Interparental Conflict Exposure and Self-Reported Depressive Symptoms and Religious Service Attendance in College Students

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Abstract

Conflict between parents is a common domestic experience, often witnessed by children in the home. Young adult children who were exposed to this conflict while in the home may be impacted negatively by these experiences to the point of experiencing depressive symptoms or reduced religious service attendance. Religious service attendance may be a helpful resource for those suffering from depressive symptoms related to parental conflict exposure. In two studies, the present research investigates relationships between three dimensions of interparental conflict – frequency, intensity, and resolution – depressive symptoms, and religious service attendance among college students. Study 1 (N = 963) found that as interparental conflict increased, symptoms of depressive symptoms increased, and religious service attendance decreased. Study 2 (N = 960) found that religious service attendance moderated the relationship between interparental conflict resolution and depressive symptoms, such that higher levels of religious service attendance weakened the relationship between poor conflict resolution and greater levels of depressive symptoms. Religious service attendance may serve as a buffer for depressed persons with a history of exposure to in-home parental conflict.

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Interparental Conflict Exposure and Self-Reported Depressive Symptoms and Religious Service Attendance in College Students

Introduction

Depression is a common and debilitating experience for many. Among the millions who annually seek treatment for depression, young adults in college represent a significant percentage of this number. In fact, American colleges and universities are facing record numbers of students who are being treated for a variety of mental health problems, including depression (Boehm et al., 2016; Chessman & Taylor, 2019). A recent report indicates that nearly 18% of college students were diagnosed with or treated for depression in the year prior to data collection (American College Health Association, 2018).

Acknowledging the prevalence of depression in college students is important in view of some of the tasks common for this developmental period and how depression may negatively impact the successful completion of these tasks. Inasmuch as educational attainment is one of these tasks, its achievement is threatened by poor academic performance that is associated with depression (De Luca et al., 2016; Deroma et al., 2009; Mahmoud et al., 2012). For those who leave college and enter the workforce, it is important to be able to consistently perform work tasks and accomplish career related goals. However, these tasks may be compromised as depression is also associated with reduced or poor work performance (Evans-Lacko & Knapp, 2016; Wang & Gorenstein, 2014) as well as unemployment (Galambos et al., 2006; Lerner et al., 2004). Finally, for those who choose to start families during this period, depression is associated with family-related relationship difficulties such as marital discord and parent-child relational strain (Benazon & Coyne, 2000; Burke, 2003; Whisman & Baucom, 2012). In view of the peril posed by depression to the achievement of these developmental tasks, understanding risk factors

associated with depression in college students, such as exposure to interparental conflict, is important for diagnostic and treatment purposes.

Conventional conceptions of personal identity development have asserted that the bulk of this work was done during adolescence (Erikson, 1968; Marcia, 1980). However, more recent affirmations regarding identity development posits that the most intensive period for this work takes place from the late-teenage years through the mid-twenties (Arnett, 2000, 2006), a period that includes the traditional college years (i.e., 18-22). This identity work typically involves religious identity and practices (Arnett & Jensen, 2002; Barry et al., 2010). Despite overall declines in religious participation in recent years (Miller, 2018; Pew Research Center, 2015), belief in God remains high among US citizens (89%) (Pew Research Center, 2014a), including the age group that includes college students (18-29; 81%) (Pew Research Center, 2014b). Although the importance of religious beliefs remains constant during the college years (Stoppa & Lefkowitz, 2010), religious practices, such as religious attendance, appear to decline over time from adolescence into young adulthood (Desmond et al., 2010; Stoppa & Lefkowitz, 2010). Although a variety of factors likely contribute to the overall variability in emerging adult religious participation, it is possible that some of this is due to behaviors observed in one's home, including interparental conflict practices.

The relationship between parents is one characterized by a variety of positive and negative experiences, including conflict. Children, in a variety of age groups, exposed to such conflict can be negatively affected by such exposure (Buehler et al., 1997; Grych & Fincham, 1990; Grych et al., 2013), even when such conflict does not necessarily involve physical or sexual abuse. In fact, Myers (2013) differentiates conflict from violence by defining it as an "incompatibility of actions, goals, or ideas" (p. 597). Among the potential outcomes for young

adult children exposed to IPC are internalizing problems, such as depressive symptoms (Bannon et al., 2018; Blumenthal et al., 1998; Richardson & McCabe, 2001; Turner & Kopiec, 2006). Specifically, scholars (Grych et al., 2013; Harold & Sellers, 2018) have demonstrated that as IPC exposure increases, depressive symptoms also increase. Consequently, these studies support the idea that interparental relationships are important factors when considering the mental health experiences of college students. However, in their cognitive-contextual framework, Grych and Fincham (1990) asserted that interparental conflict should be regarded as a multidimensional construct comprised of elements such as frequency, intensity, and resolution. However, the relationships between these individual dimensions and outcomes, such as depressive symptoms, remain understudied in college students. Thus, the first part of the first study in this two-study approach will assess the relationship between retrospective self-reports of multidimensional IPC exposure and present-tense self-reported depressive symptoms in a large convenience sample of college students.

Similarly, the extant literature supports the hypothesis that interparental relationship variables, such as IPC exposure, are also related to religious outcomes in younger children (Davis & Epkins, 2009; Nelsen, 1981), adolescents (Goldmintz, 2011; Max et al., 1997), and college students/young adults (Ellison et al., 2011; Galek et al., 2015; Milevsky & Leh, 2008; Zhai et al., 2007). Generally, the outcomes of these studies have demonstrated that as IPC exposure increases, religious outcomes, such as religious service attendance, decrease. Consequently, these studies support the idea that interparental conflict is an important factor when considering how religious values and practices are related to parental conflict behaviors. Moreover, the potential impact of IPC exposure on religious practices is notable in view of the value of religion as a coping skill for negative events (Ahles et al., 2016; Pargament, 1997;

Pargament & Brant, 1998). However, what is not clear is how each of the aforementioned individual dimensions of IPC – frequency, intensity, and resolution – individually relate to religious service attendance among college students. Thus, the second part of this first study in this two-study approach will examine the relationship between retrospective self-reports of multidimensional IPC exposure and present-tense self-reported religious service attendance among a large convenience sample of college students.

Early childhood experiences are often implicated as crucial in understanding the development of adult psychopathology (Beck, 1967; Bibring, 1953; Blatt & Homann, 1992; Bowlby, 1980). However, scholars differ regarding how best to assess these experiences. Questions have been raised about the validity of using adult retrospective recall as a means of assessing early childhood family and/or parental dynamics, which are then assessed for relationships with present-tense outcomes, such as psychopathology. An early study of the validity of adult retrospective recall discouraged the use of the approach altogether (Yarrow et al., 1970). However, Brewin et al. (1993) noted that objections to using retrospective recall in adult psychiatric patients are often exaggerated, while noting the importance of continuing to enhance the validity of adult retrospective recall. In their review, Hardt and Rutter (2004) examined validity studies comparing retrospective recall of adverse childhood experiences (ACES) with court, clinic, or research records gathered during the focal recall period as well as studies involving siblings providing retrospective recall of the same period. They concluded that adult retrospective reports are "sufficiently valid" (p. 270) when they are assessed using validated instruments versus interviews that require judgment and interpretation. In other words, according to the authors, these reports possess the requisite validity necessary for dependable

scientific inquiry and need not be conscripted to wholesale rejection as a potential means of assessment.

A number of more recent studies have performed direct comparisons between prospective and retrospective studies. For example, three such studies indicated moderate agreement between the two types of studies (r = .30-.47; k = .31), with retrospective assessments demonstrating stronger relationships among outcome on variables such as family environment, childhood maltreatment, and adverse childhood experiences (Bell & Bell, 2018; Newbury et al., 2018; Reuben et al., 2016). However, a meta-analysis of 16 comparative studies of child maltreatment, totaling 25,471 participants, found that agreement between the two types of studies was poor (k = .19; Baldwin et al., 2019). Nevertheless, agreement was higher when retrospective measures of maltreatment were derived from subjective versus objective assessments and in studies with smaller samples. Correspondingly, the present study will assess interparental conflict using the CPIC (Grych et al., 1992), an objective assessment of retrospective recall of interparental conflict.

The mixed nature of these results indicate that the relative validity of retrospective reporting may be a function of the nature of the experience being reported. For instance, the Baldwin et al. (2019) meta-analysis focused exclusively on child maltreatment and found poor agreement, whereas Bell and Bell (2018) investigated the family environment and reported moderate agreement. This points to a continued need for scholars using retrospective recall studies to focus on methodological quality while noting the potential limits of retrospective recall in providing an accurate assessment of participant experiences. The present study directs college student respondents to assess IPC in the parental arrangement in which they grew up.

