ASSOCIATIONS BETWEEN IMPULSIVITY, ADVERSE CHILDHOOD EXPERIENCES, AND SUICIDE IDEATION IN A SAMPLE OF AT-RISK TEEN GIRLS

by

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DISSERTATION ABSTRACT

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Doctor of Philosophy

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Suicidal behaviors are significant mental health and public health concerns that are preventable by targeted prevention and intervention efforts. It is especially important to focus research and clinical work on adolescents, as suicide is the second leading cause of death in this age group (Heron, 2017). The present study examines the impact of risk factors of adverse childhood experiences, impulsivity, and delinquency on suicide ideation in a sample of 122 at-risk female adolescents who were enrolled in a randomized trial of a skills coaching intervention. Depressive symptoms, intervention condition, and age were controlled for in cross-sectional, longitudinal, and mediation analyses. Adverse childhood experiences and depressive symptoms were found to have a significant direct effect on both concurrent and longitudinal suicide ideation. Discussion of these results provides implications for future research and intervention efforts.

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CHAPTER I

INTRODUCTION

Suicide is the second leading cause of death among youth in the U.S. (Heron, 2017), and yet it is a preventable outcome. Developing a better understanding of suicidal behaviors among adolescents is a critical public health issue that requires the attention of researchers and practitioners. Raising awareness of common factors associated with suicidal thoughts and the prevalence of those thoughts is an instrumental step toward understanding suicidal behaviors. The Diagnostic and Statistical Manual (DSM) defines suicide ideation as having thoughts about harming one's self with intentional planning or thoughts of committing suicide (American Psychiatric Association, 2013). Longitudinal analysis of a nationally representative sample of youth indicated that suicide risk peaks in early to mid –adolescence and decreases as they approach adulthood, demonstrating the need for prevention interventions during this time (Thompson, Kuruwita, & Foster, 2009). Additional studies find that adolescent girls and boys exhibit profound enough differences in suicidal behaviors to warrant individual analyses (Boeninger, Masyn, Feldman, & Conger, 2010). This suggests that adolescence is a key developmental period for intervention on suicidal ideation and behaviors, and that it is important to improve our understanding of this mental health concern in teenagers.

Practitioners can work toward preventing suicide and suicidal behaviors by identifying experiences and factors that are associated with them as well as protective factors that counter these risks. This present study examined how contextual and personal factors individually and interactively contributed to suicide ideation in a sample of at-risk adolescent girls. Adverse early experiences such as childhood abuse and family

instability impact the development of many mental health problems, including suicide ideation (Thompson et al., 2012). Early negative experiences have also been associated with impulsivity, which in turn is associated with suicidal behaviors (Javandi, Sadeh, & Verona, 2011). Additionally, youth with elevated delinquency are more likely to exhibit ideation than other adolescents and are also more likely to have endured adverse childhood experiences and demonstrate impulsivity (Björkenstam, Björkenstam, Ljung, Vinnerljung, & Tuyblad, 2013; Baglivio, Wolff, Piquero, & Epps, 2015). This dissertation examines the relationships between reports of adverse childhood experiences, multiple facets of impulsivity, and delinquency, as predictors of suicide ideation in a sample of at-risk adolescent girls. The literature review that follows will elaborate on the topics of adverse childhood experiences, impulsivity, and delinquency in at-risk youth, the relationship between these risk factors, and their associations with the development of suicidal behaviors (see Figure 1 for an illustrative model).

Theoretical Framework

This study was guided by components of the Interpersonal Theory of Suicide (Joiner, 2005). Joiner (2005) posited that suicide ideation is caused by feelings of a lack of belongingness and the perception of being a burden (see Figure 2). Additionally, he stated that the ability to act on such thoughts is influenced by risk factors such as painful or traumatic experiences (Joiner, 2005). This acquired capability results in a decrease in fear of death and elevation in tolerance of physical pain (Joiner, 2005). Joiner (2005) identified a number of risk factors that influence the capability of suicidal behaviors, including child maltreatment, trauma, and impulsivity (see Figure 3).

Figure 1. Hypothesized mediating relationships

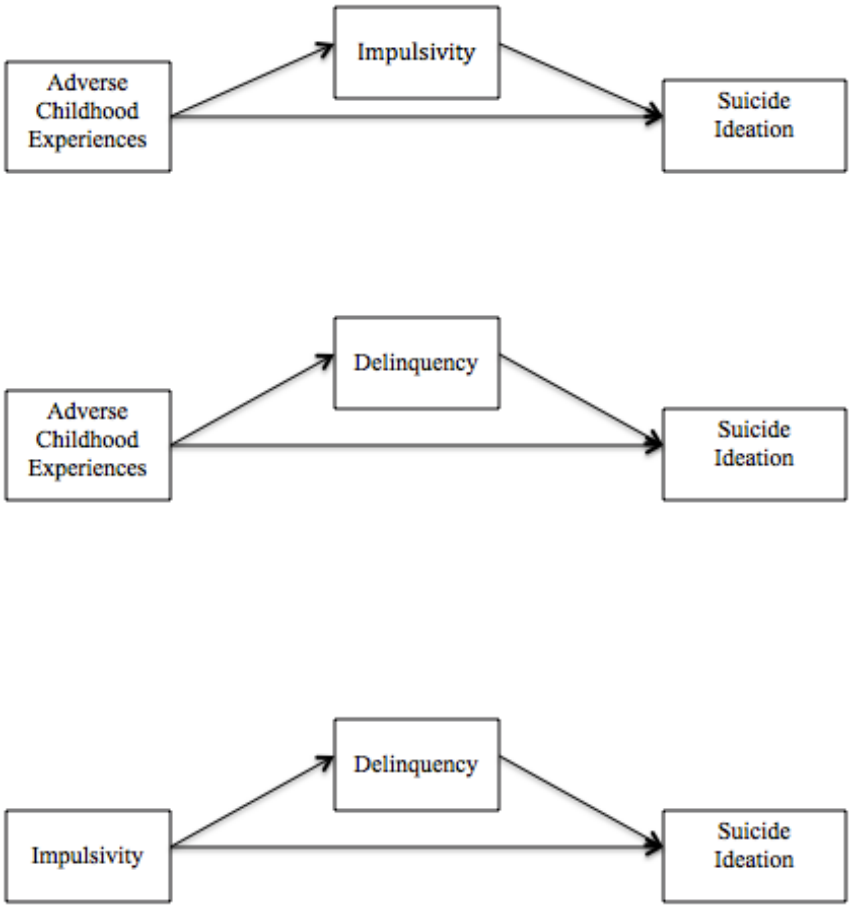


Figure 2. Interpersonal theory of suicide

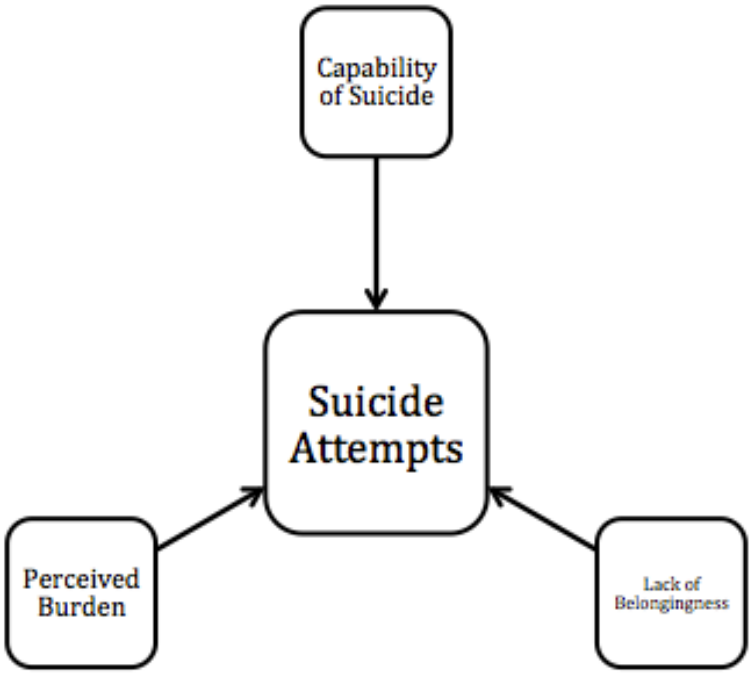
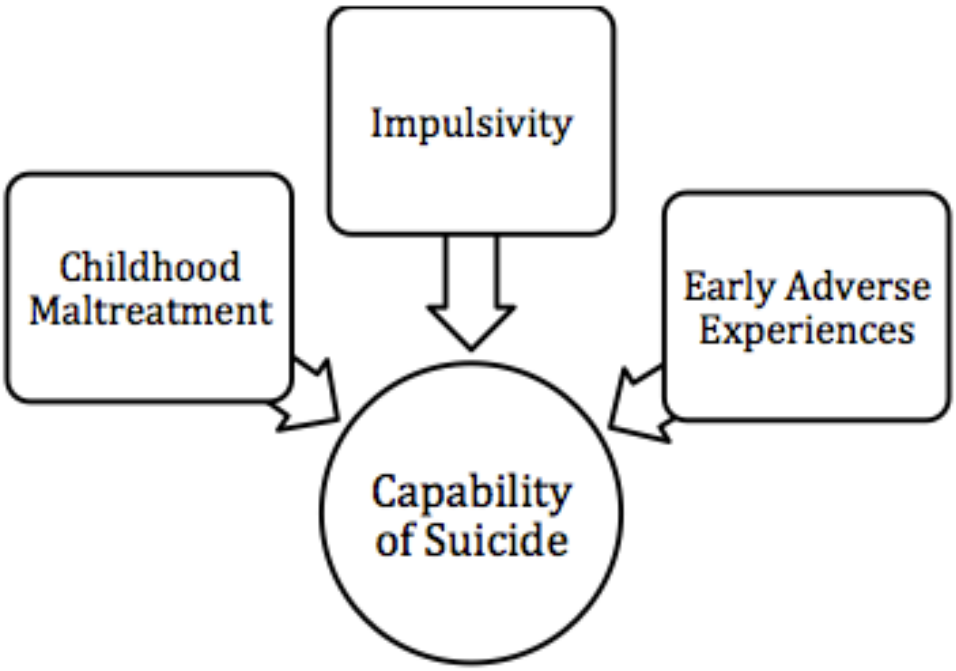


