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Examining the Association Between Fictive Kin Care, Parental Attachment and Emotional Distress in College Students

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EXAMINING THE ASSOCIATION BETWEEN FICTIVE KIN CARE, PARENTAL ATTACHMENT AND EMOTIONAL DISTRESS IN COLLEGE STUDENTS

by

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ABSTRACT

Having a supportive and secure relationship with parents can predict less emotional distress in college students. In addition to parental support, many families leverage fictive kin caregivers to provide support. This is especially true in communities of racial and ethnic minorities. The present study investigated the association between fictive kin care, parental relationships, and emotional distress in college students. One hundred fourteen (N = 114) college students completed measures that assessed parental and fictive-kin relationships, social support, and emotional distress. A COVID-19 pandemic-related distress measure was also administered. Three hypotheses were tested. First, it was hypothesized that fictive kin care and parental attachment were inversely associated with emotional distress and positively associated with social support. Second, it was hypothesized that parental attachment moderates the relationship between fictive kin care and emotional distress, especially in situations of low parental attachment. Lastly, it was hypothesized that parental attachment would moderate the relationship between fictive kin care and social support. Multiple regression analyses were used to examine the relationships between fictive kin care, parental attachment, social support, and emotional distress. Data analysis did not support the stated hypotheses. However, more secure parental attachment and fictive kin care were associated with more perceived social support. More secure parental attachment was also inversely correlated with emotional distress, and women reported more emotional distress than men. Supplemental analyses were conducted and found significant relationships between respondent race and subscales of social support, as well as the length of the fictive kin relationship and emotional distress.

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CHAPTER I – INTRODUCTION

College students are a particularly vulnerable population for experiencing emotional distress (Downs et al., 2013). According to the American College Health Association (2018), over half of the students surveyed reported experiencing overwhelming anxiety and over 40% reported experiencing symptoms of depression that adversely affected their functioning over a 12-month period. Unfortunately, many students do not seek mental health treatment due to factors such as lack of awareness about resources as well as stigma about seeking counseling (Pace et al., 2018). In addition to improving awareness and reducing stigma (Pace et al., 2018), it may be beneficial to explore preventative strategies for improving students' mental health and emotion regulation thereby decreasing the need for counseling services. The COVID-19 pandemic has increased the need for proactive mental health measures, as it has had a significant impact on the mental health outcomes of college students (Kecojevic, et al., 2020).

Attachment theory suggests that supportive and secure parental relationships developed during childhood are linked to better emotion regulation and better long-term mental health outcomes in emerging adulthood (Ainsworth & Bowlby, 1991; Avagianou, 2008; Zimmerman et al., 2008). Zimmerman et al. (2008) found that maternal attachment factors predicted quality of life in college-aged participants. Avagianou (2008) found that indicators of insecure childhood attachment predicted depression and emotional instability in college students. Research has also established that difficulties that could hinder the development of secure attachment (i.e., parental depression, anxiety, psychiatric strain, financial hurdles, and martial stress) predict poor outcomes for

adolescents (Warmuth et al., 2019; Lipman et al., 2001; Stoneman et al., 1989), and young adults (Avagianou, 2008; Donnelly et al., 2012).

While there is a significant body of research examining parental attachment as a predictor of various mental health outcomes, relatively few studies have examined whether foundational relationships with *fictive kin* work in similar ways. This study aimed to investigate the ways in which relationships with fictive kin are associated with college student mental health outcomes, beyond the contribution of parenting.

Parenting and College Student Adjustment

Bowlby and Ainsworth's attachment theory posits that a secure parent-child relationship, characterized by warmth and responsiveness that allows children to have autonomy for exploration, plays a foundational role in promoting mental health later in life (Bowlby 1973, 1988; Ainsworth & Bowlby, 1991). Armsden and Greenberg (1987) asserted that a secure attachment can also be evidenced by the child's level involvement with parents (i.e., communication), the degree of respect and autonomy that the parents give (i.e., trust), and the lack of detachment felt by the child (i.e., alienation; Andretta et al., 2015). Parental styles that balance affectionate support with the provision of autonomy were associated with better emotional regulation (Tani et al., 2018), less stress (Donnelly et al., 2012), better college adjustment (Klein & Pierce, 2009; Rice et al., 1995), and better overall quality-of-life (Zimmerman et al., 2008). Buelow et al. (2002) also found that parental styles characterized by higher care and autonomy were found to be associated with higher levels of coping skills in young adults. Secure attachment also predicted lower levels of anxiety, depression, and worry in undergraduate students (Viviona, 2000).

Alternatively, parental behaviors that provided little care (i.e., warmth) and more overprotection (i.e., lack of autonomy) were correlated with negative outcomes in college populations (Klein & Pierce, 2009; Uehara et al., 1999). This appears to be particularly impactful in the case of less warm mothers (Uehara et al., 1999) and more overprotective fathers (Klein & Pierce, 2009). A study of participants with major depressive disorder found that maternal affectionless control was correlated with maladaptive emotional coping mechanisms in patients as adults, and the maladaptive coping was correlated with psychological distress (Uehara et al., 1999). Klein and Pierce (2009) found that lower scores on parental care correlated with poorer college adjustment. They also found that paternal overprotection was a significant predictor of anxiety, depression, interpersonal problems, career and self-esteem issues, and suicidal ideation (Klein & Pierce, 2009). Ono et al. (2017) found that affectionless control, defined as low care and high overprotection, mediated neuroticism which significantly predicted the occurrence of depressive scores. These results are also consistent with Baumrind's (2005) research on authoritative, authoritarian, and permissive parenting which found that parenting styles that were more intrusive and lacked support produced more maladjustment issues in children later in life.

While the knowledge base about the impact of parental attachment on emotional distress is strong, much less is known about the impact of non-familial ties. Studies show that people from diverse racial, ethnic, and sexual identities may rely more heavily on fictive kin (Mora & Kennedy, 2020; Carey, 2016; Brooks & Allen, 2014); however, little is known about the ways that fictive kin relationships may operate similarly to parenting

relationships in the provision of support and the promotion of adaptive emotional adjustment.

