Associations between family environment characteristics and mental health outcomes for youth in foster care: Residential versus traditional foster care placements

By

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Abstract

Foster care is meant to provide a safe, temporary out-of-home placement for children when biological caregivers are unable to care for them, yet little is known about how youth and foster caregivers perceive these new family environments and how characteristics may be impacting youth mental health. The current study evaluated youth and caregiver report of family cohesion, family conflict, family expressiveness, and youth externalizing and internalizing symptoms. The sample included 503 youth in foster care ($M = 13.15$ years old, $SD = 3.08$) and their caregivers. It was expected that family cohesion and expressiveness would be negatively associated and family conflict would be positively associated with youth internalizing and externalizing problems and that placement type (i.e., traditional foster home or residential) would moderate the associations. Researchers predicted youth would report significantly different mean scores for family environment variables compared to caregivers. The results indicated that youth and caregiver reports of family conflict were positively associated with externalizing problems. Additionally, caregiver and youth reports of family cohesion were negatively associated with internalizing problems, while youth report of family conflict was positively associated. Placement type did not moderate the association between family environment variables and youth mental health outcomes. Finally, caregivers reported significantly higher scores for family cohesion than youth. Results indicate that characteristics of the foster family environment are uniquely associated with youth mental health outcomes. Therefore, examination of foster family environments provides information of the additive impact on maladaptive outcomes for youth.
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Associations between family environment characteristics and mental health outcomes for youth in foster care: Residential versus traditional foster care placements

Childhood maltreatment is a growing public health concern, as approximately 679,000 instances of confirmed child maltreatment occurred in 2013 alone (U.S. Department of Health and Human Services, 2015). As a result of their exposure to abuse, many children are placed in foster care. For example, of the over 600,000 youth reported as abused in 2013, 402,378 children were placed in foster care that same year (U.S. Department of Health and Human Services, 2014). The intent of foster care is to provide the child with a safe and temporary out-of-home placement when their primary caregivers are unable to adequately care for them (Definitions, 2012). However, little is known in the scientific literature about the nature of the new foster family environments in which youth are placed. Given that youth in foster care often exhibit a range of mental health outcomes (Mills et al., 2013) and the caregiver-child relationship is significantly associated with youth mental health outcomes (Bannink, Broeren, van de Looij-Jansen, & Raat, 2013), it is imperative to establish how the quality of family environment in the foster care settings may contribute to foster youth adjustment.

Moreover, out-of-home placement or foster care can include several different kinds of settings (i.e., traditional non-relative foster home, kinship foster home, group home, residential facility); yet little is known about how youth and caregivers perceive the family environment in these new and varied kinds of placements. Therefore, the present study aimed to examine the qualities of the family environment in foster placements and investigate how the characteristics of foster environments are associated with the mental health outcomes of youth who have experienced child maltreatment.
Family environments with and without maltreatment histories

Literature on family environment suggests that how the family members interact with each other is important for youth adjustment (Dale et al., 2011; Guzder, Bond, Rabiau, Zelkowitz, & Rohar, 2011; Hasket, Stelter, Proffit, & Nice, 2012). The majority of research on the family environments of children who have experienced maltreatment has examined samples mostly consisting of biological family members. Within that literature, the common family environment constructs targeted for study are cohesion, expressiveness, and conflict among members for their role in youth adjustment.

*Cohesion and Expressiveness related to maltreatment*

Family cohesion is often defined as the emotional bond that family members report feeling toward each other (Olson, Russell, & Sprenkle, 1983) and family expressiveness is defined as the style of exhibiting verbal and nonverbal expressions within a family (Halberstadt, Cassidy, Stifter, Parke, & Fox, 1995). While there is little to no research measuring family cohesion and expressiveness in a foster care sample, there is a relatively consistent link between low levels of both family cohesion and expressiveness in biological families where youth experience child abuse. For example, a large effect size was found for the relation between child physical abuse and low family cohesion in a meta-analysis that looked at 155 studies examining risk factors associated with child abuse (Stith et al., 2009). Mollerstrom, Patchner, and Milner (1992) measured family environment and the potential for future abuse in a sample of maltreating parents and control parents, using the Family Environment Scale (FES) and Child Abuse Potential Inventory. Researchers found a significant inverse relationship between family cohesion and expressiveness on the FES and abuse scores, suggesting that a lack of positive relations between family members is related to potential future abuse. Finally, a link was also
found between sexual abuse and lower levels of family cohesion and expressiveness for families associated with father-daughter incest in comparison to control participant families (Dadds, Smith, Webber, & Robinson, 1991).

These studies show a significant relation between maltreatment and low family cohesion and expressiveness among the youth’s biological family environment (Dadds et al., 1991; Mollerstrom et al., 1992; Stith et al., 2009). Given that these studies relied on biological parent report, the results, however, may be somewhat of an underestimate of the relations as the caregiver included in the study may also have been the perpetrator of the abuse and may have been less inclined to be completely forthcoming about the nature of their family environment. While studies have found a consistent link between maltreatment and low family cohesion and expressiveness in families with histories of maltreatment, it is important to also examine whether these family environment variables in foster families impact youth mental health and if this association differs based on the type of placement foster youth live in.

Cohesion and Expressiveness related to youth mental health

Due to the high percentage of mental health implications for youth who have experienced maltreatment, it is important to examine whether characteristics of family environments contribute to youth mental health. For families that have no history of maltreatment, research has shown that higher levels of family cohesion and expressiveness may relate to positive mental health outcomes. Guzder and colleagues (2011) found high levels of family cohesion and expressiveness were associated with improved levels of youth mental health in a longitudinal study of families whose child was receiving treatment at a psychiatric day hospital. Furthermore, in a study that sampled biological parent reports of children, with no abuse history, who were in the low range for behavioral problems on the Child Behavior
Checklist (CBCL), the parents reported higher mean scores for both cohesion and expressiveness on the Family Environment Scale, in comparison to parents whose children were in the high range for behavioral problems on the CBCL (Dale et al., 2011). Finally, in a sample of children with maltreatment histories, the parents’ ability to model positive and negative emotions impacted the child’s ability to self-regulate (Haskett et al., 2012). The results showed that poor self-regulation was associated with high aggression in youth; implications suggest that parent expressiveness (i.e., exhibiting verbal and nonverbal expressions) is salient for a child to learn self-regulation, which can play a role in childhood externalizing behavior outcomes. It appears that characteristics of family environment are associated with youth mental health outcomes in biological families where contact with each other is fairly consistent. However, for youth in foster care, relationships among family members may be new and transient, making it less clear how these variables may operate related to child mental health in non-biological family units, such as foster care environments.

Given that foster families are meant to provide a safer family system than the maltreated youths’ family of origin (i.e., without risk for emotional and/or physical harm), it is important that research test how well foster families meet this expectation. Moreover, the relation between qualities like cohesion, for example, and youth mental health outcomes may not be straightforward in foster families considering that the child’s placement in foster care is meant to be temporary, calling into question just how important it may be for the foster family members to bond or be connected emotionally if indeed the family members are likely to leave each other in the near future. Furthermore, other characteristics such as the level of conflict among family members may also contribute to mental health for children who have been placed in foster care.