Chapter 1: Theoretical Framework

The cognitive-contextual framework (CCF; Figure 1) represents an attempt to clarify the processes underlying adjustment and coping trajectories associated with IPC exposure (Grych & Fincham, 1990). The authors propose that adjustment difficulties observed in children exposed to IPC are a function of a number of factors. Furthermore, although this framework has historically been used to explain adjustment difficulties observed in younger children (Grych et al., 2013), it has also been used to frame similar discussions in young adults (Amato & Sobolewski, 2001; Cusimano & Riggs, 2013; Hayashi & Strickland, 1998). Within this framework, IPC is regarded as a multidimensional stressor that initiates an attempt at comprehension and coping from the child. The child's coping response is regarded as a product of both cognitive and affective appraisals made by the child in response to the stressor. Through primary processing the child alerts to the stressor and responds affectively. Furthermore, primary processing is influenced, in part, by characteristics of the stressor (i.e., frequency, intensity, content, and resolution). The authors assert that conflict frequency relates to repeated exposure to conflict episodes. Conflict intensity relates to an implied continuum between calm discussion to heated arguments, perhaps even including physical aggression. The content of conflict relates to specific topics that are the focus of parental discourse during conflict episodes (e.g., money, children, sex, etc.). Conflict resolution relates to whether or not parents are able to successfully resolve their differences (i.e., the degree to which parents do or do not come to a specific conclusion regarding topics of discussion). Primary processing is also influenced by contextual factors such as a child's previous experiences with conflict, the child's perceptions about the family's general emotional climate (e.g., warm and supportive vs. distant and unsupportive, parent-child relationship

quality) as well as the child's temperament, gender (i.e., do boys and girls respond to conflict the same or differently?), and moods (e.g., is the child currently happy? Sad? Frustrated? Etc.).

Through secondary processing the child attempts to decipher the cause of the conflict and identifies appropriate responses. Once the child decides on a cause, an assessment of potential coping efficacies is made. In addition to being affected by the stressor and contextual factors, secondary processing is also a function of the child's beginning state of emotional arousal, which in turn is related to subsequent states of emotional arousal. Secondary processing and affective states combine to direct attempts at coping with the stressor. Effective coping strategies result in reduction of negative affect, whereas ineffective strategies either maintain or increase distress.

Chapter 2: Study 1 Review of Literature

Grych and Fincham (1990) asserted that conflict between parents can be conceptualized as a multidimensional construct. They stated that conflict frequency, intensity, and resolution may relate to the relative stressfulness of IPC exposure for children, which in turn may be related to subsequent adjustment problems, such as depressive symptoms. These potential relationships between specific dimensions of conflict and outcomes indicate that different aspects of parental conflict may yield different results for exposed children. For instance, some couples may have frequent, low intensity conflicts but are able to successfully resolve their differences, whereas others may have infrequent, high intensity conflicts without resolution. Variability in each of these dimensions may relate to differential impacts on child outcomes. For instance, the relative seriousness of mental health outcomes, such as depressive symptoms, may be a function of high or low levels of one or more of these dimensions. Furthermore, the relative strength of the relationship of each dimension with an outcome may also vary. For instance, mental health outcomes, such as depressive symptoms, may be more closely associated with exposure to conflict frequency versus poorly resolved conflict. This perspective helps researchers to highlight which elements of the conflict experience are the most harmful to children.

As this study focuses on the dimensions of conflict frequency, intensity, and resolution, the ensuing review of research focuses on these three dimensions as they are related to the variables under consideration. Although it is not the only instrument used to assess IPC exposure, the Children's Perception of Interparental Conflict Scale (CPIC; Grych et al., 1992) is a commonly used instrument for assessing conflict exposure from the point of view of the child. However, it is noteworthy that whereas a number of studies employ the conflict properties scale of the CPIC (e.g., frequency, intensity, and resolution), the subdimensions of the scale are often

analyzed additively in order to assess the combined impact of these dimensions on associated outcomes. In other words, few studies have investigated the relationships among the individual dimensions of the conflict properties scale and specific outcomes, such as depressive symptoms(Cusimano & Riggs, 2013; Keeports & Pittman, 2017). Thus, although many studies (e.g., Alves et al., 2019; Blumenthal et al., 1998) have been cited as offering support for the existence of relationships between the individual subscales (and the concepts underlying these) and outcomes, the subscales are often analyzed together, precluding any firm conclusions regarding the relative influence of each individual subscale. Existing studies assessing these dimensions using other forms of measurement are also included in the review below.

Dimensions of Conflict and Depressive Symptoms.

Scholars have demonstrated generally that exposure to more frequent IPC is related to an increase in depressive symptoms in college students (Cusimano & Riggs, 2013; Keeports & Pittman, 2017; Turner & Kopiec, 2006). Much less is known about the relationship between other individual dimensions, such as intensity and resolution, and depression symptoms in college students. The following review summarizes the available literature related to depression and each dimension under consideration for this study.

Frequency.

Existing research has demonstrated positive relationships between IPC and depressive symptoms in college students (Cusimano & Riggs, 2013; Keeports & Pittman, 2017). However, of these studies, a few have examined relationships specifically between IPC frequency and depression symptoms among college students (Hanson et al., 1992; Shimkowski et al., 2017; Tucker et al., 2013). Although Hanson et al. (1992) sampled both men and women, they reported positive relationships between IPC frequency and depression symptoms in women only.

Furthermore, Tucker et al. (2013) sampled only women yet demonstrated positive relationships as well. However, Shimkowski et al. (2017) sampled and found a positive relationship among both men and women. Since only one of these three studies demonstrated relationships between parental conflict exposure and depression in men, the degree to which these outcomes are generalizable to the broader population of both college men and women is unclear. However, they are at least consistent with the thesis that more frequent exposure to IPC is associated with increased levels of depression symptoms. In other words, college-aged children who have grown up in homes where they recalled that conflict between parents is more frequent may also report greater depressive symptoms. The first study will add to this nascent literature by assessing the relationship between the frequency of IPC exposure and present-tense symptoms of depression in college students.

Intensity.

Compared to studies examining the relationship between IPC frequency and depression symptoms, still fewer have examined the relationship between IPC intensity and depression symptoms in college students. Although reasons for this lack of investigation are unclear, it may be that researchers view intensity as a more subjective dimension of conflict when compared to, for instance, frequency. It may also be that intensity is viewed as more susceptible to memory degradation over time. Developmentally speaking, emerging adulthood, which typically includes college students, is often viewed as a period of individual development (Arnett, 2015). Thus, it may be that family dynamics, such as parental conflict intensity, are a neglected focus of investigation (Tucker et al., 2013). Nevertheless, two studies were found that specifically assessed the relationship between parental conflict intensity and depression in either adolescence or young adults. Tucker et al., (2013) reported that IPC intensity was positively related to

depression symptoms in college women. Furthermore, Xin et al. (2009) reported that conflict intensity was negatively correlated with positive affect and positively correlated with negative affect in adolescents. Affect denotes one's emotional status or mood (Danhauer et al., 2013) and although measuring affect singularly is not the same as directly assessing depression, negative affect is a manifestation of depression (Boumparis et al., 2016; Cohen et al., 2017) and is part of the diagnostic criteria for depression (American Psychiatric Association, 2013). Thus, these results are at least consistent with the hypothesis that increased IPC intensity is related to reports of greater depression symptoms.

Resolution.

IPC resolution relates to the degree to which observed conflicts are effectively resolved or not. One study was found that used the CPIC and individually assessed the relationship between IPC resolution and depression symptoms. Tucker et al. (2013) found that there was not a relationship between IPC resolution and symptoms of depression among college women. Thus, the question of if/how IPC conflict resolution relates to symptoms of depression remains understudied.

The first study (of this two-study approach) extends the existing literature by testing the relationships, individually, between IPC frequency, intensity, and resolution and self-reported depression symptoms in college students. Specifically, this study tests the following hypotheses:

H1: Higher retrospective reports of IPC frequency will be associated with higher levels of depressive symptoms in college students.

H2: Higher retrospective reports of IPC intensity will be associated with higher levels of depressive symptoms in college students.

H3: Higher retrospective reports of IPC resolution (indicating poorer resolution) will be associated with higher levels of depressive symptoms in college students.

Dimensions of Conflict and Religious Service Attendance

Whereas a limited number of studies have demonstrated linkages between individual dimensions of IPC and symptoms of depression, an extensive literature search did not identify research that specifically assessed the relationships between any of these individual dimensions of IPC and religious service attendance. Nor were any studies found that reported a relationship between perceptions of IPC exposure, in the aggregate (i.e., independent of dimensional assessment), and present-tense religious service attendance among college students.

A handful of studies, which sampled a variety of age groups, have examined relationships between IPC and religious expression. For instance, Nelsen (1981) found that 4th through 8th grade children who perceived their parents to be highly religious and highly conflictual were less religious than children who perceived their parents to be highly religious and rarely or never conflictual. Moreover, in an unpublished dissertation, Goldmintz (2011) found that observed conflict in the home (i.e., "the amount of openly expressed anger and conflict among family members," p. 34) was negatively correlated with moral religious emphasis ("the emphasis on ethical and religious issues and values," p. 35) in high school seniors. Thus, as reports of observed family conflict increased, respondents' moral religious emphasis decreased. Lastly, in a longitudinal study, Myers (1996) found that negative parental relationships, as indicated by lower levels of marital happiness, were associated with decreased religiosity in adult children. Thus, as reports of marital unhappiness increased, religiosity in offspring decreased. However, it should be noted that less marital happiness is not the same as marital conflict.