Figure 3. Risk factors of suicide capability based on the interpersonal theory of suicide



Researchers have investigated whether or not Joiner's theory has empirical support in both community and clinical samples, and found evidence in support of his hypotheses. For example, in both a sample of undergraduate students and a sample of adults engaged in mental health services, the combination of perceived burden and lack of belongingness was associated with suicide ideation (Van Orden, Witte, Gordon, Bender, & Joiner, 2008). The researchers also examined the influence of capability of suicide in a community-based sample of adults and found that the variables that comprised it (e.g., painful life experiences and impulsivity) significantly predicted the risk of suicide attempt (Van Orden et al., 2008). In an attempt to understand more about the risk factors for suicide in adolescence, the current study examined how elements such as adverse childhood experiences (including maltreatment) and impulsivity are associated with suicide ideation in a sample of adolescent girls. In a continuation of Joiner's theory (2005), I posited that adverse childhood experiences, impulsivity, and delinquency would

act as risk factors for suicide ideation, which I believe increases an individual's capability of suicide. The overall goal of the current study was to facilitate a greater understanding of the precursors of suicidal actions in order to inform effective prevention efforts.

Gender Differences in Suicidal Behaviors

Representative studies of youth in America have identified notable gender differences in suicidal behaviors that warrant individualized investigation. Girls are more likely than boys to have developed plans for suicide (18.1% and 15%, respectively) and tend to develop suicidal ideation earlier than their male peers (Boeninger et al., 2010). The differences between genders extend to the risk factors for suicide ideation. Adverse childhood experiences have a significant impact on suicide ideation and attempts for both genders, but the relationship is slightly stronger for females (Boeninger et al., 2010). Incarcerated women in Nevada were surveyed about their mental health and childhood experiences and a significant relationship was found between childhood trauma and past suicide attempts, as well as between trauma and the likelihood of future suicide attempts (Clements-Nolle, Wolden & Bargmann-Losche, 2009).

There is also a significant gender difference in the relationship between impulsivity and suicidality. Auerbach, Stewart, and Johnson (2017) found that there was a unique and significant link between impulsive behavioral reactivity to emotions and increased suicide ideation in female adolescents, whereas their male counterparts did not demonstrate this propensity. Rohde, Seeley, and Mace (1997) also found noticeable differences between the correlates of suicidal behavior for both genders in their study of adolescents. They found that male suicide attempts were associated with depression and decreased social connection while female suicide attempts were correlated with

impulsivity and instability (Rohde et al., 1997). Differences were also seen in factors associated with current suicide ideation. For boys, past attempts and ineffective coping were associated with current suicide ideation; for girls, impulsivity and major life events were associated with current suicide ideation (Rohde et al., 1997).

The current study attended to the known gender difference in suicide behaviors by using of an all-girl sample that is community-based and not in a residential placement. While much of past research on this topic with young women has occurred in hospital settings or detention facilities (e.g. Isohookana, Riala, Hakko, & Räsänen, 2013; Bhatta, Jefferis, Kavadas, Alemagno, & Shaffer-King, 2014), this study's sample contributes to the field's understanding of suicide ideation in the community. As a significant public health issue, prevention efforts for suicidal behaviors are valuable and will be more effective when informed by research.

Suicidal Behaviors in Adolescence

Adolescence is a stage of life marked by a combination of psychological development and increased impulsivity and risk-taking behaviors. It is also associated with higher rates of suicide, especially for youth have multiple risk factors (Mathias et al., 2011). Youth who have experienced more challenges than their peers or who have engaged in risky and/or maladaptive behaviors are at a greater risk for developing suicidal behaviors. Rohde and colleagues (1997) examined what factors are correlated with past suicide attempts and current suicide ideation in a sample of 555 teenage girls and boys in a juvenile detention facility. The researchers found that the rates of suicide attempts and suicide ideation were more elevated in their sample, reflecting the need to

focus attention on research and prevention efforts of this at-risk population (Rohde et al., 1997).

Engagement in child welfare services presents additional risks for adolescents and, combined with juvenile justice involvement, has an impact on suicidal behaviors. Of former child welfare clients, those who were convicted of at least one crime in adolescence were at a significantly greater risk of suicidal behavior than their peers (Björkenstam, Björkenstam, Ljung, Vinnerljung, & Tuyblad, 2013). It is imperative that awareness of the additional concerns of at-risk youth leads to an increase in initiatives in the field of psychology, both through additional research as well as population-specific interventions. Meta-analysis of preexisting literature revealed that adjudicated youth struggle with suicide ideation more than their peers (Shrerram & Malik, 2008), supporting this call to action.

The Link between Adverse Childhood Experiences and Suicidal Behaviors

The experience of trauma itself is painful and emotional, not to mention the negative outcomes, symptomatology, and healing efforts that resound afterward (Roberts, O'Connor, Dunn, Golding & the ALSPAC Study Team, 2004; Vachon, Kruger, Rogosch, & Cicchetti, 2015) The Adverse Childhood Experiences questionnaire (ACEs) as a brief inventory that assesses if an individual has endured any of the ten most impactful adverse events that can be experienced in childhood, including neglect, physical abuse, and sexual abuse (Felitti et al., 1998). Experiencing a greater number of events included in this measure has been linked to a multitude of negative physical, psychological, and social problems. Higher scores on the ACEs questionnaire were associated with greater

risk of offending as well as earlier ages of first arrest, which in turn is linked to additional negative outcomes (Baglivio et al., 2015).

Thompson and colleagues (2012) examined the relationship between adverse experiences and suicide ideation in a sample of 740 16-year-olds. Their goal was to understand how the number of adverse events and types of adverse events as well as the timeframes in which they occurred impact the development of suicide ideation. The times in which adverse events occurred were divided between those that occurred before the age of twelve and those that occurred between the ages of twelve and sixteen. In this study, the number of adverse experiences significantly predicted suicide ideation, even after controlling for demographic variables such as gender (Thompson et al., 2012). They also found that certain negative experiences carried more weight than others. The experience of physical, psychological, or sexual abuse as well as nonfamily violence in adolescence as well as childhood physical abuse, neglect, family violence, and residential instability uniquely predicted suicide ideation (Thompson et al., 2012). In terms of timing, the researchers found that adolescent adversities had a significant effect on suicide ideation but that these events interacted with the experience of childhood adversities such that childhood events had a stronger impact in the presence of fewer adolescent events and vice versa (Thompson et al., 2012). These results support the evidence that the experience of adverse events impacts the development of suicide ideation and that experiencing negative events later in adolescence can be as impactful as experiencing them earlier in childhood (Thompson et al., 2012).

Similar results were found by researchers in Finland with a sample of adolescents (12-17 years old) in a psychiatric hospitalization placement between 2001 and 2006

(Isohookana et al., 2013). Isohookana and colleagues (2013) used the ACEs questionnaire and a structured clinical interview to assess for the target variables. They found that greater cumulative ACEs scores were associated with increased risk of suicide attempts (Isohookana et al., 2013). In particular, experiencing sexual abuse was a significant risk factor for girls in the study (Isohookana et al., 2013).

There is also evidence that trauma can lead to greater impulsivity and that impulsivity can contribute to the development of maladaptive responses to trauma, thus demonstrating the need to investigate its link between adverse childhood experiences and suicidal behaviors (Braquehais, Oquendo, Baca-Garcia & Sher, 2010). Researchers have established a significant relationship between childhood trauma and personality characteristics like impulsivity and suicidal behavior (Marzano, Hawton, Rivlin & Fazel, 2011). Future research should attempt to illuminate the details of these associations to better inform prevention efforts.

The Link between Impulsivity and Suicide Behaviors

While many individuals picture someone struggling with suicidal thoughts to exhibit more internalizing problems, impulsivity is a risk factor with significant influence in the development of suicidal behaviors. Researchers have found that impulsivity can uniquely contribute to suicide attempts, even above factors such as depression (Javandi et al., 2011). Another group of researchers investigated patterns of symptoms and risk factors in a different sample of 55 cases of child and adolescent suicide and compared them to a community sample. They found that adolescents who completed suicide had higher scores in the impulsivity domain than their peers who did not have suicidal behaviors (Renaud, Berlim, McGirr, Tousignant, & Turecki, 2008).