Fictive Kin

Fictive kin are people that maintain family-like bonds which are not necessarily based on blood or marriage, but instead are forged through close friendships or ritual ties (Ebaugh & Curry, 2000; Chatters et al., 1994). Fictive kin have taken on many forms across different cultures. In Spain and Latin American countries, *compadrazgo*, or co-parenthood relationships were forged through Catholic baptism and brought supporters to children who were often not biological relatives (Ebaugh & Curry, 2000). These networks were often called upon to widen the children's family with additional social and economic support (Chatters et al., 1994). Eastern traditions also adopted ways of expanding social and emotional support networks with fictive kin (Ebaugh & Curry, 2000; Ishino 1953). For example, the Japanese *oyabun-kobun* would extend the ritualistic family for generations, much like a genetic lineage (Ebaugh & Curry, 2000; Ishino 1953).

In the modern American context, African Americans are much more likely to cite having fictive kin than their white peers, often using terms like "*aunt*," "*uncle*," or "*play cousin*," to refer to these relationships (Chatters et al., 1994). Members of various Latin communities also still leverage informal *compadrazgo* networks to build cultural capital and community (Mora & Kennedy, 2020). Women are also more likely than their male counterparts to state that they have fictive kin relationships (Chatters et al., 1994). Elder African Americans with small families or those who have outlived their social networks also bolster their support system with fictive kin (Johnson, 1999).

The potential uses for fictive kin networks vary depending on the participants therein. In impoverished communities, fictive kin can provide financial relief by exchanging services like childcare, while in more financially stable communities fictive kin may act primarily as social support (Chatters et al., 1994). In recent immigrant communities, fictive kin provide companionship to people who are far from biological families as well as social capital in a potentially hostile environment (Ebaugh & Curry, 2000). Same-sex couples may value their fictive kin's opinions about their relationships even above that of their blood relatives, potentially due to general approval and support received from their chosen family (Blair & Pukall, 2015).

Though fictive kin seem to be an important extension to family networks in various communities, little quantitative research has been done to systematically test hypotheses around these networks (Ebaugh & Curry, 2000; Chatters et al., 1994). This is especially true for the impact of fictive kin on the formative years of child development. Instead, the available research primarily focuses on defining how people form fictive kin networks (e.g., through churches, neighborhoods, and community centers), as well as the fictive kin's provision of resources, social capital, and social support to recipients of the relationships (Chatters et al., 1994; Blair & Pukall, 2015; Ebaugh & Curry, 2000; Ishino 1953; Johnson, 1999).

Social Support

Social support, or the perceived availability of others to provide practical help or encouragement, has been associated with better mental health outcomes in studies of undergraduate students (Trujillo & Servaty-Seib, 2018). Social support was found to be a strong predictor of self-kindness and well-being (Stallman et al., 2018) as well as a

negative predictor of non-suicidal self-injury in undergraduate studies (Trujillo & Servaty-Seib, 2018). Social support networks can also provide an outlet for communication and a source of encouragement in times of distress, which may be the cause of the stated favorable outcomes (Trujillo & Servaty-Seib, 2018). Social support can be divided into subcategories that include tangible, appraisal (i.e., informational), self-esteem, and belonging support (Cohen & Hoberman, 1983). This operationalization of the construct of social support has been validated in studies of college students and is shown to have an inverse association with constructs like neuroticism and stress (Barker, 2020).

Given that fictive kin networks can provide social support (Chatters et al., 1994; Ebaugh & Curry, 2000; Blair & Pukall, 2015; Mora & Kennedy, 2020), it would be worthwhile to examine quantitatively if fictive kin care correlates with reduced emotional distress.

Current Study

Secure parental attachment, as well as social support, predict less emotional distress in college students (Donnelly et al., 2012; Ono et al., 2017; Trujillo & Servaty-Seib, 2018). Fictive kin play an important role for some families in the provision of resources, social support, emotional help, and even childcare (Johnson, 1999; Chatters et al., 1994; Blair & Pukall, 2015; Ebaugh & Curry, 2000). It would be advantageous to examine whether fictive kin relationships are correlated with undergraduate mental health outcomes in similar ways as parental relationships. Current parenting research primarily focuses on the co-parenting roles of biological parents while paying much less attention to non-familial sources of social support (Jones et al., 2006). Given that students with

diverse identities may rely more on fictive kin to provide support (Mora & Kennedy, 2020; Carey, 2016; Brooks & Allen, 2014), this gap in the literature may differentially impact marginalized groups. Furthermore, the available research that investigates the use of social and non-familial support for childrearing has provided mixed results about the potential impact that the support has on the recipient (Parent et al., 2013; Mathew et al., 2017). There is also a gap in the literature examining the association between fictive kin bonds and mental health outcomes.

Given that a supportive parental attachment is associated with less stress and depression in college students (Donnelly et al., 2012; Ono et al., 2017) and fictive kin care can provide additional support (Chatters et al., 1994) it is worthwhile to examine if fictive kin care is associated with mental health outcomes of undergraduates in similar ways as parental attachment. Considering the prevalence of fictive kin networks in marginalized groups (Chatters et al., 1994; Johnson, 1999; Blair & Pukall, 2015), there may be a protective factor of additional adult caregivers that has encouraged the proliferation of these pseudo-familial relationships.

The current project examined the associations between parental attachment, care from fictive kin parental figures, social support, and emotional distress in college students. Emotional distress was operationalized as the levels of stress, anxiety, and depression. These domains are of particular utility because college students are in a position to experience them at high rates (Gençoğlu et al., 2018). Research suggests that women are more likely to report higher stress and anxiety than men, and older students are more likely to report depression than younger students (Gençoğlu et al., 2018). Men are also more likely to report feeling anxiety than depression (American College Health

Association, 2018). Therefore, gender was one consideration in interpreting results found in the current study. Further, utilizing an aggregate measure of students' levels of stress, anxiety, and depression was used in order to provide a more complete picture of all participants' emotional distress. Previous research suggests that fictive kin may be more actively utilized in diverse communities, so race was included as a potential covariate.