Although comparatively little research has specifically documented relationships between IPC exposure and subsequent religious behaviors, other studies have approximated these relationships in studies using different variables. For instance, some have assessed the relationship between parental separation and/or divorce and subsequent religious behaviors in adolescent or adult children. Since conflict is an oft cited pretext for divorce (Gottman, 2014), these studies may be regarded as an indirect assessment of marital conflict. For instance, in a study of how marital disruption impacts religious value transmission, the correlation between parent and adolescent religiosity was stronger in intact families compared to disrupted families (e.g., divorce, separation, and/or spousal desertion). Furthermore, adolescents from disrupted families were found to be significantly less religious than those from intact families (Max et al., 1997). Zhai et al. (2007) found that, compared to young adults from intact homes, young adults from divorced homes reported significantly lower self-reported religious service attendance. Individuals from divorced families scored lower on intrinsic (i.e., religious expression as its own end) and extrinsic religiosity (i.e., religious expression as a means to an end; (Allport & Ross, 1967) compared to those from intact families (Milevsky & Leh, 2008). Similar relationships have been observed in married couples wherein the husband and wife, each from divorced families, were less religious than couples whose parents' marriages were intact (Fackrell et al., 2011).

Based on this limited number of studies, there seems to be some limited basis for concluding that the studies reviewed signal, or at least are consistent with, the hypothesis that perceived IPC exposure is negatively related to religious practice. However, the literature offers no specific direction regarding the existence of relationships between the frequency, intensity, and resolution of IPC and religious service attendance. Thus, the second part of this first study

(in this two-study approach) will be the first to assess (to our knowledge) the relationships among these variables. Specifically, this study tests the following hypotheses:

H4: Higher retrospective reports of IPC frequency will be associated with lower levels of present-tense reports of religious service attendance.

H5: Higher retrospective reports of IPC intensity will be associated with lower levels of present-tense reports of religious service attendance.

H6: Higher retrospective reports of IPC resolution (indicated lower resolution) will be associated with lower levels of present-tense reports of religious service attendance.

Chapter 3: Demographic and Control Variables

The following demographic variables served as control variables in this study: *Age*, *Race/Ethnicity*, *Sex*, *Family Structure*, and *Sexual Orientation*. The following discussion details the justification for their selection.

Age

Existing studies have demonstrated relationships between age and depression symptoms (Khesht-Masjedi et al., 2019; Mirowsky & Ross, 1992), with the incidence among adolescents and young adults increasing in recent years (Duffy et al., 2019; Lipson et al., 2019; Mojtabai et al., 2016). Furthermore, age is positively associated with religious attendance, such that attendance generally increases with age. Religious attendance is particularly low during the college years when compared to older religious attenders (Schwadel, 2010, 2011).

Race/Ethnicity

Existing studies have demonstrated relationships between race/ethnicity and each of the experimental variables in this study. For instance, Krishnakumar et al. (2003) reported that IPC exposure was been associated with higher levels of parent-child conflict and maternal psychological control in African-American families when compared to European-American families. However, with regard to the child-rearing years, African-American couples reported fewer major conflicts overall than did European and Mexican American couples (Mackey & O'Brien, 1998).

With regard to depressive symptoms, in a Canadian study, Wu et al. (2003) reported that English Canadians have worse depressive symptoms than black and Asian Canadians but better than Jewish Canadians. Riolo et al. (2005) reported that rates of depression were higher for whites than for African and Mexican Americans. In a systematic review of studies investigating

the relationships between race/ethnicity and internalizing disorders (including depression) in young people, Anderson and Mayes (2010) reported that "Numerous studies have documented higher rates of internalizing disorders among Native American, Latino American, Asian American, and African American adolescents compared to European American adolescents" (p. 339).

Finally, scholars have demonstrated that religious attendance is higher among African-Americans when compared to European-Americans (Taylor et al., 1996). Moreover, higher levels of attendance are related to lower levels of domestic violence perpetration in African-American and Latino males compared to European-American males (Ellison et al., 2007). Higher levels of religious attendance are also related to lower levels of general distress in African-Americans and Hispanics compared to European-Americans (Tabak & Mickelson, 2009).

Sex

Existing studies have demonstrated relationships between sex and each of the experimental variables for this study. For instance, Davies and Lindsay (2004) demonstrated that IPC exposure was a stronger predictor of internalizing problems, such as depression symptoms, in girls versus boys. Davies and Lindsay (2001) discussed two models for understanding the literature regarding IPC and gender. The *male vulnerability* model asserts that boys are more vulnerable to maladjustment than girls as a function of IPC exposure. The *differential reactivity* model asserts that the outcomes associated with IPC distress are different for boys and girls. Their review of the literature found 13 studies (ranging from weak to moderate to strong) that provided support for the *male vulnerability* model and 12 (ranging from weak to moderate to strong) studies that provided support for the *differential reactivity* model.

Regarding depressive symptoms, Alves et al. (2019) reported that females demonstrated higher depression scores than males and Nolen-Hoeksema (2001) demonstrated that females are twice as likely as males to experience depressive symptoms. Salk et al. (2017) reported that these differences initially appear in early childhood, peak in adolescence, and then level off in adulthood.

Generally speaking, scholars have demonstrated that women are more religious than men (Freese, 2004; Sullins, 2006; Trzebiatowska & Bruce, 2012). One of many explanations for these differences has to do with the degree to which men and women possess either gendered pride or gender expression views of themselves, with higher levels of gendered pride (i.e. the degree to which one is proud to be [respondent's gender]) being associated with higher levels of religiosity in men and higher levels of gender expression (i.e., behavioral expression of gender) being associated with higher levels of religiosity in women (Schnabel, 2017).

Family Structure

Children of intact families are characterized by lower levels of depressive symptoms compared to those from divorced families (Martínez-Pampliega et al., 2019). Furthermore, in children of divorced families, depression symptoms are more common when the non-custodial father exhibits lower levels of contact (with the child) and support (e.g., emotional, financial, relational; (Elam et al., 2016). Laukkanen et al. (2016) reported that, of five family structure types (viz. two biological parents, blended family, single parent, foster family, child welfare placement), single parenthood was associated with higher levels of adolescent depression symptoms.

With regard to religious attendance, adult children from divorced families report lower levels of self-reported religious involvement than those from intact families (Zhai et al., 2007).

However, on a battery of religiosity and spirituality measures, Handal and Lace (2017) reported that only females from intact (versus divorced) families had higher scores on these measures; no differences were observed in males.

Sexual Orientation

Existing studies have demonstrated relationships between sexual orientation and symptoms of depression. That is, sexual minority identified individuals are at greater risk for developing mood disorders, such as depression, and reporting suicidal ideations and attempts (Herek & Garnets, 2007). Similarly, when compared to men in opposite-sex relationships, men in same-sex relationships reported higher levels of suicidal ideation and attempts as well as increased risk of recurring depression (Cochran & Mays, 2000).

Overall, those professing a non-heterosexual sexual orientation are less religious than the general public, with nearly half of this population reporting they have no religious affiliation at all (Pew Research Center, 2013). Many gay men and lesbians report difficulty in reconciling their personal religious faith with their sexual orientation (Rodriguez & Ouellette, 2000; Tan, 2005). Among gay men and lesbians that attend churches that are accepting of their religious orientation, higher levels of attendance was not related to depression symptoms; however among those that attend churches that are not accepting of their religious orientation, higher levels of attendance was associated with greater levels of depression symptoms (Hamblin & Gross, 2013).

Chapter 4: Study 1 Methodology

Participants

Undergraduate students, representing a variety of academic disciplines, were recruited from a family development course at a large liberal arts university in the Southeastern U.S. and were part of a larger study focused on romantic relationship development among emerging adults The study was advertised in the course "examining the effect of this class on your relationships." On average, participants were 19 years old (*SD* = 1.8) and were primarily women (76.7%), first-year students (43.8%), and white (70.7%). A more complete description of the demographic characteristics of the sample can be found in Table 1 (See Attachments). Data for this study was drawn from a single academic semester (Fall 2009; *N* = 996). Following inspection of responses from the initial sample, 33 participants were manually removed from the final data for a final total of 963 participants. Specifically, eight participants were removed due to missingness on multiple items (ranging from 8 to 25 in number). An additional eight participants were removed due to missingness on the religious service attendance item. Finally, 17 participants were removed due to missingness on one or more control variables.

Procedures

Individuals electing to participate in the study completed an informed consent document during the first week of the academic semester and then completed restricted access survey items online at a time and place convenient to participants. Survey participants received course credit while non-participants were offered an alternative assignment for course credit.

Demographic and Control Variables

Age

Age was measured with a single item prompting participants to write-in their answer to "How old are you?"

Race/Ethnicity

Race/Ethnicity was measured with a single item and five discrete choices: *White, African-American, Latino, Asian, and Native American/American Indian*. Those who did not self-identify in one of these ways were able to write in their preference under "Other (please specify)." However, due to small cell sizes, the *Asian, Native-American,* and *Other* responses for *Race/Ethnicity* were combined into one group labeled as *Other race/ethnicity,* resulting in four levels – *White, African-American, Latino,* and *Other race/ethnicity*. This variable was then dummy coded, with *White* as the reference group.

