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MATERNAL RELIGIOSITY YOUTH INTERNALIZING SYMPTOMS

The Relationships between Religiosity and Internalizing Symptoms in African American Parent-Adolescent Dyads

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Abstract

Objectives: African American (AA) adolescents face a greater risk of internalizing symptoms, including symptoms of both depression and anxiety, compared with other racial groups; yet, relatively less is known about the variables that contribute to internalizing symptoms. With the aim of advancing this work, this study examined factors that may buffer against such symptoms (maternal warmth, religiosity), as well as those that may confer additional risk (maternal psychopathology). **Methods:** One hundred ninety-three AA single mothers and their adolescent youth reported on religiosity, maternal warmth and depressive symptoms, and youth internalizing symptoms. Dyadic structural equation modeling was used to examine the effects of mother and adolescent religiosity, maternal warmth, maternal depressive symptoms, and adolescent age on youth internalizing symptoms as reported by both the mother and the adolescent. **Results:** Consistent with hypotheses, maternal depressive symptoms were significantly associated with youth internalizing symptoms (as reported by the adolescent). Further, the impact of **maternal** religiosity on self-reported youth internalizing symptoms and its subscales was moderated by adolescent age. Specifically, maternal religiosity was associated with fewer self-reported internalizing symptoms in young adolescents while the effect waned in older youth. **Conclusions:** Possible predictive co-processes such as maternal influence on adolescent's religious choices and identity formation are explored in the context of adolescent internalizing symptomatology.

Keywords: adolescents, internalizing symptoms, maternal religiosity, maternal warmth, maternal depressive symptoms

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The Relationship between Religiosity and Internalizing Symptoms in **African American Parent-Adolescent Dyads**

Internalizing disorders impact a large number of adolescents, with some estimates suggesting incidence rates of depressive disorders reaching 35% and anxiety disorders not far behind at 25% (Kessler et al., 2012; Merikangas et al., 2010). Internalizing symptoms are associated with difficulties both during adolescence (i.e., comorbid psychopathology and substance abuse, see Beesdo, Knappe, & Pine, 2009, for a review) and beyond, including an increased likelihood of depression in adulthood (Gotlib, Lewinsohn, & Seeley, 1995; Rao, Hammen, & Daley, 1999). Some research suggests that African American (AA) youth, in particular, face a greater risk of internalizing symptoms compared with other racial groups both in terms of depressive symptoms (Gore & Aseltine, 2003; Miller & Taylor, 2012) and anxiety, as well as co-morbid symptoms, particularly among male adolescents (Anderson & Mayes, 2010; McLaughlin, Hilt, & Nolen-Hoeksema, 2007). Empirical attention is turning toward understanding the individual and family-level influences that may buffer against such symptoms as well as those that may confer additional risk. A large body of research has indicated the importance of family factors, including those that may increase vulnerability such as single-parent households (see Scott, Wallander, & Cameron, 2015, for a review) and parental psychopathology (Brennan, Hammen, Katz, & Le Brocque, 2002) and those that may be protective such as parental warmth (McKee et al., 2007) and religiosity (Petts, 2012). In addition, it is important to consider youth age, given that depressive symptoms tend to increase as youth mature (Hankin, Abramson, Moffitt, Silva, McGee, & Angell, 1998) and that age may interact with other individual and family factors.

AA youth disproportionately live in homes headed by single mothers (e.g., Miller &

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Taylor, 2015), accounting for almost two-thirds of all Black children under age 18 (National Kids Count Program, 2011). Youth living in single-parent households are more likely than their counterparts living in nuclear families to have physical and mental health issues, including higher rates of depressive symptoms (Blackwell, 2015; **Miller & Taylor, 2012**), **in some cases due to less positive parenting practices (Daryanani, Hamilton, Abramson, & Alloy, 2016).**

AA single mothers **also self-report** high levels of depressive symptoms (see Hatcher, Rayens, Peden, & Hall, 2008, for a review), which have a detrimental effect on parenting efficacy and are associated with youth internalizing symptoms (e.g., McLoyd, Jayaratne, Ceballo, & Borquez, 1994; Goodman, Rouse, Connell, Broth, Hall, & Heyward, 2011). Given the importance of understanding how additional risk and protective factors contribute to internalizing symptoms **in AA** youth, focusing on a sample of youth living with single mothers is essential.