Conflict
Family conflict includes any physical or verbal fighting or power-struggles that occur between family members, including parents, children, siblings, and extended family (Malek, 2013). Some level of family conflict is normative and even healthy throughout youth development, because researchers acknowledge the autonomy that comes with adolescence and the expectance of parent-child conflict that is typical in many different family units (Laursen, 2005; Steinberg, 2001). Some literature even suggests that minimal to no conflict during adolescence may be an indicator of youth stunted development, because the adolescent may not be exploring independence from the family unit; adolescent autonomy is considered healthy (Steinberg, 2001). While some family conflict is considered a normal part of youth development, Josselson, Geenberger, and McConochie (1997a, 1997b) found that adolescent mental health was better in families with close relationships and little conflict. Furthermore, Steinberg (2001) described the importance of using multiple reporters when measuring conflict because the experience of the event and the resolution of the argument can be perceived very differently for each individual involved.

In families with no history of maltreatment, some level of family conflict may be considered normal (Steinberg, 2001), however research has shown a consistent link between maltreatment and high levels of family conflict (Dadds et al., 1991; Stith et al., 2009). For example, both male and female adolescents with histories of physical and/or sexual abuse reported higher levels of family conflict (Meyerson, Long, Miranda, & Marx, 2002). Additionally, parent reports of family conflict during preschool-age were highly correlated with a variety of maltreatment types (i.e., physical abuse, sexual abuse, neglect, and exposure to domestic violence) in a large sample of adolescents (Herrenkohl & Herrenkohl, 2007). For this study, parents were interviewed when their children were in preschool regarding different
aspects of the family environment. The family conflict factor from the interview was correlated with abuse exposure in case reports and from adolescent retrospective reports. Although a consistent link exists between high levels of family conflict and maltreatment for family with histories of abuse, research has yet to examine similar associations in foster families.

While some level of family conflict is typical, victims of child abuse tend to live in families with higher than expected levels of conflict. Foster care families may be more similar to typical families in their level of conflict as they are meant to represent a healthier and safer family system than the child’s family of origin, but without an assessment of conflict in foster placements, it is difficult to know if youth in out-of-home care experience less or reasonable amounts of conflict in their new homes. Moreover, high levels of conflict are associated with poor mental health outcomes for youth (Josselson et al., 1997a, 1997b) and given the overrepresentation of foster youth with mental health problems it would be important to know how the level of mental health outcomes is influenced by the family conflict in different types of foster placements.

**Foster care**

Placing a child who has been exposed to maltreatment in a new family environment where he or she is safe and cared for is thought to be one way to ameliorate some of the negative effects of abuse on the child’s functioning. Almost by definition, qualities of family environments are different between the new foster home and the family of origin for youth in foster care. By nature of being in foster care it is assumed that the primary caregiver failed to provide mental and physical safety for the child, whereas foster care parents are assumed to provide a safer environment for the foster child, because to be considered a foster placement,
caregivers are expected to abide by certain requirements established by the government and demonstrate an ability to meet the physical, emotional, and developmental needs of a child.

Foster care placements are unique family environments because they have to be licensed by a state agency, caregivers are paid monthly for the foster children that they house, and there is continuous oversight by government officials (Minimum Qualifications of Foster Parent, 2006). For example, in the state of Missouri, to become a licensed foster care placement the caregivers have to meet a number of requirements. Some of these requirements include: complete nine hours of parent training during the pre-licensure process, complete an additional 27 hours of parent training during the licensure process, and pass a criminal background check (Minimum Qualifications of Foster Parent, 2006). Interested foster caregivers must also pass a home safety assessment (i.e., an in-home interview), provide multiple references (e.g., three personal references, an employer reference, and a school reference), and complete a number of non-safety licensing requirements (i.e., foster parents and all foster family members must be determined by a physician to be in good physical and mental health, residence must be centrally located to schools and community resources, all rooms in the home must have adequate lighting, water supply is tested for safe human consumption, have adequate sleeping arrangements for a new child, and adequate personal space for clothing and belongings). Once foster caregivers complete all of the steps in the licensing process they receive $100 and if approved for licensure they will begin to receive monthly payments for each foster youth in their care. Each license expires after two years, but throughout that time the caregivers are expected to complete periodic in-service trainings (In-Service Training, 2014; Minimum Qualifications of Foster Parent, 2006). Additionally, agency case workers will have quarterly in-home visits to ensure the placement
still meets requirements by the licensing agency (Resource Development Worker
Responsibilities, 2014).

The extensive government requirements and parent trainings suggests that foster care
family environments should represent the qualities necessary for a child, maltreated or otherwise,
to meet typical developmental and mental health expectations. Although the requirements for
foster care placements focus on assurance of the child’s physical safety, the rules are rather short
on any attention to the foster caregivers’ or the foster family’s ability to provide for the mental
health of a new child. Therefore, it is important to examine how qualities of these new family
environments may affect youth mental health outcomes.

*Family characteristics of foster care environments and youth mental health*

Few studies have addressed the nature of the quality of the foster family environment in
an effort to discern differences between biological family and foster family environments.
Mennen and Trickett (2011) found that foster mothers reported higher levels of family
organization and less empathy than mothers accused of maltreating their child. Sobotková (2000)
used a mixed methods design with 20 foster care families in the Czech Republic to examine
qualities of the foster care environment; in this sample 70% of foster parents reported high levels
of cohesion, adaptability, and flexibility on quantitative measures and reported adequate family
functioning in an adaptable and cohesive way on qualitative measures. Although the results from
these studies provide a good framework for understanding how foster family environments
function, it is unclear how these qualities relate to actual mental health differences for youth in
foster care. This is important because a large number of children in out-of-home placements
show elevated internalizing and externalizing symptoms and the foster care environments are
meant to be healthy alternative placements when biological caregivers are unable to care for youth.

For example, in a longitudinal, prospective study from birth, researchers found significantly higher levels of externalizing and internalizing symptoms for the foster care group when comparing children in foster care, maltreated children who remained in their home of origin, and at-risk youth with similar demographics but no history of maltreatment or foster care (Lawrence, Carlson, & Egeland, 2006). Furthermore, Lawrence and colleagues (2006) found an increase in internalizing and externalizing symptoms over-time for the foster care group (who were in foster care at the time) in comparison to the maltreated group (who lived with their biological parents). Similarly, Min, Minnes, Yoon, Short, and Singer (2014) found that prenatal cocaine exposed youth residing in foster care reported higher externalizing and attention problems in comparison to prenatal cocaine exposed youth who continued to live with their biological mother and control youth who were not born with cocaine exposure.

One study has identified a potential link between aspects of the family environment and youth mental health outcomes for a foster care sample. Richardson and Gleeson (2012) found that high scores of family functioning on ‘roles’ and ‘affective’ subscales of the Family Assessment Device were related to low scores on the Behavior Problem Index measure for foster care youth in a sample of kinship caregivers. The study also found that low levels of family functioning on the ‘behavior control’ subscale of the Family Assessment Device was also related to low behavior problem scores.

