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Secure Base Scriptedness, Psychological Health And Wellbeing In Urban Youth

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**SECURE BASE SCRIPTEDNESS, PSYCHOLOGICAL HEALTH AND WELLBEING IN
URBAN YOUTH**

by

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THESIS

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TABLE OF CONTENTS

List of Tables.....	ii
Chapter 1 – Introduction.....	1
Chapter 2 – Method.....	12
Chapter 3 – Results.....	19
Chapter 4 – Discussion.....	26
Appendix A.....	38
Appendix B.....	45
Appendix C.....	47
Appendix D.....	48
Appendix E.....	53
References.....	55
Abstract.....	66
Autobiographical Statement.....	68

LIST OF TABLES

Table 1: Descriptive Statistics of Study Variables.....	33
Table 2: Correlation Matrix of Study Variables.....	34
Table 3: Analysis of Covariates, T-tests.....	35
Table 4: Analysis of Covariates, Pearson Correlations.....	36
Table 5: Moderated Regressions Predicting Youth Behavioral Problems.....	37

CHAPTER 1

Introduction

Across the developmental period of adolescence, research has noted increases in rates of emotional and behavioral problems. These negative outcomes are likely exacerbated for youth coming from low-income, stressful environments (Cutrona et al., 2006; Deardorff et al., 2003). Up to this point, few studies have aimed to identify factors that may buffer these maladaptive outcomes, and lead to resilient outcomes in youth. The goals of the proposed study were to: a) inventory the psychological health and wellbeing of a sample of low-income, urban adolescents living in Detroit, MI; b) examine the empirical utility of a novel narrative measure of attachment-security, Secure Base Scripts, in this adolescent sample; and c) determine the extent to which environmental stressors and youth attachment were associated with youth psychological symptoms; and d) to test a model proposing that the presence of attachment security in youth buffers the association between stress exposure and psychological wellbeing, as indicated by fewer symptoms on the parent-report CBCL. To examine these aims, the proposed study collected data from 83 caregiver-adolescent dyads (adolescents ages 13-17) recruited from Detroit, MI. This study highlights factors that might be useful therapeutic foci in increasing psychosocial health and wellbeing in urban, socioeconomically disadvantaged youth.

Adolescence

Adolescence is a period of development marked by substantial physical, cognitive, and social changes (see Steinberg, 2001 for a review). During this transitional time, youth undergo puberty, encounter a redefinition of societal role expectations, and have evolving relationships with family and peers (Aikins, Bierman, & Parker, 2005; Allen & Land, 1999; Steinberg, 2001). Along with these salient developmental changes are increases in risk for emotional and

behavioral problems (Aneshensel & Sucoff, 1996; Grant et al., 2004; Wickrama & Bryant, 2003). Multiple large-scale, longitudinal studies have established that the prevalence of both depression symptoms and conduct problems increases significantly throughout the course of adolescence (Arnett, 1999; Avenevoli & Steinberg, 2000; Compas, Hinden, & Gerhardt, 1995; Kazdin 1990; Petersen et al., 1993). Further, suicide in adolescence has gained a great deal of public attention, as nationwide surveys of youth reveal that 16% of 9th-12th graders report seriously considering suicide. Further, suicide is the 3rd leading cause of death for youth between the ages of 10-24 (Centers for Disease Control and Prevention [CDC], 2010). Taken together, such findings highlight the necessity of further considering factors that may contribute to adolescent psychopathology.

Among youth in general, those living in urban, socioeconomically disadvantaged environments appear to be at an even greater risk for maladjustment as compared to adolescents from middle and upper class backgrounds. For example, Grant et al. (2004) inventoried emotional and behavioral symptoms in a sample of 1,530 low-income, urban African-American adolescent girls and boys. Results indicated that the low SES youth had significantly elevated internalizing and externalizing behaviors as compared to normative data for their age group. Similar findings linking socioeconomic disadvantage with youth depression, anxiety, and other internalizing problems have been replicated in multiple studies (Aneshensel & Sucoff, 1996; Duckworth, Hale, Clair & Adams, 2000; Hammen & Rudolph 1996; Wickrama & Bryant, 2003). Research continues to strive to better understand the mechanisms underlying the trajectory linking socioeconomic status with psychological symptoms. One empirically supported theory addressing this question is related to cumulative risk. Cumulative risk theory addresses the additive nature of stress, such that exposure to multiple risk factors together threatens children's

ability to function effectively in their given environment, and may lead to the development of maladaptive symptomatology (Evans 2003; Evans, 2004; Repetti, Taylor, & Seeman, 2002; Taylor, Repetti, & Seeman, 1997). Youth raised in socioeconomically disadvantaged neighborhoods are exposed to more frequent and threatening stressors, such as poor environmental and community conditions, trauma, violence, and family disruption (Cutrona, Wallace, & Wesner, 2006; Deardorff, Gonzalez, & Sandler, 2003; Osofsky, Wewers, Hann, & Fick, 1993; Schubiner, Scott, & Tzelepis, 1993). Highlighting the gravity of these associations, it is estimated that half of low-income, urban adolescents have directly witnessed someone being shot or stabbed (Schubiner et al., 1993). Emerging evidence supports the validity of cumulative risk impacting socioeconomically disadvantaged youth, as increased environmental stress exposure is significantly related to emotional and behavioral problems (Cutrona et al., 2006; Deardorff et al., 2003; Stein, Jaycox, Kataoka, Rhodes & Vestal, 2003). In sum, a higher degree of cumulative environmental stress is more likely to be experienced by low-income, urban youth, and thus contributes to the higher rates of emotional and behavioral symptoms in these youth.

Gaining a more comprehensive understanding of the association between socioeconomic disadvantage and psychopathology is integral to our conceptualization of mental health functioning in our population as a whole. Census data from 2010 indicated that 39.8 million Americans are currently living in poverty, of which 14 million were youth under the age of 18 (U.S. Census Bureau, 2012). Youth of color are overrepresented, as approximately 35.3% of African-American youth are members of low-income families compared with 17% of Caucasian youth (U.S. Census Bureau, 2012). Relative to Caucasian children, African-American children are also more likely to live in chronic, rather than intermittent poverty (Gottschalk, McLanahan, & Sandefur, 1994). Further, African-American children face additional stressors such as racism

and discrimination (DuBois, Burk-Braxton, Swenson, Tevendale, & Hardesty, 2002; Evans, 2004; Harrell, 2000). Thus, African-American youth may be more likely than Caucasians to experience the detrimental impact of cumulative environmental stressors associated with socioeconomic disadvantage, as they are more likely to be members of chronically impoverished families and are more likely to be exposed to racial prejudice.

In sum, adolescence is a developmental period marked by meaningful shifts in youths' physical, cognitive, and social worlds. Also during this time, emotional and behavioral problems increase, which is underscored by the high rates of suicide in adolescents and young adults. As compared to adolescents coming from middle class backgrounds, youth living in poverty experience increased exposure to cumulative stress, which may help to explain higher rates of internalizing and externalizing problems noted in this sample. Thus, the aforementioned findings emphasize the vast importance of exploring protective factors associated with resilient outcomes in socioeconomically disadvantaged youth.

Attachment

Existing research highlights the importance of family, and in particular, primary caregivers in their children's successful development across the lifespan. A long-studied, integral component of the child-caregiver relationship is attachment. Attachment theory was first proposed by Bowlby (1973), and posits that the earliest caregiving relationship, developed in infancy, is a motivational system activated when infants inherently know to seek out proximity to their caregiver when they are distressed. Security in attachment-relationships develops as infants become confident that their caregivers are emotionally available to them, responsive, and helpful, as they learn to explore their environment (Bowlby, 1973). Over time, consistent caregiver support fosters children's expectations that their caregivers will be able to effectively

care for them, protect them, and identify and fulfill their basic needs, thus creating a secure base. Bowlby (1973) theorized that these early caregiving experiences would result in lasting mental representations that reflect one's individual expectations about support and trust in relationships. Thus, a history of consistent and effective secure base experiences with a primary caregiver will eventually be generalized to future attachment relationships across development.

The nature of social relationships in adolescence is unique, such that youth continue to rely on their parents during times of distress. Simultaneously, youths' expanding social circle places increased value on romantic relationships and close friendships. These transitions are reflected at the representational level, as well. From birth, infants develop individual attachment representations for each of their primary caregivers. Over time, these separate representations are thought to become synthesized into a single, overarching attachment representation known in adulthood as one's attachment state of mind (Main, Kaplan, & Cassidy, 1985). Adolescence is believed to reflect a stage between having separate representations, to having a singular, overarching representation (Chen, Boucher, & Tapias, 2006; Furman & Simon, 2004; Furman, Simon, Shaffer, & Bouchee, 2002). As with representation in early childhood, it is believed that adolescents maintain related representational models for differing relationships, such as parents, romantic partners, and friends, but over time, these models are hypothesized to become integrated into one's adulthood generalized attachment representation, or state of mind (Chen et al., 2006; Furman & Simon, 2004; Furman et al., 2002).