Maternal Depressive Symptomatology's Effect on Youth Internalizing Behaviors

Maternal depressive symptoms have been consistently associated with youth internalizing symptoms (see Goodman et al., 2011, for a review). Research exploring the mechanisms that connect maternal depression with youth internalizing symptoms has reliably linked depressive symptoms in mothers with low parenting competence, generally (Dix & Meunier, 2009).

Specific behaviors, such as low maternal warmth, have been associated with youth internalizing symptoms (Errázuriz Arellano, Harvey, & Thakar, 2012; McKee et al., 2007), while higher levels of parental warmth have been associated with lower levels of youth internalizing symptoms (e.g., Scaramella, Conger, & Simons, 1999; Suchman, Rounsaville, DeCoste, & Luthar, 2007), which has been explained in some studies by the emotional security theory (Miller-Graff and Cummings, 2016). Maternal depression in **AA** families specifically has been linked with changes in parenting, such as fewer positive parenting behaviors like nurturance and

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consistency, which, in turn, have been associated with increased internalizing symptoms in youth (Koblinsky, Kuvalanka, & Randolph, 2006). As such, examining the impact of maternal depressive symptoms and maternal warmth on youth internalizing symptoms is warranted. In addition to maternal depressive symptoms and warmth, it is imperative to examine other youth and maternal characteristics that may mitigate youth risk. As discussed below **in more detail**, religiosity is a factor worthy of consideration. **Religion is a central force in the AA community and has been an important mainstay in AA cultural history; given the documented relations between religion and mental health throughout the life cycle, its impact on youth internalizing symptoms is considered here (see Boyd-Franklin, 2010, for a review).**

Religion in AA Lives

Although the study of religion and religiosity¹ as **a critical** facet of psychological health and well-being has only recently begun to receive deserved attention in the clinical literature, religion impacts a majority of the world's citizens. **AAs** self-identify as the most religious group of Americans, with the vast majority (70%) reporting that religion is somewhat or very important in their lives (Pew Foundation, 2008). Previous studies have documented the importance of religious coping to minority groups in the United States, suggesting that they rely on religious coping to a greater extent than do European Americans (Bjorck, Cuthbertson, Thurman, & Lee, 2001; Taylor, Chatters, & Jackson, 2007). Among **AA** the church has been of great historical significance and has been particularly influential with regard to the economic, social, and political development of Black communities (Lincoln & Mamiya, 1990). Many **AAs** identify the

¹ While there are many commonalities between spirituality and religiosity, for the purposes of the current study we are solely focusing on religiosity. In the lives of **AA** women, religiosity has been defined by organized worship and adherence to rituals, institutional practices (i.e., prayer groups, studying sacred texts), and beliefs about God, whereas spirituality relates more to a journey of self-reflection that includes adopting and internalizing positive values and a focus on the relationship between oneself, one's community and God (Mattis, 2000; Zinnbauer et al., 1997).

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church as a significant source of social support, and others also report that through giving their problems up to God, or asking for God's help in solving difficult situations, they gain a sense of control (Holt & McClure, 2006).

Religiosity and Outcomes of Well-being

In addition to being an important component of many **AAs'** lives, a body of research considering the benefits of **religiosity** has developed over more recent decades. In fact, past studies have documented that religion is a coping resource in times of stress or illness for both clinical and community samples (e.g., Koenig, George, Peterson, 1998; Tepper, Rogers, Coleman & Malony, 2001). Concomitants of religious involvement such as decreased substance use, increased social support, and enhanced coping have all been explored, and religiosity has been shown to influence mental health broadly, and depressive symptoms, specifically (Ford & Hill, 2012; Kasen, Wickramaratne, Gameroff, & Weissman, 2012; Koenig, McCullough, & Larson, 2001). Among **AAs** in particular, religiosity and religious involvement have been associated with better physical and mental health over time (Roth, Usher, Clark, & Holt, 2016), including decreased HIV risk behaviors (Ludema et al., 2015) and decreased risk of attempted suicide (Kaslow et al., 2004; Meadows, Kaslow, Thompson, & Jurkovic, 2005).

