

**Experiences in Youth Relationship Education for Adoptive and Nonadoptive Youth in
Alabama**

by

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Abstract

While recent studies have explored effects of youth relationship education (YRE) (e.g., Adler-Baeder et al., 2007; McElwain et al., 2017; Simpson et al., 2018; Huntington et al., 2021), and differences between subgroups of participants, this is the first study to date to explore YRE experiences based on adoption status. This study expanded previous research by comparing adoptive and nonadoptive groups demographics and baseline differences in dating violence victimization and perpetration, interpersonal competence, family harmony, and mental health. In addition, this study explored the association between adoption status and the amount of change in these outcomes post-program (controlling for baseline levels) and also considered differences between proportions of adoptive and nonadoptive youth in unhealthy relationships who terminate relationships after a relationship education program. The current study included a full analytic sample of 1,877 adolescents who participated in a YRE program in Alabama; a match sample was created for examining the influence of adoption status on outcomes and included 150 nonadoptive youth and 50 adoptive youth. Results indicated that adoptive and nonadoptive groups were similar demographically, with the exception of some differences in gender proportions. Findings also indicated that adoptive youth reported more frequent experiences of dating violence victimization and perpetration in their romantic relationships, on average, at baseline. Otherwise, groups reported similarly in regard to their mental health, interpersonal competence, and family harmony at baseline. Further, adoption status predicted two key post-program outcomes: dating violence victimization and interpersonal competence. Being adopted was associated with greater increases in reported dating violence victimization post-program; over time, however, there was not significant change in dating violence victimization for either group. In addition, results indicated being nonadoptive was related to greater increases of interpersonal competence; the nonadoptive group also displayed significant improvement from

pre- to post-program in interpersonal competence, however, the adoptive group did not. Adoption status did not predict changes in dating violence perpetration, family harmony, and mental health post-program, indicating similar changes between the two groups. Lastly, proportionately, more adoptive youth, terminated an emotionally unhealthy or abusive relationship after participating in the YRE program. No differences were found, however, between the adoptive and nonadoptive groups in relationship termination for relationships that were “just not working” and for physically unhealthy or abusive relationships. Overall, this study informs YRE curriculum development, facilitator skills and trainings, strategies and resources that need to be available to youth, and a trauma-informed approach to facilitation of YRE.

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CHAPTER I

Introduction

In general, relationships impact almost every aspect of development and well-being. During adolescence, youth begin dating and these relationships can have both positive and negative effects on their well-being and their development (Barber & Eccles, 2003; Collins, 2003; Furman & Shafer, 2003; Joyner & Udry, 2000). Significant issues developing in youth romantic relationships is common and decrease chances of forming and sustaining a healthy committed adult relationship and marriage (Hawkins, 2018). Thus, providing support and educating youth on skills for developing and maintaining healthy dating relationships can be considered a vital effort. In response to this, youth relationship education (YRE) programs have become more available, particularly following specific funding support in 2006 to expand their availability (e.g., Hawkins, 2018; McElwain et al., 2017). Despite their prevalence and several decades of research on YRE program effectiveness (e.g., Adler-Baeder et al., 2007; Kerpelman et al., 2009; Simpson et al., 2018; McElwain et al., 2017), limited attention has been given to the experiences of youth in YRE based on diversity in developmental histories and family context.

Family contexts differ for children in many ways and may provide added strengths and/or challenges relevant to relationship skill development. Adoptive children experience life with similarities and differences in comparison to non-adoptive children (e.g., Rees, 2020; Finet et al., 2019; Fisher, 2014). (Note that for the purposes of this paper, the focus is on adoptive children and the term nonadoptive includes any individual who was not adopted; i.e., biological, step, or foster). Adoption includes the “social, emotional, and legal process through which children who will not be raised by their birth parents become full and permanent legal members of another family” (Child Welfare Information Gateway, 2014). There are a variety of adoption pathways

including domestic and international, private agencies, and the child welfare system. Adopted children have diverse stories and backgrounds. Some children may be adopted in the first days of life, while others may not have a permanent parent until late teenage years. Children may be adopted for a variety of reasons including but not limited to: being unplanned or unwanted by nonadoptive parents, being taken by child services due to unsafe circumstances in the home, having parents who are unable to provide basic needs for the child, or death of one or both parents. Specifically, it is not uncommon for adoptive youth to show a history of adversities such as child maltreatment, physical and psychological developmental delays, institutionalized care, and illness (Jiménez-Morago et al., 2015). Regardless of age, adoption can be challenging and even traumatic for a child due to the break in attachment from a primary caregiver (Carnes-Holt, 2012).

Typically, adoptive families must overcome obstacles, to varying degrees, that families with non-adoptive children do not have to consider. In addition to individual impact, it is also important to consider the impact adoption can have on family relationships. Adoptive adolescents have shown a tendency for conflictual relationships with their parents (Goldberg et al., 2021) and have been shown to struggle in intimate relationships (DeLuca Bishop et al., 2019). It is suggested that poor attachment may be the reason adoptive children have comparatively more difficulty maintaining close family relationships and healthy romantic relationships (Carnes-Holt, 2012).

Scholars suggest that relationship education be implemented earlier in life (Hawkins, 2018; Rhoades & Stanley, 2009) because by the age of 18, two-thirds of youth have been in a dating relationship (Carver et al., 2003). In prevention work, there has been increased emphasis on providing relationship education for youth in order to enhance their prospects for entering into

and maintaining healthy dating relationships, as well as later committed relationships and marriages (Adler-Baeder, 2007; Hawkins, 2018; McElwain et al., 2017; Rice et al., 2017).

Previous research that has focused on youth relationship education (YRE) effectiveness has included explorations of subpopulations' experiences but no YRE study to date has focused on the experiences of adoptive children and the comparative experiences of adoptive youth and nonadoptive youth prior to and following YRE. The current study focused on indicators of both individual and relational well-being for adoptive youth. Note that in the current study, only an indication that adoption occurred is provided. Although the adoption experience varies as noted, we are not able to incorporate factors related to the adoption, such as age at adoption, trauma history, type of adoption. We explored whether differences exist at program start between adoptive and nonadoptive youth on demographics and on indicators of individual functioning (i.e., mental health and interpersonal competence) and indicators of relational functioning (i.e., dating violence victimization and perpetration and family harmony). We also explored whether there are differences between adoptive and nonadoptive youth on short-term changes in these areas following participation in YRE and compared proportions of adoptive and nonadoptive youths' unhealthy relationship termination post-program. This study provides a better understanding of adoptees' baseline characteristics relevant to YRE and informs us on whether and how YRE experiences may differ for adoptive adolescents. This is beneficial in enlightening and guiding practitioners who are working with adoptive individuals in adolescent relationship education.

Theoretical Assumptions

Theoretical assumptions taken from family stress theory (Boss, 1988) and attachment theory (Ainsworth & Bowlby, 1991) will inform the design of the current study. Family stress

theory considers the implications of both normative and non-normative stressors that occur in family units. Families will inevitably experience some normative stress in life; it's only natural. Those stressors can be caused by outside factors, yet still impact the family. Certain families experience additional stressors due to specific conditions and characteristics. The lack of support during times of high stress can become problematic for one or all family members. Due to the added stress adoptive children and families experience (Perry, 1994; Carnes-Holt, 2012; Goldberg et al., 2021; Bird et al., 2002), family stress theory is applicable to the study. It allows us to frame an exploration of differences between adoptive and nonadoptive youth that may exist due to a different set of stressors experienced by adoptive children and families.

Also relevant to the current study are assumptions from attachment theory, a framework to understand the psychopathology and development from emotional bonds formed between the parent and child to feel close and secure (Sroufe et al., 1999). John Bowlby (1973) developed the theory to explain the structure and the processes of the child's mind based on the attachment between the parent and child. It is assumed that four stages of attachment exist: pre-attachment phase (birth to 6 weeks), attachment-in-the-making phase (6 weeks to 6 to 8 months), clear cut attachment phase (6 to 8 months to 18 months to 2 years), and formation of a reciprocal relationship (18 months to 2 years and on) (Harlow, 2021).

Moreover, attachment is important to consider in studying adoption, due to the non-biological relationship between at least one parent and the child. Adoptive parent to child attachment may look different than nonadoptive parent to child attachment (Rees, 2020). In fact, establishing an adequate attachment is often a concern in adoptive homes. Early stages of attachment and development occur in the first year of life, yet some adoptive children are not with their permanent parents until later childhood. Research shows that children with different

attachment histories understand the environment differently (Sroufe et al., 1999). In addition, the attachment developed early on in life can affect an interpersonal relationship for years to come. When attachment breaks, consequences can include increased fear, sensory processing issues, difficulty self-regulating, disorder of memory, and short-term memory loss (Carnes-Holt, 2012). Assumptions based in attachment theory include the notion that parent-child attachment in early life is the first experience of emotional closeness, which tends to represent close relationships throughout life (Sroufe et al., 1999). Children tend to base their expectations for future social relationships off of behaviors and experiences in current and past relationships. Depending on age at adoption, some scholars assert that adoptive children may lack a strong initial parental attachment that may contribute to trouble with emotional closeness and efficacy and skill in later relationships (Sroufe et al., 1999).

These two theories frame an exploration of differences in the experiences of adoptive and nonadoptive youth in YRE. We also used a prevention science approach which considers outcomes based on risk level or developmental stage (Coie et al., 1993). The focus of prevention science on reducing risk factors and enhancing protective factors suggests expected changes for youth following participation in a YRE program.

Adoption and Individual Mental Health

At some point in life, adoptive children have likely experienced disruption with their early caregiver(s). Due to family transitions and potential incidents of maltreatment or loss, many researchers have focused on psychosocial adjustment of adoptive children. Adoptive children are likely to experience stress, whether prenatal, postnatal/preadoption, or during the adoption process (Grotevant & McDermott, 2014). Effects of stress can contribute to developmental issues physically, socially, emotionally, and cognitively. Many adoptive children

are faced with the reality of abandonment and attachment disruptions from their nonadoptive parents. Every child has a different story and many factors (i.e., age of adoption, history of abuse, stability of placements, exposure to violence/drugs/alcohol) influence well-being (DeLuca Bishop et al., 2019). Although adoption can be a positive factor for the child's future, some adoptive children are at risk for negative outcomes such as behavior problems, academic problems, insecure/anxious attachment to caregivers (DeLuca Bishop et al., 2019), mental health issues, psychological, and neurobiological difficulties (Fisher, 2015) due to family transition/dissolution experiences.

In recent years, research on mental health in adoptive children has broadened. Adoptive children are shown to have higher rates of internalizing disorders such as anxiety, posttraumatic stress disorders, and depression compared to the general population (Fisher, 2015). Further, research has found higher rates of externalizing disorders such as ADHD, oppositional defiant disorder, and conduct disorder in adoptive individuals (Ford et al., 2007; Lawrence et al., 2006; Fisher, 2015). The relationship between mental health concerns and internalizing and externalizing disorders is evident through these studies. These effects are of course conditional. Miller (2021) found differences in behavioral problems based on time spent with the adoptive family. Findings indicated the longer a child had been living with their adoptive family, the less behavioral issues were present. Factors such as the number of primary caregivers, disrupted placements, and repeated traumatic events contribute to mental health issues of an adoptive individual (Carnes-Holt, 2012).

Mental health and behavioral outcomes of adoptive youth have also been specifically examined among international adoptees due to the increasing rates of international adoptions in the United States. Juffer and IJzendoorn (2005) conducted a study examining behavioral

problems and mental health referrals of international adopted children compared to domestic adopted children. In the sample, there were no differences based on age at adoptive placement or sex. They found that most international adopted children are well-adjusted but are still more frequently referred to mental health services compared to nonadoptive children. Typically, domestic adoptees have increased behavior problems and are referred to mental health services even more often than international adoptees (Juffer & IJzendoorn, 2005). Overall, adoptive children, particularly domestic adoptees, are more likely to experience mental health issues compared to nonadoptive children.

Adoption and Parenting/Family Relationships

In addition to mental health, parenting and family relationships can be impacted by adoption in both positive and negative ways. Positive parenting practices may serve as a protective factor for adoptive children (Finet et al., 2019). Research has found effective parenting positively affects children's behavioral adjustment. Adoptive parents must attempt to develop a relationship and exemplify how relationships can be safe and trusting (Carnes-Holt, 2012). To create a feeling of safety for a child, a healthy parent-child relationship is essential. With adoptive children, building this type of relationship could be more challenging. Children who have experienced constant changes in caregivers, recurring neglect, and/or abuse can have difficulty trusting others and feeling safe in relationships (Carnes-Holt, 2012). In addition, when the adoptive child rejects their adoptive parents, the parents tend to feel confusion, frustration, and heartache which can sabotage the relationship (Carnes-Holt, 2012).