Many researchers have examined how attachment representations and relationships influence psychosocial development and well-being. Sroufe and colleagues (1978; 1979) longitudinally examined the impact of attachment security from infancy to preschool age. They found that preschoolers classified as securely attached as infants were more likely to be

enthusiastic, affectively positive, and confident in problem solving relative to insecurely attached peers. Conversely, other studies suggest that insecurely attached infants are more likely to be isolative from their peers, endorse higher rates of internalizing problems, and report lower self-worth ($d = .19$, adjusted for study bias; Madigan, Atkinson, Laurin, & Benoit, 2013).

Although the majority of published studies have focused on the impact of attachment quality on early child development, representations have increasingly been shown to have a bearing on one's psychosocial functioning across development. A meta-analysis conducted by Fraley (2004) reviewed 61 published, longitudinal attachment studies, and determined that child-attachment patterns maintain moderate stability across the first 19 years of life (Fraley, 2004). Youth with secure attachments have closer relationships with friends, are better able to regulate their emotions in their friend groups, and are more likely to be socially accepted within their peer group (Allen, Moore, Kuperminc, & Bell, 1998; Sroufe et al., 2005; Zimmerman, 2004). Adolescents with insecure attachment patterns are more likely to report higher internalizing problems, such as depression and anxiety symptoms (Brumariu & Kerns, 2010; Lee & Hankin, 2009).

Other lines of research have attempted to synthesize the potential associations between cumulative stress exposure and attachment security. There is some suggestion that attachment security may buffer the relation between cumulative stress exposure and development of behavioral problems. For example, one study conducted as a part the larger NICHD Early Childcare study examined the associations between infant attachment and the development of behavior problems and social competence at 36 months of age (Belsky & Fearon, 2002). They found that significant links between infant attachment and child outcomes were only present when cumulative socioeconomic risk was accounted for. At low and high levels of cumulative

risk, attachment did not moderate the relationship between cumulative risk and child outcomes. However, at moderate levels of risk, attachment insecurity (specifically attachment avoidance) emerged as a risk for behavioral problems and social competence (Belsky & Fearon, 2002). Although this research was conducted with young children, it does provide suggestive evidence that attachment security may function in a moderating role when considering the links between cumulative risk and child socioemotional outcomes.

Taken together, research supports that stressors associated with socioeconomic status may contribute to child behavior problems when they undermine the child and adolescent. These problems may be buffered by attachment quality, or they may contribute to child problems independent of attachment. The present study examined each of these relations to contribute new data to these proposed linkages.

Assessing Attachment

Methodology for measuring attachment security has included interactive parent-child separation procedures, lengthy narrative interviews, and self-report questionnaires. Gold standards for the classification of attachment representations have been established for both infants (Strange Situation, SST—lab based interactive task; Ainsworth, Blehar, Waters, & Wall, 1978) and adults (Adult Attachment Interview, AAI, semi-structured interview, George, Kaplan, & Main, 1984).

Historically, attachment researchers have focused on examining attachment relationships in infancy and adulthood; research on adolescent attachment is substantially less developed. As previously stated, adolescence marks a meaningful shift in youths' physical, cognitive, and social worlds. This instability may make the study of attachment in these youth both challenging and informative. Previous research has often relied on the AAI (George et al., 1984) to better

understand youths' mental models of attachment. Although the AAI has been used with some success (Allen et al., 2003; Dykas, Woodhouse, Cassidy, & Waters, 2006), it should be noted that the AAI is an extensive narrative interview that takes several hours to administer, transcribe, and code. Because of its length and cost-intensive nature, it poses a significant time and monetary investment by researchers.

Alternative, briefer methods of measurement have been proposed, including assessing secure base script knowledge (Bretherton, 1991; Waters, Rodrigues, & Ridgeway, 1998; Waters & Waters, 2006). Secure base script knowledge is assessed utilizing a relatively quick (approximately 15-minute administration), loosely structured narrative task (Attachment Script Assessment; Waters & Waters, 2006), designed to elicit participants' attachment-based scriptedness. In addition to its time and cost effective administration, the Attachment Script Assessment (ASA) offers unique insight into the development of mental representations of attachment. While the intent of the AAI is to classify individuals' attachment representations and provide information about how the representation may influence future functioning, it does not provide specific information about the cognitive structure of the mental models (Dykas et al., 2006). The ASA measure of secure base script knowledge provides specific information about the development or "building blocks" of mental representations (Waters & Waters, 2006). It is theorized that when the individual has experienced consistent secure base support, they will be able to quickly access a coherent narrative. Conversely, if one has had an ineffective history of secure base support, the script will not be as readily accessible or coherent (Waters & Waters, 2006).

Up to this point, the ASA has been validated and administered primarily with adults (Vaughn et al., 2002; Waters et al., 1998). Dykas et al. (2006) examined secure base scriptedness

in a sample (n=44) of 11th graders, originating from middle class families. Water's original secure base script story content was adapted to be relevant and appropriate for adolescent participants. The researchers juxtaposed adolescent secure base scriptedness scores with well-established measures of attachment representations, including the AAI and the Experiences in Close Relationships Questionnaire (ECR-R; Brenning, Soenens, Braet, & Bosmans, 2011). Although the ASA assesses the cognitive structure of representations, and the AAI and ECR-R inventory the representations themselves, it would be expected that these measures have a moderately significant association. The authors found that scriptedness scores were significantly related to AAI attachment security and negatively associated with romantic relationship avoidance and anxiety, as inventoried by the ECR-R. Further, and in line with their hypotheses, father-specific and mother-specific scripts were moderately correlated, suggesting that secure base knowledge is somewhat generalized across attachment figures. Similar results have been documented in other studies (Elliot, Tini, Fetten, & Saunders, 2003; Furman & Simon, 2004; Steele et al., 2014). However, Dykas et al. (2006) found that only mother-specific scripts accounted for a significant amount of unique variance in youths' scriptedness to the overarching representational model.

In sum, the secure base script paradigm appears to be a useful measure to assess one's secure base knowledge, providing unique information about the structure of attachment representations. Although research on this measure with adolescents is emerging, preliminary findings suggest that it may be a valid and reliable tool for this population (Dykas et al., 2006; Steele et al., 2014). Further, there is evidence to suggest that ASA scripts prompting mother-specific scripts are the best predictors of AAI coherence scores (Dykas et al., 2006; Elliot et al., 2003). However, not all findings for the ASA have been as expected. Zaman and Fivush (2013)

administered the ASA to a sample of middle-class 13-16-year olds. All youth were then asked to tell two stories each about their mother's and father's childhood and two positive and negative stories about personal experiences. They found that secure adolescents (as measured by the ASA) told coherent and emotionally expressive stories about their mother's childhood, but did not tell coherent and expressive stories about their father's childhood (Zaman & Fivush, 2013). In addition, across the whole sample, youth were more likely to tell coherent stories for negative but not positive personal stories. Taken together, the authors suggest that secure adolescents, or adolescents who appear to be secure as measured by the ASA, do not always tell coherent, emotionally expressive stories (Zaman & Fivush, 2013). Consequently, the present study was designed to further assess secure base knowledge using mother-specific scripts as the primary measure of adolescent attachment in a low-income sample of urban African American youth.

Summary and Specific Aims

Taken together, socioeconomically disadvantaged, urban adolescents are at particular risk to be exposed to environmental and community stressors, and therefore may be particularly vulnerable to maladaptive psychosocial outcomes. Prior research highlights the many ways in which risk factors, stressors, and trauma are additive (Evans 2003; Evans, 2004; Repetti, Taylor, & Seeman, 2002; Taylor, Repetti, & Seeman, 1997). The present study will examine how a novel indicator of adolescent secure base script knowledge, a theoretical proxy for attachment security, may serve as a protective factor for youth exposed to environmental stressors.

The aims of this research are as follows: 1) The first goal of the present study was to examine current stress exposure and mental health functioning in a sample of urban, socioeconomically disadvantaged African-American adolescent; 2) The field of developmental psychopathology would benefit from more reliable, valid and time/cost effective methods of

assessing attachment security in adolescents. Thus, I aimed to explore the empirical utility of the Secure Base Script paradigm for attachment in this sample of urban youth; 3) Further, I aimed to determine the extent to which environmental stressors and youth attachment were associated with youth psychological symptoms; 4) Finally, I tested an integrative model that synthesized what we know of community stressors, attachment security, and psychosocial outcomes, in order to examine whether the presence of attachment security in youth buffers the association between stress exposure and psychological wellbeing, as indicated by fewer symptoms on the parent-report CBCL.