Although some prior research has suggested that religiosity has been linked with positive mental health outcomes, work examining the associations between religiosity and depression, specifically, has revealed a more nuanced picture (e.g., Murphy, Ciarrocchi, Piedmont, Cheston, Peyrot, & Fitchett, 2000; Smith, McCullough, & Poll, 2003). Murphy and colleagues' (2000) research provides a paramount example. First, their data show that higher levels of religious belief are indirectly linked with lower levels of depressive symptoms through lower levels of hopelessness, suggesting the benefit of religion. However, they also note a direct, positive

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association between religious belief and depression. This positive association may suggest that religious belief can function as a liability in terms of depression. Alternatively, perhaps individuals struggling with depression are more likely to report stronger beliefs, reflecting the use of religion as a coping tool. These findings are, in some ways representative of the literature at large, wherein the majority of studies report religion is associated with lower levels of depression while an important minority report the opposite (Koenig, King, & Carson, 2012).

Although the literature examining religiosity among *adolescent* samples remains somewhat limited to date, religious involvement has generally been conceptualized as a protective factor. Several studies, for example, have linked religious practice with positive outcomes in adolescents when religion has been measured by church attendance or self defined religiosity (i.e., Billy, Brewster, & Grady, 1994; Evans et al., 1995; Spilman, Neppl, Donnellan, Schofield, & Conger, 2013). Furthermore, religiosity has been associated with lower levels of psychological distress, hopelessness, and risky health behaviors, and higher ratings of self-esteem in **AA** teens (Ball, Armistead, & Austin, 2003; Molock, Puri, Matlin, & Barksdale, 2006; Stevens-Watkins & Rostosky, 2010). With regard to depression, some research has reported a link between increased religious involvement among adolescents and lower rates of depression (Wright, Frost, & Wisecarver, 1993). However, other evidence suggests that **religiosity** in adolescence may, in some cases, be associated with higher levels of anxiety and depressive symptoms (e.g., Eliassen, Taylor, & Lloyd, 2005; Schnittker, 2001). For example, Cotton and colleagues (2005) found that adolescents who stated religion was important to them also reported higher rates of depression. In sum, findings suggest religion may not be equally protective for all **AA** adolescents (see Scott, Wallander, & Cameron, 2015, for a review).

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What factors might account for these discrepant findings in the literature? First, family structure may modify the impact of parent religiosity. To note, parental religiosity has less impact on adolescent church attendance and well-being for youth in single parent homes compared with youth from families with married biological/adoptive parents (Petts, 2014; Petts, 2015). The author speculates that youth in single parent families benefit less from parental religiosity and attendance because of lower support in religious communities that idealize an intact, two parent family. Second, youth age may be also a potential explanation for discrepant findings regarding the association between depression and religion. It is possible, for example, that younger youth experience only the positive aspects of religiosity (i.e., enhanced social support via church attendance and youth activities), while older youth may begin to internalize teachings that could contribute to depression (i.e., youth is being punished by God; Pargament, Smith, Koenig, & Perez, 1998; idealization of two parent families; Petts, 2014) or chafe against religious prescriptions and prohibitions as they are struggling with identity (McConnell, Pargament, Ellison, & Flannelly, 2006). It is also the case maternal religiosity influences adolescent religiosity, in terms of religious attendance and denomination (Gur, Miller, Warner, Wickramaratne, & Weissman, 2005); among younger adolescents the distinction between adolescent and parental religiosity may be blurred given the influence of parents in religious involvement until late adolescence when the matter of religiosity may be more likely to be considered free choice (Eliassen, Taylor, & Lloyd, 2005). As such, it is also important to include maternal religiosity in models examining youth internalizing symptoms.

Research examining parental religiosity has also produced mixed findings with regard to youth outcome. Some evidence suggests that parental religiosity may act as a protective factor by promoting positive family functioning including increased prosocial interactions and positive

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involvement and decreased hostility (Petts, 2012; Spilman, Neppl, Donnellan, Schofield, & Conger, 2013), which have been shown to be related to decreased psychological symptoms among offspring (McKee et al., 2007; Pargas, Brennan, Hammen, & Le Brocque, 2010). Youth age, however, appears to be an important determinant of this relationship. The *positive* impact of parental religiosity on youth psychological outcomes has been primarily reported in studies with children and young adolescents. For example, higher levels of maternal religiosity and religious participation have been linked to lower levels of internalizing symptoms in young children (Petts, 2012; Carothers, Borkowski, Lefever, Burke, & Whitman, 2005). Similarly, Brody, Stoneman, & Flor's (1996) research links parental religiosity with positive socio-emotional adjustment in middle childhood and early adolescence (ages 9-12). However, work with older adolescents is less straightforward. Some studies have reported significant positive associations between church attendance (largely considered to be a measure of parental religiosity at this age; see Pearce, Little, & Perez, 2003 for further discussion) and adolescent anxiety symptoms (Peterman, Labelle, & Steinberg, 2014), while others have reported church attendance to be negatively associated with depressive symptoms (Pearce, Little, & Perez, 2003). In sum, maternal and youth religiosity may both function differently depending on youth age, a hypothesis that will be further examined in the current study.

