect effect ( $\beta = .03, p = .29$ ), indicating that life satisfaction was not a mediator in this relationship (see Figure 5).

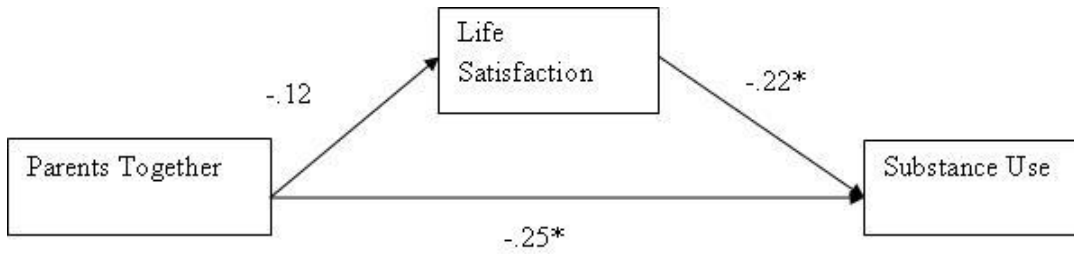


Figure 5. Path Model Representing Non-Mediation between Parents Together and Substance Use

Experiencing a change in family structure (i.e., divorced, separated, widowed) did not directly ( $\beta = -.19, p = .12$ ) or indirectly ( $\beta = .01, p = .54$ ) affect substance use, indicating that there was no mediation (see Figure 6).

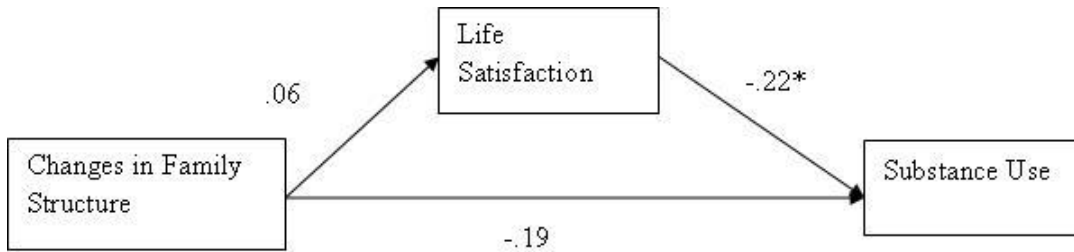


Figure 6. Path Model representing Non Mediation between Changes in Family Structure and Substance Use

Lastly, there was no mediation between Parents Never Formally Together family structure and substance use through life satisfaction with a non-significant indirect effect ( $\beta = -.05, p = .28$ ), but a significant direct effect ( $\beta = .16, p = .04$ ; see Figure 7).

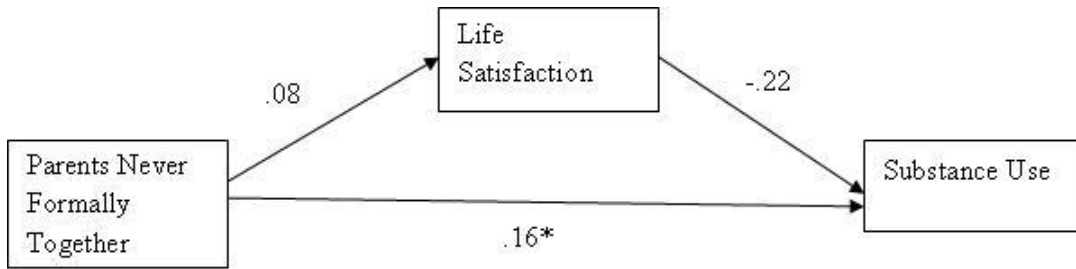


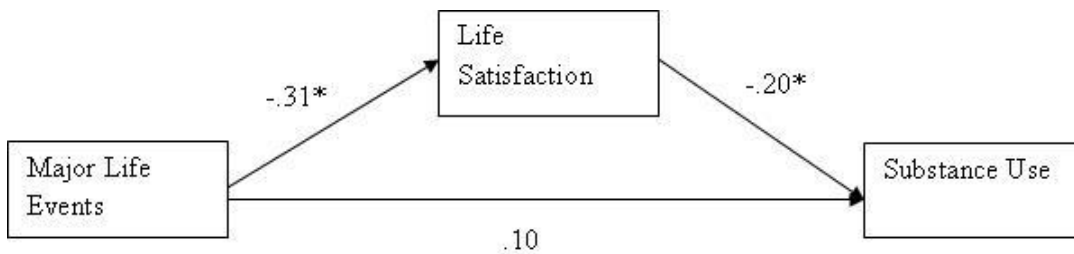
Figure 7. Path Model representing Non-Mediation between Parents Never Formally Together Family Structure and Substance Use

In sum, despite the lack of direct effects of major life events and interparental conflict on substance use, these family stress variables influenced substance use indirectly through their inverse associations with life satisfaction, which was in turn inversely related to substance use. SES exerted neither direct nor indirect effects on substance use. Regarding family structure, life satisfaction did not mediate the effect of parent marital status (Parents Together vs. Continuously Single-Parent Household) on substance use; the effects of specific family structures on substance use were solely direct in nature.

The same analyses were repeated using the transformed substance use variable as the outcome. Life satisfaction was regressed on the family stress variables (i.e., family structure, low socio-economic status, major life events, interparental conflict). The results for this specific regression are presented in Table 6. Next, the transformed substance use variable was regressed on each of the family stress variables as well as life satisfaction. The combination of family stressors and life satisfaction again accounted for 11% of the variance in substance use ( $R^2 = .11, p = .01$ ). Unlike in the results obtained using the raw substance use variable, results obtained using the log transformed version of the TADUS-T indicated that family structure does not significantly predict substance use for any of

the three family structure groups (see Table 8). The path coefficients for socio-economic status, major life events, and interparental conflict were similar to the non-significant relationships found when using the non-transformed substance use variable ( $\beta = -.03, p = .71, \beta = .10, p = .31, \beta = .07, p = .47$ , respectively). Substance use was still significantly predicted by life satisfaction ( $\beta = -.20, p = .03$ ), in the same direction with students who reported higher life satisfaction reporting less substance use (see Table 8).

The estimated path coefficient for the indirect effect of major life events on the transformed substance use variable through life satisfaction was significant ( $\beta = .06, p = .05$ ), however, the direct effect of major life events on substance use was non-significant ( $\beta = .10, p = .31$ ) indicating indirect-only-mediation (see Figure 8; Zhao, Lynch Jr., & Chen, 2010).



*Figure 8.* Path Model Representing Indirect-Only Mediation between Major Life Events and Substance Use

The indirect effect of having Parents Together on the transformed substance use variable through life satisfaction was non-significant ( $\beta = .02, p = .30$ ). The direct effect on this particular family structure on substance use was also non-significant ( $\beta = -.22, p = .08$ ), indicating non-mediation (see Figure 9).

Table 8

*Family Stressors and Life Satisfaction Regressed on Transformed Substance Use (N = 162)*

Family Stressor	<i>B</i>	<i>SE B</i>	$\beta$	<i>sr</i> <sup>2</sup>	<i>t</i>	
Family Structure <sup>a</sup>						
Parents Together		-.23	.14	-.22	.02	-1.66
Changes in Family Structure		-.16	.14	-.16	.01	-1.19
Family Structure <sup>b</sup>						
Changes in Family Structure		.06	.09	.06	.00	.70
Parents Never Formally Together		.23	.14	.14	.02	1.67
Family Structure <sup>c</sup>						
Parents Together		-.07	.09	-.06	.00	-.70
Parents Never Formally Together		.16	.14	.10	.01	1.20
Low Socio-economic Status		-.03	.92	-.03	.00	-.34
Major Life Events		.02	.02	.10	.00	.81
Interparental Conflict		.00	.01	.07	.00	.73
Life Satisfaction		-.09	.04	-.20	.02	-2.07*

*Note.* Family Structure<sup>a</sup> = Parents Never Formally Together as comparison, Family Structure<sup>b</sup> = Parents Together as comparison, Family Structure<sup>c</sup> = Changes in Family Structure as comparison,  $R^2 = .11$ , \* $p < .05$

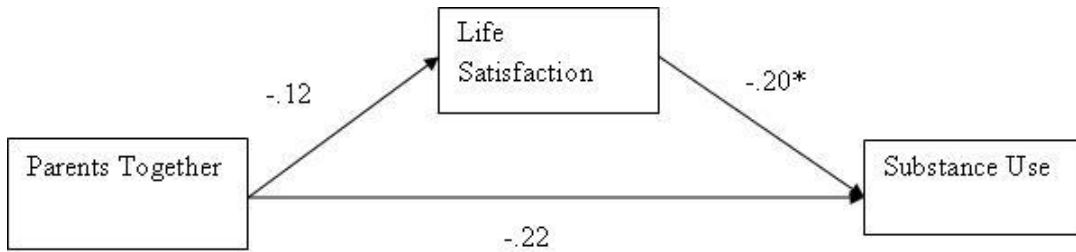


Figure 9. Path Model Representing Non-Mediation between Parents Together and Substance Use

There was no mediation through life satisfaction for students experiencing changes in family structure and substance use because both the indirect ( $\beta = .01, p = .54$ ) and direct effect ( $\beta = -.15, p = .20$ ) were non-significant (see Figure 10).