As noted, pre-adoptive factors likely play a role in development problems and relational outcomes, especially in adolescence (Finet et al., 2019). Some studies have found a child with more pre-adoptive risk factors such as maltreatment or abuse is likely to experience worse

outcomes (Melero and Sanches-Sandoval, 2017; Miller, 2021), and other studies found limited evidence that parenting strategies moderated this association (Finet et al., 2019).

In other previous research, adoptive and nonadoptive youth were found to have similar levels of closeness with their families (Sharma et al., 1996 in Walkner & Rueter, 2014). However, adoptive youth rated their overall family relationship quality lower than nonadoptive families. Using self-reports and observation, Walkner and Rueter (2014) examined family relationships during the transition between adolescence and young adulthood. Differences between adoptive families and nonadoptive families in relationship levels were present and adoptees had lower reported closeness with their adoptive mothers; however, trends over time were similar. Specifically, self-reported and observed findings indicated adoptive families had higher levels of conflict compared to nonadoptive families but the scores were still moderate for both groups. In another study, Hawk and McCall (2014) evaluated the self-reported sibling relationship quality of youth adopted from Russia into the United States. Not surprising, children who were adopted at an older age reported comparatively poorer friendship and sibling relationship quality.

It is clear that children benefit from belonging to a family that makes them feel safe, secure, connected, and loved and that attachment disruptions can compromise these feelings (Carnes-Holt, 2012). Because of the diversity of adoptive children's experiences and the many family factors involved in the post-adoption process, we find some diversity in the results of studies looking for differences between adoptive and nonadoptive children in their family relationship experiences. While it is important to identify mediators and moderators that predict and thus best ensure positive outcomes for adoptive children, for purposes of this study, there is enough evidence to suggest that some differences in parent-child relational outcomes may exist

for adoptive youth compared to nonadoptive youth prior to participating in a YRE program. This will be a broad comparative exploration based on adoptive status since information on the specific factors such as age at adoption, type of adoption, history of abuse, stability of placements, exposure to violence/drugs/alcohol, and use of positive parenting strategies were not collected in the original study of YRE program effectiveness from which data were drawn for the current study.

Adoption and Romantic Relationships

Although the literature on adoption and romantic relationships and specifically on adolescent dating relationships is extremely limited, there is significant research focused on early attachment and its implications for later adult attachment and relationship quality. As noted, children with healthy attachment tend to form healthy attachments in later romantic relationships (regardless of adoption status) since the basis of secure attachment is creating valuable, safe, and stable relationships in adulthood (Rees, 2020). Many studies of romantic relationships in general have found adult attachment styles are strong predictors of romantic relationship quality (e.g., Simpson, 1990; Collins & Read, 1990; Li & Chan, 2012). In a meta-analysis, Li and Chan (2012) found unhealthy attachment styles (anxious and avoidant attachment) can negatively affect the cognitive, emotional, and behavioral aspects of romantic relationship quality. Anxious attachment predicted general conflict in relationships and avoidant attachment was negatively associated with general satisfaction, connectedness, and general support in relationships. An early study (Simpson, 1990) found individuals with avoidant or anxious attachment styles reported less interdependence, trust, commitment, and satisfaction in their romantic relationship.

Because of the risks to secure attachment among adoptive children (e.g., Harlow, 2019; Feeney et al., 2007; Monteoliva et al., 2012; Carnes-Holt, 2012), we can deduce that there may

be related challenges in dating relationships of adoptees. As noted, there is very limited research exploring adoptive children's later romantic relationships and results are mixed. Some individual studies have found adoptees tend to struggle more in romantic relationships in terms of romantic relationship involvement and romantic relationship quality (e.g., Lindblad et al., 2003; Tieman et al., 2006). Another study examining the impact of adoption and family experiences on adult attachment and attachment as a predictor of relationship outcomes was conducted by Feeney and colleagues (2007). Although the current study examines relationships in adolescence, later relationships and adult attachment are still important to consider since earlier relationship patterns in adolescence predicts patterns in adulthood. Adoptees and participants who reported negative childhood relationships with parents had higher rates of insecure attachments. In addition, they found adoptees' recent relationship difficulties was linked with insecure attachment. However, DeLuca Bishop and colleagues' (2019) recent meta-analysis of 16 studies (11 examining adopted and biologically-reared samples (note: this is the term used in the study) and 5 examining involvement in romantic relationships for adoptees), concludes that the average findings across studies indicated adopted samples are similar to biologically-reared samples in reported involvement and quality of romantic relationships. Still, the evidence in some studies of differences between adoptive and nonadoptive individuals' romantic relationship quality, and the evidence linking higher incidence of attachment issues among adoptive children and the implications of this for later romantic relationships, warrants the consideration of differences between adoptive and nonadoptive youth in measures related to healthy dating relationships.

Youth Relationship Education

Importantly, problematic experiences are common in youth relationships and an increasing number of adolescents are following paths that lead to more challenges in sustaining a

healthy marriage in adulthood. In fact, many adolescents lack models of healthy relationships, as well as skills and knowledge to build healthy relationships (McElwain et al., 2016); and unrealistic expectations of relationships are also common in youth. Further, a recent study found a surprisingly high rate of youth (i.e., 70%) report being victim to abuse in their adolescent relationship (Taylor & Mumford, 2016).

Relationship education research has focused predominantly on adult couples; however, in recent years, relationship education has become more available for adolescents (e.g., McElwain et al., 2017), with scholars advocating for the need for wide-spread youth relationship education (YRE) (Hawkins, 2018). Promoting positive and healthy relationship skills is necessary for the success and safety of youth in relationships. The purpose of implementing YRE in high schools is to promote healthy relationships and decrease youth experiences in abusive or unhealthy relationships. YRE can provide youth with relevant and useful information to navigate relationships, avoid abusive relationships, reduce aggressive behaviors, communicate well with their partner, and successfully work through conflict (Hawkins, 2018; McElwain, et al., 2016). In addition, YRE can promote individual well-being (McElwain et al., 2017).

The expectation that YRE participation results in positive shifts in individual and relational functioning can be framed by family stress theory (Tomlinson, 1986) which emphasizes that the effect of both normative and non-normative stressors is influenced by the existence or use of resources and coping strategies. YRE can be viewed as a resource and the skills training can serve as protective factors in the face of stressors and result in enhanced individual well-being and social relationships (Family and Schools Together, 2022). Further, a prevention science approach specifically calls for programs such as YRE that aim to minimize undesirable trajectories that may lead to adverse experiences and outcomes (Coie et al., 1993).

Because relationship skills and knowledge can be considered a protective factor, we expect relationship education to positively impact individual and relational outcomes.

Overall, positive effects of YRE have been documented. An early study by Adler-Baeder and colleagues (2007) explored the impact of relationship education on adolescents of diverse backgrounds through a post + retrospective pretest design. On average, the sample of primarily White and African American high school students with diverse socioeconomic status and family structures, showed immediate improvements in relationship knowledge compared to students in the control group. In addition, findings indicated a decrease in use of verbal and physical aggression in interpersonal conflicts for participants in the test group. Overall, these findings were consistent across demographics differences (race, household income, and family structure type), with participants benefiting in similar ways. In another early YRE study, Gardner (2001) found among a sample that was ethnically and economically diverse and took place in an urban setting that the YRE program increased knowledge of relationship concepts, decreased violence in dating relationship, decreased risk factors for teen pregnancy (including poor communication with parents, the ability of youth to assertively reject sexual advances, and those who expect to be involved in sexual intercourse), and positively impacted attitudes associated with future success in marriage; however, effects were relatively small.

Two recent meta-analyses provide further evidence on the effectiveness of YRE programs for the average participant (Simpson et al., 2018; McElwain et al., 2017). Although the results indicated small to medium average effect sizes, there is evidence indicating YRE has a positive impact on relational attitudes and behaviors. Specifically, across 16 studies with a pre post design, McElwain and colleagues (2017) found significant improvements in conflict management skills, reduced faulty relationship beliefs, and increased knowledge of the

difference between a healthy and unhealthy relationship. In Simpson and colleagues' (2018) meta-analysis of 30 studies, 17 which utilized a control group, findings indicate YRE is effective in impacting relationship knowledge, attitudes, and skills, at least in the short-term (i.e., within 1-2 months post-program); however other scholars indicate program success even at the one-year follow-up (e.g., Kerpelman et al., 2009). Both of these meta-analyses emphasize the importance of research to assess long term outcomes, but also recognize the challenges (i.e., attrition, funding, etc.) of long-term evaluation.

A handful of studies of YRE have explored variation in program experiences based on participant characteristics. In a study with 1,430 adolescents, Kerpelman et al. (2010) explored demographic moderators (i.e., socioeconomic status, ethnic status, parental education, and family structure) of program effects at pretest, immediate posttest, and one-year after program. Findings indicated adolescents from a family with lower socioeconomic status had stronger faulty beliefs prior to the intervention. Adolescents living in a single-parent household benefited least from the YRE program; however, participants with fewer social or economic resources seemed to benefit the most. Specifically, greater improvement in perceived conflict management skills was reported by participants of low-income, less educated parents, minority ethnic groups, and those in stepfamilies.

In a sample of 139 students, Sparks et al. (2011) evaluated a relationship education curriculum based on characteristics associated with risk and protective factors for relationship outcomes (gender, academic performance, and parental divorce history) using a pretest posttest design. Significant differences of relationship knowledge between male and female scores at both pretest and posttest were found. Specifically, at posttest females' relationship knowledge

scores improved while male students' scores decreased. In addition, males tended to have less favorable attitudes towards marriage compared to females at pre and posttest.

In line with other research (e.g., Antle et al., 2011; Bradford et al., 2014; Kerpelman et al., 2009; Sparks et al., 2012), Futris and colleagues (2017) found that relationship and marriage education may have a greater influence on certain outcomes for participants depending on specific characteristics. Specifically, Futris and colleagues (2017) found that female adolescents and African American male adolescents tended to report higher perceived improvements in relationship self-efficacy scores after participation in relationship education compared to White males, while controlling for all other youth and program characteristics. In this more recent research, findings also suggested that students who have prior romantic relationship experience may have more effective results from YRE (Futris et al., 2017). And in Simpson and colleagues (2018) meta-analysis, findings indicated disadvantaged participants experience greater improvements from relationship education programs than participants who are more advantaged.

In sum, previous studies have found generally positive effects of YRE, with variations in some outcomes when considering such factors as race, gender, household income, family composition, and relationship experience. While results vary, there is some consistency in findings that there are distinctions at baseline and over time based on factors associated with risks for youth development. No study of YRE to date has examined differences among youth based on adoption status.

The Current Study

The purpose of this study is to further research YRE effectiveness and assess for differences between adoptive and nonadoptive youth at baseline and post-program. The current study explored how being adopted and participating in YRE impacts individual, familial, and

relational functioning at baseline and after YRE. Using data from baseline and exit of program, we included explorations of possible demographic differences as well as individual and relational functioning differences. Procedures were used to render the groups more comparable in order to isolate the adoption status when testing for differences. Specifically, the following research questions were explored.

- a. **RQ #1:** Are there demographic differences between adoptive and nonadoptive youth at program start on measures of gender, race, family type (i.e., nuclear or non-nuclear family), GPA, and parent's education level?
- b. **Following procedures for rendering the groups comparable, we explored:**
RQ#2: Does adoption status influence reports of dating violence victimization and perpetration, interpersonal competence, family harmony, and mental health at relationship education program start?
- c. **RQ#3:** We explored key target outcomes for YRE expected to immediately shift and tested whether adoption status influenced dating violence victimization and perpetration, interpersonal competence, family harmony, and mental health at relationship education program end (i.e., primary YRE target outcomes), controlling for baseline levels.
- d. We also explored whether proportionally more adoptive or nonadoptive youth report leaving an unhealthy or abusive relationship after relationship education (**RQ#4**).

CHAPTER II: Literature Review

This chapter will provide a more detailed explanation of existing literature on adoption and YRE. First, theoretical frameworks that guide the current study and the research questions will be presented. Then a review of the relevant research related to adoption and individual mental health will be provided. To follow, research on parental and familial relationships of adoptees, as well as peer dating relationships will be presented. Finally, the impact and role of YRE in individual, family, and relational functioning will be discussed.