Since fictive kin bonds have the potential to provide the care that research suggests is beneficial for children's emotional development (Tani et al., 2018), we hypothesized that recipients of caring bonds from a fictive kin parental figure should benefit from having more social support and experiencing less emotional distress. Additionally, we hypothesized that parental attachment would moderate the relationships between fictive kin care and outcomes associated social support and emotional distress, assuming that in situations where parental attachment was low, fictive kin care would provide stronger impacts on these outcomes.

Due to the unknown but likely impact of COVID-19 on the emotional wellbeing of college students, a pandemic stress measure was included to gauge the pandemic's potential influence on emotional distress.

Research Questions and Hypotheses

Question 1: To what degree are fictive kin care and parental attachment associated with emotional distress and social support in college students?

Hypothesis 1: Fictive kin care and parental attachment are inversely associated with emotional distress and positively associated with social support in college students.

Question 2: Does parental attachment moderate the relationship between fictive kin care and emotional distress?

Hypothesis 2: Parental attachment will moderate the relationship between fictive kin care and emotional distress, and the relationship will be stronger in the case of lower parental attachment.

Question 3: Does parental attachment moderate the relationship between fictive kin care and social support?

Hypothesis 3: Parental attachment will moderate the relationship between fictive kin care and social support.

CHAPTER II – METHODS

Participants and Procedure

This study was reviewed and approved by the University of Southern Mississippi's Institutional Review Board Human Subjects Protection Review Committee (Appendix A). G*Power was used to calculate the desired sample size of 120 based on 2 predictors and .95 power (Faul et al., 2009). Data was collected between the months of January and April of 2021. Participants were volunteers from the student body of the University of Southern Mississippi recruited through SONA. Surveys were developed using Qualtrics and began with a question addressing the survey's inclusion criteria. Participants had to be able to identify one non-relative who met the fictive kin parental figure criteria. For the purposes of this study, a fictive kin parental figure was defined as a person who was neither their primary caregiver, nor a blood relative, but emulated a parent-like role in their lives. This could include a close family friend or other adult mentor but not be someone legally bound to them (e.g., stepparent or foster parent). Participants meeting inclusion criteria were directed to the informed consent form (Appendix B) and all survey instruments. Survey measures were administered in a random sequence to limit order effects. Two instructed response questions were included as quality assurance checks (i.e., "Please select 'always true' for this item" and "Select 'definitely true' for this item."; Meade & Craig, 2012). Participants received research credit for completing the surveys and answering the instructed response items correctly.

Data were received from 205 participants. Prior to analysis, the dataset was monitored to determine if participants completed measures, appropriately identified fictive kin, and correctly answered quality assurance questions. The dataset was also

checked for violations of assumptions. Studentized residuals, leverage values, and standardized DFFITs statistics were generated, and the leverage value of one subject revealed an outlier that increased by more than 67% of the preceding value. This case was removed prior to data analysis.

Ninety-one cases total were removed for the following reasons: 47 participants did not have a fictive kin parental figure; 17 cases did not have any survey data (demographics or measures); 14 cases were missing all data from the measures; eight participants noted that the fictive kin they identified was actually blood relative; four cases responded incorrectly to the quality assurance check; and one case was removed as an outlier. The remaining sample used for the analysis was comprised of 114 college students. Table 1 displays the demographic characteristics of the participants. Most of the participants identified as White (64.9%) and female (81.6%). Participants ranged from 17- to 50-years-old with an average age of 21-years-old (SD = 7.13). Most of the participants identified growing up in a two-parent household (78.1%), and most currently live with roommates or caregivers (76.3%). Participants identified their primary caregivers and fictive kin parental figures to be mostly female (80.7% and 62.3%, respectively). Racial demographics of primary caregivers and fictive kin parental figures closely resembled those of the participants, with White caregivers and fictive kin making up the majority of the sample (65.8% and 66.7%, respectively). The participants reported that they became acquainted with their fictive kin most often through their relatives (35.1%), or that their fictive kin were parents of personal friends (20.2%).

Table 1

Demographic Characteristics of the Sample

	N	*%*
Participant gender		
Female	93	81.6
Male	19	16.7
Other	2	1.8
Participant race		
White/Caucasian	74	64.9
Black/African American	34	29.8
Asian	3	2.6
Multiracial	1	.9
Other	2	1.8
Participant raised by two parents		
Yes	89	78.1
No	25	21.9
Participant living arrangements		
Off-campus, with roommates	34	29.8
On-campus, with roommates	28	24.6
At home, with caregiver(s)	25	21.9
Off-campus, alone	12	10.5
On-campus, alone	11	9.6
Other	4	3.5
Primary caregiver		
Mother	92	80.7
Father	15	13.2
Grandmother	3	2.6
Other female family member	3	2.6
Other	1	.9
Primary caregiver race		
White/Caucasian	75	65.8
Black/African American	33	28.9
Asian	4	3.5
Other	2	1.8
Primary caregiver marital status		
Married	92	80.7
Divorced	22	19.3
Never married	12	10.5
Separated	4	3.5
Unmarried, living with partner	4	3.5
Widowed	2	1.8
Other	2	1.8
Fictive kin gender		
Female	71	62.3
Male	43	37.7

Table 1 (continued)
Demographic Characteristics of the Sample

	N	*%*
Fictive kin race		
White/Caucasian	76	66.7
African American	33	28.9
Multiracial	2	1.8
Other	2	1.8
American Indian or Alaska Native	1	.9
Nature of fictive kin relationship		
Family friend	40	35.1
Parent of personal friend	23	20.2
Met at church/faith community	14	12.3
Met at school (e.g., coach/ teacher)	15	13.2
Neighbor	3	2.6
Other	19	16.7
Characteristic (Range)	*M*	*SD*
Participant age (17-50)	21.28	7.13
Primary caregiver age	50.1	8.3
Age of fictive kin	45.5	14.8
Quality of relationship with primary caregiver (2-10)	8.4	1.8
Quality of relationship with fictive kin parental figure (3-10)	8.1	1.7
Hours of contact per week as a child (0-50)	16.1	10.9
Years of acquaintance with fictive kin (1-48)	11.6	7.1

Measures

Demographic Survey

The demographic questionnaire was used to discover the gender, age, race, and ethnicity of the participants as well as their primary caregivers and fictive kin parental figures. Additional questions about primary caregivers and fictive kin parental figures were also answered, such as subjective ratings of the quality of their relationships (1 being lowest quality and 10 being highest quality). Table 1 displays the subjective quality ratings. Primary caregivers received an average relationship quality rating of 8.4 (SD = 1.8) and fictive kin parental figures had an average rating of 8.1 (SD = 1.7). Respondents

also reported the number of hours spent with fictive kin parental figures per week as a child (M = 16.1, SD = 10.9), as well as the number of years they have known their fictive kin (M = 11.6, SD = 7.1).