CHAPTER 2

Method

Participants

The current study was funded by grants received by doctoral students in the Wayne State Clinical Psychology program. Participants were 83 adolescents (28 boys and 55 girls) and one of their caregivers who were assessed as a part of an ongoing larger study examining health behaviors in an urban sample of youth. Adolescents ranged in age from 13 to 18, and were 14.96 years of age on average ($SD = 1.58$). Most youth identified their ethnic background as African-American (81%). Most youth participated in the study with their biological mother (75.9%), and approximately half of the youth came from single parent households (49.4%). The annual income of most families (57.9%) was less than \$30,000 per year. See Table 1 for additional demographic information.

Procedure

Adolescents between the ages of 13 and 18 and one of their primary caregivers were recruited from Detroit, Michigan at three locations, including a primary health care clinic for adolescents (79%), and two churches located in the Detroit area (21%). Following recruitment at these three sites, a total of 153 families agreed to allow research assistants to contact them to schedule a lab or home visit. Following recruitment, 10 families had disconnected phone lines and we were unable to be contacted, 21 families indicated that they were no longer interested in participating, and 36 families scheduled and canceled their visit. At the time of this manuscript, 83 families participated in the study and completed measures of interest.

The present study was reviewed and approved by the Institutional Review Board at Wayne State University (IRB). Adolescents and parents who agreed to participate in the study

scheduled a home or lab visit with research assistants. Prior to participation, informed consent was obtained for each caregiver-child dyad. For dyads where the child was under the age of 18, parents completed signed consent for their participation and their child's participation. Children signed assent forms. For caregiver-child dyads where the child was 18 years of age, both parent and child completed consent forms. The visit lasted for approximately 2-hours. During this time, research assistants administered questionnaires, the ASA, and other relevant assessments. Adolescent and parent interviews were conducted simultaneously, but separately; one research assistant interviewed and administered questionnaires to the parent and the second research assistant interviewed and administered questionnaires to the youth. Adolescents and their caregivers were paid \$20 each for participating in the study (\$40 total per parent-child dyad).

Measures

Youth Attachment. Youth completed two measures assessing dimensions of attachment relationships including, the Experiences in Close Relationships Questionnaire – Revised Child version (ECR-R; Fraley, Waller, & Brennan, 2000; ECR-RC; Brenning, Soenens, Braet, & Bosmans, 2011), and the Adolescent Script Assessment (ASA: Dykas et al., 2006; Steiner et al., 2006; Waters & Rodrigues-Doolabh, 2004). Both assessments were aimed to assess adolescent and mother relationships. The majority of adolescents in the study participated with their mother. Youth who indicated that they were not raised by their mother were asked to complete these tasks about a different female caregiver or relative.

The Experiences in Close Relationships Questionnaire – Revised Child version (ECR-R; Fraley, Waller, & Brennan, 2000; ECR-RC; Brenning et al., 2011) is a self-report questionnaire designed to capture the attachment dimensions of anxiety and avoidance with regard to an adolescent's relationship with his or her principle caregiver. The ECR-RC consists of 36 items,

with each dimension consisting of 18 items. Responses are rated on a Likert scale ranging from 1 (strongly disagree) to 7 (strongly agree). Each dimension score is calculated by averaging the items within the domain, thus, scores range from 1 to 7, with higher scores reflecting higher anxiety and higher avoidance. Sample items include: *When I feel bad, it helps to talk to my mother, I find it easy to rely on my mother, and I prefer not to get too close to my mother.* For the present sample, scores for Attachment Anxiety ranged from 1 to 6.67 ($\alpha = 0.89$), and Attachment Avoidance scores ranged from 1 to 5.78 ($\alpha = 0.91$).

The Attachment Script Assessment (ASA, Steiner et al., 2006; Waters & Rodrigues-Doolabh, 2004) is a narrative technique designed to obtain attachment-relevant stories from adolescents. Ultimately, it measures an individual's representations of secure base behavior. The ASA took approximately 15 minutes to complete. It consisted of three word-prompt attachment scripts, including three mother-focused scripts, plus one non-attachment, warm-up script: "A Trip to the Beach." The warm-up script was administered to ensure that the child understood the task. Prior research indicates that there may be gender differences in response to certain story prompts (Dykas, Woodhouse, Cassidy, & Waters, 2006). To address this disparity, one of the administered scripts was tailored for boys and one was tailored for girls. Boys completed three scripts, "The Game", "The Party", and "The Haircut". Girls completed scripts, "The Game", "The Party" and "Acne." Administration order of scripts was counterbalanced across participants. Analyses indicated that there were no significant differences in scores based on order of administration.

During administration of the task, adolescents were handed an outline of each story prompt. Adolescents were instructed to tell a story utilizing the 12 word-prompts on the card (by reading down the columns, left to right), see Appendix A. As previously indicated, adolescents

first completed the warm-up script “A Trip to the Beach” to ensure that they understood the task. All interviews were audiotaped, and later transcribed by research assistants prior to coding.

Following transcription, the narratives were coded utilizing an established coding system (Waters & Rodrigues-Doolabh, 2001). Each transcript was given single score ranging from 1 (low secure base) to 7 (high secure base). Higher coded scores (≥ 3) indicate that the participant has a greater knowledge and access to secure base scriptedness. Narratives received higher scores when content included the following: (a) the caregiver supports the adolescents’ exploration, (b) the caregiver remains responsive and available as a resource if needed, (c) the adolescent encounters an obstacle or threat and becomes distressed, (d) the youth and his or her caregiver come together, (e) proximity and/or contact with the caregiver comforts the adolescent, (f) difficulty is resolved or removed, and (g) the character returns to confident exploration (Waters, 1998).

Youth Verbal Knowledge. The Peabody Picture Vocabulary Test, Fourth Edition (PPVT-4; Dunn & Dunn, 2007) assesses receptive vocabulary and provides an estimate of intellectual functioning. Participants were shown four pictures and asked to select the picture that best illustrated the meaning of a stimulus word spoken by a researcher. From participants’ responses, a standard score was calculated ($M = 100$; $SD = 15$). Administration of the PPVT-4 typically took about 15 minutes. Significant correlations between the standard score on previous editions of the PPVT and WISC-III full-scale score have been found ($r = 0.60$, Carvajal, Hayes, Miller, Wiebe, & Weaver, 1993; $r = 0.85$, Hodapp & Gerken, 1999). The PPVT-4 demonstrates acceptable validity and internal consistency and includes norms on adolescent populations ($\alpha = 0.96-0.98$; Dunn & Dunn, 2007).

Youth Stress Exposure. Adolescents completed the Things I have Seen and Heard questionnaire (Richters & Martinez, 1990). The 20-item measure assesses community stressors that the adolescent may have witnessed or experienced. Each item is rated on a Likert scale where a score of “1” indicates that the adolescent has never experienced the stressor, and a score of “4” indicates that the child has experienced the stressor on numerous occasions. Three items did not reflect stress exposure: *I feel safe when I’m at home, I feel safe when I’m at school, and Grown-ups are nice to me* (items 3, 11, and 16). These three items were removed from analyses. A total score was computed by summing 1-point for each of the 17-items endorsed. Representative items include: *I have heard guns being shot, and Grown-ups in my home yell at each other.*

Caregivers completed a modified version of the Stressful Life Events Checklist (Work, Cowen, Parker, & Wyman, 1990) to inventory stressful events that the adolescent may have experienced within both, 1) the past year, and 2) lifetime. A score of “1” was assigned for each item that occurred during the prior year and summed to create a cumulative stressful events score. Example items include: *Death in the immediate family, and Parent figures divorced or separated.*

In order to determine the impact of stressful events and community violence on youth functioning, a composite variable was created using the adolescent-report, Things I Have Seen and Heard questionnaire (Richters & Martinez, 1990) and the parent-report, Stressful Events Checklist (Work, Cowen, Parker, & Wyman, 1990). The two measures were significantly related ($r = .27, p < .05$). A cumulative stress exposure variable was created by standardizing the total scores for each measure and summing these values. A higher cumulative stress score reflects youths’ increased exposure to stress and violence.

Youth Internalizing and Externalizing Behaviors. Caregivers completed the 113-item Child Behavioral Checklist (CBCL; Achenbach, 1992) to assess their child's current psychosocial dysfunction. Caregivers rated question items on a 0 - 2 scale (0 = Not true, 1 = Somewhat or Sometimes True, 2 = Very True or Often True). The CBCL is a comprehensive measure that yields three scales: internalizing problems (emotionally reactive, anxious/depressed, somatic complaints, and withdrawn), externalizing problems (attention problems and aggressive behavior), and total problems. Scale T-scores for each youth were calculated using scoring software. The psychometric properties of the CBCL are well established (Greenbaum & Dedrick, 1998). Sample items include: *Self-conscious or easily embarrassed, Unhappy, sad, depressed, and Disobedient at home.*

Statistical Analyses

All data were analyzed using SPSS 22. Prior to utilizing parametric statistics, descriptive analyses were conducted on all study variables to examine the means, standard deviations, range, skew and kurtosis. If indicated by such analyses, outliers were removed, and then statistical transformation of variables conducted. Next, a series of t-tests were conducted to determine the influence of possible covariates on study variables. Pearson correlations were conducted to examine the associations among study variables.