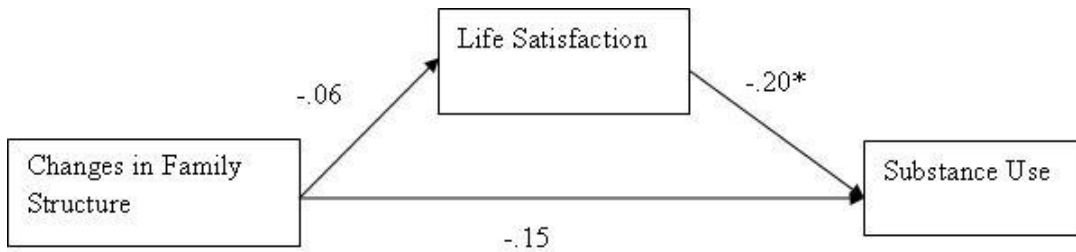


Figure 10. Path Model representing Non-Mediation between Changes in Family Structure and Substance Use

Similarly, there was no mediation through life satisfaction for students whose Parents were Never Formally Together and substance use with a non-significant indirect effect ( $\beta = -.01, p = .54$ ) and a non-significant direct effect ( $\beta = .10, p = .20$ ; see Figure 11).

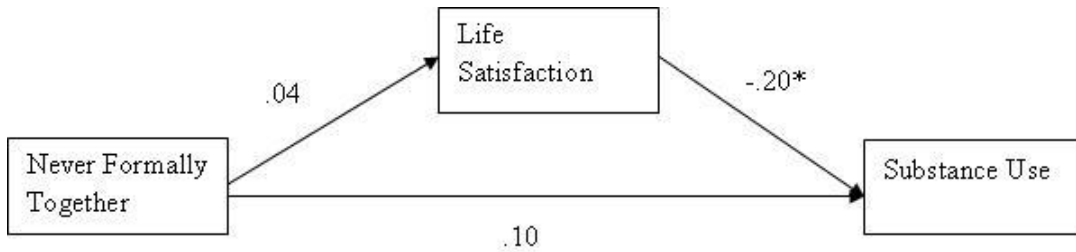


Figure 11. Path Model representing Non-Mediation between Parents Never Formally Together Family Structure and Substance Use

There was no mediation relationship between socio-economic status and substance use, with non-significant indirect ( $\beta = .002, p = .87$ ) and direct ( $\beta = -.03, p = .71$ ) effects (see Figure 12).

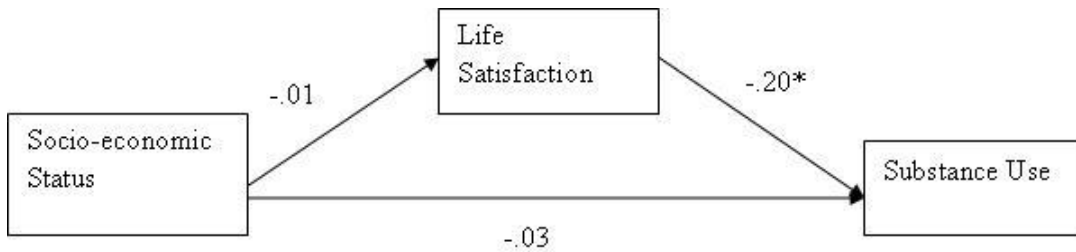
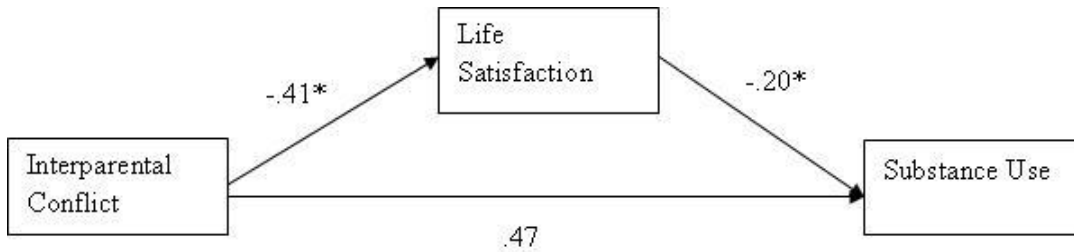


Figure 12. Path Model representing Non-Mediation between Socio-Economic Status and Substances Use

The results related to interparental conflict suggest an indirect-only mediation, with a significant indirect effect of interparental conflict on substance use ( $\beta = .08, p = .04$ ) and a non-significant direct effect ( $\beta = .06, p = .47$ ). The positive path coefficient representing the direct effect of interparental conflict on substance use signifies that students experiencing interparental conflict reported increased substance use (see Figure 13).





*Figure 13.* Path Model representing Indirect-Only Mediation between Interparental Conflict and Substance Use

In sum, results of analyses using the transformed substance use variable support indirect effects of interparental conflict and major life events on substance use through life satisfaction. Specifically, higher levels of interparental conflict and major life events were associated with increased substance use due to these variables' negative influences on life satisfaction which, in turn, was inversely related to substance use. No family stress variable was found to exert a significant direct effect on substance use when the transformed version of the substance use variable was employed in the analyses.

Comparisons of results obtained using the raw and transformed versions of the substance use variable indicate that results were highly similar regardless of which variable was employed, with the following exceptions: when the raw version of the substance use variable was utilized in the analyses, direct effects of Parents Never Formally Together and Parent Together family structures on substance use were identified. In sum, employing the transformed version of the substance use variable did not alter findings in major ways (i.e., life satisfaction did not appear to be any more or less of a mediator in the relationship between family stressors and substance use), which increases trustworthiness of findings obtained using the non-normally distributed substance use variable. Therefore, for ease of interpretability of data, the findings

obtained when the raw version of the substance use composite variable was employed will be discussed further in this document.

## **Chapter V: Discussion**

The current study examined the relationship between family stressors (i.e., family structure, socio-economic status, major life events related to the family, interparental conflict), life satisfaction, and substance use. Specifically, this study evaluated the overall contribution of family stressors to adolescent life satisfaction, the unique contribution of each family stressor to life satisfaction, and whether life satisfaction mediates the relationship between family stressors and substance use in youth. The following discussion summarizes the findings that pertain to the research questions of interest, as well as places the results in the context of findings from previous research. Implications of the findings for practice and limitations of the study are reviewed. Last, areas that could be expanded in future research are suggested.