Parental Attachment and Fictive Kin Bonding

Although there is no developed scale that can serve as a proxy for Bowlby and Ainsworth's theory of attachment (Viviona, 2000; Andretta, et al. 2015), research has supported the use of a number of instruments to measure the dimensions that the theory suggests are important for the development of secure attachment and beneficial bonds (Mattanah, Lopez & 2011). Two that will be employed in this study are the Inventory for Parent and Peer Attachment (as a measure of parental attachment) and the Parental Bonding Instrument—care scale (as a measure of fictive kin care).

Inventory of Parent and Peer Attachment

The Inventory for Parent and Peer Attachment (IPPA; Armsden & Greenberg, 1987) was used to assess the participants' attachment to their primary caregivers. The IPPA is a self-report measure of relationships that participants have with their parents and peers. For the purposes of this study, only the 25 questions pertaining to parents were administered. Answers on the IPPA range from 1 (almost never or never true) to 5 (almost always or always true), and higher scores indicate a greater amount of each of the three subscales (i.e., Perceived Trust, Communication and Alienation). Subscale scores were summed to create a total parental attachment score, with higher numbers indicating a more secure attachment. Negatively worded items were reverse scored before being added to the total attachment score (Armsden & Greenberg, 1987).

The parent questions of the IPPA have evidence of reliability, with a three-week test-retest correlation coefficient of .93 and internal reliabilities of .87 and .89 for mothers and fathers, respectively (Armsden & Greenberg, 1987). The IPPA also demonstrates good convergent validity with assessments measuring family self-concept ($r(53) = .78$, $p < .001$) (Armsden & Greenberg, 1987). Scores on the IPPA are also shown to predict outcomes like depression and anxiety in adolescents and college students (Armsden, McCauley, Greenberg, & Mitchell, 1990; Viviona, 2000). The measure also demonstrates moderate to high reliability scores ($\alpha = .66$-$.86$; Armsden & Greenberg, 1987).

Parental Bonding Instrument

The Parental Bonding Instrument (PBI; Parker, Tupling & Brown, 1979) was used to measure the degree of care received from their fictive kin parental figures. The PBI is a 25-question survey about behaviors and attitudes experienced by the participant in their interactions with parents. The PBI includes two subscales: care, which measures the degree of affection shown to the child, and overprotection, which measures the controlling or invasive attitudes of the parental figure (Terra et al. 2009). Only the care scale questions were used for analysis in this study. Due to the nature of fictive kin relationships, the care scale was determined to be a more appropriate proxy for the support that research suggests is provided by fictive kin (e.g., emotional warmth; Ebaugh & Curry, 2000).

The PBI answer options range from 3: “very like” to 0: “very unlike” on a 4-point Likert scale; after reverse scoring several items, higher scores are indicative of more care. The full instrument has been shown to predict adult’s mental health, mood disorder morbidity and stress coping mechanisms (Suzuki & Kitamura, 2011; Buelow et al.,

2002). It has also been shown to be stable over a 20-year time period (Terra et al., 2009), and it successfully predicts parent-child conflicts and support (Lopez & Gover, 1993). The three-week test-retest reliability coefficient for the care scale is .76 (Lopez & Gover, 1993).

Interpersonal Support Evaluation List

The Interpersonal Support Evaluation List—College Version (ISEL; Cohen & Hoberman, 1983) measures participants' levels of support across the four subscales of support: tangible, belonging, self-esteem, and appraisal. This measure shows acceptable convergent validity with other measures of social support like the Inventory of Socially Supportive Behaviors (Cohen & Hoberman, 1983) and the use of subscale scores as well as total support scores has been shown to be appropriate in studies of college student populations (Brookings & Bolton, 1988). The ISEL demonstrates an excellent internal reliability (.95 - .96) and has a 3-week test-retest reliability of between .86 and .93 (Barker, 2020).

Respondents determined whether each of 48 questions was "definitely true," "probably true," "probably false," or "definitely false." True answers were scored as one point, false responses were scored as zero, and negatively worded items were reverse scored. A higher total score represented a greater amount of perceived support received (Cohen & Hoberman, 1983).

DASS-21

The Depression, Anxiety, and Stress Scale (DASS-21; Lovibond & Lovibond, 1995) was used to measure the volunteers' emotional distress. The DASS-21 is a self-report measure that asks respondents to gauge whether 21 statements applied to them in

the past week. Responses range from 0 (did not apply to me at all) to 3 (applied to me most of the time), with greater cumulative scores indicating a higher degree of depression, anxiety, and stress (Lovibond & Lovibond, 1995). The DASS-21 exhibits high reliability and convergent validity with other measures of anxiety and depression (Henry & Crawford, 2005), and it has evidence of good internal consistency across races (Norton, 2007). For the purposes of this study, a total score was used for data analysis with higher scores signifying more emotional distress. In order to make the questions more culturally and linguistically suitable, the DASS-21 adapted for U.S. college students was utilized (Kia-Keating et al., 2018).

Coronavirus Questionnaires

A pandemic stress assessment was included in order to account for the unknown, but likely, impact of COVID-19 on social support and emotional distress on college students. The Coronavirus Impacts Questionnaire (Conway et al., 2020) is a 9-item measure that addresses the extent to which coronavirus has had an impact on the finances, psychological wellbeing, and resources of the participants. Answers range from 1, (not true of me at all) to 7 (very true of me) and negatively worded items were reverse scored. Higher total scores signify greater pandemic-related distress. The Coronavirus Impacts Questionnaire has been shown to predict stress responses such as alcohol consumption (Rodriguez et al., 2020). It also demonstrates good internal reliability (.80; DeRossett et al., 2021).