Aim One sought to determine relevant demographic information, stress exposure, and mental health functioning in this sample of urban adolescents. Descriptive and frequencies were conducted.

Aim Two examined the utility of the Attachment Script Assessment in this sample of youth. First, reliability of coders' scores was computed using interclass correlations and Cronbach's Alpha. Descriptives for each ASA story were examined, and then a composite

created. Next, Pearson correlations were utilized to determine if youth ASA score was related to the length of the narratives (i.e., verbosity) or to the youth's verbal knowledge. Finally, preliminary evidence for the validity of the measure was determined by running Pearson and partial (controlling for youth verbal knowledge) correlations between the ASA score and the youth-reported attachment anxiety and attachment avoidance (Brenning et al., 2011).

The third aim examined the extent to which environmental stressors and youth attachment were associated with youth psychological symptoms. Bivariate correlations were conducted.

Aim Four tested a model proposing that the presence of attachment security in youth buffers the association between stress exposure and psychological wellbeing, as indicated by fewer symptoms on the parent-report CBCL. Moderated hierarchical regressions were used to examine these associations.

CHAPTER 3

Results

Preliminary Analyses

All variables were screened for non-normality by examining histograms and computing skew and kurtosis statistics. Results revealed that the ASA score, and attachment anxiety scale were significantly positively skewed. Square root transformations were conducted on these variables successfully improving their non-normality. With the exception of descriptive statistics, all following analyses utilized the transformed ASA and attachment anxiety variables. Finally, analyses were conducted to determine if any outliers were present. To screen for univariate outliers, z scores were computed for each variable and scatterplots were examined. Values exceeding ± 3.29 were considered to be outliers. One outlier was found on caregiver-reported youth internalizing problems (ID 12, $z = 3.71$). This outlier was replaced with the next largest value in the dataset for that variable.

Next, comparative analyses were conducted to examine the influence of possible covariates on key variables (ASA secure base script knowledge, youth internalizing, externalizing, and total problems). Examined covariates included procedural constraints of the study (i.e., recruitment location, home versus office visit, sibling participation) as well as characteristics of the youth (i.e., age, gender, and ethnic background) and caregivers (i.e., relationship to youth, ethnic background, education, family income, and single parenthood).

A series of independent samples t -tests revealed that neither recruitment location nor visit location were significantly associated with the variables of interest. Thus, neither recruitment location nor visit type was controlled for in subsequent analyses.

Sibling Participation: Of the 83 youths in the sample, 35 (38.6%) had another sibling participating in the study. Thus, on 16 occurrences, one caregiver completed unique measures on two children, and on 1 occurrence, a caregiver completed measures on three children. In order to examine the possible impact of sibling participation on results, analyses were conducted with the whole sample (all siblings included), and then compared to analyses using a subsample that excluded 1 sibling per family. The excluded sibling was selected utilizing a random number generator. Results revealed that there were no significant differences on ASA or dependent variables when using the whole sample (all siblings included) versus a subsample (1 sibling per family excluded). In order to preserve power to detect significant differences in analyses, it was decided that the sample would include all siblings in analyses.

Youth Characteristics: There were several sample characteristics that were examined as possible covariates, including youth age, ethnic background, and gender. A series of bivariate correlations indicated that youth age was not related to ASA, internalizing, externalizing or total problems. T-tests indicated that ethnic background was not related to key study variables. Analyses were then conducted to determine if youth gender was a covariate. A series of independent sample t tests revealed that girls had more internalizing problems than boys, $t(78) = -2.84, p < .05$. There were no other differences noted on key variables. Gender was included in analyses involving internalizing problems.

Caregiver Characteristics: There were several caregiver characteristics examined as possible covariates, including relationship to youth, ethnic background, education, family income, and single parenthood. First, Caregiver-youth dyads were eligible to participate in the study if the caregiver was the youth's legal guardian, regardless of caregiver gender or biological relationship to the child. I decided to include nonbiological mothers to obtain a more

representative sample of urban youth and because attachment theory indicates that the quality of attachment depends on the history of interactions with the primary caregiver, rather than being specific to biological mother per se. Analyses were conducted to determine if the type of participating caregiver would impact behavioral outcomes. A new variable was created, comparing biological mother to other caregivers. An independent samples t-test revealed that caregiver relationship to youth did not significantly impact key variables. In addition, t-tests indicated that maternal ethnic background and single parenthood were not significantly related to youth outcomes. Bivariate correlations between caregiver education and youth behavioral outcomes revealed a significant association with externalizing problems ($r = -.30, p < .05$) and total problems ($r = -.30, p < .05$). Finally, Pearson correlations between family income and ASA and dependent variables were nonsignificant, see Tables 3 and 4.

Taken together, the following variables were not related to the ASA or behavioral outcomes, and thus were not included as covariates in future analyses: recruitment location, visit location, sibling participation, youth age, youth ethnicity, participating caregiver, caregiver ethnicity, family income, and single parenthood. Child gender was significantly related to youth internalizing problems and was included in analyses as a covariate. Caregiver education was also included in analyses involving youth externalizing and total problems.

Aim One: Sample stress exposure and mental health functioning

Aim One sought to explore the stress exposure and mental health functioning in this sample of urban adolescents. On average, youth reported experiencing over 5 stressful events ($M = 5.44, SD = 2.68$) and caregivers reported youth experiencing over 5 stressful events ($M = 5.83, SD = 4.20$). Over half of adolescents reported hearing gunshots in their neighborhood on at least

three occasions (58.6%, $n = 48$). Another 34.1% ($n = 28$) of youth witnessed at least three drug deals, while 23% ($n = 17$) of the sample reported witnessing drugs in their own homes.

According to CBCL clinical cutoff scores, 17.2% ($n = 17$) of the sample met or exceeded a Clinical Elevation for internalizing problems and 10.1% ($n = 10$) met or exceeded a Clinical Elevation for externalizing problems. An additional 15.2% of youth ($n = 15$) met or exceeded criteria for a Total Problems Clinical Elevation. In sum, 25.3% ($n = 25$) of youth met or exceeded criteria for Clinical elevations on Internalizing, Externalizing, or Total problems, see Table 1.

Aim Two: Utility of the ASA

Aim Two sought to explore the reliability and validity of the ASA in this sample of youth as indicated by 1) achieving inter-coder reliability as well as coding consistency with Dr. Harriet Waters; 2) providing descriptive information about ASA codes in this sample; 3) examine possible influential factors on codes (script word count and youth verbal knowledge); and 4) examine the relationship of ASA codes with the attachment anxiety and avoidance (Experiences in Close Relationships, Fraley, Waller, & Brennan, 2000).

Three coders at Wayne State University independently coded all narratives. The Wayne State coding team was trained directly by Dr. Harriet Waters, the developer of the coding system. A research assistant assigned temporary ID numbers to each narrative (three new ID numbers were assigned per participant). Coders only received the temporary ID number with each narrative and thus were blind to all other data available from participants. In addition, interrater bias was reduced by coding across stories, such that coders were not aware of participants' scores on other scripts. To assess interrater reliability, Interclass Correlations were computed for each of the three stories. ICC's ranged from .87 to .91. Final scores for each of the participants'

three scripts were created by averaging all three coders' scores. In addition to coders at Wayne State University, Dr. Waters coded a subsample of the scripts (30%). The ICC for Dr. Water's codes and the Wayne State Team average was .943. Script codes across all narratives ranged from 1-6.67. Bivariate correlations were computed to examine relatedness of stories. Scores for Haircut/Acne were significantly linked with The Party ($r = .59, p < .01$) and Basketball Game ($r = .37, p < .01$). Script scores for Basketball Game and The Party scripts were not significantly related ($r = .09, p = .43$).

A composite ASA score was computed by averaging youths' scores across three stories. Scores for the three-story composite variable ranged from 1.28 to 5.72, with an average of 2.76 ($SD = .86$). A total of 30.1% ($n = 25$) of youth fell in the "scriptedness range" meaning that their narratives had some indication of secure base knowledge present. Reliability for the 3-story composite had a Cronbach's alpha of .61, which fell below the alpha obtained in similar research ($\alpha = .78$, Steele et al., 2014). Removal of the Basketball Game script from the composite improved the alpha to .74, which falls in the *acceptable* range of internal consistency. All study analyses were first conducted with the three-story ASA composite, and then analyses were repeated with the two-story ASA composite. Because there were no meaningful differences on outcomes, results from the three-story ASA composite were included.

Due to the verbal nature of the secure base script paradigm, and its potential role in youth script scores, we examined whether adolescents' secure base scriptedness was related to 1) the word-count of the narratives and 2) youths' verbal knowledge. Word count was computed for each of the three narratives and a total mean word count score was computed across all narratives for each participant. Narrative word count was not significantly linked with secure base score ($r = -.02, p = .89$). Youth verbal knowledge was measured using the Peabody Picture Vocabulary

Test, Fourth Edition (PPVT-4). Verbal knowledge was significantly related to script scores ($r = .30, p < .01$). Given these results, verbal knowledge was controlled for in the analyses.