Sex

Sex was measured and coded with a single dichotomous item (0 = *male*, 1 = *female*).

Family Structure

Family structure was assessed by a single item with nine discrete choices: *Biological Father and Mother, Biological Father and Stepmother, Biological Mother and Stepfather, Biological Father and Partner, Biological Mother and Partner, Biological Parent and Other Family Member (e.g. grandparent), Adoptive parents, Other Persons (e.g. aunt and uncle, foster parents)* and *Single Parents*. The *Other Persons* choice did not include a write-in option. Selected responses for *Family Structure* were combined to address small cell sizes in some of the available response options. Thus, *Biological Father and Stepmother* and *Biological Mother and Stepfather* were combined into one group labeled as *Biological Parent and Stepparent*;

Biological Father and Partner and *Biological Mother and Partner* were combined into one group and labeled as *Biological Parent & Partner*; finally, *Biological Parent and Other Family, Adoptive Parent*s, *Other Persons*, and *Single Parents* (although no respondent in this study selected this option) were combined into one group and labeled as *Other Family Structure*. This variable was then dummy coded with *Biological Parents* serving as the reference group.

Sexual Orientation

Sexual orientation was measured with a single item and three discrete choices: *Heterosexual, Gay/Lesbian, and Bisexual*. Due to small cell sizes, the *Gay/Lesbian* and *Bisexual* responses for *Sexual Orientation* were combined into one group and labeled as *Non-Heterosexual.* This variable was then dummy coded with *Heterosexual* as the reference group.

Measures

Independent Variable

Interparental conflict frequency, conflict, and resolution were the independent variables for the six hypotheses in this study. Specifically, each of these three independent variables were measured for their relationships with each of two dependent variables – depression and religious service attendance.

Interparental Conflict. Interparental conflict was measured using items from the Children's Perception of Interparental Conflict Scale (CPIC; Grych et al., 1992). The CPIC consists of 51 total items assessing children's perceptions of marital conflict along four dimensions (frequency, intensity, resolution, and content) and five types of reactions to/interpretations of the conflict (perceived threat, coping efficacy, self-blame, triangulation, and stability). The conflict dimensions of frequency, intensity, resolution, and content comprise the Conflict Properties subscale, however only three of the four dimensions will serve as separate

independent variables in this study: frequency, intensity, and resolution. The content dimension was not included in this study because it was not included in the initial study from which this data was drawn. Internal consistency for this scale assessed in the Grych et al. (1992) study was assessed across two samples, .90 and .89 respectively. Further, reliability for the original measure was estimated by comparison with the Conflict Tactics Scale (CTS; r = .78) and the O'Leary-Porter Scale (OPS; r = .81). Validity has also been demonstrated by correlating scores (ranging from .50 to .60) on the CPIC with parental reports of interparental conflict and aggression (Cummings & Davies, 1994). Finally, even though the CPIC was originally designed for use with younger children, others have demonstrated adequate psychometric properties (Bickham & Fiese, 1997; Moura et al., 2010) for young adults.

The directions and individual items for this study were revised to be more appropriate for college-aged participants. Participants were prompted with the following: "In every family there are times when the parents don't get along. Please rate the following statements to show what happened in your parents' relationship." In this study, a revised version of the CPIC was employed wherein participants were presented with a series of interparental conflict descriptors (e.g., "My parents hardly ever argued or disagreed," "My parents tended to get really angry when they argued or disagreed," "When my parents had an argument, they usually worked things out.") representing each of the conflict dimensions under consideration for this study (frequency, resolution, and intensity). They were then prompted to respond with one of three available responses: *true, sort of true*, and *false*. Each of the three dimensions was assessed via four items, for a total of 12 items overall. Items were coded so that higher scores indicated higher degrees of conflict frequency, intensity, and poorer resolution, ranging from 1 to 3. The Cronbach's reliability score for each dimension in this study was as follows: frequency (α = .85); intensity (α

= .88); resolution (α = .85). Items within each dimension were averaged to produce a single score for each dimension for analysis. Since each dimension score was based on the average of four items, any case missing two or more of these items was removed. These cases are numbered among the 33 mentioned above.

Dependent Variables

Depression and religious service attendance were the dependent variables for this study.

Depressive Symptoms. Depressive symptoms were measured using the Center for Epidemiological Studies Short Form (CES-D-10; Andresen et al., 1994), a widely used shortened form of the original 20-item CES-D (CES-D; Radloff, 1977). Initial test-retest reliability for the CES-D-10 was *r* = .71, over an average of 22 days while yielding prevalence (e.g., validity) estimates (19.3%) similar to the CES-D (19.8%; Andresen et al., 1994). A subsequent analysis demonstrated strong internal consistency (α = .92) and test-retest reliability (*r* = .83; Irwin, Artin, & Oxman, 1999). Comparably strong reliability and validity have been demonstrated in other studies with samples representing a variety of contexts (Björgvinsson, Kertz, Bigda-Peyton, McCoy, & Aderka, 2013; González et al., 2017; Mohebbi et al., 2018).

Participants were presented with a series of 10 depressive symptom descriptors (e.g. “I felt depressed,” “I was bothered by things that usually don’t bother me”) and then prompted to respond with one of four available responses based on how frequently one has felt each symptom in the last week: *Rarely or none of the time (less than 1 day)*, *Some or a little of the time (1-2 days)*, *Occasionally or moderate amount of the time (3-4 days)*, or *Most or all of the time (5-7 days)*. Scores ranged from 1-4, and items were coded so that higher scores indicated greater depressive symptoms. Scores from all 10 items were averaged to produce a single score for analysis. Cronbach’s reliability score for the CESD-10 in this study was α = .76.

Religious Service Attendance. The general frequency of one's attendance at religious services was measured using a single item wherein participants were asked "How often do you attend religious services?" and then provided with four discrete choices: *never, or almost never; occasionally, but less than once per month; one to three times per month*; and *one or more times per week*. Scores ranged from 1-4, where higher scores indicated greater frequency of religious service attendance. Although single-item measures may not yield the same depth of information as multi-item measures, they often have comparable validities (see Bergkvist & Rossiter, 2007; Wanous, Reichers, & Hudy, 1997) and are common in studies of religious behavior (Hill & Hood, 1999). Moreover, in a study of the reliability and validity of single-item measures, including church attendance, Dollinger and Malmquist (2009) reported good to excellent reliability and validity scores. For frequency of church attendance (e.g., "How frequently do you attend religious services?"), the authors reported solid reliability and test-retest validity ($r = .85$, $p < .001$) scores. It should be noted, Dollinger and Malmquist (2009)'s single attendance item and the item used in this study are nearly identical; their church attendance item had five response choices, whereas the item used in this study had four choices.

Analytic Plan and Hypotheses

A hierarchical regression analysis was employed, using statistical control to explain relationships between variables. The dataset was examined for assumptions necessary for conducting multiple regression analysis, specifically, normality of conditional distributions in the sample (i.e., normality of residuals in the sample), equality of conditional variances in the sample (i.e., homoscedasticity or constant variance of residuals in the sample), and independence of observations (i.e., independence of residuals in the sample). There were no violations of either of these assumptions. Furthermore, while the inter-correlations among the conflict dimensions were

high (.70 - .79), the variance inflation factors for each dimension were below the suggested threshold of 10 (Cohen et al., 2003; Keith, 2006), ranging from a low of 2.78 to a high of 3.74.

Hypothesis testing was conducted using hierarchical regression models to assess the relationship between the independent variables (i.e., dimensions of IPC) and the dependent variables (i.e., depression and religious service attendance), as well as to determine the unique and additive contributions made by each independent variable on the variability of the dependent variables. Control variables were entered collectively into the first block of each regression model, followed by independent variables in individual, subsequent blocks.

Chapter 5: Study 1 Results and Discussion

The present analyses were intended to investigate the relationship between three dimensions of interparental conflict and two outcome variables. Specifically, IPC frequency, intensity, and resolution were assessed for their relationships with depression and religious service attendance. Are IPC frequency, intensity, and resolution related to depression? Are these same variables related to religious service attendance? The present analysis was designed to answer these questions and test the associated hypotheses.

The sample consisted of 963 college students who provided retrospective assessments of the conflict practices of their parents as well as present tense assessments of depressive symptoms and religious service attendance frequency. The average age of this sample was 19.1 (*SD* = 1.8). The means and standard deviations of participant's scores on the CPIC dimensions were as follows: frequency (*M* = 1.76, *SD* = .66); intensity (*M* = 1.89, *SD* = .69); resolution (*M* = 1.71, *SD* = .61). Furthermore, means and standard deviations of participant's scores on depression and religious service attendance were as follows: depression (*M* = 1.79, *SD* = .47); religious service attendance (*M* = 2.24, *SD* = 1.05).