### **Bivariate Relationships between Family Stressors and Life Satisfaction**

**Major life events.** Past research has examined the relationship between both chronic (i.e., family discord) and acute (i.e., moving, death of a family member) family stressors and positive indicators of mental health, such as life satisfaction. The current study examined major life events that specifically pertained to the family (i.e., moving to a new home, death of a family member, increased absence of a parent from the home) utilizing the Life Events Checklist (Johnston & McCutcheon, 1980). Results revealed that family-related major life events were negatively associated with life satisfaction. These findings are similar to the study by Ash and Huebner (2001) that examined the relationship between both acute and chronic stressors and life satisfaction among 152

students in grades 9-12. Ash and Huebner (2001) found acute stressors, measured by the LISRES-Y, to be a significant predictor of life satisfaction. A more recent study by Suldo and Huebner (2004a) that examined whether life satisfaction was a moderator between stressful life events, as measured by the LEC, and psychopathology, also found a significant negative relationship ( $r = -.23$ ) between the stressful life events and life satisfaction. The bivariate relationship found in the current study between major life events pertaining to the family and life satisfaction was stronger ( $r = -.48$ ) than identified in previous research, and further underscores the notion that experiencing acute stressors negatively relates to life satisfaction among youth.

**Economic hardship.** The current study utilized students' school lunch status as an indicator of socio-economic status and found a weak but significant positive bivariate relationship between SES and life satisfaction. The significant mean differences in life satisfaction between low and high SES students suggest that students of low SES experience lower life satisfaction. Although previous literature has found that demographic variables are weak predictors of life satisfaction, the study described above by Ash and Huebner (2001) found an even greater discrepancy in the SLSS scores of low SES students and high SES students. A more recent study among 221 middle school students using the Brief Multidimensional Students' Life Satisfaction Scale (BMSLSS), and the Multidimensional Students' Life Satisfaction Scale (MSLSS) found small but significant positive relationships between both the BMSLSS and SES ( $r = .24$ ) and the MSLSS and SES ( $r = .10$ ; Seligson, Huebner, & Valois, 2003). In sum, findings from the current study support the notion that students who qualify for free or reduced-price

school lunch experience at least slightly lower life satisfaction than their peers whose families are above the poverty line.

**Family structure.** When examining life satisfaction as it relates to family structure, previous literature has focused on the life satisfaction of the parents. The current study investigated the relationship between three types of family structures (i.e., Parents Together, Parents Never Formally Together, Changes in Family Structure) and the adolescents' life satisfaction. Results suggested small trends for differences in the means of life satisfaction among the three different family structure groups. Students who did not report a change in family structure reported the highest mean life satisfaction, with students experiencing changes in family structure reporting the lowest life satisfaction; however the differences between group means were not significant. Previous literature supports the trend that students experiencing a change in family structure report lower life satisfaction when compared to intact family counterparts. Specifically, a study of 2,758 Chinese secondary school students found that students from intact families reported higher life satisfaction, as measured by the LIFE scale, than students who have experienced divorce. A different study of 5,021 American secondary students further differentiated between several family structures (i.e., living with both mother and father, mother only, father only, mother and stepparent, father and stepparent, mother and another adult, father and another adult, and other relatives, non-relatives, or guardians; Zullig, Valois, Huebner, & Drane, 2005). Zullig and colleagues (2005) found that students living with other relatives, non-relatives, guardians, father-only, or mother and another adult all reported lower life satisfaction than students living with both parents. These studies further support the notion that children who have experienced a change in

family structure and/or do not live with both parents report lower life satisfaction than those youth whose parents are together. The fact that this trend was not statistically significant in the current study could reflect issues related to reduced power to detect effects as a result of the relatively small sample size.

**Interparental conflict.** Research examining the relationship between interparental conflict and life satisfaction has fallen under research on stressful life events. Previous research has found that chronic on-going stressors (i.e., interparental conflict) more strongly relates to life satisfaction than acute stressors (i.e., divorce; Ash & Huebner, 2001; McCullough et al., 2000). The current study expanded this research by examining interparental conflict in terms of three dimensions: frequency, intensity, and resolution, instead of measuring the construct with one item on a life events checklist. Results of bivariate analyses indicate that interparental conflict had a strong negative relationship with life satisfaction ( $r = -.54$ ). This supports the literature that posits that the quality of the relationships within the family is more important than the actual structure of the family with regard to adolescents' adjustment (Gohm, Oishi, Darlington, & Diener, 1998; Hetherington & Stanley-Hagan, 1999; Lansford, 2009); however, this extant literature focused on negative indicators of adolescent adjustment. Only one previous study (Gohm et al., 1998) measured children's perceptions of their parents' marital quality in relation to their life satisfaction, as measured by the LIFE scale, among 6,820 college students. This multi-national study found that perceived marital quality accounted for more of the variance in life satisfaction than parental marital status. The current study had similar findings in that although family structure was not significantly related to life

satisfaction; interparental conflict had a strong and significant inverse relationship with adolescent life satisfaction.

### **Overall and Unique Contributions of Family Stressors to Life Satisfaction**

The current study investigated the overall contribution of family stressors to life satisfaction, as well as the unique influence each family stressor had on life satisfaction. Results revealed that all four family stressors taken together accounted for 36% of the variance in life satisfaction. The current study is the only study to date that has examined the four specific family stressors (i.e., socio-economic status, major life events, family structure, interparental conflict) together in relation to life satisfaction in youth. However, a previous study investigated the contribution of chronic and acute stressful life events on life satisfaction and found the overall contribution to be around 29% (Ash & Huebner, 2001). The current study provides an increased understanding of the extent to which specific family stressors contribute to life satisfaction.

Further investigation of the unique contribution of each family stressor on life satisfaction allowed for a more complete understanding of how life satisfaction is related to specific family experiences. It was hypothesized that low socio-economic status and interparental conflict would be the family stressors most strongly linked to life satisfaction, followed by major life events, and lastly family structure. Results of the current study revealed that interparental conflict was the strongest contributor, followed by experiencing stressful life events. Although it was hypothesized that socio-economic status would be one of the strongest contributors, this variable was not a unique predictor of life satisfaction after the variance shared between free/reduced-price lunch status and other predictors was taken into account. This finding supports the idea that the more

proximal the stressor, the stronger the effect it has on adolescent mental health. Socio-economic status extends beyond just the family and could be a more distal stressor present in the community, therefore not having as strong of an effect as proximal stressors such as interparental conflict. Notably, when the variance shared among the family stressors was taken into account, perceiving high levels of interparental conflict was in fact the strongest contributor to life satisfaction, explaining 12% of the differences in students' life satisfaction reports. This provides further support for the importance of the quality of relationships within the family. Major life events were also an important predictor in that it accounted for 6% of the unique variance in life satisfaction. These findings support previous literature that indicates the relationship between chronic stressors and life satisfaction is stronger than the relationship between major life events and life satisfaction (Ash & Huebner, 2001; McCullough et al., 2000). Ash and Huebner (2001) found that both chronic stressors and acute stressors were significant predictors of life satisfaction, but chronic stressors exerted more of a direct effect on children's life satisfaction. McCullough and colleagues (2000) also examined major life events and chronic stressful events and their relationship with SWB (positive affect, negative affect, and life satisfaction) in a sample consisting of 92 high school students. The Adolescent Perceived Events Scale was used to measure positive events, negative events, daily events, and major events; life satisfaction was measured by the SLSS. Daily events were the strongest contributors to life satisfaction, uniquely accounting for 12.9% of the variance, whereas major events accounted for 8.6% of the variance in life satisfaction



(McCullough et al., 2000). The current study extends this research to pertain to family specific stressors, and finds that interparental conflict is more impactful than major life events.

Results of the current study that indicate interparental conflict as a stronger predictor of life satisfaction than family structure support previous findings by Gohm and colleagues (1998). In this multi-national study with 6,820 college students from 39 countries, marital quality accounted for more of the variance in life satisfaction than marital status. Such findings are in line with extant literature indicating that the quality of the parental relationship is more important than the family structure to the adolescent development of psychopathological symptoms during youth (Amato, 2001; Hetherington & Stanley-Hagan, 1999; Lansford, 2009). In sum, results of the current study indicate that adolescent wellness is more likely to be adversely affected by a parental relationship characterized by conflict, than by simply a change in the family configuration. Regardless of the parental relationship, an accumulation of stressors in the home also adversely influences youth life satisfaction.

### **Life Satisfaction as a Mediator**

The current study expanded on previous literature that has established life satisfaction as a mediator between negative events and psychopathology by examining a more specific negative outcome, substance use. Substance use was defined as whether students reported any use of three substances: beer, liquor, and marijuana. Results of path analyses indicated indirect-only mediation for both major life events and interparental conflict. Therefore, major life events and interparental conflict influenced substance use

through their relationships with life satisfaction, despite the absence of direct effects of these family stressors on youth substance use.