Researchers in Israel examined a sample of adolescents who had attempted suicide to determine its relationship to temperamental and behavioral risk factors. They found that suicidal behaviors were significantly correlated with aggressive behaviors and with impulsivity (Horesh, Gothelf, Ofek, Weizman, & Apter, 1999). The relationship between suicidal behaviors and impulsivity persisted even when controlling for aggression (Horesh et al., 1999). Researchers in the United States recruited an in-patient sample of adolescents to compare the differences in symptomatology between adolescents who engaged in self-harm with and without suicide attempts. They found that youth who also had a history of suicide attempts demonstrated more depression, hopelessness, and impulsivity than their counterparts (Dougherty et al., 2009). These results indicate that impulsivity should be assessed alongside severity of symptomatology during risk assessments of adolescents (Dougherty et al., 2009). Links and colleagues (2012) followed up with a sample of individuals who were discharged from their inpatient psychiatric stay to identify risk factors for recurrent suicidal behaviors. They found that self-reported impulsivity, along with past history of suicide attempts, depression levels, and hopelessness were significant risk factors for suicide attempts post-discharge (Links, 2012).

Researchers investigated a sample of youth in Montreal who completed suicide to better understand how impulsivity was associated with suicide completion as well as determine the behavioral, clinical, and psychosocial risk factors that might impact this relationship. Youth in this sample with higher scores on the Barratt Impulsiveness Scale who committed suicide were more likely to be younger, engaged in more aggressive behaviors, and were more likely to struggle with alcohol and drug abuse or dependence

(Zouk, Tousignant, Seguin, Lesage, & Turecki, 2006). They also found that individuals with higher impulsiveness scores reported more adverse early life events, suggesting that these experiences could have a role in suicidal behaviors for impulsive individuals (Zouk et al., 2006).

Researchers have examined the risk factors associated with suicidal behaviors in adolescent girls and found significant relationships that warrant a gender-specific approach for research, prevention, and intervention. Hull-Blanks and colleagues studied a sample of teenage girls and found that girls with higher impulsivity scores were more likely to also report suicide ideation than their peers (Hull-Blanks, Kerr, & Kurpius, 2004). These findings are meaningful because of the real-life implications they hold. Clinicians working with teenage girls at risk of suicidal behaviors should pay additional attention to their impulsivity, as they may be less likely to be able to consider the consequences of their behaviors and identify healthier alternatives (Hull-Blanks et al., 2004).

Mathias and colleagues (2011) assessed a sample of 59 adolescent girls (aged 13-17) to examine the relationship between impulsivity and suicide attempts. The researchers employed two different behavioral measures that examined the impulsivity dimensions of delay reward and disinhibition as well as a self-report measure of impulsivity. Delay reward was measured using the Two Choice Impulsivity Paradigm (TCIP; Doughterty, Marsh, & Mathias, 2003), in which the participant must choose between smaller more immediate rewards and larger delayed rewards. Disinhibition was measured using the Go-Stop Impulsivity Paradigm (Doughtery, Mathias, & Marsh, 2003a), which assesses the participants' ability to inhibit a response when target cues are

paired unexpectedly with a stop cue. Researchers used the Barratt Impulsiveness Scale (Patton, Stanford & Barratt, 1995) as the self-report measure. Results indicated that delay reward impulsivity was positively associated with multiple suicide attempts, but that neither disinhibition nor self-report measures were related to suicide attempts (Mathias et al., 2011). Depression and aggression were also associated with delayed reward impulsivity (Mathias et al., 2011). Researchers proposed that this relationship could be due to individuals with delay reward impulsivity struggling to see the long-term impacts of their behavior and seeking an immediate solution for their pain (Mathias et al., 2011).

However, there are some contradictory findings regarding the link between impulsivity and suicide ideation that warrant further study. Researchers examined the relationship between mood instability, impulsivity, and suicidal thoughts in a sample of adults who were enrolled in the Adult Psychiatric Morbidity Survey (N = 2,406). In that study, impulsivity predicted suicidal thoughts, but this relationship vanished when mood instability was added to the model (Peters, Balbuena, Marwaha, Baetz & Bowen, 2016). These results suggest that while impulsivity may be related to suicidal thoughts, other psychological issues may play an important role and should be considered alongside impulsivity. The current study builds on this prior research by testing the relationship between impulsivity and suicide ideation in a community-based sample and by examining the influence of impulsivity amongst other hypothesized predictors. Using a sample of this nature fills a gap in the research that is predominately centered on youth who are in inpatient centers or juvenile detention and has the potential to inform community-based interventions.

The Role of Delinquency in the Development of Suicidal Behaviors

There is a significant and unique relationship between delinquency and suicide ideation that is especially meaningful in teenage girls compared to boys. Adolescents who have been convicted of at least one crime are at a significantly greater risk of suicidal behavior than their peers, making a focus on delinquent youth a priority for suicide prevention researchers (Björkenstam et al., 2013). The National Longitudinal Study of Adolescent Health found that, even after controlling for risk factors such as depression, self-esteem, and impulsivity, delinquency was related to greater risk of a multitude of future suicide behaviors (Thompson, Ho, & Kingree, 2007). Youth who engaged in higher levels of delinquency were found to be at a greater risk of suicide ideation and suicide attempts one year later as well as suicide ideation seven years later (Thompson et al., 2007). In this study, researchers found that the relationship between delinquency and suicide ideation was stronger for girls than for boys (Thompson et al., 2007). Similarly, Liu (2004) found that involvement in delinquent behaviors was found to significantly predict suicidal gestures among girls, but not boys.

As found in their peers, there is also a relationship between adverse life experiences and suicidal behaviors in at-risk youth. Researchers studied a sample of 3,156 adolescents in a juvenile detention facility in Ohio between the years of 2003 and 2007 and found that youth who reported sexual abuse and homelessness were more likely to report suicide ideation as well as suicide attempts (Bhatta et al., 2014). Another study in Florida examined the relationship between adverse childhood experiences, personality traits, and suicide attempts in a sample of juvenile justice involved youth and found that those who endured more adverse experiences in childhood were more likely to have

higher levels of impulsivity and aggression (Perez, Jennings, Piquero & Baglivio, 2016). They also found that adverse experiences were linked to suicidal behavior (Perez et al., 2016). Negative experiences are also found to significantly predict general mental health problems in delinquent youth (Logan-Green, Tennyson, Nurius, and Borja, 2017). These researchers found that childhood maltreatment was the strongest predictor of mental health problems in a sample of court-involved adolescents (Logan-Green, et al., 2017), further demonstrating the impact of these experiences.

When comparing youth in juvenile detention to their peers in a psychiatric inpatient facility, detained adolescents had unique risk factors, including impulsivity, which were not shared with the comparison group (Sanislow, Grilo, Fehon, Axelron, & McGlashan, 2003). These results demonstrate that youth with elevated delinquency have a set of risk factors that are particular to them and their experience that establishes a need for further investigation. The present study sought to extend what is known about the aforementioned relationships between risk factors and suicide behaviors found in detained youth to a community-based sample of at-risk adolescents. Understanding how these variables impact one another in an outpatient, non-detained sample will help inform prevention efforts.

The Present Study

This sample included 122 girls from Lane County who were recruited through the Department of Youth Services and other community agencies to participate in a study of a skills coaching intervention. All girls who participated in the study completed an initial assessment (before the experimental intervention was received) and follow-up assessments 6 and 12 months after the baseline assessment. Information regarding the

youths' history of adverse childhood experiences was collected at the baseline assessment. Data were collected about suicide ideation at baseline and 12-month assessments, depressive symptoms and impulsivity at baseline, and delinquency at 6-months.

The research questions this study sought to answer are as follows: 1a) Are reports of more adverse childhood experiences associated with concurrent reports of suicide ideation? 1b) Does the number of adverse childhood experiences predict suicide ideation at the 12-month assessment? 2a) Is impulsivity concurrently associated with suicide ideation? 2b) Does baseline impulsivity predict suicide ideation at the 12-month assessment? 3a) Does impulsivity mediate the relationship between adverse childhood experiences and suicide ideation at the 12-month assessment? 4a) Does youth delinquency mediate the relationship between adverse childhood experiences and suicide ideation as the 12-month assessment? 4b) Do youth delinquency scores mediate the relationship between impulsivity and suicide ideation at the 12-month assessment? It was hypothesized that baseline impulsivity and adverse childhood experiences predicted both concurrent and future suicide ideation. It was also hypothesized that impulsivity mediated the relationship between adverse childhood experiences and suicide ideation. Additionally, it was hypothesized that delinquency would mediate the relationship between impulsivity and suicide ideation and between adverse childhood experiences and suicide ideation.

Guided by the principles of the Interpersonal Theory of Suicide (Joiner, 2005), this study built on that of previous research but extended it by applying the theory to a non-hospitalized, community-based sample of girls. Developing a greater understanding

of impulsivity, adverse childhood experiences, and delinquency and how they impact suicide ideation will hopefully inform researchers and practitioners in their work with adolescents. A deeper awareness of the individual characteristics that contribute to risk will foster the development of more sensitive interventions and assessments, hopefully aiding the prevention of future tragic occurrences of adolescent suicide.