Hierarchical regression analyses were performed across four blocks, or steps, of variables, with each block representing a mathematical model of relationships with each dependent variable. The first block consisted exclusively of control variables while the independent variables (i.e., each IPC dimension) were introduced into the analysis in subsequent blocks. Separating the independent variables into individual blocks allowed for an assessment of how each independent variable contributed to the overall variance of depression and religious service attendance, respectively.

IPC and Depression

The initial set of analyses tested three hypotheses associated with the self-reported depressive symptoms outcome, as indicated by scores on the CES-D-10. First, it was hypothesized that higher retrospective reports of IPC frequency will be associated with higher levels of depressive symptoms in college students. (H1). Bivariate correlations of these two variables indicated a significant positive relationship (see Table 2, Attachments). Descriptive data for these regression analyses are shown in Table 3 (See Attachments). This hypothesis was supported as the hierarchical regression model for this hypothesis was statistically significant, $R^2 = .07$, $F(10,952) = 6.62$, $p < .001$. Furthermore, interparental conflict frequency accounted for an additional 3% of variance in depression beyond the initial 3% variance accounted for by the combination of control variables. The standardized regression coefficient (*ß*) for interparental conflict frequency was .19 ($t[962] = 5.81$), $p < .001$), indicating that for each one standard deviation increase in IPC frequency, depression scores increased by .19 of a standard deviation.

Second, it was hypothesized that higher retrospective reports of IPC intensity will be associated with higher levels of depressive symptoms in college students (H2). Although bivariate correlations of these two variables indicated a significant positive relationship (see Table 2, Attachments), this hypothesis was not supported. Third, it was hypothesized that higher retrospective reports of IPC resolution will be associated with higher levels of depressive symptoms in college students (H3). Although bivariate correlations of these two variables indicated a significant positive relationship (see Table 2, Attachments), this hypothesis was also not supported.

IPC and Religious Service Attendance

The second set of analyses tested three hypotheses associated with the religious service attendance outcome, as indicated by scores on the single item religious service attendance assessment. First, it was hypothesized that higher retrospective reports of IPC frequency will be associated with lower levels of present-tense reports of religious service attendance (H4). Bivariate correlations of these two variables indicated a significant negative relationship, (see Table 2, Attachments). Descriptive data for these regression analyses are shown in Table 4 (see Attachments). This hypothesis was supported as the hierarchical regression model for this hypothesis was statistically significant, $R^2 = .07$, $F(10,952) = 7.47$, $p < .001$). Furthermore, interparental conflict frequency accounted for an additional 2% of variance in religious service attendance beyond the initial 6% variance accounted for by the combination of control variables. The standardized regression coefficient (*ß*) for interparental conflict frequency was -.13 ($t[962] = -3.93$), $p < .001$), meaning that for each one standard deviation increase in IPC frequency, religious service attendance scores decreased by .13 of a standard deviation.

Second, it was hypothesized that higher retrospective reports of IPC intensity will be associated with lower levels of present-tense reports of religious service attendance (H5). Although bivariate correlations of these two variables indicated a significant negative relationship (see Table 2, Attachments), this hypothesis was not supported. Third, it was hypothesized that higher retrospective reports of IPC resolution will be associated with lower levels of present-tense reports of religious service attendance (H6). Although bivariate correlations of these two variables indicated a significant negative relationship (see Table 2, Attachments), this hypothesis was also not supported.

This first study tested a series of hypotheses regarding the relationships between three dimensions of IPC and two outcomes – depression and religious service attendance. Conflict frequency alone was related to depression, such that more frequent IPC was related to higher levels of self-reported depressive symptoms. Thus, the confirmed relationship between IPC frequency and depression extends previous studies affirming relationships between these variables. Furthermore, exposure to more frequent conflict was related to less frequent attendance at religious services. These results are among the first to demonstrate a relationship between the frequency of observed conflict and religious service attendance. Both outcomes signal the role of the home environment, specifically the nature and degree of conflict between parents, on the mental health and religious practices of college students. Study 2 will attempt to determine whether religious service attendance has a moderating effect on the relationship between dimensions of observed conflict and depression. Are these relationships different for different levels of religious service attendance? Study 2 was designed to answer these questions.

Chapter 6: Study 2 Review of Literature

Although college students may employ a variety of strategies to mitigate the impact of negative mental health symptoms associated with parental conflict practices, for many, religion is a significant resource to mitigate such impacts (Koenig, 2013; Pargament & Brant, 1998). Generally speaking, there is a well-established relationship between religion and mental health, such that one's mental health benefits from engagement in religious activities and devotion to religious dogma (Koenig, 2018). The existing literature documenting relationships between depression and religious activity includes a number of reviews (e.g. Smith et al., 2003). For instance, in one qualitative review (Koenig et al., 2012), the authors ranked, from 1 to 10 (with 1 representing lowest quality, 10 representing highest quality), 104 studies in terms of methodological sophistication and reported that of the 54 studies with a ranking of 7 or higher, 39 (72%) reported a decrease in depression associated with greater religiosity or a religious intervention; one study reported an increase in depression associated with greater religiosity; 10 studies reported mixed results and four reported no significant associations (see Koenig et al., 2001 regarding these studies). A subsequent meta-analytic review of the religiosity-depression link examined 147 studies totaling 98,975 total subjects (Smith et al., 2003). After controlling for gender, age, and ethnicity, the average effect size across all studies was -.096, indicating that an increase in religiosity was associated with a decrease in depressive symptoms. Finally, a qualitative review of studies spanning the years 1990-2010 focused on research published in the top 25% of psychiatric and neurological journals according to the ISI citation index (currently, Web Of Science index) of 2010 (see Bonelli & Koenig, 2013). Forty-three studies met the inclusion criteria (e.g. appropriate variables, quantitative methodology) for review. Of these 43, 31 (72.1%) reported a positive relationship between religiosity and improved mental health, one

(2%) trended positive, one (2%) indicated no relationship, eight (19%) indicated mixed (positive and negative) results, and two (5%) indicated a negative relationship.

An extensive literature search did not identify research that specifically assessed religious service attendance as a moderator between IPC dimensions and depression in any age group. However, a single study was found that investigated the relationships among a similar set of variables. Davis and Epkins (2009) investigated whether private religious practices (e.g., private prayer, praying before meals, meditation, and listening to religious TV/radio) moderated the relationship between family conflict and preadolescents' (viz., boys and girls between 11 and 12) depressive symptoms. Results indicated that children's self-reported symptoms of depression were positively related to family conflict in the home. Furthermore, the authors reported that as private religious practices increased in frequency the relationship between family conflict and depression was weakened. These results suggest that engaging in private religious practices, such as prayer, may serve as a buffer from the negative effects of family conflict. Nevertheless, although this study (Davis & Epkins, 2009) focused on private religious practices of preadolescents and family conflict, the present study is concerned with college students and parental conflict. Moreover, although their study assessed whether these private religious behaviors moderated the relationship between familial conflict and depression, the present study will investigate whether public religious behavior moderates the relationship between parental (vs. "family") conflict and depression. In view of the challenge presented by depressive symptoms to the achievement of important developmental tasks for young adults in college, investigating these relationships will highlight whether religious service attendance serves as an effective buffer of the relationship between dimensions of IPC and symptoms of depression.

Furthermore, two more recent studies have examined other potential moderators of the relationship between IPC and depression. First, Tucker, Holt, and Wiesen-Martin (2013) found that IPC exposed college women who reported higher levels of sibling warmth had fewer symptoms of depression when compared to those who reported lower levels of sibling warmth. Additionally, Shimkowski, Schrodt, and Willer (2017) found that, among college students, the IPC exposure-depression relationship was strengthened by the ability to regulate one's emotions with little to moderate difficulty. These studies demonstrate the utility of assessing moderating influences between IPC exposure and depression.

Altogether, the above studies are exemplars of a significant literature that, generally speaking, supports the hypothesis that symptoms of depression are benefitted by higher levels of religious engagement. However, it is unclear whether this relationship is robust enough to mitigate the negative impact of IPC exposure on depression. The present study attempts to determine if, in fact, religious activity moderates the relationship between IPC exposure and depression. Specifically, the second study tests a set of hypotheses regarding whether current religious service attendance moderates the relationship between IPC frequency, intensity, and resolution and depressive symptoms. Moreover, it is believed that the relationship between the IPC dimensions and depression will be weaker among those who report greater religious participation. Specifically, in the second study of this two-study approach, the following hypotheses were tested:

H7: The relationship between interparental conflict frequency and depression will be different for different levels of religious service attendance. Specifically, higher levels of religious service attendance will relate to a weakened relationship between IPC frequency and depression.

H8: The relationship between interparental conflict intensity and depression will be different for different levels of religious service attendance. Specifically, higher levels of religious service attendance will relate to a weakened relationship between IPC intensity and depression.

H9: The relationship between interparental conflict resolution and depression will be different for different levels of religious service attendance. Specifically, higher levels of religious service attendance will relate to a weakened relationship between IPC resolution and depression.