A fairly consistent link exists between foster care youth and mental health outcomes; surprisingly, multiple studies have found that youth in out-of-home care have elevated mental health scores compared to maltreated youth that continue to live with their biological family.
When a child is experiencing abuse, removal from biological caregiver is expected to be the safest option for that child; however, these studies show that out-of-home placement may improve physical safety, but may do little to sustain or improve mental health for youth. Little is known about why youth in foster care continue to have high mental health concerns once placed in foster care; therefore, examining the new family environment of these placements will provide an important next step for the field.

Multiple Perceptions of Family Environment

Given that family members may view their family environments differently (Cowan, Cowan, Ablow, Johnson, & Measelle, 2005), research may also need to include child and caregiver report to better clarify the family environment-mental health relation for youth in foster care. Noller and Callan (1986) found that family members’ without histories of maltreatment, differed on their perceptions of family cohesion. In this study, parents tended to report higher levels of family cohesion in comparison to youth reports. Findings suggest family characteristics (e.g. specifically family cohesion) may be viewed differently depending on the reporter.

Utilization of multiple reporters for family environment in foster care is crucial. Due to the temporary nature of foster care, both reporters may not perceive the environment as consistently as other family units. The current study examined whether youth and caregiver perceptions of these family environment variables were associated with youth mental health outcomes.

Placements for foster care children

Understanding the family environments of out-of-home care is particularly important, because placement in foster care means that the child may live in various types of home environments. Traditional foster care homes are the most commonly known placement for youth
in care; they typically consist of a single foster family (i.e. one or two non-biologically-related adults) that cares for one or more foster children in their home (U.S. Department of Health and Human Services, 2014). In 2013, 47% of children (184,787) in foster care lived in a non-relative foster home placement (U.S. Department of Health and Human Services, 2014). Group home placement is another option where foster children live with no more than one staff per six youth and staff provide continuous supervision and care for foster youth (Foster Family Group Home, 2014); six percent of children in care lived in group homes in 2013 (U.S. Department of Health and Human Services, 2014).

Finally, residential care facilities are similar to group home settings in that they are continuously staffed, however they typically house as many as 50 children and provide in-house therapeutic, educational, and recreation support provided by an interdisciplinary team (Office of Juvenile Delinquency Prevention, 2010). Although each foster care home serves the same overall purpose, to keep youth safe, the structures of each placement are systematically different. The structure of a traditional foster care home more closely resembles a nuclear family that has at least one consistent caregiver, whereas a residential facility is often a large complex with many interchangeable caregivers and the primarily interactions are among peers that also live in the foster care placement.

Little is known about the differences in the interpersonal and family nature of these different placement options for youth in foster care. Furthermore, little is known about how the youth may perceive these new family environments or how these characteristics may impact their mental health outcomes. Youth placed in residential centers often live with other same age peers and a variety of staff members. Individuals in these settings may have very different perceptions of what family environment is like compared to youth who live in a traditional family setting.
Maltreatment, Age, and Gender

Extant literature suggests that a number of other factors may impact the outcome variables. First, previous research has found a link between maltreatment and youth maladjustment (Higgins & McCabe, 2003; Li & Godinet, 2014; Mills et al., 2013; Naar-King, Silvern, Ryan, & Sebring, 2002). Recent literature has indicated that severity of maltreatment may be related to levels of pathology in foster youth, specifically maltreatment severity (Jackson, Gabrielli, Fleming, Tunno, & Makanui, 2014). Residential facilities often have a higher percentage of older youth than traditional foster care homes, which may impact the association between family environment variables and youth mental health outcomes. Additionally, past literature also indicates that gender differences exist amongst youth exposed to maltreatment which impacts the development of mental health outcomes (Maschi, Morgen, Bradley, & Hatcher, 2008). Therefore, maltreatment severity and the youths’ age and gender were examined.

Aims of Study

Past research has distinguished consistent links between family environment variables (low cohesion, low expressiveness, and high conflict) and poor mental health outcomes for youth who have experienced maltreatment, but a number of gaps remain. Thus far, no study has looked at how the context of the foster care placement may affect the relation between family environment and mental health outcomes. The current study aimed to examine whether there is indeed a relation between family environment variables and youth mental health outcomes in foster care. For hypothesis one, high family cohesion, high family expressiveness, and low family conflict were expected to be related to lower internalizing and externalizing symptoms for youth. Furthermore, the current study examined differences in youth and caregiver self-reports of family environment variables, such that the second hypothesis predicted caregiver reports of the
family environment would be higher for family cohesion and family expressiveness and lower for family conflict than youth self-reports.

Due to the heterogeneity of foster care placement settings and the known structural and systematic differences between a traditional foster care home and residential care facilities, placement type was also explored in the analyses to determine if it explained part of the association between family environment and youth mental health outcomes. It was predicted that for both parent and youth reports, placement type would moderate the relations between family environment and mental health outcomes, such that youth living in traditional foster care placements with high mean scores for family cohesion and expressiveness and low scores for family conflict would have low levels of internalizing and externalizing outcomes.

Methods

Participants

Participants included 503 youth in foster care and their caregivers living in the Midwest. Youth participants were enrolled in the SPARK Project (Studying Pathways to Adjustment and Resilience in Kids). SPARK is a federally funded, longitudinal research study designed to investigate pathways and factors that contribute to the association between maltreatment exposures and emotional and physical outcomes for youth in foster care. Thirty-seven percent of the youth participants resided in residential facilities, while the 63% of the sample lived in traditional foster care settings. The sample consisted of 261 males and 242 females. Youth ranged from 8 to 21 years old ($M = 13.15$ years, $SD = 3.08$) and 50% of youth self-identified as African American, 35% as White, 10% as Multiracial, 3% as Latino or Hispanic, and 2% as Other. To participate in the study, youth were required to be in their current placement for at least 30 days, be over the age of 8 years old, and have an IQ of 70 or above. For youth in
residential facilities; the staff member that knew the child best was selected as their caregiver. The current study included youth and caregiver reports from time one of the parent longitudinal study.

**Procedures**

The SPARK Project was approved by the university’s Institutional Review Board and the Social Service Review Board as the state legal guardians for youth in foster care. The state social service agency consented for youth participation in the SPARK Project. Prior to participation, caregivers were provided an informed consent regarding voluntary participation in the project and youth were read an informed assent for participation by the research team.

Participating youth and caregivers provided information on maltreatment and family environment by completing surveys using an audio-computer assisted self-interview program (ACASI). Debriefing with youth participants to assess for mood changes, suicidal ideation, and current abuse was provided after the questionnaires were administered by graduate research assistants trained in clinical child psychology. Research assistants also called each participant within 48 hours of questionnaire completion, to ensure that the youth were emotionally stable after participating in the study. Adult and child participants received compensation for participation in the form of a gift card. For additional information on the project methods, recruitment, data collection processes, and methods for confidentiality maintenance and youth safety see Jackson, Gabrielli, Tunno, and Hambrick (2014).

**Measures**

**Placement.** Placement information for the foster care youth participants was provided by caregiver report. Placement type was a categorical variable with more than two levels, but the
current study focused on traditional foster care home and residential care facilities. Placement
type was dummy coded.