Next, correlations were conducted to determine if secure base knowledge was related to self-reported attachment anxiety and avoidance, as measured by the Experiences in Close Relationships (ECR, Brenning et al., 2011) questionnaire. Bivariate correlations revealed that adolescents' secure base scriptedness (ASA) was inversely related to the ECR in expected directions, such that lower secure base scriptedness was associated with increased attachment avoidance ($r = -.24, p < .05$) and attachment anxiety ($r = -.27, p < .05$). This pattern was also noted when partial correlations were conducted, controlling for youths' verbal knowledge, i.e., $r = -.30, p < .05$ and $r = -.26, p < .05$ for ECR avoidance and anxiety, respectively).

Aim Three: Are Environmental Stressors and Youth Attachment Associated with Youth Psychological Symptoms?

Aim three set out to determine the extent to which environmental stressors and youth attachment were associated with youth psychological symptoms. Results revealed that the ASA was significantly associated with internalizing, but not externalizing nor total youth behavioral problems. Further, the ASA was not correlated with youth stress exposure. Youth stress exposure was significantly associated with internalizing, externalizing, and total problems. Stress exposure was not related to the ASA, See Table 2 for the study correlation table.

Aim Four: Does Youth Secure Base Script Knowledge Buffer the Association between Trauma Exposure and Psychological Wellbeing?

To examine this question, a series of three moderated hierarchical linear regressions were conducted, with internalizing, externalizing, and total problems entered as dependent variables. Prior to conducting the analyses, predictor variables were centered in order to account for

potential multicollinearity and improve interpretation of standardized regression betas. An interaction variable was created using centered variables to examine the possible moderating effect of secure base scriptedness on stress exposure.

Step 1 of all models included youth vocabulary knowledge as a covariate in order to control for its possible impact on ASA scores. As indicated by previous analyses, youth gender was included as a covariate for the model predicting internalizing problems. Maternal education was included as a covariate in externalizing and total problems models. Step 2 included stress exposure and ASA scores. The interaction term between ASA and stress exposure was entered in Step 3. Results revealed that ASA did not moderate the effect of stress exposure across all three models. The main effects model was significant for internalizing problems ($R^2 = .17$, $F(4, 77) = 3.88$, $p = .006$), with ASA and stress exposure emerging as significant predictors. Both externalizing ($R^2 = .17$, $F(4, 77) = 3.81$, $p = .007$) and total problems ($R^2 = .14$, $F(4, 77) = 2.91$, $p = .03$) main effects models were significant, with stress exposure and maternal education emerging as significant predictors, see Table 5.

Together, these results suggest that secure base scriptedness does not buffer the relationship between youth stress exposure and emotional and behavioral symptoms. Rather, secure base scriptedness had a unique effect on internalizing problems, such that youth with higher scriptedness had fewer internalizing problems. This effect was not consistent across externalizing and total problems.

CHAPTER FOUR

Discussion

The present study aimed to better understand the stress exposure and current mental health functioning of urban adolescents in Detroit. Further, this study sought to determine if the Attachment Script Assessment (ASA; Dykas et al., 2006; Waters & Rodrigues-Doolabh, 2001) was a reliable and valid measure of attachment with these youth. Analyses were conducted to determine the extent to which environmental stressors and youth attachment were associated with youth psychological symptoms. Finally, I tested an integrative model that synthesized what we know of cumulative stress, attachment security, and psychosocial outcomes, in order to examine whether the presence of attachment security in youth buffers the association between stress exposure and psychological wellbeing, as indicated by fewer symptoms on the parent-report CBCL.

Youth Stress Exposure and Mental Health Functioning

Consistent with expectations, the present sample was significantly at-risk for psychopathology in relation to stress exposure. Over 25% of youth were considered to have significantly clinically elevated internalizing, externalizing, or total problems, which is consistent with rates found in similarly socioeconomically disadvantaged samples and exceeds that of normative sample (Grant et al., 2004; Achenbach, 2001).

Also keeping with our expectations, the elevated emotional and behavioral symptoms were a function of stress exposure. Youth in the study experienced over five stressful events on average. Other studies have considered exposure to four stressful events to reflect “stressed” groups (Wyman, Cowen, Work, Hoyt-Meyers, Magnus, & Fagen, 1999). In the sample, 58.6% of youth reported hearing gunshots in their neighborhood on at least three occasions. In addition,

preliminary evidence for the utility of the ASA measure of secure base script knowledge with this sample of urban Detroit youth appears promising. Stress exposure significantly predicted internalizing, externalizing, and total problems, and youth secure base script knowledge significantly predicted caregiver-report of youth internalizing problems.

Reliability and Validity of the ASA with Urban Adolescents

The current research is the first to utilize the ASA with an at-risk sample of urban youth. A goal of this study was to examine the empirical properties of the ASA assessment in a sample of socioeconomically disadvantaged youth. First, reliability analyses revealed that scripts were coded across the Wayne State team and Dr. Harriet Waters with an appropriate degree of reliability. Next, we would expect that all three youth narratives would be significantly related (Haircut/Acne, The Party, Basketball Game) as they are theoretically all assessing the construct of secure base script knowledge. In contrast to expectancies, The Party and Basketball Game scripts were not significantly related, though both were related to Acne/Haircut scripts. Although study results were not altered by conducting subsequent analyses with a two-story (Acne/Haircut and The Party scripts) versus three-story composite (Acne/Haircut, The Party, and Basketball Game), the nonsignificant association between The Party and Basketball Game suggests that the Basketball Game story stem may need to be adjusted for future research. It may be beneficial to create story narratives that are more consistent with problems that adolescents are exposed to on a more regular basis, for example, studying for an exam, completing homework, being late for school, having an argument with a friend, etc. In addition, some of the words included as prompts in the scripts may not be the best suited for youth. As noted by research assistants during administration, many participants did not recognize the word acne, instead calling it “bumps” nor did they recognize “sulk” (see Appendix A). Further, many youth were confused by

the expected story arcs of Basketball Game and The Party scripts. Although this is anecdotal report, these may be important findings to consider. It may be beneficial for future research to empirically explore the use of different scripts, and to ensure that ASA scores measure youth secure base script knowledge and are not an artifact of the task design.

It was also found that youth ASA scores were significantly related to their verbal knowledge (higher verbal knowledge scores associated with higher ASA scores). This finding is consistent with previous studies using the measure with adolescents (Dykas et al., 2006, Steele et al., 2014). Although these studies have accounted for the influence of youth verbal knowledge on ASA scores by entering it as a covariate in statistical models, it will be important for future research to explore the overlap between the constructs of narrative ability and secure base script knowledge. One possible way to do this would be to code ASA scripts for story coherence and to compare narrative coherence codes with scores from the Water and Rodrigues-Doolabh (2004) coding system for secure base scriptedness, specifically.

As anticipated, adolescent script scores were moderately, inversely related to attachment avoidance, such that youth high on avoidance had lower secure base script knowledge. This finding is consistent with results from prior research (Dykas et al., 2006; Steele et al., 2014). Contrary to results from prior research, ASA scores in the present example were also related to attachment anxiety. These moderate associations are consistent with attachment theory, such that a youth with an anxious or avoidant attachment with their caregiver would be less likely to develop and access secure base knowledge.

Finally, it was noted that the (three-story) composite average score of the current sample was 2.76 (SD = .87). According to the Waters coding system (Waters & Waters, 2006) this suggests that the sample's average score fell below the "scriptedness range" meaning that secure

base script knowledge was not present in the majority of youth narratives. Only 30.1% of youth in the sample had an ASA score in the “scriptedness range.” Further, the sample ASA average fell below what was reported by a similar studies conducted with youth who were not socioeconomically disadvantaged ($M > 3.5$, Dykas et al., 2006; $M > 3.2$, Zaman & Fivush, 2013), nor exposed to stressful life events. This relative difference in secure base script knowledge may be an accurate reflection for this at-risk sample. For example, Cyr et al. (2010) found that rates of attachment security were lower for children exposed to increased socioeconomic risk. Thus, based on cumulative stress exposure, it may be that the current sample’s relatively lower ASA performance is an accurate reflection of decreased access to secure base script knowledge.

Another explanation for the present sample’s relatively lower ASA scores could be, in part, attributed to methodological limitations. For example, the somewhat low internal consistency across all three stories and the nonsignificant relationship between Basketball Game and The Party may suggest that these specific story stems are not the best fit for this sample. As suggested previously, tailoring the content of the story stems to be relevant to this sample may increase the likelihood of assessing secure base script knowledge most accurately. Continued research will need to be conducted with the ASA in order to confirm its utility with urban adolescents.