Theoretical Assumptions

Many studies pertaining to YRE and adoption have not applied theory to inform their research. However, several studies covering YRE reference ecological systems theory (Ma et al., 2014; Rice et al., 2017;) and social learning theory (Adler-Bader et al., 2016) in their work. This study extends the current available literature by applying different theoretical frameworks to the population of adoptive youth who have participated in YRE. The current study will utilize attachment theory (Ainsworth & Bowlby, 1991) and family stress theory (Boss, 1988). Family stress theory suggests that families will inevitably experience stress in life but will confront the stress in either positive or negative ways. Stressors in life call for some type of response from an individual or family. Some families will handle stress well and overcome obstacles or challenges that arise while others may fall apart or experience crises during times of stress. Typically, major stressful events in life create crises for families that often lead to reorganization of the family functioning (Patterson & Garwick, 1994). In adoptive families, parents tend to experience elevated levels of stress, due to normative family stress, as well as a set of stressors associated with the adoption process and the child's increased vulnerability to emotional and behavioral problems (Goldberg, 2020).

In a study by Sanchez-Sandoval and Palacios (2012), stress in adoptive parents was explored. With a sample including 156 families, researchers found the simultaneous adoption of siblings acts as a predictor for stressful experiences of adoptive mothers. In addition, parents' perception of their similarities and differences compared to non-adoptive families predicted stress. Masarik and Conger (2016) describe risk and protective factors of individual, family, and community influences that may intensify or alleviate family stress. Protective factors include: optimistic mothers, endorsement of family values, problem solving, and neighborhood support. Risk factors are also important to consider such as: financial hardships, neighborhood adversity, and harsh parenting. It is likely that adoptive families may experience more life stressors or be faced with unique hardships. Utilizing the family stress theory informs the study on the implications of additional stressors adoptive families may experience compared to nonadoptive families.

Ainsworth and Bowlby (1991) propose a framework to understand the emotional bonds between a parent and child known as attachment theory. As described by Harlow (2019), "attachment is the strong, affectionate tie we have with special people in our lives that lead us to experience pleasure and joy when we interact with them and to be comforted by their nearness in times of stress." Healthy attachment enhances an individual's ability to feel safe and secure and to self-regulate (Carnes-Holt, 2012). Through the development of research on attachment theory, Ainsworth concludes three categories of attachment: secure, insecure-avoidant, and insecure-resistant/ambivalent (Ainsworth et al., 1978). Another type of attachment, insecure disorganized attachment, was added by Main and Solomon (1986). Bowlby found the primary caregiver of an infant has a specific role in providing the child with a sense of safety. In addition to the exploration of a secure attachment between a mother and child, Bowlby explored loss and grief

that is experienced during separation. This is relevant to the study as we explore adoption, where adolescents have experienced separation from the nonadoptive parent. Children who have experiences of loss, grief, separation, abuse, or neglect are more likely to be insecure and anxious (Harlow, 2019). Many adoptive parents have reported difficulty dealing with lack of affection or rejection, noncompliance, and violence or aggression in their children (Rushton & Dance, 2002).

Hughes (1999, 2004) has applied attachment theory to adoption and addressed the emotional pain that adoptive children may have experienced which informs implications of adoption on the child's development. Using an attachment theoretical perspective, researchers have predicted children raised in institutionalized care before adoption are at an increased risk for behavioral problems, due to the lack of long-term relationships built with a nonadoptive caregiver.

Children with healthy attachment are able to explore life with the assurance that they are safe, secure, and will be cared for by their caregivers (Carnes-Holt, 2012). On the other hand, children with unpredictable and chaotic environments have increased stress and anxiety. Experiences such as neglect, abuse, and inconsistent care can make a child feel as though he or she must control their environment. Carnes-Holt (2012) explains attachment and trauma as integrative factors for adoptive children. Specifically, adoption can be traumatic due to the break in attachment from the biological caregivers. Numerous consequences are common in the lives of children who have had attachment breaks and trauma including: increased fear, sensory processing issues, difficulty self-regulating, disorder of memory, and short-term memory loss (Forbes & Post, 2006; Hughes, 1999; James, 1994; Purvis et al., 2007; Siegel & Hartzell, 2004 in Carnes-Holt, 2012). In addition, adoptive children who struggle with attachment tend to have

difficulty establishing secure relationships with others. For the current study, we expect events occurring in an adopted adolescent's childhood may increase susceptibility to negative relational outcomes since many adoptive children experience attachment breaks and/or trauma in crucial developmental stages. Thus, the implications of adoption status for program effectiveness of YRE will be explored through the perspective of attachment theory and family stress theory.

Adoption and Individual Mental Health

As previously noted, adopted children tend to have additional life stressors in their childhood compared to non-adopted children. This could include exposure to substances in the prenatal period, subsequent neglect or abuse, inadequate nutrition, poor stimulation, and separation and broken bonds because of numerous transitions among caregivers (Melero and Sánchez-Sandoval, 2017). In addition, adoptive children are more susceptible to experiencing emotional, behavioral, development, and learning problems compared to biological children (Goldberg et al., 2021). Adopted children may experience worse outcomes based on some pre-adoptive risk factors. In fact, maltreatment and abuse prior to adoption have been related to a higher risk of mental health issues (Herrenjohl et al., 2016) and mental health facilities report disproportionately large referral rates for adoptive children compared to nonadoptive youth (Smith & Brodzinsky, 1994).

Borders and colleagues (2001) conducted a study in North Carolina where 100 adoptees and a matched group of their friends were surveyed to investigate whether adult adoptees have greater psychosocial dysfunction than non-adopted adults. The all White and majority female (80%) sample had similar responses between the adopted and nonadopted participants. For example, both groups reported moderate satisfaction with life, had few life regrets, were indecisive about their purpose in life, and were extremely low-risk for substance abuse. Overall,

the adoptees and their friends were having similar life experiences; however, there were some differences between the groups. Adoptees were more likely than non-adoptees to view their parents as a source of meaning in life. However, adoptees were less likely than their friends to classify themselves as having a secure adult attachment. With differences of connectedness and emotional/psychological well-being between the groups, adoptees showed less social support from family and friends compared to their friends. In addition, adoptees reported higher levels of depression and lower self-esteem than the other group, which indicates increased need for mental health services.

In a meta-analysis Juffer and IJzendoorn (2005) investigated the effects of international adoption on behavioral problems and mental health referrals. They used a sample that included adoptee and non-adoptee controls. With 25,281 adopted and 80,260 controls across the studies, they found adoptees tended to have more behavior problems and received more mental health services compared to controls. Contrary to common belief, international adoptees had lower rates of referrals for mental health services compared to domestic adoptees.

A more recent study conducted by Oke and colleagues (2015) examined the emotional well-being of 46 adult adoptees in India. They found the majority of participants were physically healthy and well adjusted, yet 40 percent scored below the norm of social functioning. The low scores of mental health and social functioning are important to consider as they have implications for well-being in adulthood. Similar to other studies, most adoptees had worse mental health compared to non-adoptees. However, these researchers found the adoptees' mental health issues were related to anxiety and stress rather than depression.

In Fisher and colleagues review of literature on adoptees in 2015, they found early adverse childhood experiences tend to affect psychological and neurobiological development in

adoptive children. In addition, adoptees who undergo more placement transitions, tend to show higher rates of mental health problems and developmental delays. However, Fisher et al. (2015) also found adoptive children showed impressive resilience through such adversities.

Through a systematic review of 27 studies, Melero and Sánchez-Sandoval (2017) explored mental health and psychological adjustment in adult adoptees. While adoption can serve to protect children from challenging family contexts, adopted children are at risk for certain negative outcomes which include mental health, psychological, and neurobiological difficulties (Fisher, 2015 in Melero & Sánchez-Sandoval, 2017). Within Melero and Sánchez-Sandoval's review, these researchers found that adopted children tend to have higher levels of depression, anxiety, personality and behavioral disorders, and neuroticism compared to non-adopted children. Other factors (i.e., age of adoption and gender) could also influence mental health conditions. For example, being adopted at an older age has shown to be associated with developmental delay, externalizing behavior, health problems, and domestic violence (Anthony et al., 2016). Older adoptees tend to experience unstable situations which could impact their mental health. In sum, there is sufficient evidence to suggest that adoptive youth are more likely to experience mental health problems and the implications of this on romantic relationships warrants the consideration of this measure in our comparison study.

Adoption and Parenting/Family Relationships

In addition to mental health, in the current study we will consider family relationships of adoptive families. The parent-adolescent relationship plays a significant role in a child's development (Rice et al., 2017). In addition, parenting behaviors (i.e., parental support, psychological control, and behavioral control) influence children's behavioral adjustment (Finet et al., 2019). Adoptive parenting experiences may look different and could inherit additional

challenges compared to nonadoptive parenting (Walkner and Rueter, 2014). Adopted youth may have more conflictual relationships with their parent compared to non-adopted youth (Goldberg et al., 2021). All adoptive children face the adversity of separation or loss of their birth parents; however, other adversities such as pre-adoption care, vary for adoptees. Finet and colleagues (2019) explored the role that parental sensitivity (supportive presence and intrusiveness) and parental efficacy play in enhancing children's resilience when faced with adversities in early life. A sample of 92 girls from China adopted by Dutch parents participated in the Chinese Adoptees in the Netherlands (CAN) longitudinal study at two months, six months, and nine years after adoption. Based on the results, they could not conclude that parenting buffered the association between pre-adoption adversities and the development of adaptive and maladaptive behavioral adjustment over time. Importantly, they found that pre-adoption adversities did not alter the adopted child's ability to thrive. In this sample, children were found to thrive post-adoption regardless of pre-adoption experiences. This finding, however, is in contrast to other studies of adolescent and adult adoptees that found pre-adoptive adversities can impact outcomes (Melero and Sanches-Sandoval, 2017; Miller, 2021).

In a 2013 study, 91 10-to-17-year-old children adopted from institutions in the Russian Federation into United States families self-reported family and peer relationship quality (Hawk & McCall, 2013). They found most post-institutionalized children reported high levels of perceived social support and low levels of perceived negative interactions in their relationships with mothers, siblings, and best friends. However, being adopted at an older age was associated with poorer relationship quality with best friends for girls but not boys. Having older siblings was found to buffer negative effects for many post-institutionalized children. Overall, children

who were adopted internationally tended to display resiliency in their ability to develop high quality relationships with their adoptive mothers, siblings, and best friends.

Walkner and Rueter (2014) studied adoption status and family relationships during the transition to young adulthood through self-reports and observation. In their sample of adoptive and nonadoptive participants from the Sibling Interaction and Behavior Study they found differences in relationship quality levels between adoptive and nonadoptive family dyads. Similar to prior research, their findings indicated higher self-reported and observed conflict and lower reported closeness in adoptive families compared to nonadoptive families. Adoptive mothers reported lower closeness with adoptees than nonadoptive mothers; however, adoptive mothers were observed to have higher closeness, which, interestingly, could indicate a self-report negative bias for adoptive mothers.

Tan and colleagues (2014) explored adoptive parent-child relationship quality as a function of the adopted children's country of origin, pre-adoption adversity, age at placement, age, gender, and special healthcare needs status. Using the 2007 National Survey of Adoptive Parents they found 1,906 families who had adopted from the U.S. foster system, U.S. private agencies, China, Guatemala, Russia, and South Korea. The reasons for children to be placed up for adoption varied from country to country, which created distinct characteristics between adoptive children in different countries. Findings indicate when country of origin was the sole predictor, adoption from US private agencies and the four other countries, predicted higher parent-child relationship quality scores compared to being adopted from the US foster care system. In addition, lower parent-child relationship scores were significantly predicted by being a boy, older in age at placement, older age, having special healthcare needs, and more pre-adoption adversity.

In a study of social support from family, friends, and support groups (Borders, et al., 2001), adoptees and non-adoptees both reported higher support from friends than family, but overall, most adoptees reported lower family and friend support than the non-adoptees. However, the adoptees were no more likely to be involved with a support group compared to their friends.

While some evidence suggests that adoptive families are more vulnerable to stressors (Bird et al., 2002), as well as emotional, and relational challenges (e.g., Goldberg et al., 2021), it also may be that adoptive families tend to have some advantages. In a study of adopted children and stepchildren, the adoptive parents had higher education and socioeconomic status (Kreider & Lofquist, 2014) and other research indicates they may be more likely to seek out mental health services for their children (Goldberg et al., 2021). Research also suggests that adoptive parents tend to be more involved in their children's academics compared to nonadopted children (Goldberg et al., 2021).

While some research indicates some demographic advantages for adoptive families (higher SES and greater use of family support services; Kreider & Lofquist, 2014), and variations in outcomes due to moderators, overall, we find sufficient evidence suggesting that adoptive families are more vulnerable to stressors (e.g., Bird, et al., 2002), as well as within-family relational challenges (e.g., Goldberg, et al., 2021). As such, an empirical basis is provided for testing for relational differences between adoptive and nonadoptive youth in our study.