Current Study

The current study was designed to investigate the nuanced contributions of maternal depressive symptoms and warmth, and parent and youth religiosity on **AA** youth internalizing symptoms. Dyadic reporting was utilized to enhance construct validity given there is “no single measure or method that provides a definitive or ‘gold standard’ to gauge which children are experiencing a given set of problems or disorders” (De Los Reyes & Kazdin, 2005, p. 483). As

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such, it is important to collect data from multiple informants to gather a more accurate and complex picture of child behavior. However, as with any method, there are some limitations to dyadic reporting, namely that dyads do not always agree, and youth are often better reporters of internalizing symptoms than their parents are. Based on prior research, three hypotheses about the relationships between the variables of interest were put forth and tested. First, it was expected that maternal depressive symptoms would be positively associated with youth internalizing symptoms and that maternal warmth would be negatively associated with youth symptoms. Second, it was hypothesized that maternal religiosity would interact with youth age, such that older adolescents would be least affected by maternal religiosity, while younger adolescents with more religious mothers would evidence the lowest levels of internalizing symptoms. Third, it was predicted that adolescent religiosity would interact with age such that highly religious older adolescents would report the highest levels of internalizing symptoms, while highly religious younger adolescents would report the lowest levels of internalizing symptoms. These hypotheses were specifically examined among **AA** single mother families given that over half of **AA** youth (66%) (National Kids Count Program, 2011) are raised in single mother homes and are at increased risk for internalizing symptoms (Daryanani et al., 2016; Kim & Brody, 2005; Miller & Taylor, 2012).

Methods

Participants

The current data were gathered as a part of the African American Families and Children Together (AAFACT) Project, designed to explore psychosocial and behavioral outcomes of youth living in single mother-headed **AA** homes (see **BLINDED FOR REVIEW**, for more information). The sample consisted of 193 **AA** adolescents and their mothers (94.3% biological

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mothers) living in the Southeastern United States. Adolescents ranged in age from 11 to 17 and were an average of 13.39 years old ($SD = 1.59$). They were 54.9% female. Mothers ranged from 26-64 years old ($M = 38.08$, $SD = 6.67$), reported a mean yearly household income of \$29,733 ($SD = \$17,456$, $Mdn = \$30,000$, ranging from \$0-\$120,000), and 65.3% of mothers reported having an education level below a college degree (with 5.7% reporting not having a high school diploma or GED).

Measures

Demographics. Mothers provided information about their race/ethnicity, education, age, and family income. Options for education level included “*less than high school*,” “*some high school*,” “*high school diploma or GED*,” “*college degree*,” “*some graduate, law or medical school*,” and “*graduate, law, or medical school degree*”.

Maternal depressive symptomatology. The Center for Epidemiological Studies-Depression scale was used to assess depressive symptomatology in the mothers (CES-D; Radloff, 1977). The CES-D consists of 20 self-report items assessing symptoms over the prior two weeks on a four-point scale from “rarely,” to “most of the time,” such as “*I was bothered by things that don’t usually bother me*,” or “*People were unfriendly*.” The measure achieved good reliability with the current data ($\alpha = .88$). The measure is scored by summing the items. The mean CES-D scores in the current study were similar to a past sample of single AA mothers (McLoyd et al., 1994).

Maternal and adolescent religiosity. Mother and adolescent religiosity were both measured **with four out of seven** items from Ball, Armistead, and Austin’s (2003) scale utilized in their study of religiosity among AA female adolescents. An additional question, - “*How religious is your family?*” - was added to the scale as a fifth item. **The revised measure**

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included the following 5 items: “*How often do you go to church services?*,” “*How important do you think it is for teens to attend religious services?*” “*How religious are you?*” “*How often do you read the Bible, or other religious books, magazines, or stories?*” and “*How religious is your family?*” The measurement model **including maternal and adolescent religiosity**, using **the seven** items from the **original** scale **plus the study specific question** produced poor fit, $\chi^2(304) = 490.97, p < .001, CFI = .89, TLI = .85, RMSEA = .056$. Weak loadings of three items regarding frequency of prayer, saying grace, and asking others to pray for you suggested model fit could be improved with their deletion. A full measurement model with the five remaining items was conducted prior to further analyses, as described below.