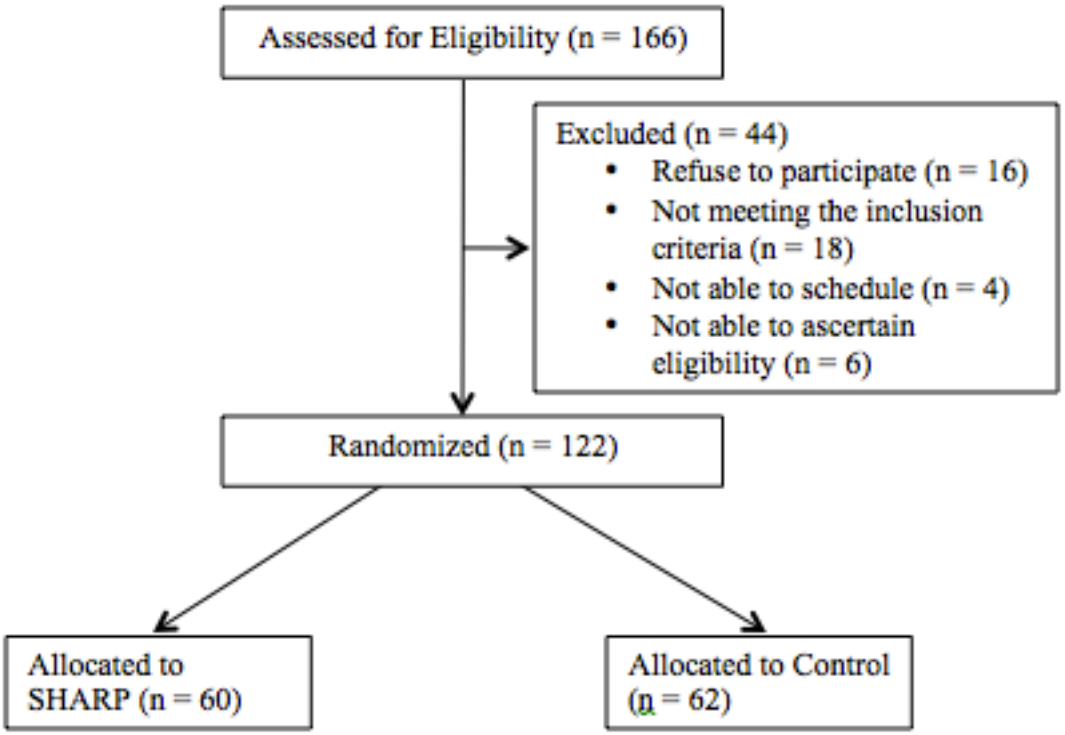
CHAPTER II

METHODS

Sample

The participants in this study consisted of girls participating in a randomized controlled trial of the Safe, Healthy, Adolescent Relationships and Peers (SHARP) project, a study of a skills coaching intervention that focused on increasing prosocial behaviors, teaching refusal skills and coping skills, and raising awareness of healthy behaviors such as safe sex practices. Study inclusion criteria at enrollment were: female youth between ages 13-18, residing in Lane County, and with a caregiver willing to complete the study and engage in the intervention with them. A total of 122 girls were recruited and met criteria for this study, consented to participate with their caregiver, and were randomized into the intervention condition (n = 60) or services-as-usual condition (n = 62) (see Figure 4). Caregivers provided consent and the youth provided assent. The average age at baseline was 15.4 years old (SD = 1.48), ranging from 13.02 to 18.09 years old. The procedures for this study were approved by The University of Oregon Institutional Review Board and both the youth and their caregivers were compensated for their time to participate in the study.

Figure 4: Consort diagram of SHARP recruitment and eligibility



Most of the youth in the study (70.5%) identified as European American, 16% identified as more than one race, 9% identified as African American, 2.5% identified as Asian, 2.5% identified as American Indian/Alaskan Native, and 1.6% identified as Native Hawaiian or other Pacific Islander. Most of the caregivers who participated in the study were biological parents (78.5%), 9.9% were adoptive parents, 5% were foster parents, and the remaining caregivers were other relatives such as grandparents or stepparents. A portion of the youth (62.8%) were referred to the study by the Department of Youth Services and the rest of the youth were referred by a local middle school (19.8%) or community agencies such as a local center for girls (9.1%) and the Boys and Girls Club (5.8%). Caregivers provided information regarding annual gross household income: 26.8% reported less than $20,000, 28.1% reported $20,000-$39,999, 21.9% reported

$40,000-$59,999, 10.5% reported $60,000-79,999, 7% reported $80,000-$99,999, and 6.1% reported $100,000 or more.

Procedures

After obtaining IRB approval, researchers collaborated with community partners such as the Department of Youth Services and community social service agencies to recruit adolescent girls and their families to participate in the study. After participants were recruited, they were contacted by a research assistant who completed a brief screener to assess for eligibility criteria, including age, county of residence, and willingness of caregiver participation. Once deemed eligible, the youth and their caregivers were randomly assigned to either the intervention or control condition and their initial assessments were scheduled with a second research assistant. Research assistants who completed the assessments were blind to the participants' intervention condition, so as to maintain impartiality. Baseline assessments were completed before the intervention was delivered to the intervention group and before participants knew to which condition they had been randomly assigned.

A member of the research team completed the baseline assessment at the participants' home or in an assessment space at the research building. At the start of the initial assessment, the research assistant completed informed consent procedures with the adolescent and her caregiver. The research assistant informed the participants of the purpose of the study, their rights as research participants, and the limits to confidentiality. After consenting to the study, the caregiver and adolescent were escorted to separate private spaces where they individually completed self-report surveys on a laptop or tablet. The research assistant accompanied the teen in the space where she worked. After

the participants completed the independent portion, the researcher conducted an individual interview with each participant. At the end of the visit, the youth completed a computerized task by herself. Once all of the data collection was complete, the researcher gave the participants each a check as compensation for their time and let them know that they would be contacted again six months and twelve months later. Participants were subsequently informed as to their intervention condition assignment.

Intervention

The youth were randomly assigned to intervention or control conditions. Youth in the intervention condition participated in a 12-week skills coaching program where they met with a mentor once per week for ninety-minute sessions. These meetings covered a range of topics pertinent to adolescence, including goal setting, self-care, substance use refusal skills, friendship, and accurate information about safe sex practices. While the youth engaged in individual skills coaching, their caregivers participated in a 14-week parenting group where they discussed issues relevant to parenting a teenager and practiced skills that complemented the material being covered in the youth skills coaching sessions. Youth in the control condition received services as usual.

Measures

Adverse Childhood Experiences

The Adverse Childhood Experiences (ACEs) questionnaire was administered at baseline to measure negative experiences early in life (Felitti et al., 1998). The youth completed the questionnaire independently on a laptop with a research assistant nearby in case they had questions. The ACEs is a ten-item questionnaire that asks if participants have endured a variety of stressful experiences, including physical abuse, sexual abuse,

emotional abuse, neglect, witnessing domestic violence, incarceration of a family member, living with a family member that struggled with substance use, living with a family member who struggled with mental illness or suicide attempts, and parental divorce. The participants tallied up the number of ACEs they had endured in their life and reported a number at the end of the survey. The ACEs scores were reported as a composite score, ranging from 0-10 (M = 3.08, SD = 2.33).

Impulsivity

The Barratt Impulsiveness Scale (BIS; Patton, Stanford & Barratt, 1995) was administered at baseline to assess for the personality characteristic of impulsivity. The youth enrolled in the study completed this survey on a laptop during the initial assessment. This scale includes 48 statements about impulsive behaviors such as "I am self controlled" and "I do things without thinking". Participants respond by indicating the frequency of their engagement in those behaviors using one of the following statements: rarely/never, occasionally, often, and usually (α = .78). The items on this questionnaire captured aspects of impulsivity including attention, cognitive instability, motor impulsiveness, perseverance, non-planning impulsiveness, self-control, and cognitive complexity and formed a composite summary score.

Delinquency

At the 6-month assessment the youth completed the Elliot General Delinquency Scale (Elliott, Huizinga, & Ageton, 1985), a 20-item self-report survey regarding their engagement in delinquent behavior (α = .49). They responded to items such as "How many times in the last 6 months have you stolen or tried to steal something worth more than $20?" and "How many times in the last 6 months have you hit or threatened to hit

someone?" and indicated how many times the behavior occurred. The general delinquency score is calculated by summing the frequency of the behaviors reported by the participant.

Suicide Ideation

The youth completed self-report symptom measurement surveys at the baseline and 12-month assessments that contained items about suicide ideation. On the Youth's Inventory (Gadow & Sprafkin, 1999), they were prompted with the statement "I think about death or suicide" and had to respond with their level of frequency. At baseline, 60.3% reported they never think about it, 15.7% reported that they think about it sometimes, 5.8% reported that this think about it often, and 3.3% reported that they think about death or suicide very often. At the 12-month assessment, 76.6% reported they never think about it, 18.9% reported that they think about it sometimes, 3.6% reported that this think about it often, and .9% reported that they think about death or suicide very often. On the Brief Symptom Inventory (Derogatis, 1993) the youth were prompted with the question "Do you have thoughts of ending your life?" and responded with their level of agreement. At baseline, 71.9% reported "not at all", 5.8% responded "a little bit", 3.3% responded "moderately", 5% responded "quite a bit", and .8% responded "very much". At the 12-month assessment, 87.6% reported "not at all", 4.4% responded "a little bit", 6.2% responded "moderately", and 1.8% responded "quite a bit".

The suicide ideation variables from the Youth's Inventory (Gadow & Sprafkin, 1999) and Brief Symptom Inventory (Derogatis, 1993) were each dichotomized (such that a response of "never" or "not at all" was coded as 0 and any response indicating some experience of suicide ideation was coded as 1) and then combined to create a single

variable at each time point ($r = .40$, $p < .001$), ranging from 0-2. This variable was used as the outcome variable for all data analyses. At baseline, 68.6% of the youth had scores of 0, 16.5% had scores of 1, and 12.4% had scores of 2. At the 12-month assessment, 68.6% of youth had scores of 0, 13.2% had scores of 1, and 9.9% had scores of 2.