Adoption and Romantic Relationships

Not only do parenting and family relationships influence children, but peer dating relationships influence adolescents (e.g., Kerpelman et al., 2009; Collins et al., 2009). Adolescence is the typical time period that individuals experience their first dating relationship. Thus, considering potential differences in romantic relationships between adoptive and

nonadoptive youth is important for our study. While the body of research specifically focused on adoptive individuals' romantic relationships is limited, there are numerous studies focused on early attachment and its implications for later adult attachment and relationship quality which can be used to inform studies of adoptive individuals, since indications are that they are at risk for insecure attachment. Much research has documented a link between adult attachment styles and romantic relationship quality (e.g., Simpson, 1990; Collins & Read, 1990; Li & Chan, 2012). Due to the risks of insecure attachment among adoptive children, we can infer challenges in romantic relationships of adoptees. In previous research, results have been mixed.

In a meta-analysis of 16 studies, DeLuca Bishop and colleagues (2019) assessed patterns related to romantic relationships of those who have experienced adoption or foster care compared to biologically-reared samples. While individual studies suggest adoptees struggle in romantic relationships (e.g., Feigelman, 1997; Lindblad et al., 2003), meta-analyses concludes that adoptees and nonadoptive individuals do not differ, on average, across studies in rates of marriage or the quality of romantic relationships. While the body of research specifically focused on adoptive individuals' romantic relationships is limited, there are numerous studies documenting links between early attachment and later romantic relationships that can be used to inform studies of adoptive individuals, since indications are that they are at risk for insecure attachment. Studies have shown attachment styles impact the quality and functioning of romantic relationships and are related to the way the person feels, thinks, and behaves in their relationships (Monteoliva et al., 2012). Specifically, a secure attachment is associated with more positive romantic relationships and an insecure attachment is associated with more negative romantic relationships. Romantic relationships of secure attachment individuals tend to be characterized by intimacy, satisfaction, trust, and stability (Monteoliva et al., 2012; Collins &

Read, 1990). On the other hand, romantic relationships of individuals with an insecure attachment tend to be characterized by conflict, jealousy, and negative emotional experiences.

One study with a sample of 144 dating couples, explored the impact of secure, anxious, and avoidant attachment styles on romantic relationships (Simpson,1990). Simpson describes the three attachment styles adapted to adult romantic relationships. An individual with a secure attachment finds it fairly easy to get close to others, is comfortable depending on others and having others depend on them, and doesn't worry about being abandoned or about someone becoming too emotionally close. An individual with an avoidant attachment is uncomfortable being close to others, finds it challenging to completely trust and depend on others, and is nervous when anyone gets too close emotionally. An individual with an anxious attachment is reluctant to get close to others, often worries that their romantic partner doesn't really love them or won't remain with them, and wants to become extremely close to their partner. The findings of the study indicated, both for men and women, that a secure attachment style was associated with greater relationship independence, commitment, trust, and satisfaction compared to the anxious or avoidant attachment styles. Unlike the secure attachment style, the anxious and avoidant attachment styles were associated with less frequent positive emotions and more frequent negative emotions within the relationship.

It also appears that a history of secure attachment may serve as a protective factor in the face of contextual stress and challenges. Eder and colleagues (2021) explored the quality of romantic relationships amidst the COVID-19 pandemic in Europe, where times were stressful and unpredictable. In addition, strict restrictions were put into place. The sample consisted of 313 participants who completed self-report questionnaires over a seven-week period. The researchers found that the environment (i.e., the severity of the pandemic) and fear did not

predict relationship quality. Rather, secure attachment was a significant predictor of reported relationship quality for these couples.

Although findings across some studies vary, there is still evidence in some studies showing differences between adoptive and nonadoptive romantic relationship quality. In addition, the evidence links higher frequency of attachment issues among adoptive youth and implications of this for later intimate relationships which warrants the exploration of differences between adoptive and nonadoptive youth in measure related to healthy romantic relationships.

Youth Relationship Education

Relationship education has become more available for high school students in recent years and focuses on equipping teens with skills and knowledge to develop healthy relationships (Adler-Baeder et al., 2007; McElwain et al., 2017; Huntington et al., 2021). The growing field is exploring many aspects and the benefits of YRE for individuals (Kerpelman et al., 2009; Rice et al., 2017). The efforts of YRE are to foster healthy romantic relationships during adolescence (Rice et al., 2017). Specifically, the goals of relationship education programs are to reduce the risk of maltreatment in dating relationships, increase knowledge about healthy and unhealthy relationships, and increase understanding of necessary skills for healthy relationships (Adler-Baeder et al., 2007). In general, YRE has been shown to improve knowledge about healthy relationships and attitudes of romantic relationships, marriage, divorce, and counseling (Rice et al., 2017), and promote relational skills (e.g., Rice et al., 2017; Huntington et al., 2021).

The first evaluation of YRE was published twenty years ago by Gardner (2001) with a curriculum titled *Connections: Relationships and Marriage*. With a primarily White sample of 213 individuals, results indicated significant improvements in reasoning strategies when faced with conflict. In addition, participants in the program were less likely to agree with divorce as an

option in a marriage and were more likely to view premarital counseling positively. Gardner (2004) continued research in this field with a more diverse sample. Results indicated positive outcomes for individuals who participated in the YRE. Through the program, students gained knowledge on healthy relationships, communication skills, conflict resolution, and marriage beliefs. Overall, this study found that the YRE program enhanced parent-child communication and family cohesion.

In another study with a quasi-experimental design by Adler-Baeder and colleagues (2007), the effectiveness of the *Love U2: Increasing Your Relationship Smarts* (later renamed to *RS+*) curriculum was evaluated. Through surveys, demographics, knowledge and awareness of key concepts of healthy relationships, frequency of behaviors used during interpersonal conflicts, and beliefs associated with healthy relationships were examined. The program took place across nine public high schools in Alabama and included 340 students who were economically, geographically, and racially diverse. Of those included, 235 were in the experimental group and received relationship education, while 105 were in the control group. The participants were primarily African American (46%) and White (50%) students. Results of the study suggest positive effects from YRE in relationship knowledge, which includes the ability to identify unhealthy relationship patterns. Findings indicated statistically significant changes in attraction/mature love, expectations and behaviors, communication skills, smart dating strategies, and unhealthy relationships. Further, the study examined conflict in three areas (reasoning, verbal, and physical) at baseline and post-program. At pretest, participants from both the experiment and control groups showed similar scores. At post-program, participants showed a decrease in levels of verbal aggression and had more realistic beliefs about relationships/

marriages compared to the control group. Overall, there was change in the desired direction for the treatment group.

Moreover, Kerpelman and colleagues (2009) expanded the evaluation of YRE using a random control assignment approach to assess the impact of the *RS+* curriculum over a two-year period and collecting qualitative data. There were 1,824 participants who provided useable data. Of these, 1045 were in the test group and 788 were in the control group. The sample included participants who were 75% female, 28% African American, and 65% European American. In regard to family relationships, 40% of student participants had experienced one parental divorce and about 16% had experienced multiple parental divorces. Results showed success from program participation through impact on faulty relationship beliefs, conflict management ability, beliefs about the importance of a supportive partner, and interest in pursuing future relationships education/counseling and provided insight for effective implementation of relationship education. Students in both the test and the control group improved with conflict management skills; however, the intervention contributed beyond the general effect. The effects were sustained for one year but declined at the two-year follow-up. In the eight focus groups, students shared that *RS +* lessons were interesting, engaging, informative, and useful. Students shared about the skills they learned and real-life circumstances that they applied the material to.

In another study of YRE, Sparks et al. (2011) addressed the lack of implementation in classes that all students take, rather than classes that students choose to sign up for such as Family and Consumer Science courses. Thus, the researchers implemented relationship education into required health courses for ninth and tenth grade students. This study took place in a predominantly white, rural county in Ohio and utilized the *Connections* curriculum. The study examined measures of knowledge, marriage attitudes, and dating abuse attitudes and were

considered based on certain characteristics of students (i.e., academic achievement). Results indicated statistically significant differences for attitudes toward marriage at pretest and posttest.

In two meta-analyses, researchers explored effectiveness of YRE programs (Simpson et al., 2018; McElwain et al., 2017). Results of these studies indicate positive effects of YRE on relational attitudes and behaviors. In McElwain and colleagues' (2017) analyses of 16 YRE studies, conflict management, faulty relationship beliefs, and healthy relationship attitudes were evaluated. Although effect sizes were small to medium, improvements in all three key outcomes were significant. Specifically, the effect size of conflict management was smaller compared to faulty relationship beliefs and healthy relationship attitudes. Of the three outcomes, faulty relationship beliefs showed the largest effect size. In Simpson and colleagues' (2018) meta-analysis of 17 control-group studies and 13 one-group/pre-post studies, relationship knowledge, attitudes, and skills were evaluated. This review included studies of both adolescents and emerging adults. Specifically, results of youth studies included in this review indicated significant moderate effect sizes on the outcomes for both the control-group and one-group/pre-post design studies. Overall, both of these meta-analyses provided evidence of effectiveness of YRE programs.

While the emphasis in YRE studies of program effectiveness have emphasized the experiences of the average participant, some studies have explored differences in program outcomes based on participant characteristics. Kerpelman and colleagues (2010) assessed demographic moderators (i.e., socioeconomic status, ethnic status, parental education, and family structure) of program effects. Higher socioeconomic status was related to lower faulty beliefs. Although most participants benefited from the program, those with low SES benefited most and participants with a single-parent household benefited least. Participants of low-income, less

educated parents, minority ethnic groups, and stepfamilies showed greater improvements. Another study, conducted by Sparks and colleagues (2011), found significant differences in outcomes between males and females who participated in relationship education. Post-program, females' scores showed improvements in relationship knowledge while males' scores declined. Further, in Simpson and colleagues' (2018) meta-analysis of 30 studies they concluded that disadvantaged participants, indicated by economic, educational, and social circumstances, experienced greater improvements post-program compared to more advantaged students. This is especially important because more disadvantaged youth are at greater risk for unhealthy romantic relationships (Smith et al., 2011 in Simpson et al., 2018). Overall, previous research has found YRE to be generally effective in the short-term, with variations in some outcomes based on participant characteristics (i.e., race, gender, household income, family composition, and relationship experience). To date, no YRE study has considered differences among youth based on adoption status.

The Current Study

The purpose of this study is to enhance research in the field of YRE and assess for differences between adoptive and nonadoptive youth in individual, familial, and relational functioning at baseline and post-program. This information can also be useful for practitioners. The current study, guided by attachment and family stress theory, explored experiences in a YRE program for both adoptive and nonadoptive youth. More specifically, the current study investigated differences between adoptive and nonadoptive youth in their demographics at baseline and in their interpersonal competence, experiences with dating violence, family relationships, and individual mental health at baseline and over time. Specifically, the following research questions guided the current study.

- a. **RQ #1:** Are there demographic differences between adoptive and nonadoptive youth at program start on measures of gender, race, family type (i.e., nuclear and non-nuclear family), GPA, and parent's education level?
- b. **Following procedures for rendering the groups comparable, we explored:**
RQ#2: Does adoption status influence reports of dating violence victimization and perpetration, interpersonal competence, family harmony, and mental health at relationship education program start?
- c. **RQ#3:** Does adoption status influence changes in dating violence victimization and perpetration, interpersonal competence, family harmony, and mental health from baseline to post-program (i.e., primary YRE target outcomes)?
- d. We will also explore whether proportionally more adoptive or nonadoptive youth report leaving an unhealthy or abusive relationship after relationship education (**RQ#4**).

CHAPTER III: Methods

Procedure

The current study included YRE participants in 9th to 12th grade from a southern state. Numerous sites across 11 counties in Alabama implement healthy relationship education in high schools for youth through a university-community partnership. The Alabama Youth Relationship Education (AYRE) project promotes healthy marriage and relationship skills, helps participants identify signs of unhealthy and abusive relationships, and highlights the use of healthy relationship skills with romantic partners, peers, family members, and professionals through the implementation of a 12-hour workshop using an evidence-based curriculum for youth titled, *Relationship Smarts Plus* (RS+) (Pearson, 2018), with added components from *Mind Matters* (Curtis & Stolzenbach, 2017) and *Money Habitudes for Teens* (also evidence-based) (Solomon, 2009). Programs are implemented by experienced community educators at six local sites, as well as by trained undergraduate and graduate students from Auburn University, Auburn University at Montgomery, Alabama State University, and Tuskegee University who serve as “near-peer” facilitators in local high schools. The program covers material such as: communication skills, conflict resolution, anger management, self-regulation, problem-solving skills, identifying unhealthy and abusive relationships, effects of trauma, financial responsibility, mindfulness and self-care, and the value of healthy relationships and marriage. Each session of the program is discussion-based and interactive to provide insightful information and resources to youth as well as experiences and practices in an effort to promote healthy relationships. Data collection began in 2020 and continues presently.