The path model for major life events specifies that experiencing high levels of stressful events within the family is related to lower levels of life satisfaction and lower levels of life satisfaction in turn predicts higher reported substance use. This finding is supported by previous research by McKnight and colleagues (2002), in which life satisfaction was examined as a mediator between stressful life events and psychopathology. In a sample of 1,201 students in grades 6-12, life satisfaction (measured by the SLSS), problem behavior, and stressful life events (LEC scores) were examined. Results indicated that life satisfaction partially mediated the association between stressful life events and externalizing behaviors. This finding is in line with the results of the current study because substance use can be conceptualized under the umbrella term of externalizing behaviors.

It is surprising, however, that experiencing stressful events was not directly related to substance use. Previous literature on this topic has found a significant positive relationship between experiencing stressful events and substance use in youth. In a study by Hoffman and colleagues (2000), 651 adolescents and their parents responded to questionnaires regarding stressful life events (measured by the Junior High Life Experiences Survey and the Family Inventory of Life Events and Life Changes), and drug and alcohol use in the past year. A positive relationship was found between increases in life events and increases in drug use. Other studies have found similar positive relationships between experiencing stressful life events and adolescent substance use (Aseltine & Gore, 2000; Barrett & Turner, 2005). Contrasting findings between the

current study and previous research could be the result of differences in sample. In the study described above by Hoffman and colleagues (2000), the sample size was much larger and less diverse, with 84% of the students being Caucasian. A larger sample ( $N = 1208$  students) of more homogenous youth (94% Caucasian) was also used in Aseltine and Gore (2000), who also notably examined a wider range of life events (61 items total related to domains beyond the family). Further, previous studies have examined the stress-substance use relationship using a longitudinal design, whereas the current study examined this relationship at one point in time.

The path model for interparental conflict indicates that experiencing high levels of interparental conflict was related to lower levels of life satisfaction, and in turn lower levels of life satisfaction predicted higher substance use. To date, this is the first study that has examined whether life satisfaction mediates the relationship between interparental conflict and substance use; however, previous research has examined another aspect of family stress: parenting style, specifically authoritative parenting (Suldo & Huebner, 2004b). This particular study of a 1,201 students ages 11-19 years examined the relationship between dimensions of authoritative parenting (psychological autonomy granting, social support/involvement, and strictness-supervision), life satisfaction (SLSS scores), and psychopathology. Results revealed that life satisfaction fully mediated the relationship between parental social support and psychopathology, as well as partially mediated the relationship between the other two authoritative parenting dimensions and psychopathology. Higher levels of parental support predicted higher life satisfaction; high life satisfaction, in turn, co-occurred with fewer symptoms of psychopathology. In the case of strictness/supervision and psychological autonomy granting, these dimensions

of authoritative parenting yielded direct, inverse links with psychopathology, as well as indirect effects through their positive influence on life satisfaction. Although this study addressed the parent-child relationship and not the marital relationship, it provided support for life satisfaction as an important mechanism in which family experiences influence negative outcomes in adolescents.

Interestingly, in the current study the direct effect of interparental conflict on substance use was non-significant. Previous research has supported a significant positive relationship between family conflict and reported substance use (Kristjansson et al., 2008). This study included 7,430 participants, ages 14-16 years and required students to respond to questions regarding their smoking and alcohol use in the past 30 days, their parents marital status, and the amount of family conflict (measured through four questions: “Have you been involved in a serious argument with your parents?”, “Have you witnessed a serious argument by your parents?”, “Have you been involved in physical violence in your home?”, and “Have you witnessed physical violence in your home?”). Results revealed that students who experienced parental divorce reported significantly more drug use; however, when family conflict variables were considered, this relationship disappeared (Kristjansson et al., 2008). Noteworthy, all family conflict variables were significantly related to adolescent substance use, highlighting the importance of the quality of the parental relationship. With this previous research in mind it is surprising that the direct effect of interparental conflict on substance use did not approach significance. The results of the current study are contrasting to previous research, and could be the result of several differences between previous research and the current study. Previous research has examined the relationship between interparental

conflict over a period of time in longitudinal designs (Kristjansson et al., 2008; Skeer et al., 2009). Additionally, the sample used in the study described above was from Iceland, and was older (ages 14-16) and much larger than the current study.

The other path analyses that included socio-economic status and family structure did not indicate mediation. Specifically, for socio-economic status, both the direct and indirect effects were non-significant. This finding is not particularly surprising. Past literature has been mixed on the relationship between SES and substance use. Large studies such as the Monitoring the Future Survey (2008) found a relationship between low SES and increased substance use in younger adolescence, but by grade 12, this relationship disappeared. Several other studies have also failed to find a relationship between SES and substance use (Hoffman, Cerbone, & Su, 2000; Spijkerman, Eijnden, & Huiberts, 2008).

The current study results in regard to family structure found no support for mediation between any of the family structure groups and life satisfaction. Although there were significant direct relationships between two family structure groups (i.e., Parents Together, Parents Never Formally Together) and substance use, there were no significant indirect effects present between any of the family structure groups and substance use. The significant direct effect between Parents Together and substance use when Parents Never Formally Together was the comparison group indicates that students with Parents Together reported lower substance use than students whose parents were never married. Although the current study did not examine the adults who were in the home of students with Parents Never Formally Together (for instance, step-parents or parents' significant others), it could be hypothesized that these students of presumably

single-parent households have less parental monitoring than students from families with intact parents. There is an extensive amount of literature supporting the importance of parental monitoring as a protective factor against problem behaviors such as substance use (Hemovich & Crano, 2009; Kiesner, Poulin, & Dision, 2010; Paxton, Valois, & Drane, 2007). The significant positive direct effect between Parents Never Formally Together and substance use when Parents Together was used as the comparison group, further support the findings described above; adolescents whose parents were not married (or not currently living together) reported more substance use than students whose parents were currently married or living together.

### **Implications for School Psychologists**

Early adolescence is a critical stage in development in which many changes occur that can affect the psychological functioning of youth. Adolescents' psychological functioning is of utmost concern to school psychologists in part due to the fact that students with the best mental health have the greatest academic functioning (Suldo & Shaffer, 2008). It is important for school psychologists to conceptualize mental health as not only the absence of psychopathology but also the presence of positive indicators of mental health (i.e., life satisfaction). Focusing on adolescents' wellness aligns with the current paradigm shift in the field of psychology that stresses the importance of attending to students' strengths (Doll & Cummings, 2008). Previous literature has established clear links between adolescent mental health and the presence of many types of family stressors (Amato, 2001; Ash & Huebner, 2001; Gohm et al., 1998; Lansford, 2009; Morales & Guerra, 2006; Shek, 2007). The current study augments a growing body of research indicating that students experiencing specific kinds of family stress (i.e., major

life events, interparental conflict) report lower life satisfaction. Noteworthy, the relationship between family stressors and life satisfaction could possibly be bi-directional. Additionally, the link between life satisfaction and negative outcomes in youth could represent a reciprocal relationship.

By delineating specific family stress variables that link to students' mental health, school psychologists have a clearer idea of where they should focus their efforts in terms of youth or family-focused prevention and intervention targets. School psychologists have a further evidence-based rationale to spend more time providing parent and teacher consultation, as well as individual or group counseling to provide skills and resources matched to the students' need. Specifically, school psychologists could provide teacher consultation to assist in the identification of students who are experiencing high levels of major stressful family events or interparental conflict. Once students are identified, school psychologists are in a prime role to provide information to parents regarding the importance of the parental relationship on children's development, and the adverse effects of children perceiving a conflict-ridden relationship between parents. Further, school psychologists can work with students to provide them with coping strategies to deal with major stressful events or high levels of interparental conflict. Also, school psychologists could help students identify social supports, such as adults at the school or extended family members, who can provide students with a supportive relationship that may buffer students from experiencing declines in life satisfaction as a function of family stressors. Additionally, individual counseling that reduces self-blame may mediate the relationship between perceiving high levels of interparental conflict and adverse outcomes in youth. Additionally, school psychologists can work in collaboration with the

school social worker to provide families with resources in cases where the need is beyond what can be addressed by school personnel alone.