Associations between Stress Exposure, Youth Secure Base Knowledge, and Psychological Wellbeing

Results did not support the final aim of the study: the ASA did not buffer the impact of stress exposure on youth outcomes. This could be explained by the high degree of stress exposure in the current sample. In a study conducted by Belsky and Fearon (2002), the authors

examined the moderating role of infant-attachment on the relationship between cumulative risk and toddler socioemotional development. They found that attachment interacted with risk when risk was at moderate, but not high levels. In applying these findings to the current study, it is possible that the present sample's environmental stress, or cumulative risk exposure is too great to reveal a moderating effect of attachment on stress exposure.

ASA and stress exposure functioned as unique predictors of internalizing problems in youth. This is consistent with both Bowlby's (1973) original theory of attachment as an affective regulation system, as well as from more recent research. For example, Brumariu and Kern's (2010) review of existing literature on attachment and internalizing problems, found a modest relation between youth internalizing problems and attachment insecurity. The associations were noted most clearly for adolescents, and specifically for anxiety and depression symptoms (Brumariu & Kern, 2010). A metaanalysis conducted by Groh, Roisman, van IJzendoorn, Bakermans-Kranenburg, and Fearon (2012) found that a small association between youth internalizing problems and attachment insecurity ($d = 0.15$, Groh et al., 2012).

In the current study, ASA did not significantly predict youth externalizing or total problems. This result may be contrary to what would be expected given a previous metaanalysis conducted by Fearon, Bakermans-Kranenburg, Van IJzendoorn, Lapsley, and Roisman (2010). The authors found that there were small relations between youth externalizing problems and attachment insecurity ($d = 0.31$, Fearon et al., 2010). They found that the associations were most pronounced for boys and when child behavioral outcomes were observed, versus parent-reported. Several important characteristics of the studies that they examined should be noted, as they differ somewhat from the present work. For example, Fearon et al. (2010) examined studies primarily including young children, the most frequently used measure of attachment was the Strange

Situation Procedure, and they included the disorganized dimension of attachment. Given that the ASA is a narrative measure conducted with adolescents (in the present study), and is not able to account for attachment disorganization, comparing outcomes to this research might not be appropriate.

Limitations, Recommendations, and Future Directions

There were several limitations to this study that should be considered. First, the present sample is reflective of urban, socioeconomically disadvantaged youth. Further, given the high percentage of youth with elevated internalizing and externalizing problems, this sample may reflect a clinical sample more so than a typical low SES sample. Thus, results may not generalize across groups. In addition, there were several methodological limitations in relation to the ASA measure. Adolescents were administered ASA scripts with story stems related to their relationship with their mother or primary caregiver, if not the biological mother. This could potentially be problematic in that their mother was not necessarily the caregiver participating in the study with them. However, the results were consistent with the idea that the quality of the child's attachment representation is more important to child functioning than relationship with biological mother per se. In addition, scripts related to father, other caregiver, or romantic partner were not considered. Given the high percentage of youth participating in the study with a non-biological caregiver, it may have been interesting to administer story scripts focusing on a "generalized" relationship.

The study provides preliminary evidence that the Adolescent Script Assessment is a useful measure of secure base script knowledge among low income, minority adolescents, at risk for behavior problems. Importantly, the present research provides support for the discriminant validity of the ASA across multiple domains (youth verbal knowledge, youth characteristics,

caregiver characteristics, etc.). However, further research on the utility of this measure with low-SES youth is warranted. Additional story stems, or adjustments to current story stems should be administered to empirically derive the most relevant narratives to this sample. It would also be beneficial for future research to compare ASA coded scores with the narrative coherence of scripts, in order to separate the influence of youth narrative storytelling ability from their secure base scriptedness per se. In addition, it would benefit to conduct research on the ASA with a longitudinal design, focusing on observational versus self-reported data. This would provide more information about the directionality of proposed relations among variables, and reduce the bias inherent in self-report.

Taken together, the purpose of the present study was to assess the empirical utility of the Adolescent Script Assessment (ASA) with a sample of socioeconomically disadvantaged, urban youth, and to explore its role as a possible protective factor in the development of internalizing and externalizing problems. Findings provide promising preliminary support of this measure with urban youth, and support the hypothesis that attachment plays an essential role in understanding youth internalizing problems.

Table 1
Descriptive Statistics

Sample Demographic Information	Mean (SD)	Percentage	Range
Youth Gender			
Girls		66.30%	
Boys		33.70%	
Youth Age	14.96 (1.58)		13-18
Youth Race			
African-American		81.0%	
Bi-Racial		13.3%	
Latino		2.4%	
Caucasian		3.6%	
Caregiver			
Biological Mother		75.9%	
Biological Father		7.2%	
Aunt		4.8%	
Uncle		1.2%	
Foster Mother		1.2%	
Other Family Member		9.6%	
Caregiver Relationship Status			
Partnered		43.4%	
Single		49.4%	
Yearly Income			
\$ 0-29,999		57.9%	
\$ 30,000-59,999		27.6%	
\$ 60,000-79,999		3.9%	
More than \$80,000		10.5%	
Attachment			
ASA	2.76 (.86)		1.28-5.72
Attachment Avoidance	2.85 (1.31)		1-5.78
Attachment Anxiety	2.03 (1.17)		1-6.67
Youth Stress Exposure			
Youth Report	5.44 (2.68)		0-13
Parent Report	5.83 (4.20)		0-18
Caregiver-Rated Behaviors			
Internalizing	58.25 (10.21)		39-96
Externalizing	54.65 (11.46)		34-80
Total	57.98 (11.35)		29-88

Note: ASA = Adolescent Secure Base Script Knowledge

Table 2
Correlation Matrix of Study Variables

	1	2	3	4	5	6	7	8
1. ASA Composite	-							
2. Youth Verbal Knowledge	.30**	-						
3. Attachment Avoidance	-.24*	.15	-					
4. Attachment Anxiety	-.25*	.02	.75**	-				
5. Youth Stress Exposure	.04	-.01	.12	.18	-			
6. Youth Internalizing Problems	-.24*	.05	.34**	.45**	.27*	-		
7. Youth Externalizing Problems	-.08	.02	.28*	.42**	.33*	.58**	-	
8. Youth Total Problems	-.11	.00	.28*	.42**	.32*	.79**	.87**	-
Means	2.76	89.19	2.85	2.03	5.55	58.25	54.65	57.33
SD's	.86	13.12	1.31	1.17	3.32	10.21	11.46	11.31

Note: $\tau p < .10$, * $p < .05$, ** $p < .01$. ASA = Adolescent Secure Base Knowledge

Table 3

Analysis of Covariates, T-tests between Study Constraints, Youth and Caregiver Characteristics, and Key Study Variables

Grouping Variables	ASA	Internalizing	Externalizing	Total
Constraints of the study				
Recruitment Location	t (81) = -.48, p = .63	t (81) = 1.85, p = .09	t (81) = .43, p = .67	t (81) = .71, p = .48
Home vs Office Visit	t (81) = .67, p = .51	t (80) = 1.27, p = .21	t (80) = -.04, p = .97	t (80) = .11, p = .91
Youth Characteristics				
Gender	t (81) = .23, p = .82	t (78) = -2.84, p < .05	t (78) = -.97, p = .34	t (78) = -.70, p = .49
Ethnic Background	t (81) = 1.30, p = .19	t (74) = .61, p = .55	t (74) = -.85, p = .40	t (74) = -.27, p = .79
Caregiver Characteristics				
Relationship to Youth	t (81) = -.37, p = .71	t (81) = .89, p = .38	t (81) = .29, p = .77	t (81) = .78, p = .44
Ethnic Background	t (81) = -.48, p = .63	t (74) = .82, p = .42	t (74) = .21, p = .84	t (74) = .47, p = .64
Single Parenthood	t (81) = 1.36, p = .18	t (75) = .35, p = .73	t (75) = -.86, p = .39	t (75) = -.07, p = .95

Note: $\tau p < .10$, * $p < .05$, ** $p < .01$.

Table 4
*Analysis of Covariates, Pearson Correlations between Youth and Caregiver Characteristics
 and Key Study Variables*

	ASA	Internalizing	Externalizing	Total
Youth Characteristics				
Age	.08	.03	.03	-.04
Caregiver Characteristics				
Education	-.01	-.19	-.30**	-.25*
Family Income	.10	-.09	-.20	-.16

Note: $\tau p < .10$, * $p < .05$, ** $p < .01$.