Data Analysis

Prior to running analyses, frequencies were checked in order to explore the spread of the data. Data points that were missing at random were replaced using the estimated

means imputation (Beale & Little, 1975). Outliers were addressed by running tests of studentized residuals, leverage values, and standardized DFFITs. The studentized residuals and standardized DFFITs did not reveal values that increased or decreased by a value of more than 0.5 or 67%, respectively. However, the leverage values did reveal an outlier that increased by more than 67% of the preceding value. This case was removed prior to analysis.

In order to check the appropriateness of a regression analysis, the assumptions of normality, linearity, homoscedasticity, and multicollinearity were evaluated. Normality was appraised by generating a histogram plot of residuals as well as calculating pseudo-z scores to check for skewness and kurtosis. Pseudo-z scores fell within the criterion values of positive and negative three as skewness was -2.26 and kurtosis was .503. The histogram plot also approximated a normal curve, so the assumption of normality was not violated. Homoscedasticity was evaluated by plotting the predicted values and standardized residual values of the dependent variables. There was no notable pattern of increase or decrease across predicted values, so homoscedasticity was determined to be acceptable. A scatterplot was generated to determine linearity, and no curved or non-linear pattern was evident in the plot, so linearity was assumed. Lastly, multicollinearity was evaluated by inspecting the tolerance statistics. All values were more than 0.2, so no multicollinearity was observed.

T-tests were conducted to determine if there were differences across key demographic variables on outcome measures used in this study. Results indicated that there were significant differences in DASS-21 total scores based on participants' gender (0=male; 1=female; other genders were not included), $t(110) = -2.799$, $p = .006$, with

women reporting higher levels of emotional distress. Since White and Black participants most frequently appeared in the dataset, t-tests were run using dummy coded variables (0 = White; 1 = Black). Results of t-tests found no significant differences between White and Black participants on any total score of the study measures. Further investigation, however, revealed that there were differences between White and Black participants on the social support subscales of appraisal $t(103) = 2.46$, $p = .016$ and self-esteem $t(104) = -2.21$, $p = .029$. White respondents reported higher scores in the appraisal domain while Black respondents reported higher scores in the self-esteem domain. Therefore, the respondent race was only included as a covariate in supplemental analyses of social support subscales. Another factor examined as a potential covariate was the race of the primary caregiver, which also showed significantly different means on the social support subscales of appraisal $t(103) = -2.61$, $p = .01$ and self-esteem $t(104) = 2.08$, $p = .04$. Gender of fictive kin also produced significantly different means for emotional distress, $t(112) = -2.61$, $p = .01$. Neither the race of the primary caregiver nor gender of the fictive kin were included as covariates.

T-tests revealed that the primary caregiver's gender (male or female), marital status (married or divorced), and child-rearing situation (one-parent or two-parent household) did not produce significantly different means for the outcome variables of emotional distress or social support.

A correlation table (see Table 2) was generated using the measures for fictive kin care, parental attachment, emotional distress, and social support in order to answer the first research question. This table was examined to determine if fictive kin care and parental attachment were inversely associated with emotional distress and positively

associated with social support. Two moderation analyses were conducted using the PROCESS macro in SPSS in order to answer the second and third research questions. The first moderation analysis used fictive kin care as the independent variable, emotional distress as the dependent variable, parental attachment as the moderator, and respondent gender as the covariate. This model was used to examine whether parental attachment moderates the relationships between fictive kin care and emotional distress. A final moderation analysis ran fictive kin care as the independent variable, social support as the dependent variable, and parental attachment as the moderator. This model was tested to investigate if parental attachment moderates the relationship between fictive kin care and social support.

CHAPTER III - RESULTS

Table 2 displays the means and standard deviations for each measure: fictive kin care as measured by the PBI, parental attachment as measured by the IPPA, social support as measured by the ISEL, and emotional distress as measured by the DASS-21. Correlations for the coronavirus impacts questionnaire were also included. Results of Pearson correlations indicated that a significant inverse correlation existed between social support and emotional distress, $r(108) = -.395$, $p<.001$. A significant positive correlation was found between coronavirus impacts and emotional distress, $r(112) = .33$, $p<.001$. A significant positive association also existed between fictive kin care and parental attachment, $r(112) = .19$, $p<.05$. Correlations were also conducted using the subjective ratings of respondents' relationships with their primary caregivers and fictive kin, as well as the length of time and hours per week spent with fictive kin. Subjective ratings of the parental relationship quality were significantly positively correlated with measures of parental attachment and social support, $r(114) = .67$, $p<.001$ and $r(114) = .36$, $p<.001$, respectively. Subjective ratings of parental relationship quality were also inversely associated with emotional distress, $r(114) = -.23$, $p = .02$. Subjective ratings of fictive kin relationship quality were positively correlated with fictive kin care scores, $r(114) = .38$, $p<.001$. There was also a significant positive association between subjective ratings of parental and fictive kin relationship quality, $r(114) = .35$, $p<.001$. Higher social support ratings were also associated with less emotional distress, $r(114) = -.40$, $p<.001$. Hours spent with fictive kin per week did not produce significant correlations. Notably, the number of years a fictive kin parental figure was present in the respondent's life significantly predicted emotional distress, with increased emotional distress as years of

fictive kin increased, $r(112) = .21$, $p=.029$. The average levels of distress for the sample was 40.5 (SD = 16.5).

Hypothesis 1 investigated the extent to which fictive kin care and parental attachment were associated with less emotional distress and more social support. Results of correlational analyses demonstrated that there was a significant positive association between parental attachment and social support, $r(112) =.56$, $p<.001$. A significant inverse relationship also was found between parental attachment and emotional distress, $r(112) = -.34$, $p<.001$. With regard to fictive kin care, a significant positive relationship was found between fictive kin care and social support, $r(112) =.26$, $p<.001$. However, there was no significant correlation between fictive kin care and emotional distress. Therefore, the data only partly supports this hypothesis. Although fictive kin care was associated with more social support, and parental attachment was associated with more social support and less emotional distress, fictive kin care was not associated with less emotional distress.