Depressive Symptoms

Depressive symptoms were measured using a standardized scale of depressive symptoms taken from the Youth's Inventory, the same measure containing the suicide ideation variable in the subsection above, (Gadow & Sprafkin, 1999) at the baseline assessment. The scale contains eleven items containing statements about depressive symptoms such as "I feel unhappy or sad" and "I feel that things never work out right" and the youth respond by indicating the frequency in which they experience those symptoms, ranging from "never" to "very often" ($\alpha = .85$).

Control Variables

Control variables for this study included age and intervention condition. This information was collected through self-report measures from the adolescent at the baseline assessment. Age was a continuous variable that was reported in years and intervention condition was coded as a dichotomous variable (1 = Control, 2 = Intervention).

Analysis Plan

All analyses were conducted using SPSS (IBM, 2013) and Mplus (Muthén & Muthén, 2011) software. The data analysis approach began with descriptive statistics and a thorough examination of the data for issues and abnormalities. Bivariate correlations were conducted between the independent variables (adverse childhood experiences,

impulsivity, and delinquency) and the dependent variable (suicide ideation). Next, analyses were conducted to address each of the research questions. To determine if adverse childhood experience and impulsivity significantly accounted for concurrent and longitudinal suicide ideation, multiple regression analyses were conducted. To determine if youth delinquency partially accounted for the relationships between baseline impulsivity and ACE scores on 12-month suicide ideation, mediation analyses were completed using a bootstrapping estimation. Throughout these analyses, I controlled for the covariates of intervention condition, youth age, and depressive symptoms. To account for data missing at random, I employed a maximum likelihood estimate (ML estimation). Of the variables that were missing data, the percent that was missing ranged from 0.82-9.02%. In order to address a non-normal distribution, I utilized a maximum likelihood estimation with robust errors.

CHAPTER III

RESULTS

Descriptive Statistics

At the baseline assessment, 29.7% of youth reported experiencing suicide ideation and at 12-months 25.2% reported suicide ideation at twelve months. The youth reported an average of 3.08 adverse childhood experiences (*SD* = 2.33) at baseline, with 35.8% of the sample reporting four or more adverse experiences. Baseline scores on the Barratt Impulsiveness Scale ranged from 35 to 88 with a mean of 57.55 (*SD* = 8.23). Scores on the Youth's Inventory Depressive Disorder Symptom Severity Scale at baseline ranged from 0 to 27 with a mean of 12.84 (*SD* = 6.23). Youth scores on the Elliot General Delinquency Questionnaire at the 6-month assessment ranged from 0 to 36 with a mean of 3.55 (*SD* = 6.33).

Examination of the correlations indicated moderate associations between baseline reports of suicide ideation and the following predictor variables: ACEs scores ($r = .27$, $p < .01$), 6-month delinquency ($r = .26$, $p < .01$), and baseline depressive symptoms ($r = .49$, $p < .01$). Additionally, reports of suicide ideation at 12 months were correlated with baseline ACEs scores ($r = .30$, $p < .01$) and baseline depressive symptoms ($r = .30$, $p < .01$). Predictor variables were also correlated with one another at baseline at moderate levels. ACEs scores were correlated with delinquency at 6-months ($r = .22$, $p < .05$) and baseline depressive symptoms ($r = .37$, $p < .05$). Additionally, baseline depressive symptoms were significantly correlated with baseline impulsivity ($r = .47$, $p < .01$) and delinquency at 6 months ($r = .34$, $p < .01$). See Table 1 for full correlation matrix.

Table 1.

Correlations Between Predictor and Outcome Variables

	1	2	3	4	5	6	7
Suicide ideation (BL)	1	-	-	-	-	-	-
Age (BL)	-.01	1	-	-	-	-	-
ACES (BL)	.27**	.10	1	-	-	-	-
Impulsivity (BL)	.08	-.06	.14	1	-	-	-
Delinquency (6 month)	.26**	-.11	.22*	.16	1	-	-
Depressive symptoms (BL)	.49**	.01	.37*	.47**	.34**	1	-
Suicide ideation (12 month)	.31**	.05	.30**	.05	.17	.30**	1

Note. * $p < 0.05$, ** $p < 0.01$

Regression Models Predicting Baseline Suicide Ideation

Multiple regression analyses were conducted to determine whether ACEs scores and baseline impulsivity predicted baseline suicide ideation. A significant direct effect of ACEs scores was observed on baseline suicide ideation (*B(SE)*= .09 (.03), $p < .01$), after controlling for depressive symptoms, age, and intervention condition. This model explained 8.8% of the variance associated with suicide ideation but had poor model fit: $\chi^2(9) = 65.82$, $p < .001$; CFI = 0.18; RMSEA (90% CI) = 0.21 (0.15, 0.26). The direct effect of impulsivity on baseline suicide ideation was non-significant (*B(SE)*= .01 (.01), $p = .23$). Depressive symptoms were found to have a direct effect on baseline suicide ideation (*B(SE)*= .06 (.01), $p < .001$).

Regression Models Predicting Suicide Ideation at 12 Months

A second set of multiple regression analyses were conducted to ascertain whether youth ACEs scores and baseline impulsivity predicted reports of suicide ideation at 12 months. Youth ACEs scores were found to significantly predict 12-month suicide

ideation (*B(SE)*= .09 (.03), $p < .01$), after controlling for baseline depressive symptoms, age, and intervention condition. This model explained 8.9% of the variance associated with 12-month suicide ideation but had poor model fit: $\chi^2(9) = 35.20$, $p < .001$; CFI = 0.24; RMSEA (90% CI) = 0.16 (0.10, 0.21). The direct effect of baseline impulsivity on 12-month suicide ideation was non-significant (*B(SE)*= .01 (.01), $p = .26$). As in the previous model, intervention condition, age, and depressive symptoms were entered as control variables. Once again, depressive symptoms were found to have a direct effect on suicide ideation (*B(SE)*= .03 (.01), $p < .01$).

Mediation Analyses

Mediation analyses were conducted to examine if the predictor variables of baseline impulsivity and baseline delinquency partially explained the relationships between the other predictor variables and the outcome variable of suicide ideation at 12 months. The indirect effect of ACEs on suicide ideation through impulsivity was non-significant (*b* = -.01, SE = .02, 95% CI = -.01, .06) and the previously meaningful relationship between ACEs and suicide ideation was found to be non-significant (*B(SE)*= .05 (.03), $p = .09$). The indirect effect of ACEs on suicide ideation through delinquency was also non-significant (*b* = -.02, SE = .003, 95% CI = -.19, .70). Additionally, the addition of delinquency to the model eliminated the previously significant association between ACEs and suicide ideation (*B(SE)*= .18 (.11), $p = .08$). Lastly, the indirect effect of impulsivity on 12-month suicide ideation through delinquency was non-significant (*b* = -.01, SE = .01, 95% CI = -.01, .39). See Table 2 for details regarding all regression and mediation pathways.

Table 2.

Regression Coefficients for Final Models Predicting Baseline and 12-month Reports of Suicide Ideation

Outcomes	Pathway of influence	*B*	*SE*	*p*
BL SI				
	ACES → BL SI	**.09**	**.03**	**.001**
	Impulsivity → BL SI	.01	.01	.23
	Depressive symptoms → BL SI	**.06**	**.01**	**<.001**
	Age → BL SI	-.05	.04	.16
	Condition → BL SI	-.06	.12	.58
12M SI				
	ACES → 12M SI	**.09**	**.03**	**.002**
	Impulsivity → 12M SI	.01	.01	.26
	Depressive symptoms → 12M SI	**.03**	**.01**	**.002**
	Age → 12M SI	-.02	.04	.57
	Condition → 12M SI	.07	.12	.58
	ACES → Impulsivity → 12M SI(95%CI)	-.01 (-.01, .06)	.02	
	ACES → Delinquency → 12M SI(95%CI)	-.02 (-.19, .70)	.003	
	Impulsivity → Delinquency → 12M SI(95%CI)	-.01 (-.01, .39)	.01	

Note. Bolded pathways indicate statistical significance. BL = baseline; SI = suicide ideation; 12M = twelve month. Regression estimates reported here are from full models, including all covariates. Separate models were tested for BL SI and 12M SI.

CHAPTER IV

DISCUSSION

Suicidal behaviors are public health concerns as well as mental health concerns. Adolescence is a critical period in development where many mental health issues arise, including suicidal behaviors, and should be a focus of prevention efforts (World Health Organization, 2014). To prevent adolescent suicide attempts and completions, it would be beneficial for practitioners and those close to the individual to be able to identify when youth begin to have thoughts of suicide. Researchers and clinicians can contribute to this knowledge by identifying risk factors associated with suicide ideation. This dissertation aimed to extend to existing literature by identifying association between risk factors and suicide ideation, with the goal of informing practitioners and aiding the effort of developing more sensitive assessment practices. Examining patterns that have been previously studied in incarcerated and in-patient samples in a community-based setting will hopefully support a move toward identifying these mental health concerns in a proactive rather than reactive way.