Chapter 7: Study 2 Methodology

Participants and Variables

Data was drawn from a subsequent academic semester with a different cohort of students (Spring 2010, $N = 1005$). On average, participants were 19 years old ($SD = 1.45$) and were primarily women (70.2%), first-year students (37.9%), and white (69.5%). A more complete description of the demographic characteristics of the sample can be found in Table 5 (See Attachments). Forty-five participants were manually removed from the original sample due to various types of missingness, resulting in a final sample of 960 participants. Specifically, 15 participants were removed due to missingness on multiple items (viz. ranging from a total 15 to 25 in number). An additional 13 participants were removed due to missingness on the religious service attendance item. Fifteen participants were removed due to missingness on one or more control variables. Finally, two participants were removed due to missingness on two of the ten items on the CES-D-10. Furthermore, the same conventions for combining levels of control variables in Study 1 were also used in this study. The Cronbach's reliability score for the CESD-10 and each CPIC dimension in this study was as follows: CESD-10 ($\alpha = .79$); CPIC frequency ($\alpha = .85$); CPIC intensity ($\alpha = .88$); CPIC resolution ($\alpha = .85$).

Analytic Plan and Hypotheses

A hierarchical regression analysis using statistical control was employed to explain relationships between variables. The dataset was examined for assumptions necessary for conducting multiple regression analysis, specifically, normality of conditional distributions in the sample (i.e., normality of residuals in the sample), equality of conditional variances in the sample (i.e., homoscedasticity or constant variance of residuals in the sample), and independence of observations (i.e., independence of residuals in the sample). There were no violations of these

assumptions. Furthermore, while the inter-correlations among the frequency dimensions were high (.70 to .79), the variance inflation factors for each dimension were all comfortably under the suggested threshold of 10 (Cohen et al., 2003; Keith, 2006), ranging from a low of 2.83 to a high of 4.12.

Specific hypothesis testing was conducted using hierarchical regression models to assess the relationship between the moderation interaction terms (i.e., dimensions of IPC x religious service attendance) and depression. Control variables were entered collectively into the first block of each regression model, followed by independent variables in individual, subsequent blocks. All three interaction terms were entered into the same final block.

Chapter 8: Study 2 Results and Discussion

This second study consisted of a moderation analysis designed to test whether religious service attendance moderates the relationship between dimensions of IPC and depression. Specifically, these analyses were intended to test whether the nature and/or strength of the relationships between the dimensions of IPC and depression changes as a function of religious service attendance. Each of three regression equations consisted of one IPC dimension serving as the focal variable with the religious service attendance variable serving as the moderator variable. Prior to analyses, the same combinations of control variable levels were made as in Study 1 (see Table 5, Attachments).

Participants provided identical information using identical instruments in identical circumstances as those from Study 1. The average age of this sample was 19.4 (*SD* = 1.45). The means and standard deviations of participant's scores on the CPIC dimensions were as follows: frequency (*M* = 1.74, *SD* = .65); intensity (*M* = 1.85, *SD* = .68); resolution (*M* = 1.66, *SD* = .59). Furthermore, means and standard deviations of participant's scores for depression and religious service attendance were as follows: depression (*M* = 1.73, *SD* = .47); religious service attendance (*M* = 2.16, *SD* = 1.06). Correlations for Study 2 may be found in Table 6 (see Attachments).

Religious service attendance was examined as a moderator of the relationship between dimensions of IPC and depression. Hierarchical regression analyses were performed across five blocks, or steps, of variables. As in study 1, control variables were collectively entered into the first block while the independent variables (i.e., each IPC dimension) were added in subsequent blocks. Three interaction, or moderation, terms were entered in the fifth block to allow testing for moderation. Specifically, each IPC dimension as well as the religious service attendance variable were mean centered in order to reduce any undue multicollinearity (Aiken et al., 1991; Shieh,

2011). The interaction terms were then created as mean centered cross-product terms between each IPC dimension and religious service attendance. Descriptive data for these regression analyses can be found in Table 7 (see Attachments).

The first part of the analyses represents a replication of Study 1. First, in model (or block) 2, as was the case in Study 1, the relationship between IPC frequency and depression was statistically significant, $R^2 = .05$, $F(10,949) = 4.49$, $p < .001$). Furthermore, IPC frequency accounted for an additional 2% of variance in depression beyond the initial 3% variance accounted for by the combination of control variables. The standardized regression coefficient (*ß*) for interparental conflict frequency was .14 ($t[949] = 4.28$, $p < .001$), indicating that for each one standard deviation increase in IPC frequency, depression scores increased by .14 of a standard deviation. However, in Model 3, neither IPC frequency nor intensity were significant.

With regard to the moderation analyses, it was expected that each IPC dimension, when combined with religious service attendance, would moderate the relationship between each dimension and depression. Specifically, it was expected that the relationship with depression would be weakened in each case. The interaction terms were combined into a single model which demonstrated a statistically significant relationship with depression, $R^2 = .06$, $F(15,944) = 3.96$, $p < .001$. The interaction terms, together, accounted for an additional 1% variance in depression beyond earlier models. However, when examined individually, only the IPC resolution-religious service attendance interaction term was significantly related to depression. Specifically, the standardized regression coefficient (*ß*) for this term was -.11 ($t[944] = -2.05$, $p < .041$), indicating that for each one standard deviation increase in the IPC resolution-religious service attendance interaction terms, there was a corresponding .11 standard deviation decrease in depression scores. Furthermore, although the differences between levels of religious service

attendance are small, nevertheless, as hypothesized, the relationship between interparental conflict resolution and depression is different for different levels of religious service attendance. Specifically, higher (i.e., more frequent) levels of religious service attendance were associated with a weaker association between IPC resolution and depressive symptoms. Correspondingly, lower (i.e., less frequent) levels of religious service attendance were associated with a stronger association between IPC resolution and depressive symptoms.

This second study tested three hypotheses regarding whether religious service attendance moderates the relationship between three dimensions of parental conflict exposure and depression. Only one (H9) of these moderation hypotheses was supported while the other two (H7 and H8) were not supported. Religious service attendance moderated the relationship between IPC resolution such that higher levels of religious service attendance are associated with a weaker relationship between IPC resolution and depression. The relationship between poorly resolved conflict and self-reported depressive symptoms was weakened by more frequent attendance at religious services among college students. These results signal the role of religious behaviors, specifically religious service attendance, as a means of coping with and/or reducing the negative experience of depressive symptoms.

Chapter 9: General Discussion

The college experience is challenging enough by itself without having to be concerned about one's mental health. And yet, college students commonly wrestle with a variety of mental health challenges, including depression (e.g., National Institute of Mental Health, 2012). Understanding associated risk factors and coping strategies can be helpful for the individual student as well as those providing care and support. The home environment, particularly the relational climate between one's parents, is one of many risk factors for the development of depressive symptomology in college students (e.g., Blumenthal et al., 1998; Cusimano & Riggs, 2013). However, religious practices represent some of the many strategies available for attempting to understand these experiences and/or cope with symptoms of depression (Bonelli & Koenig, 2013; Koenig, 2013). The studies described in this paper have attempted to shed light on whether individual dimensions of IPC are related to depression and religious service attendance and whether religious service attendance influences the relationship between dimensions of IPC and depression.

In their cognitive-contextual framework (CCF; Figure 1, see Attachments), e.g., Grych and Fincham (1990) asserted that IPC is a multidimensional construct reflecting different aspects of conflict between parents (e.g., frequency, intensity, and resolution). Children exposed to such conflict process their experience on two levels; the first level entails cognitive and affective appraisals of the event as well as affective responses, while the second level is focused on identifying causes and pinpointing coping practices. Individual dimensions of conflict separately and collectively contribute to the overall stressfulness of the experience for children so exposed. This model represents a lens through which these two studies may be viewed. Therefore, the present study represents a partial examination of relationships posited by the CCF model.

A total of nine hypotheses were tested in two studies. In the first study, the first three of these hypotheses postulated positive relationships between retrospective assessments of IPC frequency, intensity, and resolution and present-tense depression in college students. In other words, it was believed higher levels of each dimension would be associated with higher levels of depression symptoms. However, only one of these hypotheses was confirmed; depressive symptoms were positively related with retrospective recall of frequent IPC. In other words, as expected, as conflict frequency increased, depressive symptoms increased. This relationship was not observed with intense or poorly resolved conflict.

The observed relationship between present-tense depressive symptoms and retrospective recall of frequent conflict could be understood as an expression of primary processing in the CCF model inasmuch as these symptoms may represent the affective response to the stress of exposure to frequent conflict between one's parents. However, this begs the question of how this might happen. One possibility is that the stress of being exposed to repeated incidents of parental conflict over time may have the cumulative effect of offspring experiencing increased levels of helplessness and hopelessness, symptoms known to be associated with depression (American Psychiatric Association, 2013). Parental conflict is also associated with attachment issues (Cusimano & Riggs, 2013; Ross & Fuertes, 2010). The stress of repeated conflict exposure may threaten the security of attachments to parents, which may then relate to depression symptoms in college aged children (Agerup et al., 2015; Constantine, 2006). Finally, it may be that parents who fight more often are depressed themselves (Choi & Marks, 2008), which may then relate to subsequent depression in offspring (England et al., 2009; Sander & McCarty, 2005). However, although the present study assessed past tense conflict exposure and present tense depression, it is possible that the depressive symptoms reported by college students preceded and, in some

way, contributed to the conflict observed between their parents (Crnic et al., 2005). In this case, the stress of parenting a depressed child may relate to more frequent conflict between parents. Nevertheless, the cross-sectional nature of this study precludes any directional causal attributions associated with prospective studies.