**Family Environment.** Family environment was measured by youth and caregiver-report
on the Family Environment Scale (FES; Moos & Moos, 1994). This survey consists of ten
subscales, including nine true/false questions each, assessing three dimensions in the family
environment: Relationship, Personal Growth, and System Maintenance. Family cohesion,
expressiveness, and conflict are subscales that measure the Relationship dimension. Next, the
Personal Growth dimension is measured by subscales: independence, achievement orientation,
intellectual-cultural orientation, active-recreational orientation, and moral-religious emphasis.
Finally, the System Maintenance dimension contains family organization and family control
subscales. The current study included scores from the subscales on the Relationship dimension
(i.e., cohesion, expressiveness, and conflict).

According to Moos and Moos (1994), this measure demonstrates good overall reliability
and validity and has been used in samples of foster caregivers and maltreating parents (Mennen
& Trickett, 2011; Sobotková, 2000). Furthermore, Boyd, Gullone, Needleman, and Burt (1997)
tested the reliability of the Family Environment Scale in a large sample of adolescents; these
authors found reliability consistent with the manual but the internal consistency was lower for
some subscales.

**Mental Health Functioning.** To measure externalizing behavioral health outcomes, the
Behavioral Assessment System Children-2 parent-report survey (BASC-2 PRS) was
administered to foster parents and residential staff members. The BASC-2 PRS includes
composite scores for a variety of scales, but the current study only used the Externalizing
Problems domain score, which includes hyperactivity, aggression, and conduct problem
subscales (Reynolds & Kamphaus, 2004). Youth self-report (BASC-2 SRP) for the Internalizing Problems domain score was included to measure internalizing problems (e.g., atypicality, locus of control, social stress, sense of inadequacy, anxiety, depression, and somatization subscales). When completing the BASC-2 PRS form, caregivers rated the youth’s behavior for each item on a 4-point Likert scale (Reynolds & Kamphaus, 2004). Similarly, the SRP items include true/false and 4-point Likert scale questions. For BASC-2 SRP, reliability coefficients are in the mid .90s for Internalizing Problems domain when computed by age group and gender (Tan, 2007).

According to Reynolds and Kamphaus (2004), reliability estimates for the BASC-2 PRS range from alphas .89 to .95 for biological caregiver reports of children age 8 and older. The current sample consists of caregiver reports from foster parents and residential staff members, rather than biological caregivers. Therefore, a confirmatory factor analysis was completed prior to the current study for the BASC-2 PRS in this sample and the results demonstrated an adequate fit for the overall sample (Gabrielli, Jackson, & Brown, 2014).

**Maltreatment history.** History of maltreatment was measured by youth self-reports on the maltreatment experienced throughout the course of their life, from the Modified Maltreatment Classification System (MMCS) (English, 1997). The MMCS is a commonly-used measure which has demonstrated high fidelity of maltreatment history (English et al., 2005). In this study, youth reported on four types of maltreatment: physical abuse, sexual abuse, psychological abuse, and neglect. For every abuse event question the youth endorsed, a follow-up question asked the participant about the frequency of that event occurring. Frequency of abuse was calculated using a sum of abuse items that the youth responded affirmatively to; the factor included all types of abuse endorsed including regularity or chronicity of the abuse for each participant. MMCS provided a rating system to aid in measuring severity of each abuse
type. The MMCS severity ratings for each abuse type included: mild (i.e., being slapped), moderate (i.e., being hit with an object) and severe (i.e., being shot at with a gun). Levels of severity were calculated so that mild received a score of one, moderate was considered a two, and severe was assigned as a three. Severity scores were divided by the number of abuse events endorsed by youth to obtain a final severity score independent of frequency. Past literature shows that maltreatment history has an effect on youth mental health outcomes (Mills et al., 2013; Villodas, Litrownik, & Roesch, 2012), therefore, each child’s self-report maltreatment severity history was controlled for, given that severity has a stronger association with mental health outcomes than maltreatment frequency (Jackson et al., 2014).

Data Analytic Plan

Review of previous literature yielded medium to large effect sizes for the variable relations within the current study (Stith et al., 2009). An a priori power analysis was completed using G*Power 3.1 (Faul, Erdfelder, Lang, & Buchner, 2007), which indicated that a sample size ranging from 84-210 participants would be required to complete the following analyses. To test hypothesis one, which will examine the relation between family environment variables and youth internalizing and externalizing symptoms, correlation analyses were completed. For hypothesis two, a one-way ANOVA was completed to examine mean differences between youth and caregiver reports of family environment variables. Finally, to test hypothesis three, each of the mental health outcomes (i.e., externalizing and internalizing) were regressed onto maltreatment severity, gender, age, placement type, family environment, and their interaction term to determine if placement type (i.e., traditional foster home vs. residential care facility) moderated the associations between family environment variables (i.e., family cohesion, family expressiveness, and family conflict) and the mental health outcomes. It is important to note that
the caregiver and child FES variables were ran in separate models based on results from the correlation analyses. For all analyses, the continuous predictor variables were centered for the purpose of testing interactions (Aiken & West, 1991). For the current study, missing data ranges between 1.0% and 16.1% of the variables. Multiple imputation was used to control for the missing values.

**Data Preparation**

Internal consistencies were calculated for each scale. Alphas for the parent report of the BASC-2 PRS Externalizing Problems domain fell in the Excellent range (α = .962, .964) and the youth report of the BASC-2 SRP Internalizing Problems domain fell in the Excellent range (α = .912, .954). Alphas for parent and youth report for the FES Expressiveness scales were 0.361 and 0.067, respectively. Alphas for parent and youth report of Expressiveness fell into the Unacceptable range, which suggests that the scales do not provide reliable measures of expressiveness for the present sample. Therefore, both parent and youth report of Expressiveness were excluded from the analyses.

The internal consistency for parent report of FES Conflict (α = 0.794) was consistent with alphas found in previous literature of caregiver report for youth with histories of maltreatment (α = 0.80; Mennen & Trickett, 2011). However, the alpha for youth report of FES Conflict fell in the Questionable range (α = 0.632) and is lower than previously reported internal consistencies in a large sample of adolescents (α = 0.72; Boyd et al., 1997). Thus, a confirmatory factor analysis (CFA) was conducted using all measurement indicators with a single latent factor assumed. Given that FES Conflict items are dichotomous, all indicators were modeled using weighted least-squares mean and variance adjusted (WLSMV) estimation (Beauducel & Herzberg, 2006). The initial CFA demonstrated an adequate fit to the data ($\chi^2_{18, n=490} = 60.63, p < 0.001$, RMSEA
= 0.050, TLI = 0.921, CFI = 0.941), however, one item did not significantly load (standardized loading = .087) onto the latent factor. Elimination of this item produced a good model fit ($\chi^2_{16, n = 490} = 43.34, p = 0.002$, RMSEA = 0.049, TLI = 0.942, CFI = 0.959) with significant indicator loadings ranging from .33-.78. Therefore, this item was removed from the youth report FES Conflict scale for the hypotheses testing ($\alpha = .654$).