With this study I examined the association between impulsivity, adverse childhood experiences, delinquency with suicide ideation using both cross-sectional and longitudinal models. As hypothesized, reports of adverse childhood experiences significantly predicted reports of suicide ideation at 12 months, with youth who reported more adverse experiences also being more likely to report suicide ideation. Youth ACE scores also had a significant direct and positive effect on baseline suicide ideation. However, the results indicated that impulsivity did not significantly predict reports of

suicide ideation at baseline or at 12 months. Additionally, none of the mediation models tested in this study was significant.

Although I did not fully replicate the findings on which the literature review was based on, there are other studies with results that corroborate those found in the current study. Connor and Rueter (2009) completed a study on predictors of adolescent suicide and found the diagnosis of an affective disorder (such as depression) was a significant predictor of suicide ideation, such that adolescents with an affective disorder diagnosis were three times more likely to be planning a suicide, four times more likely to report suicide ideation or to plan a suicide in the future, and five times more likely to have attempted in the past than those without a diagnosis (Connor and Rueter, 2009). Other researchers have found that enduring adverse experiences as a child increases the likelihood of suicide ideation in adulthood between two and five times (Dube, Anda, Felitti, Chapman, Williamson, & Giles, 2001), corroborated by Johnson and colleagues (2002). Additionally, other previous research has failed to find a meaningful relationship between delinquency and reports of suicidal behaviors (Connor & Rueter, 2009).

The covariate of depressive symptoms is a variable that is strongly associated with suicide ideation both in previous literature as well as in this study. The significance of the relationship between youth ACEs and suicide ideation even while accounting for youth depressive symptoms indicates a strong, temporal link and contributes to our understanding of who might be at risk. In addition to the stress, trauma, and other psychosocial ramifications of adverse experiences in childhood, individuals who endure these difficulties have a higher probability of coping with them in a maladaptive way through suicidal ideation. Traumatic, disruptive, or self-esteem damaging events can lead

an individual to feel unwanted, unworthy, and even shameful (Shahar, Doron, & Szepsenwol, 2015). The strength of these negative feelings can become overwhelming such that an individual resorts to thinking about ending their life as a way to cope with and escape their experience. Awareness of this link not only improves our understanding of the development of suicide ideation but also provides direction for intervention efforts.

There is a documented dose-response effect between the number of adverse childhood experiences and mental health symptoms, indicating that greater attention and intervention efforts need to be made for children who experience disruptive and traumatic experiences in order to prevent harmful outcomes in adulthood (Edwards, Holden, Felitti, & Anda, 2003). Afifi and colleagues (2008) found that a significant proportion of negative mental health concerns in adults could be traced back to the experience of adverse events in childhood, supporting the notion that an upstream approach to prevention of psychopathology would be beneficial. Reduction in the incidence of adverse childhood experiences and timely intervention to support those who endure them would be a tremendous aid to suicide prevention efforts and is a path that scientists and practitioners should move toward (Dube et al., 2001).

The results of this study supported the ideas posited by Joiner's Interpersonal Theory of Suicide (2005) and provided a focused examination of how this theory conceptualizes suicide ideation. Joiner (2005) identified the capability of suicide as the factor that contributes to an individual taking action where feelings of a lack of belongingness and perception of being a burden lead an individual to consider suicide. The significant direct relationship of ACEs on suicide ideation reinforced Joiner's (2005) theory that painful traumatic experiences can contribute to the capability of suicide, as

ideation precedes action. The meaningful contribution of depressive symptoms alongside ACEs in this study adds to the preexisting ideas of what influences the capability of suicide. Future research can examine how depressive symptoms interact with adverse experiences within this theoretical framework.

The current study held numerous limitations that must be taken into consideration when interpreting the results. A pre-existing dataset was used for this project, and while the nature of the sample and measurements included during data collection were sufficient for what was proposed by this design, there are disadvantages to secondary analysis that must be considered. The original study was not originally designed with the most optimal measures to answer this dissertation's hypotheses. Although there were two items on separate scales that assessed for suicide ideation, a full scale measuring suicide behaviors would have been a more rigorous approach that was not available to this study, due to the nature of secondary analysis (Cheng & Phillips, 2014).

In addition, secondary analysis does not allow for the timing of measurement, which can limit the rigor of data analysis models. For example, the Barratt Impulsiveness Scale (Patton, Stanford & Barratt, 1995) was not completed at the 6-month assessment therefore the baseline assessment had to be used. It would have been ideal in the mediation model to have a measure of impulsivity at the 6-month assessment. Another restriction on the measurement of variables lies in the specificity of the ACEs questionnaire. Due to mandated reporting requirements, the youth tallied the number of ACEs they had experienced and reported that number in the computerized interviewing program, rather than indicating yes/no to any individual item. This eliminated the ability to examine how particular adverse experiences were associated with suicide ideation and

limited the design to an analysis of how an increased number of adverse experiences might impact suicide ideation.

Additionally, there are a number of limits to the generalizability of this study's results. The sample size is small at 122 participants, making it challenging to generalize these findings to the greater population. However, the analyses for both cross-sectional and longitudinal models had moderate statistical power ($r = .57$; $r = .42$). This sample also contained limited ethnic diversity and was taken from one county in the state of Oregon, which further limits the ability to generalize study findings. There is also the potential for selection bias. While the participants and their caregivers were randomly assigned to intervention and control conditions, they were not randomly sampled and thus self-selected into the study. This could mean that there are particular characteristics of this sample that set them apart from the community at large, further impacting the study findings. Another limitation to this study is that it did not account for recruitment source due to limited statistical power. As the participants were recruited from a variety of agencies that have their own unique features, there may have been an effect on them that was not taken into account in the analyses that should be addressed in future work. Additionally, controlling for socioeconomic status in future iterations of this research would be beneficial as this variable could be a potential confound.

All of the variables used for this study were collected with self-report measures. While there are benefits to this method, there are also limits due to inherent bias. Social desirability bias is a category of response bias that describes the propensity to provide answers that might be viewed favorable by society, such as underreporting significant psychopathology or high-risk behaviors (Heppner, Wampold, & Kivilighan, 2008).

Adolescents are particularly vulnerable to enacting this bias. In a study measuring suicide ideation and social desirability in a sample of 15-19 year olds, results indicated that those who scored higher on the Marlowe-Crowne Social Desirability Scale (SDS) reported markedly fewer mental health symptoms (Miotto & Preti, 2008). In spite of social developments, there is still a high level of stigma associated with mental illness and suicidal behaviors. Individuals who are more concerned with being accepted by society might be less willing to disclose things that are perceived to be unacceptable, such as struggles with mental health. A study of discrepancies in reporting suicidal behaviors in adolescents between self-report and semi structured interview methods similarly demonstrated an effect of social desirability responding, as this bias accounted for some of the discrepancies found between reports (Velting, Rathus, & Asnis, 1998).

Adolescents are likely to feel uncomfortable sharing personal details with a stranger, even in a somewhat anonymous way through a self-report survey. Distrust and ambivalence in reporting mental health concerns like suicidal behaviors are likely to be stronger in younger people (Yigletu, Tucker, Harris, & Hatlevig, 2004), which is a challenge for research in adolescent mental health. Additionally, Velting and colleagues (1998) identified another possible explanation for adolescent hesitancy to disclose sensitive information such as experiencing suicide ideation. They posited that since endorsing suicide behaviors typically results in follow-up questions, youth might avoid reporting that they experience them in order to avoid the additional questions (Velting et al., 1998).

Future studies that examine these constructs and relationships should include more thorough measures of suicide ideation that consist of full scales rather than a few

items. Surveys such as the Suicidal Ideation Questionnaire (Reynolds, 1988) are short (approximately ten minute completion time) but thorough and intended for youth aged 12-18. Additionally, as this study lacked the ability to examine the differences between various types of adverse childhood experiences, future studies should explore and identify these unique relationships. Previous research has shown that some experiences such as physical abuse and psychological abuse have a stronger association with suicide ideation than others and this study would be strengthened if it could investigate unique relationships as well (Thompson, Proctor, English, Duboqitz, Narasimhan, & Everson, 2012).

The next step that could be taken in terms of data analysis would be the examination of other mediating relationships. Depressive symptoms had an association with both concurrent and future suicide ideation in this study, which warrants a deeper examination of its relationship to other predictor variables and the outcome variable. It is possible that depressive symptoms may mediate other variables such as ACEs, impulsivity, and delinquency. Dube and colleagues (2001) found that depression partially mediates the relationship between ACEs and suicidal behaviors, a result replicated by other studies (Fuller-Thomson, Baird, Dhrodia, & Brennenstuhl, 2016). Examination of the predictor variables' indirect effects on suicide ideation through depressive symptoms would add important detail to what the field already knows about the impact of depressive symptoms on the development of suicidal behaviors. Consideration of change in suicide ideation over time is another important next step in understanding this construct and its development. The development of suicide ideation and behaviors is a complex process that requires more in-depth understanding in order for prevention efforts

to be successful. Extending this study to examine how the risk factors of adverse childhood experiences, impulsivity, delinquency, and depressive symptoms impact both suicide ideation as well as suicide attempts would illuminate a crucial shift in action and be extremely beneficial to practitioners.