Table 2

Means, Standard Deviations, Pearson Correlation, and Reliability Matrix for Measures

	M	***SD***	***Cronbach's α***	***1***	***2***	***3***	***4***	***5***	***6***	***7***
1. Fictive kin care	*31.9*	*19.9*	*(.82)*	-	*.187**	*.264***	*-.152*	*-.097*	*.103*	*.38***
2. Parental attachment	*95.1*	*20.2*	*(.95)*		-	*.562***	*-.341***	*.015*	*.671***	*.165*
3. Social support	*145.3*	*22.5*	*(.93)*			-	*-.395***	*.085*	*.364***	*.169*
4.Emotional distress	*40.5*	*15.5*	*(.96)*				-	*.329***	*-.228**	*-.16*
5. COVID impacts	*31.3*	*10.8*	*(.76)*					-	*-.02*	*.048*
6. Parent relationship quality	*8.4*	*1.8*							-	*.347***
7. Fictive kin relationship quality	*8.1*	*1.7*								-

**p < .05. **p < .01.*

Hypothesis 2 predicted that parental attachment would moderate the relationship between fictive kin care and emotional distress, and the relationship will be stronger in the case of lower parental attachment. After centering the variables, a moderated multiple regression model in PROCESS (Model 1) was used to investigate this hypothesis; gender was identified as a covariate. Results of this analysis demonstrated that parental attachment did not significantly moderate the relationship between fictive kin care and emotional distress b = -.03, $t(107)$ = 1.07, p = .29. Significant main effects were found for fictive kin care, b = -.75, $t(107)$ = -2.23, p<.05.

Hypothesis 3 predicted that parental attachment would moderate the relationship between fictive kin care and social support. After centering the variables, a moderated

multiple regression model in PROCESS (Model 1) was used to investigate this hypothesis. Results of this analysis indicated that parental attachment did not moderate the relationship between fictive kin care and social support, *b*, = -.01, *t*(110) = -.59, *p* = .56, however the overall model was significant, *F*(3, 110) = 19.21, $p < .001$, $R^2 = .34$. No significant main effects were found in this moderation analysis.

Supplemental analyses were conducted to explore the relationship between race and the subscales of social support. T-tests were utilized to test for mean differences between racial groups, and they revealed significantly different means by race in appraisal and self-esteem support. White respondents reported more appraisal support *t*(103) = 2.46, *p* = .016. Black participants reported more self-esteem support *t*(104) = -2.21, *p* = .029. Two-step hierarchical multiple regression analyses were conducted. Prior to analyses, tolerance statistics were generated to check for collinearity. The variance inflation factor statistics were all less than 2.0 and the collinearity tolerance statistics were greater than .9, suggesting that no issues with multicollinearity were present (Brace et al., 2012; Wiseburd & Britt, 2013). In step 1, the appraisal domain of social support was entered as the outcome variable and race was entered as the independent variable (0 = White and 1 = Black). In step 2, fictive kin care and parental attachment were entered as the independent variables.

Results of the step 1 analysis revealed that the model with race as an independent variable accounted for 5.5% of the variability in appraisal support (adjusted), *F*(1, 103) = 6.1, *p* = .02, $R^2 = .055$. Results of the step 2 analysis showed that the model including race, fictive kin care, and parental attachment explained an additional 14% of the

variance in appraisal support, $\Delta F(2, 101) = 8.7$, $p < .001$, $\Delta R^2 = .139$. Race had the largest effect on this model, with White respondents reporting more appraisal support than Black respondents, $\beta = -.26$ $t(101) = -2.92$, $p = .004$.

A similar analysis was conducted using the self-esteem subscale of social support as the outcome variable, as t-tests also revealed significantly different means by race in the self-esteem domain of social support, $t(104) = -2.21$, $p = .029$. In step 1, the self-esteem subscale of social support was entered as the outcome variable and race was entered as the independent variable (0 = White and 1 = Black). In step 2, fictive kin care and parental attachment were entered as the independent variables.

Results of the step 1 analysis revealed that the model with race as an independent variable accounted for 4.5% of the variability (adjusted), $F(1, 104) = 4.89$, $p = .03$, $R^2 = .04$. Results of the step 2 analysis showed that the model including race explained an additional 15.3% of the variance in the self-esteem domain of support, $\Delta F(2, 102) = 9.7$, $p < .001$, $\Delta R^2 = .153$. Parental attachment had the largest effect on this model, with higher attachment correlating with greater self-esteem support $\beta = .36$ $t(102) = 3.98$, $p < .001$. Race also had a significant effect in this model, with Black respondents reporting more support in the self-esteem domain than White respondents, $\beta = .185$ $t(102) = 2.08$, $p = .04$.

CHAPTER IV – DISCUSSION

The purpose of this study was to examine if there were significant relationships between fictive kin care, parental attachment, social support, and emotional distress. The first research question sought to discover if fictive kin care and parental attachment were associated with emotional distress and social support in college students. The results confirmed that secure parental attachment was associated with less emotional distress and more social support, and fictive kin care was positively associated with measures of social support. However, fictive kin care was not associated with emotional distress in this study. These findings provide further support for research that suggests that parental attachment can be a strong basis of social support and an important basis for lessening emotional distress (Chen, et al., 2017). It also supports the literature suggesting that fictive kin care can be leveraged for social support (Chatters et al., 1994; Johnson, 1999). However, fictive kin care was not seen to have a direct relationship with emotional distress in this study. This suggests that though fictive kin care can add to the quantity of support, the effects of this support may not be enough to uniquely impact participants' experience of emotional distress. This assertation is reinforced by literature that states that the type of support provided is more impactful at limiting emotional distress than quantity of support (Lerman, et al., 2021; Sharpley et al, 2015). It is also possible that fictive kin care did not have a significant correlation with emotional distress due to the particularly high levels of distress found in this sample. The participants in this study reported levels of emotional distress that were approximately two times higher than previous studies of college students and nonclinical populations (Liu et al., 2019; Sinclair et al., 2012; Crawford & Henry, 2003). This could potentially be due to the effects of the

pandemic, as COVID-19 has been found to be associated with negative mental health outcomes of college students (Kecojevic, et al., 2020). Moreover, this research was conducted during pandemic lockdown precautions, so participants may not have had regular access to their fictive kin care networks.