The internal consistency for parent report of FES Cohesion fell in the Questionable range ($\alpha = 0.656$) and is lower than internal consistencies in previous literature of caregiver report for youth with histories of maltreatment ($\alpha = 0.75$; Mennen & Trickett, 2011). Thus, a confirmatory factor analysis (CFA) was conducted using all measurement indicators with a single latent factor assumed. FES Cohesion items are also dichotomized so all indicators were modeled using weighted least-squares mean and variance adjusted (WLSMV) estimation (Beauducel & Herzberg, 2006). The initial CFA demonstrated an adequate fit to the data ($\chi^2_{18, n = 440} = 35.26, p = 0.132$, RMSEA = 0.025, TLI = 0.987, CFI = 0.990) with significant indicator loadings ranging from .29-.92. Additionally, the alpha for youth report of FES Cohesion fell in the Poor range ($\alpha = 0.594$) and is lower than previously reported internal consistencies in a large sample of adolescents ($\alpha = 0.67$; Boyd et al., 1997). Thus, a confirmatory factor analysis (CFA) was conducted. The initial CFA demonstrated an adequate fit to the data ($\chi^2_{18, n = 440} = 83.27, p < 0.001$, RMSEA = 0.069, TLI = 0.821, CFI = 0.866), however, two items did not significantly load (standardized loading = 0.125, 0.186) onto the latent factor. Elimination of these items produced a good model fit ($\chi^2_{14, n = 440} = 31.74, p = 0.004$, RMSEA = 0.054, TLI = 0.928, CFI = 0.952) with significant indicator loadings ranging from .35-.84. Therefore, these two items were removed from the youth report FES Cohesion scale for the hypotheses testing ($\alpha = .642$).
Results

Descriptive statistics

Consistent with predictions for the first hypothesis, correlation analyses indicated that family cohesion was negatively associated and family conflict was positively associated with externalizing and internalizing symptoms for both youth and parent report. See Table 1 for means, standard deviations, and correlations of all study variables. An independent-samples t-test was conducted to compare residential and traditional foster care. See Table 2 for means, standard deviations, and t values reflecting differences in the means between foster placements. As shown, parents and youth in residential foster placements report significantly higher levels of family conflict ($p < .001$; $p < .001$, respectively) and significantly lower levels of family cohesion ($p < .001$; $p < .05$, respectively). Youth in residential centers are exhibiting significantly higher levels of externalizing ($p < .001$) and internalizing ($p < .01$) problems. Finally, youth in residential centers endorsed significantly higher severity of physical maltreatment ($p < .001$), psychological maltreatment ($p < .01$), and sexual maltreatment ($p < .01$). Youth in residential and traditional foster care homes did not differ in their reports of neglect severity scores ($p = 0.170$).

ANOVA analyses

One-way ANOVA analyses indicated significant differences between caregiver and youth report for family cohesion ($F(1, 868) = 86.02, p < .001$), but not family conflict ($F(1, 870) = 1.42, p = 0.23$). Our hypotheses were partially supported, such that caregivers reported higher levels of family cohesion ($M = 7.53, SD = 1.67$) than youth participants ($M = 5.55, SD = 1.59$). However, contrary to expectations, parent and youth did not differ in their report of
conflict within the family environment ($M = 3.09, SD = 2.45$; $M = 3.28, SD = 2.10$, respectively).

**Exploratory Moderation**

**Parent-report Externalizing.** Externalizing symptoms were regressed on age, gender, placement type, maltreatment severity, parent FES Cohesion, and parent FES Conflict. The model was significant $F(6, 496) = 18.95, p < .001$, with variables accounting for 18.6% of the variance in externalizing symptoms. Placement type was negatively associated with externalizing symptoms ($t = -2.34, p = 0.019$; i.e., youth in residential centers had higher externalizing symptoms compared to traditional foster homes), whereas parent-report of family conflict was positively associated ($t = 5.26, p < .001$). In the second step, the interactions between parent report FES Cohesion and placement type and parent report FES Conflict and placement type were added to the model ($F(8, 494) = 14.60$, $\Delta R^2 = .005, p < .001$). Results indicated that none of the interaction terms were significantly associated with externalizing symptoms ($p = 0.588, p = 0.254$, respectively), indicating that placement type did not moderate the association between parent report of Cohesion and Conflict and externalizing symptoms. Next, externalizing symptoms were regressed on age, gender, placement type, maltreatment severity, child FES Cohesion, and child FES Conflict scores. The main effects model was significant $F(6, 496) = 11.48, p < .001$, with variables accounting for 11.1% of the variance in externalizing symptoms, such that main effects were found for placement type negatively associated with externalizing symptoms ($t = -5.22, p < .001$; i.e., youth in residential centers had higher externalizing symptoms compared to traditional foster homes), child report of family conflict was positively associated with externalizing symptoms ($t = 2.41, p = .016$) and gender was positively associated with externalizing symptoms ($t = 2.13, p = 0.034$; i.e., males had higher externalizing symptoms.
than females). In the second step, the interactions between child-report FES Cohesion and placement type and child-report FES Conflict and placement type were added to the model ($F(8, 494) = 8.67, \Delta R^2 = .001, p < .001$). Results indicated that none of the interaction terms were significantly associated with externalizing symptoms ($p = 0.680, p = 0.703$, respectively), indicating that placement type did not moderate the association between youth report of Cohesion and Conflict and externalizing symptoms.

**Youth-report Internalizing.** Internalizing symptoms was regressed on age, gender, placement type, maltreatment severity, parent FES Cohesion, and parent FES Conflict. The model was significant $F(6, 496) = 22.14, p < .001$, with variables accounting for 21.1% of the variance in internalizing symptoms. Main effects were found for gender negatively associated with internalizing symptoms ($t = -2.98, p = 0.003$; i.e., females had higher internalizing symptoms than males), maltreatment severity was positively associated with internalizing symptoms ($t = 9.08, p < .001$), and parent-report FES Cohesion was negatively associated with internalizing symptoms ($t = -2.18, p = 0.030$). In the second step, the interactions between parent-report FES Cohesion and placement type and parent-report FES Conflict and placement type were added to the model ($F(8, 494) = 16.96, \Delta R^2 = .004, p < .001$). None of the interaction terms were significantly associated with internalizing problems ($p = 0.173, p = 0.147$, respectively), suggesting that placement type did not moderate the associations between parent report of Cohesion and Conflict and internalizing problems. Next, internalizing symptoms was regressed on age, gender, placement type, maltreatment severity, child FES Cohesion, and child FES Conflict. The model was significant $F(6, 496) = 34.37, p < .001$, with variables accounting for 29.4% of the variance in internalizing symptoms. Maltreatment severity and child-reported FES Conflict was positively associated with internalizing symptoms ($t = 7.09, p = .001, t = 4.62, p$
< .001, respectively), whereas gender and child-reported FES Cohesion were negatively associated with internalizing symptoms ($t = -2.55, p = .011, t = -3.26, p = .001$, respectively). In the second step, the interactions between child-report FES Cohesion and placement type and child-report FES Conflict and placement type were added to the model ($F(8, 494) = 26.82, \Delta R^2 = .009, p < .001$). Results suggested that none of the interaction terms were significantly associated with internalizing symptoms ($p = 0.074, p = 0.735$, respectively), suggesting that placement type did not moderate the associations between youth report of Cohesion and Conflict and internalizing problems.