Current approaches to suicide prevention range from broad approaches such as media campaigns to more direct methods such as targeting at risk youth and the adults in their lives (American Academy of Child and Adolescent Psychiatry; AACAP, 2001). There are many practice parameters indicated by the AACAP but a promising prevention strategy, supported by results of research (Connor & Rueter, 2009), would be for practitioners and counselors to include screeners for depression and suicidal behaviors as part of their routine procedure. Those who are identified as being at risk through high mental health symptom scores and repots of suicide ideation will be followed up with to complete a suicide risk assessment, safety plan, and connection to services (AACAP, 2001).

Additionally, as supported by the results of the current study, adverse childhood experiences are predictors that need to be considered in the early stages of risk assessment. Youth who have endured disruptive and traumatic events are more likely to engage in suicide ideation than those who have not. An opportunity to apply research findings to applied work could be within Child Protective Services (CPS) proceedings. If maltreatment or a disruptive environment is investigated or substantiated within a family, the staff member assigned to the case could conduct a brief screener to assess for mental health and suicide risk. This type of selective prevention technique employs knowledge

of risk factors gained from research but does not wait for a problem to arise before intervening.

Suicide risk is challenging to measure for a variety of reasons. It is almost fluid in nature, affected by multiple things that can shift over time (Gutierrez, 2006). One of the most important factors of effective suicide assessment is that it is ongoing. There is still much to learn about predicting suicide ideation and behaviors. As practitioners and scientists, we can combat this uncertainty with compassionate vigilance. Alongside improving our understanding of risk, it is imperative to examine protective factors that keep individuals from thinking suicidal thoughts and that prevent individuals from acting on them. Hopefully a more nuanced understanding of risk and protective factors can help practitioners develop more effective prevention methods to disseminate to the communities and families who would benefit from them.

APPENDIX

MEASURES

SHARP Study
Family Characteristics

The following questions ask about some basic demographic information. Our funding agencies and publication outlets require that we report this basic information anonymously about all of our participants. If you do not feel comfortable answering any of the following questions, please let me know and I will move onto the next question.

1. What is your gender?
    a. Male
    b. Female

2. What is your date of birth?
   __ __ / __ __ / __ __ __ __

3. What is your ethnicity?
    a. Hispanic or Latino
    b. Non Hispanic or Latino
    c. Unknown
    d. Decline to answer

4. What is your race? (check all that apply)
    a. American Indian/Alaska Native
    b. Asian
    c. Native Hawaiian or Other Pacific Islander
    d. Black or African American
    e. White (includes white Hispanics and Latinos)
    f. Decline to answer

5. What is your highest level of education?
    a. less than high school
    b. Some high school
    c. G.E.D. or Equivalency
    d. High School Degree
    e. Trade School
    f. 2-year college or university degree
    g. 4-year college or university degree
    h. Graduate Degree
    i. Decline to Answer

6. Are you currently working? (Circle one.)
    a. Full time

b. Part time
c. Not employed (Skip to Question 8)

7. Currently, what is your main job that you do to earn money? Be as specific as possible.

_____

_____

8. What is your gross annual household income?
   a. less than $20,000
   b. $20,000 - $39,999
   c. $40,000 - $59,999
   d. $60,000 - $79,999
   e. $80,000 - $99,999
   f. $100,000 or more
   g. Decline to Answer

9. Do any household members receive financial aid? (Check all that apply):
   a. No financial aid
   b. Food stamps
   c. Aid to families with dependent children (ADC)
   d. Other welfare (not including food stamps)
   e. Medical only (OHP)
   f. Low income housing
   g. SSI/SSDI
   h. School loans and/or grants
   i. Other (describe:
      _____)

10. Do you live in a
    a. Single-family home
    b. Mobile home
    c. Duplex
    d. Apartment
    e. Homeless
    f. Other (describe: _____)

11. Do you own or rent your home?
    a. Own
    b. Rent
    c. Other
       (Describe_____)

12. How many people live in your household including yourself?
    __ __ People

13. What is your relationship to the child participating in the study?
    a. Biological Parent
    b. Biological Grandparent
    c. Biological Aunt/Uncle
    d. Biological or Half Sibling
    e. Biological or Half Other Relative (Cousin, Niece, Nephew)
    f. Step-Parent
    g. Step-Grandparent
    h. Step-Aunt/Uncle
    i. Foster Parent - Unrelated
    j. Foster Grandparent - Unrelated
    k. Foster Aunt/Uncle - Unrelated
    l. Foster Sibling – Unrelated
    m. Foster Parent - Related
    n. Foster Grandparent – Related
    o. Foster Aunt/Uncle – Related
    p. Foster Sibling – Related
    q. Adoptive Parent - Unrelated
    r. Adoptive Grandparent – Unrelated
    s. Adoptive Aunt/Uncle – Unrelated
    t. Adoptive Parent – Related
    u. Adoptive Grandparent – Related
    v. Adoptive Aunt/Uncle – Related
    w. Legal Guardian – Mother/Father
    x. Legal Guardian - Grandparent
    y. Legal Guardian - Aunt/Uncle
    z. Non-Related Parent Figure/ Caretaker (Parent's girlfriend, friend's parent, partner's Parent)
    aa. Decline to Answer

SHARP Race/Ethnicity (Teen BL and 12 month Interviews)

1. Are you from Spanish, Hispanic, or Latino background/origin?
(This includes Mexican, Mexican American, Puerto Rican, Cuban and all other Spanish, Hispanic or Latino origins)

1= Yes
2= No
3= Prefer not to answer

2. What is your race?

1 = American Indian/Alaska Native
2 = Asian
3 = Native Hawaiian or Other Pacific Islander
4 = Black or African American
5 = White
6 = More than one race
7 = Unknown/Refused

Adverse Childhood Experiences Questionnaire (ACES) – Girl Version
(QED: Childhood Experiences Questionnaire)

Directions: For this next set of questions, you are going to take notes on the post-it note you have been provided. We do not want you to write down the question number or any words. Please read each question below carefully. For each item, if that experience is true for you, please mark "1" on your paper. There are a total of 10 questions for this section. At the end, you will be asked to add the number of "1"s you have marked on your paper and enter the total at the end of the questionnaire. If you have any questions, please ask your interviewer before proceeding.

For the following items, please think about your entire childhood and adolescence.

1. Did any adult in your household **often**...
   Swear at you, insult you, put you down, or humiliate you?
   or
   Act in a way that made you afraid that you might be physically hurt?

If yes, please mark a 1 on your post-it. If no, do not put anything on your post-it.

2. Did any adult in your household **often**...
   Push, grab, slap, or throw something at you?
   or
   Ever hit you so hard that you had marks or were injured?

If yes, please mark a 1 on your post-it. If no, do not put anything on your post-it.

3. Did any adult or person at least 5 years older than you **ever**...
   Touch or fondle you or have you touch their body in a sexual way?
   or
   Attempt or actually have oral, anal, or vaginal intercourse with you?

If yes, please mark a 1 on your post-it. If no, do not put anything on your post-it.

4. Did you **often** feel that...
   No one in your family loved you or thought you were important or special?
   or
   Your family didn't look out for each other, feel close to each other, or support each other?

If yes, please mark a 1 on your post-it. If no, do not put anything on your post-it.

5. Did you **often** feel that...

You didn't have enough to eat, had to wear dirty clothes, and had no one to protect you?

or

Your parents were too drunk or high to take care of you or take you to the doctor if you needed it?

If yes, please mark a 1 on your post-it. If no, do not put anything on your post-it.

6. Were your parents ever separated or divorced?

If yes, please mark a 1 on your post-it. If no, do not put anything on your post-it.

7. Was your parent:

Often pushed, grabbed, slapped, or had something thrown at them?

or

Sometimes kicked, bitten, hit with a fist, or hit with something hard?

or

Ever repeatedly hit at least a few minutes or threatened with a gun or knife?

If yes, please mark a 1 on your post-it. If no, do not put anything on your post-it.

8. Have you lived with anyone who was a problem drinker or alcoholic or who used street drugs?

If yes, please mark a 1 on your post-it. If no, do not put anything on your post-it.

9. Was a household member depressed or mentally ill, or attempt suicide?

If yes, please mark a 1 on your post-it. If no, do not put anything on your post-it.

10. Did a household member go to prison?

If yes, please mark a 1 on your post-it. If no, do not put anything on your post-it.

11. Thank you for answering these questions. Now, please add the numbers on your paper and enter the total in the space below:

__ __ Total

Barratt Impulsivity Scale

People differ in the ways they act and think in different situations. Select the item that best describes you. Do not spend too much time on any statement. Answer quickly and honestly.

	Rarely/Never	Occasionally	Often	Almost Always/ Always
1. I plan tasks carefully.	1	2	3	4
2. I do things without thinking.	1	2	3	4
3. I make-up my mind quickly.	1	2	3	4
4. I am happy-go-lucky.	1	2	3	4
5. I don't "pay attention."	1	2	3	4
6. I have "racing" thoughts.	1	2	3	4
7. I am self-controlled.	1	2	3	4
8. I concentrate easily.	1	2	3	4
9. I save money regularly.	1	2	3	4
10. I "squirm" at plays or in class.	1	2	3	4
11. I am a careful thinker.	1	2	3	4
12. I say things without thinking.	1	2	3	4
13. I like to think about complex problems.	1	2	3	4
14. I act "on impulse."	1	2	3	4
15. I get easily bored when solving thought problems.	1	2	3	4
16. I act on the spur of the moment.	1	2	3	4
17. I am a steady thinker.	1	2	3	4
18. I buy things on impulse.	1	2	3	4
19. I can only think about one thing at a time.	1	2	3	4
20. I change hobbies.	1	2	3	4
21. I often have extraneous thoughts when thinking.	1	2	3	4
22. I am more interested in the present than the future.	1	2	3	4
23. I am restless at the theater or in class.	1	2	3	4
24. I like puzzles.	1	2	3	4
25. I am future oriented.	1	2	3	4

Elliott Behavior Checklist (Girl)

Step 1: Please read the question and then write down your best estimate of **how many times**, you've done each behavior during the **last 6 months**. Please write a number, not a range. For example, write "15" not "10-20". If you have never done the behavior in the last 6 months, put "0". **Step 2**: For any item you've done 10 or more times please circle how often you were involved in this behavior.