The current study demonstrated life satisfaction as a pathway by which two specific stressors influenced substance use in adolescence. Previous research has found that the greatest escalation of alcohol use occurs between 12 and 15 years of age (Brown, 2008), supporting the importance of examining substance use among youth. The results of the current study highlight the importance of advocating for the promotion of complete mental health (i.e., elevated life satisfaction) in youth as a form of prevention. Additionally, it provides school psychologists with further insight into which students are at risk for future substance use in order to facilitate early prevention and intervention efforts.

In essence, the current study provides further rationale for school psychologists to provide services that aim to promote and increase students' life satisfaction, in part in an attempt to reduce the risk of substance use. Although literature discussing the promotion of life satisfaction is recent and limited, especially within youth populations, there are several ways school psychologists could be involved in promoting life satisfaction. In an early review of the literature, Huebner, Suldo, Smith, and McKnight (2004) recommend specific strategies to address the promotion of life satisfaction. For instance, in light of previous research that highlighted locus of control as a cognitive mediator between acute negative events and life satisfaction (Ash & Huebner, 2001), the authors discuss the use of cognitive-behavioral strategies to alter ineffective cognitions that are related to negative appraisals (i.e., attribution retraining focusing on internal locus of control). Other strategies summarized by the authors include strengthening peer and family



supports, increasing students' involvement in meaningful activities, and improving problem-solving skills (Huebner et al., 2004).

In a more recent summarization of literature on this topic, Suldo, Huebner, Savage, and Thalji (2011) discuss the importance of enhancing correlates of subjective well-being (SWB) such as relationships with family and peers. Strategies that provide students with skills (i.e., social skills, conflict resolution) that are related to positive social relationships were discussed. Another correlate of SWB that can be a focus of intervention is school climate; promoting positive teacher-student relationships and parental involvement can be another area in which school psychologists can place their efforts. Suldo and colleagues also outlined the importance of cognitions as discussed above, specifically advocating for the importance of helping students develop “(a) more positive expectations about the potential to experience positive things in life (e.g., look on the bright side, expect good things to come from bad situations); (b) multiple methods to obtain one’s future goals, as well as the confidence and motivation to follow these plans; (c) more adaptive attributions regarding the causes of positive and negative events, (d) a sense of personal control over situations; and (e) reasonably high yet flexible personal standards for performance” (Suldo, Huebner, Savage, Thalji, 2011, p. 511). In addition to addressing correlates of SWB, the authors also summarized two specific areas of interventions that focus primarily on increasing happiness in students: hope and gratitude. School psychologists can work with students to increase their gratitude by assigning a gratitude journal in which students write down daily situations or events for which they are grateful. Additionally, school psychologists can increase hopeful thinking by assisting students to state clear goals for the future, and help students build the belief that they can

be successful in completing the goals. Although literature on promoting happiness and life satisfaction in youth is not as established as literature addressing psychopathology in youth, these are examples of ways that hold promise for school psychologists who are interested in intervening to help promote students' life satisfaction.

### **Contributions to the Literature**

There has been an extensive amount of literature examining the link between family stressors and adolescent psychopathology. However, there is less of a focus within this topic on positive indicators of mental health, especially with respect to the topic of interparental conflict. The current study provides further understanding of how experiencing family stress can affect students' global life satisfaction. The current study clarifies that the specific types of family stressors that most influence life satisfaction are a specific form of chronic family stress (i.e., interparental conflict) and the accumulation of major family stressful events. The effect of low SES and non-intact family status on life satisfaction is not significant after the influence of parental relationships and family stressors are controlled for. Additionally, although life satisfaction has been identified as a mechanism by which stress can affect negative outcomes, this study is the first to examine whether life satisfaction mediates the relationship between family stressors and adolescent substance use. Because results revealed that life satisfaction does in fact mediate specific relationships (i.e., major life events, interparental conflict), this study provides support for attending to students' happiness instead of a primary focus on psychopathology.

## **Limitations**

One limitation of this study is the generalizability, or population validity, of this sample due to low response rates from the participating middle schools. The participants who obtained parental consent and agreed to participate in the study may be uniquely different from the students who chose not to participate in the study. Additionally, the majority of the sample was female (64%) and there was a higher representation of sixth grade students (46.4%) than seventh and eighth grade students. Therefore, precautions should be taken when attempting to generalize the results of this study to other populations of students.

The current study required participants to self-report their substance use. Thus, a potential limitation of this study is the utilization of self-report data. Participants may feel the need to respond in a socially desirable way when reporting about their behavior (Smart, Chibucos, & Didler, 1990). Therefore, the level of substance use indicated by the participants in this study may not be accurate, and may even be a low estimate. Further, the lack of variability among the individual substance use items resulted in a non-normal distribution on this outcome variable. Including variables with large skew and/or kurtosis in the analyses may have reduced the power to detect a significant effect in the event(s) that a significant effect actually existed. Additionally, although the originally intended sample included high school students, due to convenience sampling, the current study investigated substance use among middle school students only and found low levels of substance use among this population. Investigating risky behavior such as substance use among this population may best be done by examining student attitudes about substance

use instead of strictly their frequency of substance use, as actual use is more likely to occur at later ages.

Although the purpose of the current study was to glean further information on the relationships among family stressors, life satisfaction, and substance use, it can not be stated that lower levels of life satisfaction were the result of experiencing family stress because all data were collected at a single point in time. Additionally, there were other family variables (i.e., parent-child relationships) that were not included in the current study and could be confounding variables that affect the results.

### **Future Directions**

In order to provide further understanding of how family stressors are linked to life satisfaction and substance use there are several future directions for research. As stated above, the results of the current study do not imply a causal relationship between experiencing family stressors and lower levels of global life satisfaction. Research within the positive psychology realm is not as established as research examining psychopathology in youth. As a result, literature on empirically-based techniques that focus on increasing life satisfaction in students is very limited and not comparable to the extant amount of research on the treatment of psychopathology. Without established techniques for how to increase happiness in students, it is not possible to experimentally test relationships between environment and intrapersonal “predictor” variables and life satisfaction, making it impossible to determine causality. Future research needs to continue to examine the relationship between stressful experiences, life satisfaction, and “predictor” variables to build empirical rationales of where to intervene and how to increase life satisfaction.

It would also be beneficial for future research to examine these relationships over time to gain an even further understanding of life satisfaction in youth. In the current study, students only reported on their family stress, life satisfaction, and substance use at one time point so it is impossible to say that lower levels of life satisfaction are the result of experiencing family stress. Additionally, the current study focused on life satisfaction as a positive indicator of mental health; however, measuring all aspects of subjective well-being (i.e., positive affect and negative affect, in addition to life satisfaction) would further add to the literature in exploring which positive indicator(s) of mental health is most associated with experiencing family stressors. Further, future research would benefit from not only looking at additional positive indicators of mental health, but additional family stressors. The inclusion of other potential family stressors such as parent-child relationships, sibling relationships, and children's attributions or perceptions of their economic status would provide a more comprehensive understanding of the relationship between family stressors and mental health.

Another direction for future research is to further explore the relationship between interparental conflict and life satisfaction by examining other dimensions of conflict such as threat and self blame. The current study results revealed that interparental conflict was the strongest contributor to life satisfaction; therefore, further understanding of this relationship would be beneficial. For example, a previous study by Fosco and Grych (2009) investigated the relationship between children's perceptions of interparental conflict and psychopathology. Specifically, in a sample consisting of 150 two parent families with children ages 8-12 years, students reported on measures of interparental conflict (i.e., CPIC Conflict Properties Subscale), triangulation (i.e., CPIC Triangulation

Subscale), appraisal of conflict (i.e., Threat and Blame Scales of CPIC), and psychological functioning (i.e., CBCL-YSR). Results found that children's self-blaming attributions were uniquely associated with both internalizing and externalizing problems. Perceived threat was a unique predictor of internalizing problems, whereas externalizing problems were predicted by triangulation (Fosco & Grych, 2009). Further exploring whether additional dimensions of interparental conflict influence positive indicators of mental health is an area for future research.