Participants took part in three surveys: one before any implementation of relationship education took place, another on the last day of implementation, and the third one six months

following baseline collection. We utilized the baseline and the immediate post-program survey data for this study. The baseline survey obtained demographic information of the participant. All surveys contained measures of individual and relational well-being. All procedures are approved by the university Institutional Review Board.

Participants

The analytic sample consisted of 1,877 youth individuals across the state of Alabama who enrolled in the study through child's assent and parent's consent. Of the 1,877 participants, 55% are women, 41% are men, and 3% identify as non-binary, gender queer, transgender, or other. The average age of participants is 15 years and ranges from 14-19 years. Forty-five percent of participants are White, 43% are Black, 5% are Hispanic or Latinx, 1% are Asian, 4% are American Indian, and 2% reported other. In the current study, 43% reside in a nuclear family, 27% in a single parent family, and 30% in a blended or stepfamily. Participants reported education level of a mother or mother figure as 10% not completing high school, 27% have completed high school or received a GED, 20% have completed some college, 27% have completed a bachelor's degree, and 17% obtained an advanced degree. Participants reported education level of a father or father figure as 13% not completing high school, 37% have completed high school or received a GED, 19% have completed some college, 21% have completed a bachelor's degree, and 10% obtained an advanced degree.

Demographic Measures

Adoption. At baseline, participants answered the following question: "Are you adopted?" Participants answered "yes" or "no." In the sample of 1,877 youth, 50 (3.6%) are adopted. This variable was treated as categorical.

Gender. At baseline, participants responded to the following item: “I identify as (select all that apply).” Responses included: woman, man, non-binary or genderqueer, transgender, and other. This variable was treated as categorical.

Race. At baseline participants were asked “What is your race?” Participants selected all options that applied from White, Black, Hispanic or Latinx, Asian, Native Hawaiian Pacific Islander, American Indian or Alaskan Native, and Other. For the current study, race was re-coded into White and Minority (1, 0) for parsimony in group comparison analyses. In the full analytic sample, 45.2% of participants were White and 54.8% were non-White. This variable was treated as categorical.

GPA. At baseline, participants were asked “What is your GPA in school?” Participants indicated their GPA by choosing one of seven choices: below 1.0, 1.0 to 1.49, 1.50 to 1.99, 2.0 to 2.49, 2.50 to 2.99, 3.0 to 3.49, and 3.50 to 4.0. This variable was treated as continuous.

Family Type. At baseline, participants were also asked about their family type: “What type of family do you currently have?” Responses included: a nuclear family (both of your original biological/adoptive parents are currently in a relationship and living in the same house), a single parent family, and a blended or stepfamily. For the current study, family structure was re-coded into nuclear and non-nuclear (1, 0) for parsimony in group comparison analyses. In the full analytic sample, 43.4% of participants reside in a nuclear family and 56.6% of participants reside in a non-nuclear family. This variable was treated as categorical.

Family Education. At baseline, participants were asked two questions, one for their mother/ mother figure and one for their father/father figure: “What is the highest level of education completed by your mother or mother figure (and father or father figure)?” Participants chose from one of five answer choices: less than high school, complete high school/ GED, some

college, college graduate (Bachelor's degree), or advanced degree (Masters, Ph.D., M.D., etc.). This variable was treated as continuous.

Outcome Measures

Dating Violence Victimization and Perpetration. Participants were assessed on dating violence victimization and perpetration. Dating violence victimization was measured using four items from the Safe Dates Psychological and Physical Scales (Foshee et al., 1998; Neal & Edwards, 2015). Only participants who have been in a romantic relationship that lasted more than one month responded to these particular questions. Specifically, the dating violence victimization question is stated: "Please indicate how often in the last two weeks your current (or most recent) boyfriend/girlfriend did the following- NOT IN A PLAYFUL MANNER." Then, participants were asked questions about their boyfriend or girlfriend's recent behavior which included: "Pushed/grabbed/shoved you," "Threatened to hurt you," and "Sent threatening text messages or so many messages as to make you feel unsafe." Participants answered on a Likert-type scale that ranges from (0) "Never" to (3) "Very Often." The same four questions were asked in regard to their own behavior to assess dating violence perpetration and participants who have never been in a relationship for more than one month should not have responded. The respondent was asked to "indicate how often in the last two weeks YOU did the following to your current (or most recent) boyfriend/girlfriend - NOT IN A PLAYFUL MANNER." Scores were averaged; higher scores indicate more experience with dating violence victimization or perpetration. In the current sample the Cronbach's alpha coefficient for internal consistency of dating victimization was $\alpha = .84$ (good reliability) at baseline and $\alpha = .91$ (acceptable reliability) post-program. The Cronbach's alpha coefficient for internal consistency of dating perpetration

was $\alpha = .67$ (poor to moderate reliability) at baseline and $\alpha = .77$ (good reliability) post-program. Dating violence victimization and perpetration were treated as continuous.

Interpersonal Competence. To assess interpersonal competence, an adapted version of the Interpersonal Competence Questionnaire (ICQ-15) was used (Buhrmester et al.; Coroiu et al., 2015). Negative assertion and emotional support items were adapted to be gender neutral. Participants were asked nine items regarding interpersonal competence representing three dimensions: negative assertion, conflict management, and emotional support. Participants were to indicate how well they believe they would handle certain situations. Examples of these questions include: “Telling a date/acquaintance that he/she has done something that made you angry” (negative assertion); “Being able to admit that you might be wrong when a disagreement with a close companion begins to build into a serious fight” (conflict management); “Helping a close companion get to the heart of the problem he/she is experiencing” (emotional support). Participants answered on a Likert-type scale that ranged from (1) “I am poor at this” to (5) “I’m extremely good at this.” Mean scores were calculated; higher scores indicate greater interpersonal competence. In the current sample, the Cronbach’s alpha coefficient for internal consistency is $\alpha = .72$ (good reliability) at baseline and $\alpha = .81$ (good reliability) post-program. Interpersonal competence was treated as continuous.

Family Harmony. To examine family harmony, a global item from the *Family Harmony Measure* (Banker & Gaertner, 1998) was used. Participants were asked to think about their family as they rate how much they agree with a global statement: “Generally, there is a feeling of contentment and happiness in my house.” Responses range from (1) “Strongly disagree” to (5) “Strongly agree.” A higher score indicates greater family harmony. Family harmony was treated as continuous.

Mental Health. Participants were asked five questions to assess mental health, using the *Mental Health Inventory* questionnaire (Cuijpers et al., 2009; Ware et al., 1992). Responses indicated how much of the time during the past two weeks several experiences occurred. Questions included: “Did you consider yourself to be a very nervous person,” “Did you feel downhearted,” “Did you feel calm and peaceful,” “Did you feel so down in the dumps that nothing could cheer you up,” “Did you consider yourself to be a happy person.” Participants answer on a Likert-type scale that ranges from (1) “All of the time” to (6) “None of the time.” After reversing the answers to two items (the third and fifth), mean scores were calculated. Higher scores indicate better mental health state. In the current sample, the Cronbach’s alpha coefficient for internal consistency is $\alpha = .77$ (good reliability) at baseline and $\alpha = .71$ (good reliability) post-program. Mental health was treated as continuous.

Relationship termination. Participants were asked three items regarding being in or leaving an unhealthy relationship since completing the program. Items included: “Have you ended a relationship that was emotionally unhealthy or abusive,” “Have you ended a relationship that was just not working for you,” and “Have you ended a relationship that was physically unhealthy or abusive.” Responses include “yes,” “no,” and “I am not in this type of relationship.” The proportion of “yes” responses to each question will be compared between adoptive and nonadoptive youth. Termination of each type of relationship was treated as categorical.

Analytic Strategy

To test RQ 1 which assessed demographic differences between adoptive and nonadoptive youth at program start on measures of gender, race, GPA, family type, and parent’s education level, we ran a series of one-way analysis of variance (ANOVA) models, with adoption status as the grouping variable. All cases were used ($n = 1,877$). Because of the large imbalance of groups

(97% nonadoptive youth; 3% adoptive youth), optimal pair matching using the “MatchIt” package (Ho et al., 2007) in R program (R Core Team, 2020) was then utilized for the comparisons in RQs 2 and 3 to select a random sample of nonadoptive youth using demographic matching variables with adoptive youth (i.e., gender, race, GPA, family type, and parent education level) with a ratio of 3 to 1 (nonadoptive/ adoptive). Differences were not found on any of the variables included to match when groups were compared at this ratio. This enhances the ability to detect differences in outcomes between groups and simultaneously controls for any differences in these demographics that may exist between groups. The standardized mean differences were used to assess balance between samples.

To test RQ2 which assessed differences between adoptive and nonadoptive youth in dating violence victimization and perpetration, interpersonal competence, family harmony, and mental health at relationship education program start, we utilized the match sample and performed a series of one-way ANOVA models, using adoption status as the grouping variable. Further, for dating violence victimization and perpetration, we created categorical variables and ran crosstab with chi-square tests to compare groups on occurrence of dating violence. To test RQ3 which assessed differences between adoptive and non-adoptive youth on indicators of individual and relational well-being at relationship education program end, we performed a series of block enter multiple regression models. In each model an individual outcome variable (i.e., dating violence victimization and perpetration, interpersonal competence, family harmony, or mental health) at post-program was entered as the dependent variable. Block 1 included the baseline level of the outcome; Block 2 included adoption status as the predictor (i.e., adoptive/non-adoptive, dummy coded). If adoption status predicted change in the outcome, we further tested whether there were statistically significant shifts from baseline to post-program in

each group using paired sample t-tests. To test RQ4, we utilized the full sample (n=1374) of each adoption status group and ran cross tab with chi square difference tests to compare the proportions of those who reported leaving an unhealthy relationship in each adoption status group. The test was conducted for each of the items asking about relationship termination (i.e., emotionally unhealthy or abusive, just not working, or physically unhealthy or abusive).

CHAPTER IV: Results

Preliminary Analyses

Descriptive statistics of demographic study variables across the full analytic sample and adoptive and nonadoptive program participant sample are reported in Table 1. Descriptive statistics of outcome variables across the matched analytic sample of adoptive and nonadoptive program participants at baseline and post-program are reported in Table 2. At baseline, the distributions based on adoption status in the matched analytic sample are not normally distributed for measures of dating violence victimization and dating violence perpetration, as the kurtosis and skewness statistics do not fall between -2 and +2 (George & Mallery, 2010). This is expected since a large majority of romantic relationships do not have occurrences of dating violence; thus, responses on measures of relationship violence in a nonclinical sample skew towards “never” (e.g., Yamawaki et al., 2012). However, the distributions in the matched analytic sample, at baseline, are normally distributed for measures of interpersonal competence, family harmony, and mental health as the kurtosis and skewness statistics fall between -2 and +2. Race was re-coded into White and Minority (1,0; 45.2% White, 54.8% non-White) and family structure into nuclear and nonnuclear (1,0; 43.4% nuclear, 56.6% non-nuclear) for parsimony in group comparison analyses. Before conducting ANOVA models, crosstabs with chi-square tests, and regression models for research questions 2 and 3, we created an analytic sample appropriate for comparisons by using adaptive propensity score matching which created more balance between the two groups. This resulted in a sample size of 200; 50 adoptive youth and 150 nonadoptive matched youth. Group comparisons were conducted at different ratios to include as many participants in the sample as possible, and differences were not found on any of the variables included to match, at a 3 to 1 ratio.

Research Question 1 – Baseline Demographic Differences between Adoptive and Nonadoptive Youth

Research Question 1 explored the demographic differences between adoptive and nonadoptive youth at program start using the full analytic sample. Results demonstrated by one-way ANOVA for baseline demographic comparisons between adoptive (N=50) and nonadoptive (N=1324) groups are displayed in Table 3. There were no significant differences between adoptive and nonadoptive participants at baseline for mother's education level ($F(1,1345) = .326, p = .568$), father's education level ($F(1,1313) = 1.75, p = .186$), and GPA ($F(1,1279) = 3.45, p = .063$).

For categorical variables, crosstabs with a Chi-square test for independence were conducted to compare proportions of gender, race, and family structure between adoptive and nonadoptive youth; results are presented in Table 4. All expected cell frequencies were greater than five. There were not statistically significant differences between adoptive and non-adoptive youth on family structure ($X^2(1, n = 1351) = .009, p = .924, \phi = -.003$) and race ($X^2(1, n = 1352) = .039, p = .844, \phi = .005$); however, results do indicate significant differences between adoptive and nonadoptive participants at baseline on gender ($X^2(4, n = 1372) = 15.174, p = .004, \phi = .105$). Specifically, the adoptive participants were more likely to be women (60% vs. 56.3% for non-adoptive); less likely to be men (32% vs. 40.2% for non-adoptive); less likely to be non-binary or gender queer (2% vs. 2.6% for non-adoptive); more likely to be transgender (2% vs <1% for non-adoptive); and more likely to be some other gender (4% vs <1% for non-adoptive).