00. Have you worked for pay or volunteered in the last 6 months?
    a. Yes
    b. No

How many times in the last 6 months have you:	**# of times**		**Once a month**	**Once every 2-3 weeks**	**Once a week**	**2-3 times a week**	**Once a day**	**2-3 times a day**
01. purposely damaged or destroyed property belonging to your parents or other family members?	___	**01a. If more than 10 times,** then answer →	4	5	6	7	8	9
02. (IF WORKIN purposely dan or destroyed property belor to your emplo **(dot if NA)**	___	**02a. If more than 10 times,** then answer →	4	5	6	7	8	9
03. purposely damaged or destroyed other property that did not belong to you, not counting	___	**03a. If more than 10 times,** then answer →	4	5	6	7	8	9

family, school, or work/military property ?								
								More →
How many times in the last 6 months have you:	**# of times**		**Once a month**	**Once every 2-3 weeks**	**Once a week**	**2-3 times a week**	**Once a day**	**2-3 times a day**
04. stolen or tried to steal a motor vehicle such as a car or motorcycle ?	— — —	**04a. If more than 10 times,** then answer →	4	5	6	7	8	9
05. stolen or tried to steal something worth more than $50 ?	— — —	**05a. If more than 10 times,** then answer →	4	5	6	7	8	9
06. knowingly bought, sold or held stolen goods or tried to do any of these things ?	— — —	**06a. If more than 10 times,** then answer →	4	5	6	7	8	9
07. purposely set fire to a building, a car, or other property or tried to do so ?	— — —	**07a. If more than 10 times,** then answer →	4	5	6	7	8	9
08. carried a hidden	— —	**08a. If more**	4	5	6	7	8	9

weapon other than a plain pocket knife?		**than 10 times,** then answer →						
09. stolen or tried to steal things worth $5 or less ?	— — —	**09a. If more than 10 times,** then answer →	4	5	6	7	8	9
10. been paid money or drugs for having sexual relations with someone ?	— — —	**11a. If more than 10 times,** then answer →	4	5	6	7	8	9
								More →

How many times in the last 6 months have you:	**# of times**		**Once a month**	**Once every 2-3 weeks**	**Once a week**	**2-3 times a week**	**Once a day**	**2-3 times a day**

11. paid someone money or drugs to have sexual relations with you ?	— — —	**12a. If more than 10 times,** then answer →	4	5	6	7	8	9
12. made money from prostitutes working for you (pimping)?	— — —	**13a. If more than 10 times,** then answer →	4	5	6	7	8	9
13. been involved in gang fights ?	— — —	**14a. If more than 10 times,** then answer →	4	5	6	7	8	9
14. used checks illegally or used phony money to pay for something ? (INCLUDES INTENTIONAL OVERDRAFTS)	— — —	**15a. If more than 10 times,** then answer →	4	5	6	7	8	9
15. sold marijuana or hashish ("POT", "GRASS", and "HASH") ?	— — —	**16a. If more than 10 times,** then answer →	4	5	6	7	8	9
16. hitchhiked where it was illegal to do so ?	— — —	**17a. If more than 10 times,** then answer →	4	5	6	7	8	9
17. (IF	__ __	**18a. If**	4	5	6	7	8	9

WORKING) stolen money, goods, or property from the place where you work ? **(dot if NA)**	—	**more than 10 times,** then answer →						
18. had or tried to have sexual relations with someone against their will ?	— — —	**19a. If more than 10 times,** then answer →	4	5	6	7	8	9
								More →
How many times in the last 6 months have you:	**# of times**		**Once a month**	**Once every 2-3 weeks**	**Once a week**	**2-3 times a week**	**Once a day**	**2-3 times a day**
19. hit or threatened to hit one of your parents ?	— — —	**20a. If more than 10 times,** then answer →	4	5	6	7	8	9
20. (IF WORKING) hit or threatened to hit your supervisor/superior or other employee ? **(dot if NA)**	— — —	**21a. If more than 10 times,** then answer →	4	5	6	7	8	9
21. hit or threatened to hit anyone else (other than parents, persons at work) ?	— — —	**22a. If more than 10 times,** then answer →	4	5	6	7	8	9

If you answered yes to #20, #21, or #22, please answer this question; otherwise skip to 24. 22. Thinking of the most severe (worst) time, did you actually hit them or just threaten to →	**1-** actually hit		**2-** tried but didn't succeed			**3-** only threatened to hit		
23. been loud, rowdy, or unruly in a public place – disorderly conduct ?	— — —	**24a. If more than 10 times,** then answer →	4	5	6	7	8	9
24. sold hard drugs such as heroin, cocaine, LSD or any other hard drugs ?	— — —	**25a. If more than 10 times,** then answer →	4	5	6	7	8	9
25. tried to cheat someone by selling them something that was worthless or not what you said it was ?	— — —	**26a. If more than 10 times,** then answer →	4	5	6	7	8	9
26. taken a vehicle for a ride or a drive without the owner's permission ?	— — —	**27a. If more than 10 times,** then answer →	4	5	6	7	8	9

								More →
How many times in the last 6 months have you:	**# of times**		**Once a month**	**Once every 2-3 weeks**	**Once a week**	**2-3 times a week**	**Once a day**	**2-3 times a day**
27. bought or provided liquor for a minor ?	— — —	**28a. If more than 10 times,** then answer →	4	5	6	7	8	9
28. used force or strong-arm methods to get money or things from people ?	— — —	**29a. If more than 10 times,** then answer →	4	5	6	7	8	9
29. been drunk in a public place ?	— — —	**30a. If more than 10 times,** then answer →	4	5	6	7	8	9
30. stolen or tried to steal things worth between $5 and $50?	— — —	**31a. If more than 10 times,** then answer →	4	5	6	7	8	9
31. broken or tried to break into a building or vehicle to steal something or just to look around ?	— — —	**32a. If more than 10 times,** then answer →	4	5	6	7	8	9

32. begged for money or things from strangers ?	— — —	**33a. If more than 10 times,** then answer →	4	5	6	7	8	9
33. used or tried to use credit cards without the owner's permission ?	— — —	**34a. If more than 10 times,** then answer →	4	5	6	7	8	9
34. made obscene phone calls (such as calling someone and saying dirty things) ?	— — —	**35a. If more than 10 times,** then answer →	4	5	6	7	8	9
35. snatched someone's purse or wallet or picked someone's pocket ?	— — —	**36a. If more than 10 times,** then answer →	4	5	6	7	8	9
								More →
How many times in the last 6 months have you:	**# of times**		**Once a month**	**Once every 2-3 weeks**	**Once a week**	**2-3 times a week**	**Once a day**	**2-3 times a day**
36. embezzled money, that is used money or funds entrusted to your care for some purpose other than that intended ?	— — —	**37a. If more than 10 times,** then answer →	4	5	6	7	8	9

37. used force or threat of force to rob a person, store, bank or other business establishment ?	— — —	**38a. If more than 10 times,** then answer →	4	5	6	7	8	9
38. burglarized a residence, building, house, business or warehouse ?	— — —	**39a. If more than 10 times,** then answer →	4	5	6	7	8	9

END. THANK YOU

Youth's Inventory Depressive Symptom Subscale

Choose the rating that best describes your overall behavior.

SECTION K	**Never**	**Sometimes**	**Often**	**Very Often**
K84. I feel unhappy or sad.	0	1	2	3
K85. I don't feel like doing anything.	0	1	2	3
K86. I think about death or suicide.	0	1	2	3
K87. I don't like myself.	0	1	2	3
K88. I feel tired, like I don't have any energy to do things.	0	1	2	3
K89. I feel bad that I can't do things as well as other people.	0	1	2	3
K90. I feel that things never work out right.	0	1	2	3
K91. I eat a lot.	0	1	2	3
K92. I sleep a lot.	0	1	2	3
K96. My feelings get hurt very easily.	0	1	2	3
Kx. How often do the behaviors above, in Section K, make it harder to do schoolwork, get along with others, or work on a job?	0	1	2	3

K95. My school grades have really gone down hill.
- 1- Yes
- 2- No

K96. In the past year, a very upsetting thing happened to me (parents divorces, friend or relative died, serious accident, etc.)
- 1- Yes
- 2- No

Suicide Ideation Items

Brief Symptom Inventory:

Next, I will read a list of problems and complaints that people sometimes have. Please tell me how much discomfort, if any, this problem has caused you this past week, including today.

During the past week, how much were you bothered by . . .	Not at all	A little bit	Moderately	Quite a bit	Very much
S505. Thoughts of ending your life?	1	2	3	4	5

Youth's Inventory:

Choose the rating that best describes your overall behavior.

SECTION K	**Never**	**Sometimes**	**Often**	**Very Often**
K86. I think about death or suicide.	0	1	2	3

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