What is unclear is why IPC intensity and resolution were not positively related to depressive symptoms, as hypothesized. Tucker et al. (2013) and Xin et al. (2009) both reported positive relationships between conflict intensity and depression. However, the Tucker et al. (2013) study was based on a female-only sample and the Xin et al. (2009) study was based on an adolescent sample of males and females. Based on these two studies and the current study, it is possible that any relationships observed in adolescent males disappears during the college years, while relationships in females remains. However, if these relationships in college females are stable, one would expect that the outcomes of Study 1 would have demonstrated the same, since the sample was comprised of mostly (77%) women. Although Study 1 adds to a nascent literature investigating IPC intensity and depression in college students, it does little to add clarity to our understanding of these relationships in view of non-significant findings. Furthermore, Study 1 results indicated a non-significant relationship between IPC resolution and depression, replicating similar non-significant findings from Tucker et al. (2013). It may be that poorly resolved conflict between parents is not sufficiently distressing to college students as to relate to depression. Moreover, any actual relationships between intense and/or poorly resolved conflict and depressive symptoms may be susceptible to the passing of time, also known as recall bias. Thus, by the time children are in college these relationships are either negligible or non-existent. In view of these potentialities, it should be noted that Grych and Fincham's (1990) CCF

model is predicated on the assumption that children are able to accurately recall the parental conflict experiences to which they were exposed.

The remaining three hypotheses in Study 1 postulated negative relationships between retrospective assessments of IPC frequency, intensity, and resolution and present-tense religious service attendance in college students. In other words, it was believed that higher observed levels of each dimension increased would be associated with lower levels of religious service attendance. However, only one of these hypotheses was supported. Namely, religious service attendance was negatively related with retrospective recall of frequent IPC. In other words, as expected, higher levels of conflict frequency were associated with lower levels of religious service attendance. This relationship was not observed with intense or poorly resolved conflict. In this study and within the CCF, lower levels of religious service attendance associated with more frequent IPC may be conceptualized as evidence of either primary or secondary levels of processing. Specifically, religious service attendance may be conceptualized as an attempt at either understanding (i.e., cognitive appraisal) or coping through one's religious experience (Ahles et al., 2016; Krause et al., 2001; Nooney & Woodrum, 2002). Thus, at the primary level, religious service attendance may serve as a lens through which college students attempt to understand, for example via religious teachings (e.g., "human suffering," etc.), the frequent conflict to which they have been exposed. For instance, if such conflict can be conceptualized, via religious teaching, in a way that provides explanation for and/or meaning to these experiences, this meaning-making may lessen the overall impact of the depressive symptoms (Holland et al., 2015). Moreover, at the secondary level, religious service attendance may operate as an attempt at coping with the stress of frequent parental conflict exposure. In either case, the results of Study 1 indicate that higher levels of IPC exposure are related to lower levels of

religious service attendance, thus potentially short-circuiting attempts at understanding and/or coping.

The association of exposure to frequent parental conflict and lower levels of religious service attendance in college students may be the function of a "hypocrisy effect." Namely, if a child is religious themselves, it is plausible that they were raised in a religious home (Barry et al., 2010; Barry & Nelson, 2005). If, in that home, the child witnesses parental behaviors that are inconsistent with the religious tenets of one's faith system, this could result in decreased levels of religious commitment and engagement in the college-aged child that is now out of the home and free to choose a new religious path, or none at all. Moreover, as the college-aged child attempts to understand repeated experiences with parental conflict, they may struggle with connecting their experiences with the idea of an all-powerful, beneficent deity (e.g. "God doesn't care about me or he would have..."; Exline et al., 1999) and reduce, or even eliminate, their religious attendance behaviors. This would represent an example of what scholars have referred to as negative religious coping with a negative event, which is associated with negative mental health outcomes (Ano & Vasconcelles, 2005; Bjorck & Thurman, 2007; Pargament et al., 1998).

What is unclear is why IPC intensity and resolution were not negatively related to religious service attendance, as hypothesized. Previous studies have established linkages between IPC and religious outcomes in children of younger ages (Goldmintz, 2011; Myers, 1996; Nelsen, 1981), yet none of these studies specifically assessed relationships with individual conflict dimensions. It may be that especially intense or poorly resolved parental conflict are not sufficiently upsetting to college students as to result in decreased religious service attendance activities. For instance, it may be that of the three dimensions, conflict frequency is a more salient predictor of religious service attendance behavior due to the spiritual challenges and/or

questions that this repetition could present for the college student ("God…why is this happening so often?"). Whereas less frequent, although more intense and/or poorly resolved conflict, although upsetting, may not necessarily relate to the same kinds of spiritual struggles, and associated decreases in religious service attendance, as conflict frequency.

In the second study, it was hypothesized that the relationship between the three dimensions of IPC and depressive symptoms would be moderated by religious service attendance. Specifically, it was hypothesized that the relationships between IPC dimensions and depression would be weakened by higher levels of religious service attendance. However, only one of these hypotheses was confirmed. Namely, as expected, higher levels of religious service attendance moderated the relationship between poorly resolved parental conflict and depression by weakening this relationship. This relationship was not observed with frequent or intense conflict.

Within the CCF framework, these results are consistent with secondary processing inasmuch as religious service attendance may be regarded as an effective means of coping with the depressive symptoms associated with higher levels of poorly resolved parental conflict. Whereas exposure to frequent and/or intense conflict between one's parents can be stressful, exposure to poorly resolved conflict may be particularly stressful inasmuch as the after-effects of conflict itself may seem never-ending, even when the conflict itself is over. College students may continue to struggle with the aftermath of poorly resolved conflict in the form of depressive symptoms. These symptoms may be ameliorated by more frequent religious service attendance. Scholars have consistently demonstrated that more frequent religious service attendance is related to decreased depressive symptom presentation (Jansen et al., 2010; Koenig, 2018; Koenig et al., 2012; McCullough & Larson, 1999). This begs the question of why? What is it about

religious service attendance that could offer relief to the college student struggling with depression in the context of poorly resolved parental conflict? Due to the social withdrawal and reduced energy levels typically associated with depression, some may choose not to leave home and thus self-limit their religious service attendance activities (Maselko et al., 2012). However, those who are able and choose to leave home may find strength and encouragement through religious service attendance in the face of depressive symptoms. Inasmuch as social support is an effective coping mechanism for depression (Leavy, 1983; Santini et al., 2015), the social connections that are a (mostly) natural byproduct of religious service attendance may be a particularly potent source of support (Ellison & George, 1994; Hayward & Krause, 2014; Nooney & Woodrum, 2002; Van Olphen et al., 2003). For instance, by virtue of attendance one may have the opportunity to interact with others in a way that is personally meaningful and practically helpful regarding the amelioration of depressive symptoms. Furthermore, coping via religious service attendance may come in the form of religious teachings that provide perspective and consolation (e.g. “parents aren’t perfect,” “meaning in suffering”; Koenig et al., 2012) for stressful experiences. Thus, while at the religious service, one may learn about perspectives and insights that are either new or long forgotten. Such perspectives and insights may prove to be meaningful cognitions for the amelioration of depressive symptoms (Paukert et al., 2009).

It is unclear why religious service attendance did not moderate the relationships between frequent and intense conflict and depression. It may be that religious service attendance is simply more effective at helping college students cope with depressive symptoms associated with poorly resolved conflict compared to frequent and intense conflict. This relative ineffectiveness may be due to the fact that religious service attendance is ill suited for alleviating depression symptoms associated with frequent and/or intense conflict and better suited for alleviating depression

symptoms associated with poorly resolved conflict. It may also be that any depressive symptoms associated with frequent and/or intense conflict are severe enough as to withstand a buffering effect associated with religious service attendance.

Practical Implications

Implications for Family Life Educators (FLEs)

As they promote healthy family functioning, FLEs are in a unique position to positively impact the families they serve. The findings in this study can help FLEs convey to parents the importance of engaging in more effective forms of conflict resolution. Educational programs targeting parents could be tailored to include couple relationship skills to prevent and/or manage conflict in ways that reduce its frequency. Previous research has demonstrated that, in general, exposure to IPC relates to negative mental health outcomes in children of various ages (Buehler et al., 1997; Cummings & Davies, 2002; Grych & Fincham, 1990; Harold & Sellers, 2018). However, the current research adds to this literature by supporting the idea that frequent conflict is related to depression in college age children. FLEs are in a position to stress that the harm of frequent conflict exposure is not merely short-term in nature but rather extends, at least, into the college years. Thus, in a parenting class, FLEs might offer class members a self-assessment regarding conflict with their partners. This could then be followed with research-based education regarding specific child outcomes (e.g., depression) associated with parental conflict in children paired with specific instruction on healthy and productive ways of engaging in and mitigating conflict with partners. FLEs could also discuss with class members ways to talk to their children about their children's perceptions of the conflict that they witness. Doing so may not only improve the quality of parent-child interactions but provide parents important insights about the things that their children see and hear.