Overall, these results indicate no statistically significant differences on demographics of age, race, family structure, mother's education level, father's education level, and GPA between

adoptive and nonadoptive participants, but statistically significant differences were found for gender. Due to the large imbalance between the adoptive (N=50) and nonadoptive (N= 1,327) groups, we recognized differences may be harder to detect between groups.

Research Question 2 – Baseline Differences between Adoptive and Nonadoptive Youth on Dating Violence Victimization and Perpetration, Interpersonal Competence, Family Harmony, and Mental Health

Research Question 2 explored the differences between adoptive and nonadoptive youth at program start on measures of dating violence victimization and perpetration, interpersonal competence, family harmony, and mental health using the matched sample. Results as demonstrated by one-way ANOVA for baseline outcome differences between adoptive (N=50) and nonadoptive (N=150) groups are presented in Table 5. There were no statistically significant differences between adoptive and nonadoptive participants at baseline for mean level of interpersonal competence ($F(1,198) = 1.173, p = .28$), family harmony ($F(1,168) = .744, p = .39$), or mental health ($F(1,198) = 2.66, p = .105$). As expected, the skewness and kurtosis were not normally distributed, however there were statistically significant differences between adoptive and nonadoptive participants at baseline for dating violence victimization ($F(1,141) = 4.385, p = .038$) and dating violence perpetration ($F(1,141) = 8.633, p = .004$). Based on responses of dating violence victimization ranging from “never” to “very often”, adoptive youth reported greater frequency of dating violence victimization ($M = .36, SD = .60$) compared to nonadoptive youth ($M = .17, SD = .47$). This indicates adoptive youth are more likely than nonadoptive youth to experience victimization in dating relationships such as being slapped, being pushed/grabbed/shoved, being sent threatening messages or so many messages as to feel unsafe, or being threatened to be hurt. In addition, results indicate a greater frequency of

occurrence of dating violence perpetration for adoptive youth ($M = .22$, $SD = .42$) compared to nonadoptive youth ($M = .07$, $SD = .22$). This means adoptive youth are also more likely than nonadoptive youth to be the perpetrator in dating relationships and commit acts of dating violence such as slapping their partner, pushing/ grabbing/ shoving their partner, sending threatening text messages or so many messages as to make their partner feel unsafe, or threatening to hurt their partner.

In addition, categorical variables were created for dating violence victimization and perpetration and crosstabs with chi-square tests (results presented in Table 6) were run to compare proportions of participants who had experienced dating violence at any frequency (i.e., rarely, sometimes, very often) versus never. Among the adoptive participants, 30.2% ($n=13$) indicated some occurrence of dating violence victimization while only 13% ($n=13$) of the nonadoptive participants indicated being victims to dating violence. On the other hand, among the adoptive participants, 69.8% ($n=30$) indicated never experiencing dating violence victimization, while 87% ($n=87$) of the nonadoptive participants report no dating violence victimization in their romantic relationship. According to the chi-square tests, these results are statistically significant ($p = 0.014$). Thus, at baseline, adoptive participants were more likely to have experienced dating violence victimization compared to nonadoptive participants. Among the adoptive youth, 21% ($n=9$) reported some level of dating violence perpetration in their relationship, compared to 7% ($n=7$) of nonadoptive youth who reported committing some level of dating violence in their romantic relationship. On the other hand, 79% ($n=34$) of the adoptive youth indicated never committing acts of dating violence, while 93% ($n=93$) of nonadoptive youth reported no dating violence perpetration in their romantic relationship. According to the chi-square tests, these results are statistically significant ($p = 0.015$). Thus, at baseline adoptive

participants were more likely to have committed acts of dating violence in their romantic relationship compared to nonadoptive participants.

Research Question 3 – Post-program Differences between Adoptive and Nonadoptive Youth on Dating Violence Victimization and Perpetration, Interpersonal Competence, Family Harmony, and Mental Health

Research Question 3 assessed post-program differences between adoptive and nonadoptive youth on dating violence victimization and perpetration, interpersonal competence, family harmony, and mental health using hierarchical multiple linear regression. Each individual outcome (i.e., dating violence victimization and perpetration, interpersonal competence, family harmony, or mental health) post-program (T2) was regressed onto the same outcome variable at baseline (T1) at Block 1, and onto adoption status at Block 2. The first block controlled for pre-program levels of post-program outcomes, indicating residual change and the second block examined associations between this post-program outcome and adoption status. Results are described in detail below and all parameter estimates from the analyses are displayed in Table 7.

Dating Violence Victimization. In Block 2, the additive model, adoption status statistically significantly predicted post-program dating violence victimization [$\beta = .256, p = .05$], accounting for baseline level of dating victimization, indicating adoptive participants reported greater increases. In Block 2, the baseline dating violence victimization 95% confidence interval was from .144 to .647 and is statistically significant. This indicates change in dating violence victimization was predicted by adoption status, with adoptive participants indicating more frequent acts of dating violence victimization after program participation. We utilized paired sample t-tests to explore this finding further but found that change over time within adoptive and nonadoptive groups was not statistically significant for either group; results are

displayed in Table 8. Baseline dating violence victimization explains 12.6% of the variance; the total variance explained by the model was 16.3%. This indicates adoption status explains an additional 3.7% of the variance in post-program dating violence victimization, after accounting for baseline. The change is statistically significant ($R^2 = .163$, F change (1, 89) = 3.867, $p = .052$) indicating adoption status contributes uniquely to predicting variance in dating violence victimization increases.

Dating Violence Perpetration. In Block 2, the additive model, adoption status did not statistically significantly predict post-program dating violence perpetration [$\beta = .143$, $p = .256$], accounting for baseline dating violence perpetration. In Block 2, the baseline dating violence perpetration 95% confidence interval was from -.016 to .739 and is not statistically significant. Baseline dating violence perpetration explains 5.7% of the variance; the total variance explained by the model was 7%. This indicates adoption status explains an additional 1.3% of the variance in post-program dating violence perpetration, after accounting for baseline. The change in R^2 , however, is not statistically significant ($R^2 = .07$, F change (1, 89) = 1.309, $p = .256$).

Interpersonal Competence. In Block 2, the additive model, adoption status statistically significantly predicted post-program interpersonal competence [$\beta = -.279$, $p = .009$], accounting for baseline interpersonal competence, such that nonadoptive participants changed more. In Block 2, the baseline interpersonal competence 95% confidence interval was from .37 to .693 and is statistically significant. This indicates change in interpersonal competence post-program was predicted by adoption status. Based on responses of interpersonal competence ranging from “I am poor at this” to “I am extremely good at this,” and within-group paired-sample t-tests (results displayed in Table 8), we also found that that the nonadoptive group significantly improved in ratings of interpersonal competence (3.24 baseline versus 3.44 post-program; $t = -$

4.22, $p < .000$), while adoptive youth did not. Baseline interpersonal competence explains 20.8% of the variance; the total variance explained by the model was 24.5%. This indicates adoption status explains an additional 3.7% of the variance in post-program interpersonal competence, after accounting for baseline. The change in R^2 is statistically significant ($R^2 = .245$, F change (1, 143) = 6.997, $p = .009$) indicating that adoption status contributes uniquely to the explanation of the variance in interpersonal competence change.

Family Harmony. In Block 2, the additive model, adoption status did not statistically significantly predict post-program family harmony [$\beta = -.384$, $p = .060$], accounting for baseline family harmony. In Block 2, the baseline family harmony 95% confidence interval was from .4182 to .719 and is statistically significant. Baseline family harmony explains 33.9% of the variance; the total variance explained by the model was 36%. This indicates adoption status explains an additional 2.1% of the variance in post-program family harmony, after accounting for baseline. The change in R^2 , however, is not statistically significant ($R^2 = .36$, F change (1, 108) = 3.505, $p = .064$).

Mental Health. In Block 2, the additive model, adoption status did not statistically significantly predict post-program mental health [$\beta = .024$, $p = .871$]. In Block 2, the baseline mental health 95% confidence interval was from .449 to .695 and is statistically significant. Baseline mental health explains 38.6% of the variance; the total variance explained by the model was 38.6%. This indicates adoption status explains no additional variance in post-program mental health, after accounting for baseline. The change in R^2 is not statistically significant ($R^2 = .386$, F change (1, 137) = .027, $p = .871$).

Research Question 4 – Post-program Differences Proportionally between Adoptive and Nonadoptive Youth on Relationship Tolerance

Research question 4 used chi-square statistics to compare proportions of those who reported leaving an unhealthy relationship after program completion between the full sample of adoptive and nonadoptive youth based on relationship termination of three types of relationships (i.e., emotionally unhealthy or abusive, “just not working”, or physically unhealthy or abusive). To avoid relying on just the matched participants to represent all of the nonadoptive participants in unhealthy relationships within our study, we utilized the full sample for this research question. Results of crosstabs with chi-square tests for unhealthy relationship termination based on adoption status are presented in Table 9. Prior to running these analyses, participants who indicated not being in each type of unhealthy relationship were removed (n= 271 for emotionally unhealthy; n = 353 for relationship “just not working”; n= 238 for physically unhealthy). For the analyses of terminating an emotionally unhealthy relationship 15 were adoptive and 256 were nonadoptive. For the analyses of terminating a relationship that was “just not working” 14 were adoptive and 339 were nonadoptive. For the analyses of terminating a physically unhealthy or abusive relationship 10 were adoptive and 228 were nonadoptive.

In regard to an emotionally unhealthy relationship, findings indicate a statistically significant difference at 5% significance level between adoption status groups and the termination of an emotionally unhealthy or abusive relationship post-program ($X^2 = 4.072$, $df = 1$, $p = .044$). Overall, 41.7% (n=113) of participants in an emotionally unhealthy relationship indicate relationship termination, with a greater proportion of adoptive participants in an emotionally unhealthy relationship terminating the relationship. Specifically, 66.7% (n=10) of adoptive youth who were in an emotionally unhealthy or abusive relationship reported relationship termination, while 40.2% (n=103) of nonadoptive youth who were in an emotionally unhealthy or abusive relationship reported leaving the relationship. Conversely, 33.3% (n=5) of

adoptive youth indicated not leaving their emotionally unhealthy relationship, while 59.8% (n=153) of nonadoptive youth did not terminate their emotionally unhealthy relationship. There were not statistically significant differences between adoptive and nonadoptive youth on proportions of youth terminating a relationship that was “just not working” ($X^2 = .864$, $df = 1$, $p = .353$; 64.3% of adoptive youth terminated and 51.6% of nonadoptive youth terminated) or terminating a physically unhealthy or abusive relationship ($X^2 = .152$, $df = 1$, $p = .697$; 30% of adoptive youth terminated and 24.6% of nonadoptive youth terminated).

CHAPTER V: Discussion

Although increasing numbers of studies have focused on youth relationship education (YRE) (e.g., Adler-Baeder et al., 2007; McElwain et al., 2017; Simpson et al., 2018; Huntington et al., 2021), no study to date has considered the effect of adoption status in the context of YRE experiences. The current study expanded the literature on YRE evaluations by examining differences in start point and changes based on adoption status in dating violence victimization and perpetration, interpersonal competence, family harmony, and mental health among adoptive and nonadoptive individuals who participated in a relationship education program in Alabama. Comparing adoptive and nonadoptive groups, our study indicated adoptive youth have, on average, more frequent experiences of dating violence victimization and perpetration at baseline, but otherwise, were similar to nonadoptive participants in terms of their mental health, interpersonal competence, and family harmony reported. We also found that the groups were mostly similar demographically in our sample, with the exception of some differences in gender proportions. Importantly, a main focus of the study was to examine adoption status influence on the patterns of change in the outcome variables of interest pre-program to post-program, since there are some indications that characteristics of participants may influence program effectiveness (e.g., Kerpelman et al., 2010; Sparks et al., 2011; Simpson et al., 2018; Futris et al., 2017). This study was novel as it was the first to find evidence that adoption status can predict some post-program outcomes. Being adopted was related to greater increases in reported dating violence victimization (although there was not significant change, on average, for either group over time); further, nonadoptive youth experienced greater change in interpersonal competence post-program and experienced a significant improvement in this key outcome area, while adoptive participants did not. Notably, of those in an emotionally unhealthy or abusive

relationship, adoptive youth were more likely to terminate their relationship after participating in the YRE program compared to nonadoptive youth. No differences in relationship termination for physically unhealthy/abusive and for relationships “just not working” were detected between groups. We discuss these findings and their relevance to the study and practice of YRE in the sections to follow.