Table 5
Moderated regression analyses predicting youth problems

Predictor	Internalizing Problems			Externalizing Problems			Total Problems		
	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3	Step 1	Step 2	Step 3
Vocab Assessment	.05	.13	.12	.11	.14	.15	.05	.11	.12
Youth Gender	.16	.15	.15						
Caregiver Education				-.34**	-.32**	-.33**	-.24*	-.23 τ	-.24*
Youth Stress Exposure		.28**	.19**		.27*	.23*		.27*	.23*
ASA Composite		-.27*	-.26*		-.09	-.11		-.15	-.17
Stress Exposure x Secure Base			-.05			.14			.17
ΔR^2	.03	.14**	.00	.10*	.07*	.02	.05	.08*	.03
Total R2	.03	.17	.17	.10	.17	.19	.05	.14	.16

Note: $\tau p < .10$, * $p < .05$, ** $p < .01$. ASA = Adolescent Secure Base Script Knowledge

APPENDIX A

Secure Based Script Instructions

START RECORDER and CONTINUE RECORDING THROUGHOUT SBS!

For this part of the study, we are interested in seeing how different people tell stories.

In front of you is what we call a word prompt outline. [hand participant “Trip to the beach]. **This particular outline is about “A Trip to the Beach.” If you read down the columns and from left to right, you can see that the words follow a basic storyline.** [point slowly as you say it]

What we will be asking you to do during this study is to tell stories using outlines that are set up just like this one. The outline will remain in front of you the entire time that you are telling your story. The outline is just a guide, so you do not have to use all the words if you don’t want to, you can change the order around, or you can change the words themselves. You should try to tell your story so it comes out to be about a page in length if you were going to write it down, so you should put in as much information and as many details as you can. The first story we’ll do is just for practice. What I’d like you to do, is take a minute or two to read over this outline. When you’re ready, go ahead and tell your story. OK? Any questions?

****ADMINISTER TRIP TO THE BEACH****

Now we’ll begin with the other outlines. There are 3 outlines total. We’ll use the same format that we just used for the practice story. I’d like you to imagine that the people involved in the stories are you and your mom (If no mother, SAY name of primary female caregiver). You should tell them as if these situations were really happening to you and your mom. So you should tell them in the first person. I’ll remind you of that before you begin each story. Let me know when you’re ready to tell your story.

[Introducing remaining 2 story outlines]

This is a story about (read title). For this story, you should imagine that this situation is happening to you, and “Mom” in this story refers to your mom. You should tell this story in the first person. Take a minute or two to look over the outline. Let me know when you’re ready to tell your story.

ADMINISTRATION NOTES

****For first few outlines, remind them of the following:**

- ✓ The outline will remain in front of you the entire time.
- ✓ The outline is only a guide, so you do not have to use all the words if you don’t want to, and you can elaborate as much as you’d like.
- ✓ You should try to tell your story so it comes out to be about a page in length (double-spaced) if you were going to write it down.

Order of administration

Boys

Even IDS:

1. Trip to the Beach
2. The Haircut
3. The Party
4. The Basketball Game

Odd IDS:

1. Trip to the Beach
2. The Basketball Game
3. The Party
4. The Haircut

Girls

Even IDS:

1. Trip to the Beach
2. Acne
3. The Party
4. The Basketball Game

Odd IDS:

1. Trip to the Beach
2. The Basketball Game
3. The Party
4. Acne

A Trip to the Beach

Amber

blankets

hot

Joan

lotion

ice cream

drive

chat

late

beach

smile

home

Acne

Sunday

Mom

laugh

mirror

talk

bathroom

acne

herself

experiment

embarrassed

acne

make-up

The Haircut

weekend

Mom

clippers

barber

talk

experiment

bad haircut

we laugh

fix

embarrassed

bathroom

hug

The Party

Friday night

sulk

Mom

party

couch

movie

uninvited

Mom

popcorn

miserable

talk

smile

Basketball Game

morning

tired

upset

big game

easy shot

mom

nervous

I miss

talk

play

lose

practice

APPENDIX B

ECR-R Child Questionnaire

The statements below concern how you feel in your relationship to your mother. We are going to use the following (**YELLOW**) rating scale, where 1 means you strongly disagree with the statement, 4 means you are neutral about the statement, and 7 means you strongly agree.

1 **2** **3** **4** **5** **6** **7**
 Strongly Disagree Neutral Strongly Agree

1. I'm afraid my mother will stop loving me	1	2	3	4	5	6	7
2. I don't like telling my mother how I feel deep down inside	1	2	3	4	5	6	7
3. I'm worried that my mother might want to leave me	1	2	3	4	5	6	7
4. I find it easy to tell my mother what I think and how I feel	1	2	3	4	5	6	7
5. I'm worried that my mother doesn't really love me	1	2	3	4	5	6	7
6. I find it difficult to admit I need help from my mother	1	2	3	4	5	6	7
7. I'm worried that my mother doesn't love me as much as I love her	1	2	3	4	5	6	7
8. I am very comfortable feeling close to my mother	1	2	3	4	5	6	7
9. I wish my mother would love me just as much as I love her	1	2	3	4	5	6	7
10. It's not easy for me to tell my mother a lot about myself	1	2	3	4	5	6	7
11. I worry a lot about my relationship with my mother	1	2	3	4	5	6	7
12. I prefer not to get too close to my mother	1	2	3	4	5	6	7
13. When I don't see my mother, I worry she may stop thinking about me	1	2	3	4	5	6	7
14. I don't feel comfortable when my mother cuddles up to me too much	1	2	3	4	5	6	7
15. When I show my mother I love her, I'm afraid she doesn't love me just as much	1	2	3	4	5	6	7
16. Feeling close to my mother comes easily to me	1	2	3	4	5	6	7
17. I do not often worry that my mother would abandon me	1	2	3	4	5	6	7
18. It's not difficult for me to feel close to my mother	1	2	3	4	5	6	7
19. The things my mother says and does make me unsure about myself	1	2	3	4	5	6	7

20. I usually talk to my mother about my problems and worries	1 2 3 4 5 6 7
21. I do not worry that my mother would abandon me	1 2 3 4 5 6 7
22. When I feel bad, it helps to talk to my mother	1 2 3 4 5 6 7
23. I feel that my mother does not want to get as close to me as I'd like	1 2 3 4 5 6 7
24. I tell my mother nearly everything	1 2 3 4 5 6 7
25. I sometimes think my mother has changed her feelings about me without any reason	1 2 3 4 5 6 7
26. I talk things through with my mother	1 2 3 4 5 6 7
27. I'm afraid that I want to feel too close to my mother and she does not like it	1 2 3 4 5 6 7
28. I get nervous when my mother wants me to share really close moments	1 2 3 4 5 6 7
29. I'm afraid my mother wouldn't love me any more if she found out how I really feel and what I really think	1 2 3 4 5 6 7
30. I find it easy to ask my mother for help	1 2 3 4 5 6 7
31. I get angry because my mother doesn't give me enough love and support	1 2 3 4 5 6 7
32. I find it easy to rely on my mother	1 2 3 4 5 6 7
33. I'm afraid my mother thinks less of me than she does of other children	1 2 3 4 5 6 7
34. I find it easy to show my mother I love her	1 2 3 4 5 6 7
35. I think my mother only pays attention to me when I make a fuss	1 2 3 4 5 6 7
36. I feel that my mother understands me well	1 2 3 4 5 6 7

APPENDIX C

Things I have seen and heard

Using this scale (**GREEN**), please indicate how many times you have experienced the event described.

	0 0 times	1 1 time	2 2 times	3 3 times	4 Many times
1. I have heard guns being shot	0	1	2	3	4
2. I have seen someone arrested	0	1	2	3	4
3. I feel safe when I am at home	0	1	2	3	4
4. I have seen drug deals	0	1	2	3	4
5. I have seen somebody being beat up	0	1	2	3	4
6. I have been beat up	0	1	2	3	4
7. I have seen somebody get stabbed	0	1	2	3	4
8. I have seen somebody shot	0	1	2	3	4
9. I have seen a gun in my home	0	1	2	3	4
10. I have seen drugs in my home	0	1	2	3	4
11. I feel safe when I'm at school	0	1	2	3	4
12. Somebody threatened to kill me	0	1	2	3	4
13. I have seen a dead body outside	0	1	2	3	4
14. Somebody threatened to shoot me	0	1	2	3	4
15. Somebody threatened to stab me	0	1	2	3	4
16. Grown ups are nice to me	0	1	2	3	4
17. Grown ups at my home hit each other	0	1	2	3	4
18. Grown ups in my home threaten to stab or shoot each other	0	1	2	3	4
19. Grown ups in my home yell at each other	0	1	2	3	4
20. I have seen somebody in my home get shot or stabbed.	0	1	2	3	4

APPENDIX D

Child Behavior Checklist

Below is a list of items that describe children and youths. (Pass the **ORANGE** rating scale) For each item that describes your child now or within the past 6 months, please circle the 2 if the item is very true or often true of your child. Circle the 1 if the item is somewhat or sometimes true of your child. If the item is not true of your child, circle the 0. Please answer all items as well as you can, even if some do not seem to apply to your child