**Discussion**

Youth in foster care are often placed into a home environment that differs significantly from their biological home, therefore it is important to assess the characteristics of these new family environments. Given the high rate of pathology often demonstrated by youth in foster care (Clausen, Landsverk, Ganger, Chadwick, & Litrownik, 1998; McIntyre & Keesler, 1986), it is perhaps even more important to assess how these new family attributes may be contributing to (mal)adjustment outcomes for youth. Specifically, the literature suggests that low family cohesion and expressiveness and high levels of conflict are associated with poor mental health outcomes (Caples & Barrera, 2006; Hasket et al., 2012) and foster youths’ externalizing and internalizing symptoms are worse than maltreated youth who continue to live with their biological families (Lawrence et al., 2006; Min et al., 2014; Richardson & Gleeson, 2012). The current study extended the research by providing first time evidence of the direct links between characteristics of the foster family environment and youth mental health outcomes.

The findings were consistent with the predictions, such that family cohesion was negatively and family conflict was positively correlated with youth internalizing and
externalizing symptoms for both parent and youth report. Further examination of these relations provided additional information when testing the exploratory moderation from hypothesis three, which predicted that placement type (i.e., residential or traditional foster care home) would moderate the association between family environment variables and youth mental health outcomes. Although placement type did not moderate the relation, there were a number of significant main effects. Results suggested that some family environment variables were associated with mental health outcomes as expected (e.g., family conflict was positively associated with externalizing problems), however there were a number of nonsignificant findings which suggests that foster family environments may operate differently than biological family environments on youth internalizing and externalizing problems.

**Predictors of Externalizing Problems**

When assessing the relation of family environment and externalizing problems, the results indicated a number of expected findings. First, both parent and youth report of family conflict were positively associated with externalizing problems. Previous literature suggests that youth with maltreatment histories typically live in families that are characterized as high in family conflict (Dadds et al., 1991, Herrenkohl & Herrenkohl, 2007; Meyerson et al., 2002) and maltreated youth often have high externalizing problems (Mills et al., 2013). Additionally, extant research suggests that adolescent and parent report of family conflict are associated with youth externalizing problems in various samples (i.e., community-based sample, youth whose parents who are alcoholics; Flores, Salum, & Manfro, 2014; Josselson, 1997a, 1997b; Rothenberg, Hussong, & Chassin, 2016). Although it is clear that family conflict is associated with externalizing symptoms in typical youth samples or in samples of youth exposed to stressors, the present study provided evidence of this relation in a new sample (i.e., youth in foster care),
where the level of conflict is not expected to be as significant (in comparison to biological maltreating families) and yet the relation to externalizing behavior remains. Most youth in foster care have maltreatment histories which place them at a heightened risk for externalizing behaviors, the current study expands the field’s understanding of this relation by providing evidence that family conflict within the foster home may also be related to externalizing behaviors for these youth. Findings are particularly important for foster youth, given that externalizing behaviors are a strong predictor of placement change and placement instability also negatively contributes to internalizing and externalizing behaviors (Chamberlain, Price, Reid, Landsverk, Fisher, & Stoolmiller, 2006; Newton, Litrownik, & Landsverk, 2000).

Inconsistent with hypothesis one predictions, parent and youth reports of family cohesion were not significantly associated with youth externalizing problems. Additionally, results from hypothesis two showed that youth and caregivers reported similar levels of family cohesion, however main effects were not significantly associated with externalizing problems regardless of the reporter. Predictions were based on previous literature that suggests that high levels of family cohesion are associated with low levels of behavior problems for youe et al., 2011; Guzder et al., 2011). The discrepancy in findings may be due to samples in past research including youth without maltreatment histories (i.e., children enrolled in a longitudinal study on development; youth in a psychiatric day hospital, respectively). Additionally, Richardson and Gleeson (2012) found that caregivers report of family functioning (i.e., family cohesion) was related to low behavioral problems in a sample of 120 youth in kinship care (i.e., youth placed in out-of-home care with relatives). Although Richardson and Gleeson (2012) provides a good framework for understanding how family environment is related to youth behavioral outcomes, conclusions are limited to youth who live in kinship placements with caregivers who are likely familiar to them
(i.e., aunts, uncles, or grandparents). The present study differs from the previous study of foster youth, because it measured family cohesion of youth in a variety of placement type, therefore allowing for examination of how family cohesion may be related to externalizing symptoms in a sample of foster youth which may be more representative of the general foster youth population. Therefore, the current study provides evidence that family cohesion, regardless of the placement type, does not appear to play a role in youth externalizing symptoms. Previously we expected foster family environments to be similar to typical non-maltreating families (Guzder et al., 2011), such that high family cohesion should be related to low externalizing symptoms for youth, but the present study findings call into question the strength of the relation for foster families.

Foster families represent a unique type of family environment, in which caregivers receive training, are paid to house children, and receive regular evaluation from state officials. The purpose of foster care is to provide a child with a safe environment to reduce the potential for future maltreatment with the idea that family relations in a safe home may play a role in ameliorating some of the maladaptive effects of maltreatment. However, nonsignificant results suggest that how family members feel or do not feel connected to each other may not actually matter so much when considering youth externalizing problems. Family cohesion was thought to operate similarly in foster families as it does in biological families, however for youth in care who are placed into a family of people they have never met, encouraging togetherness and unity may not impact the demonstration of externalizing symptoms. For youth in foster care it is possible that family cohesion is harder to assess for or less important in an environment in which relationships are transient. Furthermore, for youth in foster care there may be other areas of the family environment that play a more salient role in youth externalizing outcomes.
Main effects results showed that placement type was significantly associated with externalizing problems, such that youth living in residential placements had higher levels of externalizing problems than youth living in traditional foster care homes. Results are consistent with existing literature that suggests youth in residential centers have high rates of externalizing problems (Baker, Archer, & Curtis, 2007; Connor, Doerfler, Toscano, Volungis, & Steingard, 2004). Previous literature sampled youth residing in residential centers regardless of the maltreatment history or legal status of the youth. While these past studies provide an initial framework for understanding the degree of externalizing behaviors of youth living in residential centers, the current study expands the literature by examining the relation between different placement types and externalizing problems exclusively for youth in foster care. The current findings are not only able to confirm that foster youth in residential centers have high levels of externalizing symptoms, but also show that within the larger sample of youth in foster care, youth in residential facilities demonstrate clinical levels of externalizing behavior and significantly greater scores than those in in traditional family placements.

Additionally, gender was positively associated with externalizing symptoms, suggesting that males had significantly higher externalizing symptoms in comparison to females. Results were consistent with previous literature that suggests a relation between maltreatment and externalizing behaviors for males (Maschi, Morgen, Bradley, & Hatcher, 2008). Additionally, maltreatment severity and age were not significantly associated with externalizing symptoms in this sample of foster youth. While previous literature certainly suggests a relation between maltreatment history and youth externalizing problems (Higgins & McCabe, 2003; Mills et al., 2013); findings from the current study suggest that other predictors (i.e., family conflict, placement type, and gender) account for more of the variance in externalizing behavior and thus
may better explain the demonstration of foster youth externalizing problems. Discrepancies between current findings and previous literature may result from methodological differences, given that the current study consisted of foster youth and maltreatment was measured using youth self-report, whereas past literature assessed for maltreatment using parent report and records from a child protection agency.