Baseline Demographic Differences. As noted, the only demographic difference found between adoptive and nonadoptive youth at baseline, was in gender proportions. Specifically, there were more adoptive girls than nonadoptive girls proportionately and less adoptive boys than nonadoptive boys. While this may just be an anomaly of this sample, this is consistent with findings of a study exploring sex preferences of adoptive parents which found adoptive children were more often girls compared to nonadoptive children (Gibby & Thomas, 2019), especially with international adoptions. In certain countries (i.e., China and India), girls are placed up for adoption more often than boys due to son preference (Chen et al., 2015) or child policy laws. In addition, scholars have found couples considering adoption favored girls over boys (e.g., Baccara et al., 2010; Department of Economic and Social Affairs, 2009) for various reasons including an “inexplicable desire for a girl,” perceived characteristics of girls, and perceived characteristics of the parent-daughter relationship (Goldberg, 2009). Further, a study exploring length of stay in foster care based on child characteristics found boys were less likely to find permanency out of foster care compared to girls (Kemp & Bodonyi, 2000). Any of these reasons could explain the gender differences found in our study between the adoptive and nonadoptive groups.

No differences were found on race, family structure, GPA, and parent’s education level between adoptive and nonadoptive youth. The results also showed adoptive and nonadoptive youth are performing similarly in their academics, which could indicate both groups in our

sample are receiving the same level of resources and support in the school context. The average student in both groups was performing at about a high C-level or low B-level, which indicates standard performance in academics across both groups. Based on the literature, we did expect to find some other demographic differences since previous research notes that a higher proportion of adoptive parents are White, well-educated (i.e., college degree), middle-upper socioeconomic status, in mid to late 40s, and working full-time (e.g., Simon & Farr, 2021; Kreider & Lofquist, 2014). It is highly likely in our study that the imbalance of adoptive and nonadoptive youth in the sample resulted in insufficient power to detect differences that may exist. The comparison is driven by the smallest group size; therefore, a larger sampling of adoptive YRE participants may yield different comparative results.

Baseline Differences in Functioning. Interestingly, our finding of similar start points, on average, in individual and family functioning were inconsistent with previous research on mental health of adoptive youth, which indicates higher rates of mental health issues and mental health visits/referrals for adoptees (e.g., Fisher, 2015; Juffer & IJzendoorn, 2005; Smith & Brodzinsky, 1994; Herrenjohl et al., 2016; Borders et al., 2001). However, all of these studies occurred prior to the COVID-19 pandemic. The global rise in mental health issues post-pandemic for both parents and youth (Fitzpatrick et al., 2021), could have created more challenges and essentially leveled mental health issues amongst adoptive and nonadoptive youth. Different from most other studies comparing adoptive and nonadoptive youth, in our study analyses, adoptive and nonadoptive participants were matched on demographic characteristics to isolate adoption status; therefore, other demographic differences (socioeconomic status, geographic location, family structure, race, etc.) that may exist between groups in other studies could explain the difference in mental health issues found in those. In our study, participants reported an average score of

3.15 for mental health, on a scale ranging from one to six. A “3” represents experiences of mental health challenges “some of the time”; thus, the average student is experiencing medium levels of mental health issues. Further, since no differences were found on family harmony and the average score was 3.59 on a scale of 1-6, this could indicate similar family environments which could also contribute to the reasons mental health does not differ between adoptive and nonadoptive youth.

Of note, we did find that adoptive youth reported more dating violence victimization and dating violence perpetration in their romantic relationships. At baseline, 30% of adoptive participants report experiences of dating violence victimization in their dating relationship, compared to only 13% of nonadoptive participants. In addition, 21% of adoptive participants report committing acts of dating violence in their romantic relationship, compared to only 7% of nonadoptive participants. Because this was the sample matched on other demographic factors, it appears that adoption status could be an explanation for this. As the literature indicates, adoptees tend to come from a background with traumatic experiences (e.g., Fisher, 2015; Carnes-Holt, 2012; Purvis et al., 2007), which could involve a single incident, or chronic and complex trauma with numerous incidents occurring over time (Hartinger-Saunders et al., 2019). Further, adoptive individuals (especially those adopted from the child welfare system) bring additional challenges to their adoptive families due to the greater likelihood of a complex traumatic history. These past traumas for some could present feelings of abandonment and being unwanted which could cause higher levels of both dating violence victimization and perpetration. That is, the desire for belonging could convince an individual to accept acts of dating violence victimization in their relationship (Wolford-Clevenger et al., 2016); it could also influence their actions to commit

dating violence towards their partner in an effort to gain control over him or her (Zweig et al., 2014).

In addition, past traumas for some could include experiences of domestic violence in their home, making an individual feel that violence is normal and even expected in romantic relationships. Further, individuals who have experienced child abuse or a witness to domestic violence have increased chances of both being victim to domestic violence and the perpetrator of domestic violence (e.g., O’Keefe, 1998; Gómez, 2011). Based on the literature, adoptive youth tend to have less social support from friends and family compared to nonadoptive individuals (e.g., Borders, et al., 2001). Less social support could evidence acceptance of dating violence in their romantic relationship because they do not want to be lonely or because there may not be anyone to recognize and address the warning signs in the relationship. This is more likely an explanation when children are adopted at an older age. In our data, we did not have any information on age of adoption and trauma histories, therefore, we can only offer this speculation as a possible explanation for the differences observed.

We do also note another possible practical explanation and a methodological consideration. Frequencies were run on proportions of adoptive and nonadoptive youth who are currently in dating relationships. Greater proportions of adoptive youth (57%) indicated currently (post-program) being in a romantic relationship compared to nonadoptive youth (31%), which does allow for greater frequencies of dating violence victimization to exist. However, we also note a methodological issue with this item which prompts the youth to respond about their current relationship in the last 2 weeks, “or a previous relationship.” Thus, it is not clear whether this double-barreled item is capturing the current relationship or previous or both. It does seem

that in our sample that adoptive youth may have more dating experiences than nonadoptive, and this may partially explain the larger proportion reporting dating violence experiences.

This finding of the enhanced prevalence of dating violence experience among a subgroup of participants reminds us of the importance of a trauma-informed approach to YRE. Certain areas of the content in the curricula could be triggering to those with past trauma. For example, discussing dating violence, red flags in a relationship, or effects of trauma on the brain could potentially trigger those with previous violence experience. Training educators to use trigger warnings and having strategies and resources in place for students to utilize is critical.

The Influence of Adoption Status on Post-program Changes in Functioning. As noted, significant associations were found between adoption status and two key outcome variables, dating violence victimization and interpersonal competence, post-program. Unfortunately, results from our study indicate poorer outcomes on both measures (dating violence victimization and interpersonal competence) for the adoptive group. Importantly, while adoption status was related linearly to increases in reports of dating violence victimization post-program, for neither group was there a significant increase from baseline to post-program (i.e., experiences of being slapped, pushed/grabbed/shoved, sent threatening text messages or so many texts as to make them feel unsafe, or were threatened to be hurt by their partner), so there is no evidence that, as a group, dating violence victimization was experienced significantly more following the program. Although there are no improvements displayed among our participants pre- to post-program, fortunately, there are no signs of worsening conditions for either group from the YRE program.

The nonadoptive group, however, did experience significant improvements in interpersonal competence post-program, a key target outcome of YRE, while the small sample of

adoptive participants did not. Some research indicates that adoptive youth may have more trouble trusting others and feeling safe in relationships (Carnes-Holt, 2012); therefore, this finding could be evidence of additional work needed to gain more interpersonal skills. On average, nonadoptive youth may have an easier experience interacting and building relationships with others and acquiring new relational skills more quickly. After losing one or both biological parents, adoptive youth could fear being alone or losing another companion, especially considering the risk of poorer attachment styles of adoptive individuals evidenced in the literature (e.g., Harlow, 2019). Specifically, our interpersonal competence measure assessed ability to confront your close companion when they have broken a promise, express feelings of being hurt or angry, and being able to take a companion's perspective in a fight and really understand their point of view. Whether related to unhealthy attachment styles or to added stressors often present in adoptive individuals' lives (Li & Chan, 2012; Grotevant & McDermott, 2014), directly communicating such emotions, confronting their partner in conflict, or understanding the other's perspective may be more difficult and require more skills training for the average adoptive youth. Emotional pain or trauma that adoptive youth may have endured could create challenges in expressing feelings or being able to support their companion. In addition, adoptive youth may feel more anxious or may feel as though they must put others' needs before their own, which could explain the greater changes in interpersonal competence for the nonadoptive group that includes assertiveness regarding one's needs in a relationship.

Relationship Termination. Since not all participants were in an unhealthy or abusive relationship, the samples for unhealthy relationship termination analyses were small, especially for the adoptive group; still, differences were found between adoptive and nonadoptive youth when proportionately comparing relationship termination of an emotionally unhealthy or abusive

romantic relationship. More adoptive youth, proportionately, compared to nonadoptive youth terminated an emotionally unhealthy or abusive relationship, which could imply some program benefits. Physically unhealthy warning signs may have been more commonly understood amongst teens prior to program participation; however, their awareness of emotionally unhealthy warning signs could have broadened during the program. Emotional closeness is developed in the early stages of attachment; emotional development of adoptive youth may have been negatively impacted due to unhealthy attachments or past trauma. With potential higher risk of poor attachment in earlier life, adoptive youth may have had emotional development delays (Grotevant & McDermott, 2014); thus, they may have gained more knowledge in the program regarding emotionally unhealthy relationships compared to nonadoptive youth who may have already understood emotionally unhealthy warning signs. Adoptive youth becoming more knowledgeable about unhealthy relationships could explain the greater rate of emotionally unhealthy relationship termination amongst the adoptive group compared to the nonadoptive group.

It is important to note, proportionately, more of the adoptive youth, compared to nonadoptive youth, were in all three types of unhealthy relationships: emotionally unhealthy (30% adoptive, n=15; 19.3% nonadoptive, n=256), physically unhealthy (20% adoptive, n=10; 17.2% nonadoptive, n=228), and “just not working” (28% adoptive, n=14; 25.6% nonadoptive, n=339). Differences were not found between adoptive and nonadoptive groups for termination of a relationship that was “just not working” or a physically unhealthy or abusive relationship. Overall, with such a small adoptive sample for these analyses power is reduced; thus, future replications are needed to confirm these results or distinguish whether the finding of differences was an artifact in the data.

Limitations

While many strengths exist in the current study through its use of a diverse sample of youth and novel attention to adoption status, there are some limitations that can be considered. The current study is limited in that all of the measures utilized were self-report, which allows for biases that may not reflect accurate experiences prior to and after participation in the program. Another limitation of the current study is the lack of specific information regarding each adoption such as age at adoption, recency of adoption, background information on the child prior to adoption (i.e., being in foster care, death of parent(s), abandonment), type of adoption (i.e., domestic or international), being adopted by one or two non-biological parents, or adoption with siblings. We also do not have early attachment information for this sample of youth. Since the current study utilized a secondary analysis approach to an existing dataset, questions were not able to be altered to accommodate these other important factors. Knowing more about each adoption would provide more insight into the specific experiences of each individual and the possibility of distinctions among adoptive youth and differing experiences within group in the context of the YRE program. Due to restrictions of data collection in one state, generalizability is another limitation of the current study. Lastly, the limited number of adoptive individuals presents a significant limitation to the study. Although, to examine differences between adoptive and nonadoptive youth over time, we balanced out the two groups and matched participants on demographic characteristics, this decreased the overall sample size, making it more challenging to detect differences between groups if they do exist. And clearly the large imbalance of groups to test for baseline demographic differences and differences in unhealthy relationship termination, limited our ability to detect differences if they exist. Oversampling of adoptive

youth in future studies can help further develop the literature on adoptive youth's experiences in YRE.

Practical Implications and Future Directions

We cautiously offer some practical implications for YRE programs and those who work with adopted individuals from this initial study. It is expected that professionals implementing YRE programs will have interest in our findings which indicate some positive post-program outcomes for adoptive individuals, and others that are not desired but inform practice. With our knowledge of potential trauma present in an adoptee's life (e.g., Fisher, 2015; Carnes-Holt, 2012), we recommend, as previously noted, trauma-informed trainings for program facilitators that include an understanding of adoptees' experiences, implications on the child's life, and skills and resources for navigating past trauma arising in conversation in the classroom setting. Because both adoptive and nonadoptive youth may have experienced or are currently experiencing trauma, trauma-informed training should be prioritized and promoted to professionals working with youth in YRE programs. It is not expected that YRE facilitators are skilled clinicians; however, there are trainings in trauma first aid in the classroom setting that could be incorporated in preparing educators (e.g., Mental Health First Aid USA, 2022). Noting the baseline differences between adoptive and nonadoptive youth in dating violence and the proportions stating they are currently in some type of unhealthy relationship; facilitators should be further trained to recognize signs of unhealthy or abusive relationship patterns and have an action plan when it is evident that a youth has/is a violent romantic partner. Regarding differences in skills gained for interpersonal competence among adoptive youth, facilitators are encouraged to provide more real-world examples and practice active listening and assertiveness skills with all participants. In addition, facilitators could also consider parental and sibling

figures that are non-biological in examples and discussions to create an even more inclusive classroom experience.