Implications for Clinical Practice

In a recent national survey of college students, 17% of respondents (N = 26,181) indicated that they had been diagnosed or treated for depression in the previous 12 months (American College Health Association, 2018). Inasmuch as an assessment of family dynamics is common in depression therapy (Chen et al., 2017; Hughes & Gullone, 2008), clinicians should be aware of specific family dynamics associated with depression. Understanding family dynamics that are related to depression can support clinicians in the diagnostic process. The present research provides additional insight into how parental conflict may relate to the development of depressive symptoms in college students. This insight can help situate the depression in a relevant familial context, which may then help guide specific treatments. Furthermore, understanding the role that active faith may play in the amelioration of depressive symptoms can help clinicians formulate treatment plans that incorporate a client's spiritual or religious inclinations (Oakes & Raphel, 2008; Richards et al., 2009). For instance, since social withdrawal is common among those suffering from depression (American Psychiatric Association, 2013), upon learning of a client's religious disposition, clinicians could encourage clients to resume, increase, or continue religious service attendance as part of an overall treatment protocol designed to increase coping skills and decrease depressive symptoms.

Implications for Religious Leaders

Research informed religious leaders are in a unique position to offer assistance to their congregants in the form of trusted teaching, counsel, and support. Moreover, religious leaders are generally sought out early in one's experience of personal crisis (Chalfant et al., 1990). Students who go "off" to college sometimes find a surrogate family in the form of a religious community near the college campus. Some of these students will have come from homes where they have

been exposed to frequent or poorly resolved conflict. Instruction (e.g., classes, sermons, etc.) offered by religious leaders can stress to congregants the threat to the mental (i.e., depression) and religious (i.e., reduced religious service attendance) health of children posed by exposure to frequent parental conflict. Furthermore, based on the results of the present study, religious leaders can teach congregants the potential mental health benefits of religious service attendance, particularly in view of depression symptoms associated with poorly resolved parental conflict. Religious teaching and social connections can help provide perspective and consolation to college-aged attendants who may continue to struggle with depressive symptoms related to exposure to parental conflict.

Limitations and Future Directions

Although the present analyses involve present-tense assessments of depression and religious service attendance paired with assessments of past-tense parental conflict, the cross-sectional design of these studies precludes any firm directional, cause-effect inferences. Superficially, relating past-tense exposure with present-tense behaviors may be a means of approximating past-to-present cause-effect relationships; however, there is no way of determining whether the present-tense self-reported depressive symptoms and religious service attendance existed prior or subsequent to the conflict exposure reported by participants. In the present report, this issue is further complicated by the use of retrospective recall to assess exposure to parental conflict. The relative value and validity of retrospective recall assessments is an ongoing discussion among scholars (Baldwin et al., 2019; Bell & Bell, 2018; Hardt & Rutter, 2004). The authenticity of reported relationships hinges on the relative accuracy of these assessments. It seems reasonable to question how the recall of certain experiences, such as parental conflict, are affected by the passing of time. It may also be the case that one's present-

tense experience of depression impacts one's recall of past events, such as depression (Brewin et al., 1993). Future investigations of these relationships would benefit from a longitudinal design, eliminating the need for retrospective recall while also adding clarity to the directional-causal nature of these relationships. Future studies would also benefit from multiple reporters of parental conflict (e.g., adult children, parents, siblings) as a means of establishing validity of exposure reports.

Although the present study is the first large sample assessment of outcomes related to dimensions of parental conflict in college students, it is possible that, generally, college students do not come from homes typified by high levels of conflict, thus attenuating any observed outcomes. Despite efforts to make a college education more affordable and attainable, college students are still more likely to come from higher SES homes. According to the National Center for Education Statistics (2015), 60% of bachelor's level graduates in 2012 came from homes characterized as high SES; only 14% of graduates came from low SES homes. Children from low SES homes are more likely to experience higher levels of IPC exposure than children from high SES homes (Buehler et al., 1997). Thus, broadening the research population beyond college students will likely result in more robust results. As the sample is broadened, SES indices could be collected to assess if and how SES relates to parental conflict exposure. A related limitation is the lack of information collected in the initial study about whether or not the participants continued to live in the same home in which they grew up. This could be an important distinction when examining the nature of parental conflict exposure for college students.

One of the notable limitations of the present study is that, in spite of significant findings in three of the models tested across both studies, a small amount of variance is accounted for in each model. Specifically, IPC frequency accounted for 3% of the variance in depression and 2%

of the variance in religious service attendance beyond the initial variance accounted for by control variables. Moreover, in the moderation analysis, the interaction terms, together, accounted for an additional 1% of variance explained in depression beyond earlier models. Thus, although the models themselves are associated with significant statistical change in the outcome variables, the amount of change accounted for by each model is low. Part of this may be explained by the fact that existing research has demonstrated that both outcome variables are related to large numbers of other variables across a large number of different populations. For instance, existing literature indicates that depression is related to variables such as family history (Klein et al., 2004), low SES (Baune et al., 2006), age (Devanand et al., 2004), and low education levels (Yang & Dunner, 2001) as well as groups such as health care workers (Onyishi et al., 2016), law enforcement personnel (Olson & Surrette, 2004), and retired persons (Farakhan et al., 1984). Likewise, existing literature indicates that religious service attendance is related to variables such as mortality (Li et al., 2016), marital status (Li et al., 2018), physical health (Chen, Kim, et al., 2020), and substance use (Chen, Koh, et al., 2020) as well as groups such as immigrants (Cadge & Ecklund, 2006), adolescents (Hardie et al., 2016), and cardiac patients (Banerjee et al., 2014). Each of these variables are in some sense "competing" with all other variables – known and unknown – for their own unique contribution to variance in the outcome variables, in this case depression and religious service attendance. Normally, one might prescribe increasing the number of study participants as a panacea for low variance levels. However, the studies summarized here included 963 and 960 participants, respectively. Statistically controlling for some of these other known covariates may result in increased variance explained. However, adjusting the sample population to include not only non-collegiate participants (as noted above) but more representative levels of participants with respect to gender, ethnicity, sexual

orientation, and family structure, among others, may have the net effect of increasing the amount of variance accounted for by the parental conflict dimensions.

The relationships between exposure to IPC dimensions and the outcomes investigated in this study beg the question of why these relationships exist in the first place. In their discussions of the CCF, Grych and Fincham (1990) have suggested that cognitive appraisals made by children about the nature of their exposure are integral for understanding the relationships between dimension exposure and associated outcomes. Thus, understanding the child's thought processes about the conflict exposure experience itself, as well as religious/spiritual ramifications of this exposure, could be important in terms of understanding why some dimensions are related to depression and/or religious service attendance and others are not. Consequently, future studies should focus on these appraisals as potential mediators of the relationships between conflict dimensions and the outcomes assessed in this study.

A final limitation and recommendation is related to the way in which religious behavior is assessed. The present study examined relationships involving a single indicator of religious behavior, namely frequency of attendance at religious services. The use of such measures of religious service attendance is common in studies of religious behavior (Dollinger & Malmquist, 2009; Hill & Hood, 1999). Moreover, these single-item measures often possess good to excellent psychometric properties (Dollinger and Malmquist, 2009). Nevertheless, future studies might benefit from multi-dimensional assessments of religious behaviors including (but not limited to) actions such as prayer, meditation, fasting, and monetary giving. This approach would allow for a comparative assessment of if/how parental conflict differentially relates to a variety of religious behaviors.

Conclusion

A large body of existing literature has investigated relationships between interparental conflict and a variety of outcomes. However, examinations of specific dimensions of parental conflict, such as frequency, conflict, and resolution and associated outcomes, such as depression and religious attendance, are much fewer in number, particularly in college students. The current study demonstrated that retrospective recall of exposure to frequent parental conflict is related to present-tense depressive symptoms and attendance at religious services. It also demonstrated that religious attendance weakens the relationship between exposure to poorly resolved parental conflict and depressive symptoms in college students. These results add to a larger body of work demonstrating deleterious outcomes associated with exposure to parental conflict in the home. It also signals the value of religious attendance as a possible coping mechanism for negative mental health outcomes.

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Vita

Originally from North Carolina, Geoffrey R Mabe was born in Fayetteville and graduated High School in Charlotte. After high school, he attended Freed-Hardeman University and received a Bachelor of Arts in Bible and Psychology (double major). After graduation, he worked in the mental health field for three years. After moving to Knoxville, he attended East Tennessee State University and earned a Master of Arts degree in General Psychology. Later he attended Johnson University and earned a Master of Arts degree in Marriage and Family Therapy/Professional Counseling. Finally, he attended the University of Tennessee in Knoxville to pursue the Doctor of Philosophy Degree in Child and Family Studies. After graduation, Geoffrey will continue serving as the Preaching Minister for the South Knoxville Church of Christ, working in his private counseling practice, and serving as a Chaplain for the Knoxville Police Department He also plans to pursue college level teaching positions.