The second research question examined whether parental attachment moderated the relationship between fictive kin care and emotional distress when controlling for gender. Parental attachment was not a significant moderator of these relationships, however fictive kin did uniquely influence the prediction of emotional distress in this model. Further investigation of parental attachment means suggest that parental attachment was consistently high for most participants and therefore, the opportunity to fully explore the impact of the interaction between low parental attachment and positive fictive kin relationships may not have been possible. According to this predictive model, 21% of the variance in emotional distress was accounted for by the combination of parental attachment and fictive kin relationships, which is consistent with the previous literature (Viviona, 2000; Hall, 2008).

The final research question explored whether parental attachment moderated the relationship between fictive kin care and social support. Parental attachment was not found to be a significant moderator in the analysis. Similar to the discussion of research question 2 above, it is likely that parental attachment reports were not sufficiently varied to allow for an exploration of the low-parental attachment/ high fictive kin interaction. The overall significance of the model is consistent with previous research that shows that fictive kin relationships as well as parental attachment are significant sources of social support (Chen et al., 2017; Chatters et al., 1994).

We found that black and white participants differed on two domains of social support (i.e., appraisal support and self-esteem support), so we investigated this further. Appraisal support refers to the provision of advice and information; self-esteem support focuses on the extent to which others' communication makes a recipient feel valued (Schonfeld, 1991). Results of supplemental analyses found that when considering race as a variable, White participants reported more appraisal support than Black participants, and Black participants reported more self-esteem support than White participants. In both models, the combination of parental attachment and fictive kin care were significant predictors of these facets of social support even after accounting for the variability associated with race. These findings support research that suggests that fictive kin support is used in various ways depending on the needs of the community (Chatters et al., 1994; Johnson, 1999). Racial differences in support may be partially attributed to structural factors like economic and social institutions (Sarkisian & Gerstel, 2004). For example, the greater availability of appraisal support in the White samples may be explained by the fact that Whites tend to have a larger and more varied support networks while Blacks tend to have smaller support networks of close people, potentially as a reaction to discrimination (Ajrouch, et al., 2001). The smaller networks may have a similar knowledge and resource base as the support recipient, making them less helpful resources for advice (Ajrouch, et al., 2001). With regards to self-esteem support, Black networks may incorporate more self-esteem assistance than White networks in order to build resilience against racially demeaning encounters and messages (Patterson, 2004; Chao et al., 2016).

Supplemental analyses found that parental relationship quality ratings (i.e., “rate the quality of your relationship on a scale from 1-10”) were associated with better attachment scores, better social support, and less emotional distress, which supports current literature, and was associated with the corresponding objective measures used in this study (Chen, et al., 2017, Klein & Pierce, 2009; Uehara et al., 1999; Ono et al., 2017). Moreover, social support was associated with less emotional distress, which is also supported by research (Stallman et al., 2018; Trujillo & Servaty-Seib, 2018). However, one supplemental analysis uncovered an unexpected finding. Emotional distress was positively associated with the duration of fictive kin involvement. This differs from literature which has demonstrated that social support predicts less emotional distress (Stallman et al., 2018, 2018; Trujillo & Servaty-Seib, 2018). It is uncertain, but this may be due to the fact that fictive kin care may be utilized more heavily in situations where other resources (e.g., financial, familial, social) are not available (Johnson, 1999; Hall, 2008; Ebaugh & Curry, 2000). This may suggest that individuals who use fictive kin care for longer timespans may have fewer alternative resources for meeting their needs, which would put them at greater risk for emotional distress in general (Conger et al., 2000). Future research could explore whether individuals who leverage fictive kin care for longer periods of time have similar levels of available resources as peers who use fictive kin care for shorter lengths of time. We also found that participants who experienced more perceived impacts from COVID-19 also had more emotional distress. This indicates that the levels of distress seen in this study may have been impacted by the pandemic, which is in line with other research findings that COVID-19 has had a significant impact on the emotional distress of college students (Kecojevic, et al., 2020).

There are limitations to this study to consider, including the use of self-report measures, which are vulnerable to response biases such as social desirability or misunderstanding of measures (Rosenman et al., 2011). These results also do not offer a causal explanation of the constructs tested. Another potential limitation is the use of parenting instruments that were not validated for use with fictive kin parental figures. Further research may need to explore the development of measures that capture the unique constructs of fictive kin relationships. This study may also be limited by the conceptualization of social support. Being that most of the participants surveyed lived with others, their level of social support received may have come from their roommates or other outside support (e.g., friends) as opposed to solely their caregivers or fictive kin. Finally, the study demographics may be limiting in that it is comprised of mostly White, female college students. Research suggests that racial minorities use fictive kin networks more than their White counterparts (Chatters et al., 1994; Mora & Kennedy, 2020), so the study results may not reflect the use of fictive kin networks in the general population, especially among people of color.

Overall, this study supports previous findings about parental attachment while extending the knowledge about fictive kin in important ways. These findings further support research suggestions that parental attachment is important foundationally for social support and limiting emotional distress. It also demonstrates that fictive kin provide a significant base of social support for college students above what can be experienced from parents alone. Finally, it emphasizes the literature stating that fictive kin may operate differently across various groups.

This study makes an important contribution to the small body of work exploring fictive kin parental relationships. It advances the knowledge about the characteristics and function of fictive kin parental relationships, and it helps develop an understanding of how fictive kin operate in conjunction with parental relationships. Future research can explore whether there are significant psychological benefits experienced by parents who leverage fictive kin parental figures in support of their children. Research should also be conducted with racial and ethnic minority samples to determine if fictive kin relationships operate differently across racial groups.