### **Summary**

In conclusion, the current study has expanded the available literature by examining the relationship between family stressors and life satisfaction in adolescents. Specifically, the current study was the first study to investigate the relationship between interparental conflict, as measured through three dimensions (i.e., frequency, intensity, resolution), and life satisfaction. Additionally, the current study was the first to examine whether life satisfaction mediates the relationship between family stressors and substance use in adolescents. As a result of the greatest escalation of substance use occurring between ages 12 to 15 years (Brown, 2008) it is important to continue to investigate this outcome in middle school age students in order to inform prevention and intervention services to youth. The current study identified major life events related to the family and interparental conflict as two unique contributors to life satisfaction. Importantly, life satisfaction mediated the relationship between these two stressors and substance use, providing even further information in identifying students at risk so that supports can be implemented.

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## Appendices

## Appendix A: Parent Consent Letter (Modified to fit in current document)



Dear Parent or Caregiver:

This letter provides information about a research study that will be conducted at \_\_\_\_\_ Middle School by Dr. Julia Ogg and Dr. Rance Harbor. Dr. Ogg is a professor from the University of South Florida and Dr. Harbor is a school psychologist in \_\_\_\_\_ County, as well as a visiting professor at the University of South Florida. Our goal in conducting the study is to investigate the experiences of adolescents exhibiting symptoms of inattention, hyperactivity, and impulsivity and to better understand the perceptions of adolescents toward those exhibiting these behaviors.

- ✓ **Who We Are:** Julia Ogg, Ph.D. is a professor in the College of Education at the University of South Florida (USF). Rance Harbor, Ph.D. is a school psychologist in \_\_\_\_\_ County and a visiting professor at USF. We are planning the study in cooperation with the principal and administrators of \_\_\_\_\_ Middle School to ensure the study provides information that will be helpful to the schools.
- ✓ **Why We Are Requesting Your Participation and Your Child's Participation:** This study is being conducted as part of a project entitled, "The Experiences of and Perceptions toward Adolescents Exhibiting Inattention, Hyperactivity, and Impulsivity." You and your child are being asked to participate because your child is a student at \_\_\_\_\_ Middle School. All students at \_\_\_\_\_ Middle School are being asked to participate.
- ✓ **Why You and Your Child Should Participate:** We need to learn more about how to help students be successful during the pre-teen and teenage years. The information that we collect from students and parents may help increase our overall knowledge of difficulties frequently encountered in school and help support students' success. Please note neither you nor your child will be paid for your participation in the study. However, all students who return parental consent forms will be entered into a drawing for a gift certificate, regardless of if you allow your child to participate or not.
- ✓ **What Participation Requires:** If you give permission for your child to participate in the study, he or she will be asked to complete paper-and-pencil questionnaires. The surveys will ask about your child's behaviors, feelings about themselves, medication use, substance use, life events, and about how family members get along. They will also be asked to report their gender, ethnicity, experiences getting in trouble, diagnoses, and the marital status of their parents. Completion is expected to take your child about 40 minutes. We will personally administer the questionnaires at \_\_\_\_\_ Middle School along with a trained team of researchers from USF during regular school hours. Questionnaires will be administered to students who have parent permission to participate. Participation will occur during one class period this Spring semester. In addition, students' school records will be reviewed for academic achievement (e.g., grades, FCAT scores) and reduced lunch status. If you choose to participate, you will be asked to complete a questionnaire about your child's behavior. Completion of the questionnaire is expected to take about 5 minutes.
- ✓ **Please Note:** Your decision to participate and to allow your child to participate in this research study is completely voluntary. You are free to allow your child to participate in this research study or to withdraw him or her at any time. You are also free to decide if you would like to participate in this study or to withdraw at any time. If you choose not to participate or not to allow your child to participate, or if you withdraw your child at any point during the study, this will in no way affect your relationship with \_\_\_\_\_ Middle School, USF, or any other party.
- ✓ **Confidentiality of Your Responses and Your Child's Responses:** There is minimal risk to you and your child for participating in this research. We will be present during administration of the questionnaires, along with a team of trained researchers, in order to provide assistance to your child if he or she has any questions or concerns. Your child's privacy and research records will be kept confidential to the extent of the law. Authorized research personnel, employees of the Department of Health and Human Services, and the USF Institutional Review Board may inspect the records from this research project, but you and your child's individual responses will not be shared with school system personnel or anyone other than us and our research assistants. Your questionnaire and your child's completed questionnaire will be assigned a code number to protect the confidentiality of his or her responses. Only we will have access to the locked file cabinet stored at USF that will contain: 1) all records linking code numbers to participants' names, and 2) all information gathered from school records. The questionnaires will be kept for 5 years and then will be destroyed. Please note that although your child's specific responses on the questionnaires will not be shared with school staff, if your child indicates that he or she intends to

**Appendix A: Continued**

harm him or herself, we will provide your child’s name to the mental health counselors at \_\_\_\_\_ Middle School and ask that they follow up with your child to ensure your child’s safety. We will also let school mental health counselors know if your child scores high on a measure of depression. The mental health counselors will determine if additional follow-up is needed.

- ✓ What We’ll Do With Your Responses and Your Child’s Responses: We plan to use the information from this study to inform educators and psychologists about helping all students be successful in school. The results of this study may be published. However, the data obtained from you and your child will be combined with data from other people in the publication. The published results will not include your name or your child’s name or any other information that would in any way personally identify you or your child.
- ✓ Questions? If you have any questions about this research study, please contact Dr. Julia Ogg at (813) 974-9698. If you have questions about you or your child’s rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the University of South Florida at (813) 974-9343.
- ✓ Do You Want to Participate or Have Your Child Participate? To permit your child to participate in this study, complete the attached child consent form (top portion below) and have your child turn it in to his or her 1<sup>st</sup> period teacher. If you would like to participate in this study, please complete the parent consent form (2<sup>nd</sup> portion of form below). If you choose to participate, your child will also bring the questionnaire home for you to fill out.

Sincerely,

Julia A. Ogg, Ph.D.  
Assistant Professor of Educational Psychology  
USF College of Education

Rance Harbor, Ph.D.  
School Psychologist & Visiting Professor  
\_\_\_\_\_ County & USF College of Education

-----  
**Consent for Child to Take Part in this Research Study**

- I do not give permission to let my child take part in this study.
- I freely give my permission to let my child take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

\_\_\_\_\_  
Printed name of child

\_\_\_\_\_  
Child’s Homeroom Teacher

\_\_\_\_\_  
Date

\_\_\_\_\_  
Signature of parent of child taking part in the study

\_\_\_\_\_  
Printed name of parent

**Consent For You To Take Part in this Research Study**

- I do not give permission to participate in this study.
- I freely give my permission to take part in this study. I understand that this is research. I have received a copy of this letter and consent form for my records.

\_\_\_\_\_  
Signature of parent taking part in study

\_\_\_\_\_  
Printed name of parent

\_\_\_\_\_  
Date

-----  
**Statement of Person Obtaining Informed Consent**

I certify that participants have been provided with an informed consent form that has been approved by the University of South Florida’s Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

\_\_\_\_\_  
Signature of person obtaining consent

\_\_\_\_\_  
Printed name of person obtaining consent

\_\_\_\_\_  
Date



## Appendix B: Student Assent Letter (Modified to fit in current document)

Hello!

This letter explains a research study that we would like you to take part in. Our goal in conducting the study is to learn more about your thoughts, feelings, and attitudes related to school, family, friends, and life in general.