For future directions, as noted, we suggest that future studies explore program effects based on characteristics associated with adoption with a larger sample of adoptive youth, as well as more information regarding the individual's adoption (i.e., age at adoption, recency of adoption, type of adoption, background information, siblings, etc.). While some YRE studies have considered demographic characteristics of participants, no study to date has considered adoption status. Thus, we suggest taking more adoption factors into account and including a larger sample size for greater reliability and validity. It would also be interesting to explore sibling experiences of biological and adoptive sibling responses who participate in a YRE program, specifically on indicators of family harmony, mental health, and interpersonal competence. As these would most likely be small samples, qualitative assessments may reveal different experiences between adoptive and nonadoptive youth within the same household. Another suggestion for future research includes the effects of the COVID-19 pandemic on adoptive individuals and YRE. With the current state of the global pandemic, comparing effects of COVID on mental health and well-being, as well as parent-child relationships, between adoptive and nonadoptive families would be valuable. We also propose qualitative studies that look more in depth at YRE experiences of adoptive youth and include topics such as self-esteem, conflict management, relationship attitudes, expectations for their future, and facilitator connectedness.

Conclusions

The current study explored differences in baseline and changes post-program based on adoption status in dating violence victimization and perpetration, interpersonal competence,

family harmony, and mental health between a diverse sample of adoptive and nonadoptive youth who participated in a relationship education program in Alabama. Importantly, this study is the first to date to explore adoption status as a predictor of YRE effects. At baseline, greater frequencies of both dating violence victimization and dating violence perpetration are present for adoptive youth compared to nonadoptive youth. Results indicate being adopted seems to influence the amount of change in dating violence victimization post-program; however, no significant increases in dating violence victimization were found, over time, for either the adoptive or nonadoptive group. In addition, this study evidences indications of less benefit in a central YRE target outcome - interpersonal competence for adoptive youth. However, amounts of change were similar for adoptive youth in dating violence perpetration, family harmony, and mental health. Lastly, proportionately more adoptive youth compared to nonadoptive youth terminated an emotionally unhealthy or abusive relationship. Overall, the results inform curriculum development and facilitation skills, and trauma informed trainings are recommended for facilitators of YRE. This study opens the door to considering adoption status and its implications for participation in YRE. Efforts to assess diversity of youth experiences can lead to more well-informed best practices.

Appendix

Table 1.
Demographic Characteristics of Study Participants (T1)

	Full Analytic Sample (N=1877)		Adoptive Participants (N=50)		Nonadoptive Participants (N=1324)	
	N	%	N	%	N	%
Age (Mean)	15.4		15.69		15.42	
Gender						
Woman	843	55.4%	30	60.0%	774	56.3%
Man	625	41.1%	16	32.0%	531	40.2%
Non-binary or gender queer	36	2.4%	1	2.0%	35	2.6%
Transgender	9	0.6%	1	2.0%	7	0.5%
Other	9	0.6%	2	4.0%	5	0.4%
Race/Ethnicity						
White	685	45.2%	23	47.9%	606	46.5%
Black	642	42.3%	16	33.3%	539	41.3%
Hispanic or Latinx	68	4.5%	3	6.3%	58	4.4%
Asian	12	0.8%	2	4.2%	10	0.80%
Native Hawaiian Pacific Islander	37	2.4%	4	8.3%	28	2.1%
American Indian or Alaskan Native	66	4.4%			57	4.4%
Other	6	0.4%			6	0.5%
Family Structure						
Nuclear Family	589	43.4%	21	42.9%	567	43.5%
Single Parent Family	367	27.0%	9	18.4%	355	27.3%
Blended or Stepfamily	401	29.6%	19	38.8%	380	29.2%
Mother's Education						
Less than high school	131	9.5%	4	8.2%	121	9.3%
Completed high school/GED	368	26.6%	19	38.8%	343	26.4%
Some college	276	19.9%	6	12.2%	258	19.9%
College graduate	372	26.9%	10	20.4%	352	27.1%
Advanced degree	237	17.1%	10	20.4%	224	17.3%
Father's Education						
Less than high school	181	13.4%	7	14.9%	167	13.2%
Completed high school/GED	495	36.6%	21	44.7%	462	36.4%
Some college	254	18.8%	8	17.0%	237	18.7%
College graduate	289	21.4%	8	17.0%	273	21.5%
Advanced degree	134	9.9%	3	6.4%	129	10.2%
GPA						
Below 1.0	14	1.1%			14	1.1%
1.0 to 1.49	45	3.4%	5	10.2%	38	3.1%
1.50 to 1.99	51	3.9%	1	2.0%	46	3.7%
2.00 to 2.49	128	9.7%	6	12.2%	117	9.5%
2.5 to 2.99	198	15.0%	10	20.4%	180	14.6%
3.0 to 3.49	365	27.7%	12	24.5%	345	28.0%
3.5 to 4.0	515	39.1%	15	30.6%	492	39.9%

Table 2.

Descriptive Statistics of Outcome Variables at Baseline (T1) and Post-Program (T2)

Match Sample (N=200; 150 nonadoptive, 50 adoptive)						
Variable		<i>M</i> (SD)	Skewness (SE)	Kurtosis (SE)	Min	Max
Dating Violence Victimization	Time 1	.17 (.047)	4.123 (.241)	19.333 (.478)	0	3
		.36 (.092)	1.543 (.361)	1.444 (.709)	0	2
	Time 2	.14 (.058)	3.795(.293)	13.784 (.578)	0	2
		.50 (.133)	1.145 (.409)	-.310 (.798)	0	2
Dating Violence Perpetration	Time 1	.07 (.022)	4.411 (.241)	22.476 (.478)	0	2
		.22 (.065)	1.993 (.361)	3.026 (.709)	0	2
	Time 2	.12 (.061)	4.596 (.293)	21.321 (.578)	0	3
		.34 (.105)	1.660 (.409)	1.396 (.798)	0	2
Interpersonal Competence	Time 1	3.19 (.047)	.226 (.198)	-.160 (.394)	2	5
		3.29 (.081)	.155 (.337)	-.366 (.662)	2	5
	Time 2	3.44 (.058)	-.389 (.235)	1.223 (.465)	1	5
		3.23 (.118)	-.141 (.374)	.731 (.733)	1	5
Family Harmony	Time 1	3.62 (.091)	-.545 (.206)	-.185 (.410)	1	5
		3.44 (.215)	-.246 (.414)	-.798 (.809)	1	5
	Time 2	3.86 (.102)	-.801 (.243)	.375 (.481)	1	5
		3.37 (.181)	-.573 (.369)	-.242 (.724)	1	5
Mental Health	Time 1	3.08 (.082)	.399 (.198)	-.149 (.394)	1	6
		3.35 (.141)	.439 (.337)	-.063 (.662)	2	6
	Time 2	3.21 (.100)	.653 (.241)	.270 (.478)	1	6
		3.40 (.139)	.179 (.374)	.040 (.733)	2	5

Note. **Bold** = Adoptive. Time 1= Baseline; Time 2= Immediate post-program.

Table 3.

ANOVA for Baseline Demographic Comparisons Between Adoptive (N=50) and Nonadoptive (N=1324) Groups

Measure	Adoptive
	Mean (SD)
Mother's Education Level	3.06 (1.329)
Father's Education Level	2.55 (1.138)
GPA	5.39 (1.579)

Table 3.

ANOVA for Baseline Demographic Comparisons Between Adoptive (N=50) and Nonadoptive (N=1324) Groups

Measure	Adoptive	Nonadoptive	<i>F</i>	<i>p</i>
	Mean (SD)	Mean (SD)		
Mother's Education Level	3.06 (1.329)	3.17 (1.254)	0.326	0.568
Father's Education Level	2.55 (1.138)	2.79 (1.213)	1.750	0.186
GPA	5.39 (1.579)	5.77 (1.410)	3.450	0.063

Table 4.
Results of Crosstabs with Chi-Square Tests for Demographics

Outcome Variable	Adoption Status		Chi-Square Statistic	<i>p</i>
	Adoptive (N=50)	Nonadoptive (N=150)		
Gender			15.174	0.004**
Woman	30 (60%)	744 (56.3%)		
Man	16 (32%)	531 (40.2%)		
Non-binary or gender queer	1 (2%)	35 (2.6%)		
Transgender	1 (2%)	7 (0.5%)		
Other	2 (4%)	5 (0.4%)		
Race			0.039	0.844
White	23 (47.9%)	606 (46.5%)		
Non-white	25 (52.1%)	698 (53.5%)		
Family Structure			0.009	0.924
Nuclear	21 (42.9%)	567 (43.5%)		
Non-nuclear	28 (57.1%)	735 (54.4%)		

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

Table 5.

ANOVA for Baseline Outcome Differences Between Adoptive (N=50) and Nonadoptive (N=150) Groups

Measure	Adoptive	Nonadoptive	<i>F</i> (1,199)	<i>p</i>
	Mean (SD)	Mean (SD)		
Dating Violence Victimization	.36 (.601)	.17 (.469)	4.385	0.038*
Dating Violence Perpetration	.22 (.424)	.07 (.218)	8.633	0.004**
Interpersonal Competence	3.29 (.575)	3.19 (.570)	0.006	0.280
Family Harmony	3.44 (1.216)	3.62 (1.068)	0.744	0.390
Mental Health	3.35 (.996)	3.08 (1.008)	2.660	0.105

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

Table 6.

Results of Crosstabs with Chi-Square Tests for Occurrence of Dating Violence on Adoption Status

Outcome Variable	Adoption Status		Chi-Square Statistic	<i>p</i>
	Adoptive (N=50)	Nonadoptive (N=150)		
Dating Violence Victimization			6.003	0.014*
Never	30 (69.8%)	87 (87%)		
Some Occurrence	13 (30.2%)	13 (13%)		
Dating Violence Perpetration			5.872	0.015*
Never	34 (79.1%)	93 (93%)		
Some Occurrence	9 (20.9%)	7 (7%)		

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

Table 7.

Summary of Hierarchical Regression Analysis for Variables Predicting Adoption Status, Accounting for Baseline Levels, within Match Sample (N=200)

Outcome Variables	Block 1							Block 2						
	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	F for change in <i>R</i> ²	<i>B</i>	<i>SE B</i>	β	<i>t</i>	<i>p</i>	<i>R</i> ²	F for change in <i>R</i> ²
Dating Violence Victimization	0.452	0.125	0.356	3.609	0.001**	0.126	13.027**	0.256	0.130	0.196	1.966	0.052*	0.163	3.867*
Dating Violence Perpetration	0.424	0.182	0.238	2.328	0.022*	0.057	5.420*	0.143	0.125	0.122	1.144	0.256	0.070	1.309
Interpersonal Competence	0.509	0.083	0.456	6.142	< .001***	0.208	37.728***	-0.279	0.105	-0.193	-2.645	0.009**	0.245	6.997**
Family Harmony	0.573	0.077	0.582	7.473	< .001***	0.339	55.852***	-0.384	0.205	-0.144	-1.872	0.064	0.360	3.505
Mental Health	0.573	0.062	0.621	9.312	< .001***	0.386	86.708***	0.024	0.144	0.011	0.163	0.871	0.386	0.000

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

Table 8.

Paired Sample t-test Results Comparing Adoptive and Nonadoptive Change From Pre to Post-Program

Measure	n	Mean	SD	<i>t</i>	<i>df</i>	<i>p</i>
Dating Violence	33	0.50	0.616	-0.947	32	0.351
Victimization	59	0.15	0.506	-0.309	58	0.758
Interpersonal	40	3.23	0.744	1.007	39	0.320
Competence	106	3.44	0.598	-4.220	105	.000***

Note. **Bold** = Adoptive. *** $p < .001$

Table 9.

Results of Crosstabs with Chi-Square Tests for Unhealthy Relationship Termination Based on Adoption Status

Demographic Characteristic	Adoption Status		Chi-Square Statistic	<i>p</i>
	Adoptive (N=50)	Nonadoptive (N=1324)		
Emotionally Unhealthy Relationship			4.072	0.044*
Termination	10 (66.7%)	103 (40.2%)		
Remained in Relationship	5 (33.3%)	153 (59.8%)		
Just Not Working Relationship			0.864	0.353
Termination	9 (64.3%)	175 (51.6%)		
Remained in Relationship	5 (35.7%)	164 (48.4%)		
Physically Unhealthy Relationship			0.152	0.697
Termination	3 (30.0%)	56 (24.6%)		
Remained in Relationship	7 (70.0%)	172 (75.4%)		

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

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