**Predictors of Internalizing Problems**

Consistent with predictions from the first hypothesis, parent and youth report of family cohesion was negatively associated with internalizing problems. Extant literature suggests that youth with maltreatment histories have family environments that are typically characterized as low in cohesion (Dadds et al., 1991; Mollerstrom et al., 1992; Stith et al., 2009), and low family cohesion is associated with internalizing symptoms for youth (Lucia & Breslau, 2006; Sheidow, Henry, Tolan, & Strachan, 2014). These studies provide the best available framework for understanding how family cohesion may be related to internalizing symptoms in a foster family. Evidence clearly identifies a relation between family cohesion and internalizing symptoms in typical youth samples. Given that foster youth are removed from their biological home and placed into another home which is expected to be a safe and caring environment, it is anticipated that foster families operate similarly to biological homes of non-maltreated youth with high levels of family cohesion. The present study provided evidence of this relation in a new sample (i.e., youth foster care). Interestingly, family cohesion was not significantly associated with externalizing problems for either reporter, suggesting that components of the family environment that elicit feelings of connectedness or unity may not serve as a protective factor against engagement in aggression, conduct problems or hyperactivity. However, family cohesion was found to be significantly associated with internalizing problems, in that feelings of
connectedness or unity may serve as a protective factor against feelings of depression, hopelessness or anxiety.

Consistent with predictions from the first hypothesis, youth report of family conflict was positively associated with internalizing symptoms. Extant literature suggests that that some level of conflict within the family is normative (Steinberg, 2001), however higher levels of family conflict have been associated with poor internalizing symptoms for youth without histories of maltreatment (Josselson et al., 1997a, 1997b). Although it is possible that reporter bias may be accounting for the significant findings, the results contribute to the field by examining this association in the context of the foster family. Therefore, current findings suggest that this relation remains consistent for foster youth even when they are placed in a family environment that is, by definition, meant to be safer and less harmful. Findings are particularly salient for foster youth who are already at a heightened risk of developing internalizing symptoms; placement in foster families that are characterized as high in conflict may initiate or exacerbate youth internalizing symptoms.

Parent report of family conflict was not significantly associated with internalizing symptoms, which is inconsistent with expectations from the first hypothesis and previous literature (Josselson et al., 1997a, 1997b; Lucia & Breslau, 2006; Sheidow et al., 2014). The null findings provide important implications for the field, because thus far much of the extant literature utilizes only parent report of family conflict for samples of youth with histories of maltreatment and youth in foster care (Herrenkohl & Herrenkohl, 2007; Mennen & Tricket, 2011; Sobotková, 2000). The current study expands previous literature by incorporating multiple reporters and investigating the varying perceptions. Findings from the present study, suggest that youth and caregivers report similar levels of family conflict, however main effects indicate that
only youth report of conflict is significantly associated with internalizing symptoms, which provides greater support for potential reporter bias. Foster families are often temporary placements for youth, therefore typical family constructs such as conflict as it relates to internalizing symptoms may not function in the same way as in biological family environments in which family members remain intact. Therefore, it is possible that other factors (i.e., family cohesion, gender, maltreatment history) may account for greater influence on internalizing symptoms for youth in foster care.

When assessing for contributors to internalizing symptoms, results indicated a number of other associations that are consistent with previous literature. In particular, the current study found that females had significantly higher levels of internalizing symptoms in comparison to males; findings are similar to results from a variety of studies (Connor et al., 2004; Deković, Buist, & Reitz, 2004; Oliva, Parra, & Reina, 2014; Ulu & Fişiloğlu, 2002). Additionally, results indicated that maltreatment severity was significantly associated with internalizing problems. Results from the current study are consistent with previous literature that suggests youth with maltreatment histories report high levels of depression, anxiety, suicide ideation, and hopelessness (Arata, Langhinrichsen-Rohling, Bowers, & O’Brien, 2007; Higgins & McCabe, 2003; Li & Godinet, 2014; Mills et al., 2013; Naar-King et al., 2002). Extensive literature has found a consistent association between maltreatment and internalizing symptoms for youth exposed to maltreatment. Findings from the current study provide evidence consistent with past research that maltreatment is significantly associated with internalizing symptoms for youth in foster care. Given that youth with histories of maltreatment are at risk for developing internalizing symptoms, foster youth who experience a degree of maltreatment that rises to the level of removal from their biological home may be at a more heightened risk. Therefore, even
though foster youth are removed from potentially abusive and neglectful environments does not negate the risk for developing internalizing problems.

Although it was expected that expressiveness would also be an important construct for predicting youth behavioral health, in the present study, the factor structure of the expressiveness scale on the FES was not stable enough to include in the analyses. Across various studies with samples of youth and young adults with and without histories of maltreatment, the internal consistencies for the FES expressiveness scale have ranged between .61 and .7 (Benedict & Zantra, 1993; Dale et al., 2011; Galea, 2010; Guzder et al., 2011). However, past literature has also had difficulties replicating the factor structure of the original Family Environment Scale created by Moos & Moos (Gondoli & Jacob, 1993; Waldron, Sabatelli, & Anderson, 1990). Thus far, the present study is the only study to use the FES in a sample of youth in foster care and it may be that this construct is not the same or well captured by the items on the FES.

**Differences in perceptions of family environment characteristics**

Because previous literature suggests that perceptions of the family environment vary among members, and because all of the past literature (i.e., Herrenkohl & Herrenkohl, 2007; Mennen & Tricket, 2011; Sobotková, 2000) on family environments of foster families has included parent-report exclusively, the present study contributes to the field by including multiple reporters’ perceptions of the foster family environment. As expected significant differences were found between reporters on endorsement of family cohesion, such that caregivers rated this variable higher than their youth dyad. However, contrary to expectations, the results indicated that foster youth and their caregiver did not differ in their ratings of family conflict, despite literature that suggests youth typically view the family environment as more conflictual than their caregivers (Noller, Seth-Smith, Bouma, & Schweitzer, 1992). Results from
the current study were consistent with the findings of Stuart and Jose (2012), in which parents rated *positive* forms of family dynamics (i.e., cohesion, autonomy, mutual activities, and family identity) higher than their youths and there were no statistically significant differences between reporters on family conflict. According to Stuart and Jose, family conflict may be a more stable indicator of family environment, meaning that family members may have a more consistent perception of the amount of conflict experienced. Greater discrepancies between parent and youth reporters on positive family dynamics (i.e., family cohesion) has been linked to lower levels of adolescent well-being, and for adolescents with higher levels of well-being are likely to evidence divergent attitudes with parents (Stuart & Jose, 2012). Findings may be particularly important for foster youth who are at a heightened risk for internalizing and externalizing symptoms, however the current study did not assess for directionality regarding whether poor adjustment outcomes may lead to greater discrepancy among reporters or if discrepancies between reporters leads to greater internalizing and externalizing symptoms. Nonetheless, for youth who are removed from their biological home and placed into a new family environment it may be particular problematic that they are viewing the level of cohesion in the family differently but are more similar on reports of family conflict.