- ✓ Who We Are: Julia Ogg, Ph.D. is a professor in the College of Education at the University of South Florida (USF). Rance Harbor, Ph.D. is a school psychologist in \_\_\_\_\_ County and a visiting professor at USF. Several doctoral students in the College of Education at USF are also part of the team. We are working with your principal and administrators to make sure this study will be helpful to your school.
- ✓ Why We are Asking You to Take Part in the Study: This study is being conducted as part of a project entitled, “The Experiences of and Perceptions toward Adolescents Exhibiting Inattention, Hyperactivity, and Impulsivity.” You are being asked to participate because you are a student at \_\_\_\_\_ Middle School.
- ✓ Why You Should Take Part in the Study: We need to learn more about how to help students be successful during the pre-teen and teenage years! The information that we collect from you may help increase our overall knowledge of difficulties frequently encountered in school and help support your success. Please note you will not be paid for your participation in the study. However, all students who complete and return parental consent forms will be entered into a drawing for a gift certificate.
- ✓ What Will Happen if You’re in the Study: If you choose to take part in the study you will be asked to complete a paper-and-pencil questionnaire. The survey will ask you about your thoughts and behaviors. It will take you about 40 minutes to complete the questionnaire. If you choose to take part in the study, we will also look at some of your school records including your grades, and reduced lunch status.
- ✓ Please Note: Your involvement in this study is voluntary (it’s your choice). By signing this form, you are agreeing to take part in this study. Your decision to take part, not to take part, or to stop taking part in the study at any time will not affect your student status or your grades; you will not be punished in any way. If you choose not to take part, it will not affect your relationship with \_\_\_\_\_ Middle School, USF, or anyone else.
- ✓ Privacy of your Involvement: Your privacy and research records will be kept confidential (private, secret) to the extent of the law. People approved to do research at USF, people who work with the Department of Health and Human Services, the USF Institutional Review Board, and its staff, and other individuals acting on behalf of USF may look at the records from this research project. However, your responses to the surveys will not be shared with people in the school system or anyone other than us and our research assistants. Your surveys will be given a code number to protect the confidentiality of your responses. Only we will have the ability to open the locked file cabinet stored at USF that will contain: 1) all records linking code numbers to names, and 2) all information gathered from school records. All records from the study (completed surveys, information from school records) will be

**Appendix B: Continued**

destroyed in four years. Please note that although your specific responses and comments will not be shared with school staff, if you say or write that you may harm yourself or someone else, or if your responses on specific surveys indicate extreme emotional distress, we will contact district mental health counselors to make sure everyone is safe. The district mental health counselor may meet with you to make sure you are safe.

- ✓ What We'll Do With Your Responses: We plan to use the information from this study to learn more about how to help students be successful during the pre-teen and teenage years! The information that we collect from you may help increase our overall knowledge of difficulties frequently encountered in school and help support your success. The results of this study may be published. However, your responses will be combined with other students' responses in the publication. The published results will not include your name or any other information that would identify you.
- ✓ Questions? If you have any questions about this research study, please contact Dr. Julia Ogg at (813) 974-9698. If you have questions about your rights as a person who is taking part in a research study, you may contact a member of the Division of Research Compliance of the University of South Florida at (813) 974-9343.

Thank you for taking the time to take part in this study.

Sincerely,

Julia A. Ogg, Ph.D.  
Assistant Professor of School Psychology  
USF College of Education

Rance Harbor, Ph.D.  
School Psychologist & Visiting Professor  
County & USF College of Education

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**Assent to Take Part in this Research Study**

I give my permission to take part in this study. I understand that this is research. I have received a copy of this letter and assent form.

\_\_\_\_\_  
Signature of student taking part in the study      Printed name of student      Date

\_\_\_\_\_  
Your Homeroom Teacher

**Statement of Person Obtaining Assent**

I certify that participants have been provided with an assent form that has been approved by the University of South Florida's Institutional Review Board and that explains the nature, demands, risks, and benefits involved in participating in this study. I further certify that a phone number has been provided in the event of additional questions.

\_\_\_\_\_  
Signature of person obtaining assent      Printed name of person obtaining assent      Date

**Appendix C: Demographic Form (Modified to fit in current document)**

<p><b>1. Gender</b></p> <p><input type="radio"/> 1) Female</p> <p><input type="radio"/> 2) Male</p> <p><b>2. Ethnicity</b></p> <p><input type="radio"/> 1. African American/Black</p> <p><input type="radio"/> 2. Asian/ Pacific Islander</p> <p><input type="radio"/> 3. White</p> <p><input type="radio"/> 4. Hispanic</p> <p><input type="radio"/> 5. Native American/ Alaska Native</p> <p><input type="radio"/> 6. Other (Specify _____)</p> <p><b>3. Age</b></p> <p><input type="radio"/> 10                      <input type="radio"/> 14                      <input type="radio"/> 18</p> <p><input type="radio"/> 11                      <input type="radio"/> 15                      <input type="radio"/> 19</p> <p><input type="radio"/> 12                      <input type="radio"/> 16                      <input type="radio"/> 20</p> <p><input type="radio"/> 13                      <input type="radio"/> 17                      <input type="radio"/> 21</p> <p><b>4. Grade</b></p> <p><input type="radio"/> 6                      <input type="radio"/> 9                      <input type="radio"/> 11</p> <p><input type="radio"/> 7                      <input type="radio"/> 10                      <input type="radio"/> 12</p> <p><input type="radio"/> 8</p> <p><b>5. Estimated GPA</b></p> <p><input type="radio"/> 4.0 or higher (A)</p> <p><input type="radio"/> 3.0-3.9 (B)</p> <p><input type="radio"/> 2.0-2.9 (C)</p> <p><input type="radio"/> 1.0-1.9 (D)</p> <p><input type="radio"/> Less than 1.0 (F)</p> <p><b>6. Are you on Free or Reduced Lunch (e.g. do you pay for your lunch in the cafeteria)?</b></p> <p><input type="radio"/> 1. Yes</p> <p><input type="radio"/> 2. No</p> <p><b>7. Do you attend school regularly?</b></p> <p><input type="radio"/> 1. No</p> <p><input type="radio"/> 2. Sometimes</p> <p><input type="radio"/> 3. Yes</p> <p><b>8. Including last year, and this year, have you received any discipline referrals for behaviors other than being tardy?</b></p> <p><input type="radio"/> 1. Often (More than 5)</p> <p><input type="radio"/> 2. Some (1-5)</p> <p><input type="radio"/> 3. Never</p>	<p><b>9. Including last year, and this year, have you been suspended out of school (including ATOSS)?</b></p> <p><input type="radio"/> 1. Often (More than 5 days total)</p> <p><input type="radio"/> 2. Some (1-5 days total)</p> <p><input type="radio"/> 3. Never</p> <p><b>10. Including last year, and this year, have you been arrested?</b></p> <p><input type="radio"/> 1. Often (More than 2 times)</p> <p><input type="radio"/> 2. Some (1-2 times)</p> <p><input type="radio"/> 3. Never</p> <p><b>11. Have you ever been diagnosed with ADHD?</b></p> <p><input type="radio"/> 1. Yes</p> <p><input type="radio"/> 2. No</p> <p><b>12. Have you ever been diagnosed with Anxiety, Depression, or other mental health problems?</b></p> <p><input type="radio"/> 1. Yes</p> <p><input type="radio"/> 2. No</p> <p><b>13. Have you ever been prescribed medication for ADHD?</b></p> <p><input type="radio"/> 1. Yes, and I still take the medication.</p> <p><input type="radio"/> 2. Yes, but I no longer take medication.</p> <p><input type="radio"/> 3. No</p> <p><b>14. Have you ever been prescribed medication for Anxiety, Depression, or other mental health problems?</b></p> <p><input type="radio"/> 1. Yes, and I still take the medication.</p> <p><input type="radio"/> 2. Yes, but I no longer take medication.</p> <p><input type="radio"/> 3. No</p> <p><b>15. My biological parents are:</b></p> <p><input type="radio"/> 1. Married</p> <p><input type="radio"/> 2. Divorced</p> <p><input type="radio"/> 3. Separated</p> <p><input type="radio"/> 4. Never married</p> <p><input type="radio"/> 5. Never married but living together</p> <p><input type="radio"/> 6. Widowed</p>
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## Appendix D: Teen Alcohol and Drug Use Scale (TADUS)

Have often have you used alcohol or the drugs/substances listed below during the past year?