APPENDIX A – IRB Approval Letter

Office *of*
Research Integrity

THE UNIVERSITY OF SOUTHERN MISSISSIPPI

118 COLLEGE DRIVE #5125 • HATTIESBURG, MS | 601.266.6576 | USM.EDU/ORI

NOTICE OF INSTITUTIONAL REVIEW BOARD ACTION

The project below has been reviewed by The University of Southern Mississippi Institutional Review Board in accordance with Federal Drug Administration regulations (21 CFR 26, 111), Department of Health and Human Services regulations (45 CFR Part 46), and University Policy to ensure:

- The risks to subjects are minimized and reasonable in relation to the anticipated benefits.
- The selection of subjects is equitable.
- Informed consent is adequate and appropriately documented.
- Where appropriate, the research plan makes adequate provisions for monitoring the data collected to ensure the safety of the subjects.
- Where appropriate, there are adequate provisions to protect the privacy of subjects and to maintain the confidentiality of all data.
- Appropriate additional safeguards have been included to protect vulnerable subjects.
- Any unanticipated, serious, or continuing problems encountered involving risks to subjects must be reported immediately. Problems should be reported to ORI via the Incident template on Cayuse IRB.
- The period of approval is twelve months. An application for renewal must be submitted for projects exceeding twelve months.
- Face-to-Face data collection may not commence without prior approval from the Vice President for Research's Office.

PROTOCOL NUMBER: IRB-20-500
PROJECT TITLE: Fictive Kin and Emotional Distress
SCHOOL/PROGRAM: Psychology
RESEARCHER(S): Roxanne Watts, Bonnie Nicholson

IRB COMMITTEE ACTION: Approved
CATEGORY: Expedited

7. Research on individual or group characteristics or behavior (including, but not limited to, research on perception, cognition, motivation, identity, language, communication, cultural beliefs or practices, and social behavior) or research employing survey, interview, oral history, focus group, program evaluation, human factors evaluation, or quality assurance methodologies.

PERIOD OF APPROVAL: November 17, 2020

Donald Sacco Jr.

Donald Sacco, Ph.D.
Institutional Review Board Chairperson

APPENDIX B –IRB Informed Consent Form

ORI | Office of Research Integrity

INSTITUTIONAL REVIEW BOARD

STANDARD (ONLINE) INFORMED CONSENT

STANDARD (ONLINE) INFORMED CONSENT PROCEDURES

The Project Information and Research Description sections of this form should be completed by the Principal Investigator before submitting this form for IRB approval. Use what is given in the research description and consent sections below when constructing research instrument online.

Last Edited May 13th, 2019

Today's date: November 10, 2020

PROJECT INFORMATION

Project Title: Examining the Impact of Fictive Kin Parental Figures' Support on the Experience of Stress, Anxiety and Depression in College Students

Principal Investigator: Roxanne Watts	Phone: 414-510-3905	Email: roxanne.watts@usm.edu
College: University of Southern Mississippi	School and Program: School of Psychology- Counseling Psychology	

RESEARCH DESCRIPTION

1. **Purpose**:

   This study is aimed at exploring the effects of fictive kin parental figures on college student mental health outcomes.

2. **Description of Study:**

   Study participants will be asked to respond to a series of questionnaires that will take approximately 15 to 20 minutes to complete. Please read each item carefully and respond thoughtfully, as quality assurance checks will be included to ensure the validity of responses. Participants who do not pass the quality assurance checks will be excluded from data analyses and will not receive SONA credit or gift card entry.

3. **Benefits:**

   Participants will either receive .5 SONA credits or a raffle entry for one of two $25 VISA gift cards upon completing the surveys and passing the quality assurance checks. Additionally, the knowledge gained from the surveys may also help participants recognize the need to seek help from resources available to them on campus. Participating in the study can also help researchers discover practices that promote better mental health in emerging adults. This study does not pose a risk for medical injury, nor does it involve any treatment procedures that could pose additional risks.

4. **Risks:**

   The risks associated with participation are minimal and do not exceed levels of discomfort experienced in ordinary daily life. Participants should be conscious of sensitive or triggering questions within the questionnaires and may skip any question they prefer not to answer without penalty. If participants should feel uncomfortable, you may discontinue the study without penalty. If you experience distress as a result of your participation in this study, please notify Dr. Bonnie Nicholson (bonnie.nicholson@usm.edu) or contact Student Counseling Services (601) 266-4829 for support.

5. **Confidentiality:**

To ensure confidentiality, identifying information like name and contact information will not be retained with the participants' survey responses. All information that participants provide will be kept confidential and stored in a secure location for six (6) years before being destroyed.

6. **Alternative Procedures:**

No alternative proedures are required or provided.

7. **Participant's Assurance:**

This project and this consent form have been reviewed by the Institutional Review Board, which ensures that research projects involving human subjects follow federal regulations. Any questions or concerns about rights as a research participant should be directed to the Chair of the Institutional Review Board, The University of Southern Mississippi, 118 College Drive #5125, Hattiesburg, MS 39406-0001, 601-266-5997.

Any questions about this research project should be directed to the Principal Investigator using the contact information provided above.

CONSENT TO PARTICIPATE IN RESEARCH

I understand that participation in this project is completely voluntary, and I may withdraw at any time without penalty, prejudice, or loss of benefits. Unless described above, all personal information will be kept strictly confidential, including my name and other identifying information. All procedures to be followed and their purposes were explained to me. Information was given about all benefits, risks, inconveniences, or discomforts that might be expected. Any new information that develops during the project will be provided to me if that information may affect my willingness to continue participation in the project.

Include the following information only if applicable. Otherwise delete this entire paragraph before submitting for IRB approval: The University of Southern Mississippi has no mechanism to provide compensation for participants who may incur injuries as a result of participation in research projects. However, efforts will be made to make available the facilities and professional skills at the University. Participants may incur charges as a result of treatment related to research injuries. Information regarding treatment or the absence of treatment has been given above.

CONSENT TO PARTICIPATE IN RESEARCH

By clicking the box below, I give my consent to participate in this research project.

☐ Check this box if you consent to this study, and then click "Continue." (Clicking "Continue" will not allow you to advance to the study, unless you have checked the box indicating your consent.)

If you do not wish to consent to this study, please close your browser window at this time.

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