0	1	2
Not True	Somewhat/ Sometimes true	Very/Often True

1	Acts too young for his/her age.	0	1	2
2	Drinks alcohol without parents' approval.	0	1	2
3	Argues a lot.	0	1	2
4	Fails to finish things he/she starts.	0	1	2
5	There is very little he/she enjoys.	0	1	2
6	Bowel movements outside toilet.	0	1	2
7	Bragging, boasting.	0	1	2
8	Can't concentrate, can't pay attention for long.	0	1	2
9	Can't get his/her mind off certain thoughts; obsessions.	0	1	2
10	Can't sit still, restless, or hyperactive.	0	1	2
11	Clings to adults or too dependent.	0	1	2
12	Complains of loneliness.	0	1	2
13	Confused or seems to be in fog.	0	1	2
14	Cries a lot.	0	1	2
15	Cruel to animals.	0	1	2
16	Cruelty, bullying, or meanness to others.	0	1	2
17	Daydreams or gets lost in his/her thoughts,	0	1	2
18	Deliberately harms self or attempts suicide.	0	1	2
19	Demands a lot of attention.	0	1	2
20	Destroys his/her own things.	0	1	2

21	Destroys things belonging to his/her family or others.	0	1	2
22	Disobedient at home.	0	1	2
23	Disobedient at school.	0	1	2
24	Doesn't eat well.	0	1	2
25	Doesn't get along with other kids.	0	1	2
26	Doesn't seem to feel guilty after misbehaving.	0	1	2
27	Easily jealous.	0	1	2
28	Breaks rules at home, school, or elsewhere.	0	1	2
29	Fears certain animals, situations, or places, other than school.	0	1	2
30	Fears going to school.	0	1	2
31	Fears he/she might think or do something bad.	0	1	2
32	Feels he/she wants to be perfect.	0	1	2
33	Feels or complains that no one loves him/her.	0	1	2
34	Feels others are out to get him/her.	0	1	2
35	Feels worthless or inferior.	0	1	2
36	Gets hurt a lot, accident-prone.	0	1	2
37	Gets in many fights.	0	1	2
38	Gets teased a lot.	0	1	2
39	Hangs around others who get in trouble.	0	1	2
40	Hears sounds or voices that aren't there.	0	1	2
41	Impulsive or acts without thinking.	0	1	2
42	Would rather be alone than with others.	0	1	2
43	Lying or cheating.	0	1	2
44	Bites fingernails.	0	1	2
45	Nervous, high-strung, or tense.	0	1	2
46	Nervous movements or twitching.	0	1	2
47	Nightmares.	0	1	2
48	Not liked by other kids,	0	1	2
49	Constipated, doesn't move bowels.	0	1	2
50	Too fearful or anxious.	0	1	2

51	Feels dizzy or lightheaded.	0	1	2
52	Feels too guilty.	0	1	2
53	Overeating.	0	1	2
54	Overtired without good reason.	0	1	2
55	Overweight.	0	1	2
56	Physical problems (without known medical cause):	0	1	2
	a. aches or pains	0	1	2
	b. headaches	0	1	2
	c. Nausea, feels sick	0	1	2
	d. Problems with eyes (Not if corrected by glasses)	0	1	2
	e. rashes or other skin problems	0	1	2
	f. Stomachaches	0	1	2
	g. Vomiting, throwing up	0	1	2
	h. Other	0	1	2
57	Physically attacks people.	0	1	2
58	Picks nose, skin, or other parts of body.	0	1	2
59	Plays with own sex parts in public.	0	1	2
60	Plays with own sex parts too much.	0	1	2
61	Poor school work.	0	1	2
62	Poorly coordinated or clumsy.	0	1	2
63	Prefers being with older kids.	0	1	2
64	Prefers being with younger kids.	0	1	2
65	Refuses to talk.	0	1	2
66	Repeats certain acts over and over.	0	1	2
67	Runs away from home.	0	1	2
68	Screams a lot.	0	1	2
69	Secretive, keeps things to self.	0	1	2
70	Sees things that aren't there.	0	1	2
71	Self-conscious or easily embarrassed.	0	1	2
72	Sets fires.	0	1	2

73	Sexual problems.	0	1	2
74	Showing off or clowning.	0	1	2
75	Too shy or timid.	0	1	2
76	Sleeps less than most kids.	0	1	2
77	Sleeps more than most kids during day and/or night.	0	1	2
78	Inattentive or easily distracted.	0	1	2
79	Speech problem.	0	1	2
80	Stares blankly.	0	1	2
81	Steals at home.	0	1	2
82	Steals outside the home.	0	1	2
83	Stores up too many things he/she doesn't need.	0	1	2
84	Strange behavior.	0	1	2
85	Strange ideas.	0	1	2
86	Stubborn, sullen, or irritable.	0	1	2
87	Sudden changes in mood or feelings.	0	1	2
88	Sulks a lot.	0	1	2
89	Suspicious.	0	1	2
90	Swearing or obscene language.	0	1	2
91	Talks about killing self.	0	1	2
92	Talks or walks in sleep.	0	1	2
93	Talks too much.	0	1	2
94	Teases a lot.	0	1	2
95	Temper tantrums or hot temper.	0	1	2
96	Thinks about sex too much.	0	1	2
97	Threatens people.	0	1	2
98	Thumb-sucking.	0	1	2
99	Smokes, chews, or sniffs tobacco.	0	1	2
100	Trouble sleeping.	0	1	2
101	Truancy, skips school.	0	1	2
102	Underactive, slow moving, or lacks energy.	0	1	2

103	Unhappy, sad, or depressed.	0	1	2
104	Unusually loud.	0	1	2
105	Uses drugs for nonmedical purposes (don't include alcohol or tobacco)	0	1	2
106	Vandalism.	0	1	2
107	Wets self during day.	0	1	2
108	Wets the bed.	0	1	2
109	Whining.	0	1	2
110	Wishes to be opposite sex.	0	1	2
111	Withdrawn, doesn't get involved with others.	0	1	2
112	Worries.	0	1	2
113	Other problems.	0	1	2

APPENDIX E
Stressful Life Events Checklist

To be completed by *caregivers* to reflect their child's experiences. Check the first box if the child has ever experienced that event. Check both boxes if the child has experienced the even in the past year.

Which of the following events has your child experienced in their past?	Ever?	In the past year?
1. Death of a family or household member		
2. Parent's (LTP's) divorced (separated)		
3. Family or household member has had serious behavior or psychiatric problem		
4. Family or household member has had problem with drugs or alcohol		
5. Family or household member has had serious illness or accident requiring hospitalization		
6. Parent has spent time in jail		
7. Family has come to the attention of Protective Services		
8. Family, household member, or friend has been victim of serious crime		
9. Angry violence between member of household (i.e. parents, parent and sibling, parent and child)		
10. Child has lived at home of relative or friend because of parent problems		
11. Child has been in foster care		
12. Child has had some serious illness or accident requiring hospitalization		
13. Child has witnessed serious violence in the home		
14. Child has been victim of serious crime		
15. Child has witnessed serious crime		
16. Child has moved to a new home		
17. Child has been homeless		
18. Child has had legal trouble		
19. Child has used alcohol or drugs		

20. Child has been evicted from home		
21. Child has witnessed violent crime in neighborhood		
22. Child has witnessed someone badly hurt		

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ABSTRACT

**PSYCHOLOGICAL HEALTH AND WELLBEING IN URBAN YOUTH: THE
PROTECTIVE NATURE OF ATTACHMENT RELATIONSHIPS**

by

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Advisor: Dr. Douglas Barnett

Major: Psychology (Clinical)

Degree: Master of Arts

The present study aimed to better understand the stress exposure and current mental health functioning of urban adolescents in Detroit. Further, this study sought to determine if the Attachment Script Assessment (ASA; Dykas et al., 2006; Waters & Rodrigues-Doolabh, 2001) was a reliable and valid measure of attachment with these youth. Analyses were conducted to determine the extent to which environmental stressors and youth attachment were associated with youth psychological symptoms, and test an integrative model proposing that attachment security in youth buffers the association between stress exposure and psychological wellbeing. The sample included 83 adolescent (ages 13-18) caregiver dyads that participated in a larger study examining adolescent health behaviors. Results suggest preliminary empirical support for the utility of the ASA with this sample, as evidenced by expected inverse correlations with another well-established measure of attachment. There was not sufficient evidence to suggest that secure base knowledge moderated the impact of stress exposure on youth outcomes. However, youth secure base knowledge significantly predicted youth internalizing problems.

Taken together, these findings suggest that the ASA may be a useful measure of attachment and may provide some insight into adolescents' internalizing problems. As this is the first study to utilize the ASA with at-risk youth and few studies have examined the link between secure base knowledge and child outcomes, future research will need to replicate these results.

AUTOBIOGRAPHICAL STATEMENT

Patricia Richardson received a Bachelor of Arts degree in 2010 from the University of Michigan in Ann Arbor, Michigan, where she majored in Psychology. She will graduate with a Master of Arts in Clinical Psychology from Wayne State University in Detroit, Michigan in December 2014. She is currently working towards a Doctor of Philosophy in Clinical Psychology at this university.