Circle the number that best describes how often, from (1) to (7), where (1) = **Never**, (2) = **Less than once a month**, (3) = **Once a month**, (4) = **2 – 3 times a month**, (5) = **Once a week**, (6) = **2 – 6 times a week**, and (7) = **Daily**

<b>Alcohol or Substance:</b>	<b>Never</b>	<b>Less than once a month</b>	<b>Once a month</b>	<b>2-3 times a month</b>	<b>Once a week</b>	<b>2-6 times a week</b>	<b>Daily</b>
1. Cigarettes	1	2	3	4	5	6	7
2. Chewing Tobacco	1	2	3	4	5	6	7
3. Wine/ Wine Coolers/ Malt Beverages (i.e., Smirnoff Ice)	1	2	3	4	5	6	7
4. *Beer (9%)	1	2	3	4	5	6	7
5. *Liquor (i.e., Rum, Vodka, Tequila, Gin) (12%)	1	2	3	4	5	6	7
6. *Marijuana (“pot,” “weed”) (7%)	1	2	3	4	5	6	7
7. Inhalants (i.e., sniff something like glue, gasoline, spray paint)	1	2	3	4	5	6	7
8. Over the counter drugs (when you are NOT sick or hurt)	1	2	3	4	5	6	7
9. Prescription drugs (i.e., Oxycontin, Xanax, Prozac, Ritalin) when you are NOT sick or hurt	1	2	3	4	5	6	7
10. Other _____	1	2	3	4	5	6	7

*\* Only items denoted with asterisks were included in the TADUS composite score that was utilized in all analyses. The number in parentheses indicates the proportion of the sample that endorsed any use of the particular substance.*

## Appendix E: Students' Life Satisfaction Scale (SLSS)

We would like to know what thoughts about life you've had during the past several weeks. Think about how you spend each day and night and then think about how your life has been during most of this time. Here are some questions that ask you to indicate your satisfaction with life. In answering each statement, circle a number from (1) to (6) where (1) indicates you **strongly disagree** with the statement and (6) indicates you **strongly agree** with the statement.

	Strongly Disagree	Disagree	Slightly Disagree	Slightly Agree	Agree	Strongly Agree
1. My life is going well	1	2	3	4	5	6
2. My life is just right	1	2	3	4	5	6
3. I would like to change many things in my life	1	2	3	4	5	6
4. I wish I had a different kind of life	1	2	3	4	5	6
5. I have a good life	1	2	3	4	5	6
6. I have what I want in life	1	2	3	4	5	6
7. My life is better than most kids'	1	2	3	4	5	6

## Appendix F: Children's Perception of Interparental Conflict (CPIC)

- I live with:**
1. \_\_\_\_ both my mom *and* my dad
  2. \_\_\_\_ my mom *and* her significant other (e.g., a step-father, mom's boyfriend)
  3. \_\_\_\_ my dad *and* his significant other (e.g., a step-mother, dad's girlfriend)
  4. \_\_\_\_ just my mom
  5. \_\_\_\_ just my dad
  6. \_\_\_\_ another relative (e.g., grandmother, aunt)
  7. \_\_\_\_ other (please specify): \_\_\_\_\_

In every family there are times when the parents don't get along. Below are some things that kids sometimes think or feel when their parents have arguments or disagreements. We would like you to write what you think or feel when your parents argue by answering each of the sentences below.

If your parents are not living together, answer these questions in regard to the parent and stepparent (or your parent's significant other) that you spend the most time with. If your parents are not living together and neither one is living with a new partner, think about times when your parents are together and don't get along when you answer the questions.

T = TRUE

ST = SORT OF OR SOMETIMES TRUE

F = FALSE

1.	*I never see my parents arguing or disagreeing. ( <i>F</i> )	T	ST	F
2.	*When my parents have an argument they usually work it out. ( <i>R</i> )	T	ST	F
3.	My parents get really mad when they argue. ( <i>I</i> )	T	ST	F
4.	They may not think I know it, but my parents argue or disagree a lot. ( <i>F</i> )	T	ST	F
5.	Even after my parents stop arguing they stay mad at each other. ( <i>R</i> )	T	ST	F
6.	*When my parents have a disagreement they discuss it quietly. ( <i>I</i> )	T	ST	F
7.	My parents are often mean to each other even when I'm around. ( <i>F</i> )	T	ST	F
8.	I often see or hear my parents arguing. ( <i>F</i> )	T	ST	F
9.	*When my parents disagree about something, they usually come up with a solution. ( <i>R</i> )	T	ST	F
10.	When my parents have an argument they say mean things to each other. ( <i>I</i> )	T	ST	F
11.	*My parents hardly ever argue. ( <i>F</i> )	T	ST	F
12.	*When my parents argue they usually make up right away. ( <i>R</i> )	T	ST	F
13.	When my parents have an argument they yell at each other. ( <i>I</i> )	T	ST	F
14.	My parents often nag and complain about each other around the house. ( <i>F</i> )	T	ST	F
15.	*My parents hardly ever yell when they have a disagreement. ( <i>I</i> )	T	ST	F
16.	My parents have broken or thrown things during an argument. ( <i>I</i> )	T	ST	F
17.	*After my parents stop arguing, they are friendly towards each other. ( <i>R</i> )	T	ST	F
18.	My parents have pushed or shoved each other during an argument. ( <i>I</i> )	T	ST	F
19.	My parents still act mean after they have had an argument. ( <i>R</i> )	T	ST	F

\*Indicates item is reversed scored; *F* = frequency scale, *I* = intensity scale; *R* = resolution scale

## Appendix G: Life Events Checklist (LEC)

Below is a list of things that sometimes happens to people. Circle “**Yes**” next to each of the events you **have** experienced during the past year (12 months). Circle “**No**” for each event you **have not** experienced during the past year. Please read over the entire list before you begin.

<b>EVENT:</b>	<b>Experienced in Past Year?</b>		<b>% of Sample that Endorsed Experiencing the Event</b>
1. Moving to new home	Yes	No	41%
2. New brother or sister	Yes	No	14%
*3. Changing to new school	Yes	No	
4. Serious illness or injury of family member	Yes	No	49%
5. Parents divorced	Yes	No	8%
6. Increased number of arguments between parents	Yes	No	27%
7. Mother or father lost job	Yes	No	24%
8. Death of a family member	Yes	No	40%
9. Parents separated	Yes	No	20%
*10. Death of a close friend	Yes	No	
11. Increased absence of parent from the home	Yes	No	10%
12. Brother or sister leaving home	Yes	No	16%
*13. Serious illness or injury of close friend	Yes	No	
14. Parent getting into trouble with law	Yes	No	6%
15. Parent getting a new job	Yes	No	38%
16. New stepmother or stepfather	Yes	No	13%
17. Parent going to jail	Yes	No	7%
18. Change in parents’ financial status	Yes	No	30%

\* Indicates item was not included in the composite stressful life events scores that was utilized in all analyses.

## Appendix H: Center for Epidemiological Studies Depression Scale (CES-D)

Below is a list of the ways you might have felt or behaved. Please tell me how often you have felt this way during the **past week**. (Circle one number on each line)

<i>During the past week...</i>		<b>Rarely or none of the time.</b>	<b>Some or a little of the time (1-2 days)</b>	<b>Occasionally or a moderate amount of time (3-4 days)</b>	<b>Most or all of the time (5-7 days)</b>
1	I was bothered by things that usually don't bother me.	0	1	2	3
2.	I did not feel like eating; my appetite was poor.	0	1	2	3
3.	I felt that I could not shake off the blues even with help from my family or friends.	0	1	2	3
4.	I felt I was just as good as other people.	0	1	2	3
5.	I had trouble keeping my mind on what I was doing.	0	1	2	3
6.	I felt depressed.	0	1	2	3
7.	I felt that everything I did was an effort.	0	1	2	3
8.	I felt hopeful about the future.	0	1	2	3
9.	I thought my life had been a failure.	0	1	2	3
10.	I felt fearful.	0	1	2	3
11.	My sleep was restless.	0	1	2	3
12.	I was happy.	0	1	2	3
13.	I talked less than usual.	0	1	2	3
14.	I felt lonely.	0	1	2	3
15.	People were unfriendly.	0	1	2	3
16.	I enjoyed life.	0	1	2	3
17.	I had crying spells.	0	1	2	3
18.	I felt sad.	0	1	2	3
19.	I felt that people dislike me.	0	1	2	3
20.	I could not get "going."	0	1	2	3