Results indicate that youth reported lower levels of family cohesion than their foster caregivers. These findings are particularly salient for youth in foster care who likely have a history of family environments that are characterized as less cohesive. For non-maltreated youth, previous literature considers it normative for youth to report lower levels of cohesion than their caregivers (Stuart & Jose, 2012), however these findings for youth in foster care may actually result in poorer outcomes if they view their new family placement as less unified, connected, and supportive. For youth with histories of maltreatment, youth who perceive their family
environments as less unified may also feel like they do not belong in the foster family or have beliefs that they cannot rely on new family members. Based on findings in the current study, youth report of family cohesion was linked to internalizing symptoms, but not externalizing symptoms, therefore suggesting maladaptive outcomes resulting from youth report of family cohesion.

Moderation Findings

Given that there are structural differences (i.e., paid staff instead of typical parents) between foster homes and residential facilities, it was expected that placement type would moderate the relation between family environment and foster youth mental health outcomes. Contrary to predictions, placement type did not moderate this association. Although there were statistically significant mean differences for cohesion and conflict between residential and traditional foster care reporters, the difference was not enough or sufficient to detect meaningful differences in the behavior variables. For example, the largest discrepancy was between caregivers on family conflict, with residential caregivers reported higher levels of conflict ($M = 4.82$, $SD = 2.34$) in comparison to caregivers in traditional foster homes ($M = 2.48$, $SD = 2.17$). Additionally, youth living in residential settings reported higher levels of family conflict, however the mean scores were only 0.85 points higher than the mean scores of family conflict for youth living in traditional foster care homes. Furthermore, the discrepancy between caregiver report on family cohesion was 1.06 points, in which residential caregivers reported slightly lower mean scores. Finally, youth living in residential centers reported slightly less family cohesion than youth living in traditional foster care homes, although the difference between means for family cohesion was only 0.37 points. The similar mean scores between reporters on cohesion and conflict across the placement types, suggest these family environments are likely more
similar than expected, despite the structural differences. Minimal variability in reports of family environment likely explain the null findings, because results suggest that reporters viewed the environments in these placements similarly. Although results were not as expected, they provide the field with important information about how youth and caregivers view foster placements.

**Limitations and Implications**

Results of the current study should be interpreted within the context of several limitations. First, the ability to make inferences about directionality is limited by the cross-sectional design of this study. Longitudinal methodological design is needed to determine directionality of the current associations. Second, the current study used caregiver report, which included either the foster parent or the residential staff member who knew the child the longest, but the current study did not assess for length of time with the current caregiver. It is possible that time in current placement could have impacted the findings with youth who had lived in their current placements for a shorter period of time having a less clear sense of the true nature of their new family environments than youth who had lived several months or years in their current placement. Although all participants met the 30-day minimum time in their current placement that is required by the BASC-2, there are no rules for the FES, making it hard to judge the appropriate amount of contact required before completing this measure. Additionally, the current study did not assess for youth perceptions of previous placements. It is possible that the youth’s view of their current placement may have been impacted by experiences in previous foster placements. Third, the FES was used to measure qualities of the family environment. The reliability of the expressiveness scale on the FES was not adequate to include in the analyses. It is possible that the use of foster reporters impacted the internal consistency of the scale, which
was not as strong as in previous studies (Benedict & Zantra, 1993; Dale et al., 2011; Galea, 2010; Guzder et al., 2011).

Despite limitations, the current study addressed a number of gaps in the literature. Foster care, by definition, involves removal of a child from their home of origin and subsequent placement into a new family environment, which is expected to be safer and more similar to a non-maltreating family. However, previous literature has yet to assess how specific aspects of the current foster family may be impacting youth overall internalizing and externalizing symptoms. The current study expanded the literature in a number of ways, by 1) providing direct assessment of the foster family environment on constructs known in the literature to be relevant to youth outcomes, 2) utilize multiple informants of key family environment variables to account for varying perceptions, and 3) assessing for how placement type may impact outcomes in order to account for the potential heterogeneity within foster care placements. It was expected that family characteristics would be similarly associated with mental health outcomes, however findings from the current study suggest that not all of these characteristics are related to youth internalizing and externalizing symptoms in the same way as identified in previous literature. Because family environments often play a crucial role in shaping youth behavior over time, current findings suggest that some frequently studied family characteristics are unrelated to mental health for foster youth. Therefore, we cannot assume these family environments in foster homes operate similarly to other biological family systems. For youth who are at an increased risk for internalizing and externalizing symptoms, findings suggest that characteristics within the foster family environment may exacerbate maladaptive outcomes and contribute to greater placement disruptions for this transient population.
Furthermore, the study produced novel findings in which placement type did not moderate the association between family environments and youth mental health. Despite obvious differences between foster placement types (i.e., residential vs. traditional foster placements) the type of placement does not matter as it relates to the family environment and youth mental health outcomes. The current findings suggest a need for greater examination of the foster family environment.

**Future Directions**

There are a number of future directions that others can build on from this study. Future research should investigate these variables longitudinally to determine if foster family characteristics predict higher levels of maladaptive outcomes. In particular, parent and youth report of family conflict was associated with youth externalizing symptoms, therefore future studies could assess for whether conflict within the foster family exacerbates externalizing behaviors or if youth presenting with externalizing behaviors increases the level of conflict within the family. Given that family expressiveness has been well studied throughout the literature, future studies on youth in foster care should aim to examine how this construct is related to mental health outcomes for youth. The FES expressiveness factor structure was not stable enough for analyses, which suggests that these items may not have been sensitive enough to measure expressiveness in a foster family. Additionally, studies of youth in foster care which aim to assess predictors of mental health outcomes should account for previous family environments to understand how other contributing factors (i.e., family environments in previous placements, the number of children living in the home) may be accounting for outcomes. Finally, researchers should also investigate how other moderators and mediators may help
explain the relation between family environment characteristics and youth mental health outcomes, considering that placement type did not moderate the association.
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Table 1.
Correlations Matrix of the study variables

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<td>5. Parent FES Conflict</td>
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<td>0.208**</td>
<td>-0.546**</td>
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<td>0.047*</td>
<td>-0.228**</td>
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<td>7. Youth FES Conflict</td>
<td>0.057**</td>
<td>-0.021</td>
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<td>9. Internalizing Problems</td>
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<td>0.436**</td>
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<td>0.186**</td>
<td>-0.362**</td>
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Mean: 13.15  0.52  4.27  7.52  3.33  5.54  3.24  69.29  55.69
Std. Deviation: 3.08  0.5  2.29  1.67  2.50  1.57  2.12  14.62  10.82

* p < .05; ** p < .01; *** p < .001
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<th>Traditional foster placement</th>
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<td>(n = 319)</td>
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<td>7.91 (1.36)</td>
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<td>Internalizing Problems</td>
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<td>Neglect</td>
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<td>0.71 (0.63)</td>
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Note. FES = Family Environment Scale, BASC-2 = Behavioral Assessment System Children-2, MMCS = Modified Maltreatment Classification System

*p < .05, **p < .01, ***p < .001
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Note. P = Parent report, C = Youth report

*p < .05; **p < .01; ***p < .001