Covariances errors were estimated to account for shared method variance between items that contained similar content—that is, error covariances were included between the two items “*How often do you go to church services?*,” and “*How important do you think it is for teens to attend religious services?*”, as well as between the two items “*How religious are you?*,” and “*How religious is your family?*”. Both maternal ($\alpha = .81$) and adolescent ($\alpha = .73$) scales had acceptable reliability.

Mother and adolescent reported youth internalizing symptoms. The Child Behavior Checklist, Ages 6-18 (CBCL; Achenbach & Rescorla, 2001) and the Youth Self Report, Ages 6-18 (YSR; Achenbach & Rescorla, 2001) were utilized as the measures of youth internalizing symptoms as reported by the mother and the adolescent, respectively. For the present study the items were summed to compute raw scores of the three syndrome subscales—*anxious/depressed*, *withdrawn/depressed*, and *somatic complaints*. The subscales of *withdrawn/depressed* ($\alpha = .71; .70$), *anxious/depressed* ($\alpha = .73; .77$), and *somatic complaints* all had acceptable reliability ($\alpha = .71; .74$).

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Mother and adolescent reported maternal warmth. The short-form of the Interaction Behavior Questionnaire (IBQ; Prinz, Foster, Kent, & O'Leary, 1979) was used to assess maternal warmth and consists of 20 items with the highest phi coefficients and the highest item-to-total correlations with the 75 items in the original IBQ. Both mothers (IBQ-M) and youth (IBQ-A) responded to true or false items (**0 = false, 1 = true**), such as “*You enjoy spending time with your mother*” in the youth version and “*Your child is easy to get along with*” in the maternal version. In the present study, the scale achieved good reliability IBQ-A/IBQ-M ($\alpha = .88; .91$). Maternal warmth summed scores were similar to those reported by Steele, Nesbitt-Daly, Daniel and Forehand (2005) in an AA sample.

Results

Analysis Strategy

Descriptive statistics for and correlations among exogenous and endogenous variables and indicators of internalizing are contained in Table 1. The Actor-Partner Interdependence model (APIM; Kenny, Kashy, & Cook, 2006) with latent variables was used to estimate the effects of mother’s and adolescent’s religiosity on mother’s and adolescent’s reports the of the youth’s internalizing. The APIM is a model useful for estimating both within-person—e.g., the effect of the mother’s religiosity on her report of the adolescent’s internalizing—and between-person—e.g., the effect of the mother’s religiosity on the adolescent’s report of his or her own internalizing—effects with dyadic data. These within-person effects are referred to as *actor effects* and the between-person effects are called *partner effects*. In partner effects, the partner’s exogenous variable has an effect on the person’s endogenous variable. When estimating the APIM with latent variables, to appropriately model the nonindependence between dyad members, we include covariances of the measurement errors for each pair of indicators. For

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example, the importance of attending church services is an indicator of religiosity for both parents and adolescents, but this activity is not independent—the more importance a mother places on attending church, the more likely that her adolescent child will also believe it is important to attend church—so we allow for covariance in the measurement error for this item between mothers and adolescents. Covariance in measurement errors for all pairs of indicators for the religiosity latent variable as well as the internalizing latent variable were included in our model. In addition, to further model the nonindependence, the covariance between disturbances of the two endogenous latent variables (mother's and adolescent's reports of youth internalizing) was estimated (see **Figure 1**).

There was relatively little missing data on our study variables. Missing percentages ranged from zero percent missing to 3.6% missing, except for one variable—the adolescent's report of the maternal warmth—which was 9.8% missing. Little's MCAR test indicated that we cannot assume the data are missing completely at random, $\chi^2(281) = 365.67, p < .001$, thus, we assumed missing at random (MAR). Structural Equation Modeling with Full Information Maximum Likelihood (FIML) estimation was used to handle the missing data.

Model Results

Measurement model. All model parameters were estimated via AMOS 21 using FIML estimation. Prior to fitting the hypothesized structural model depicted in Figure 1, we assessed the fit of the measurement model—a model allowing all possible covariances among variables, both latent and measured. That is, **we estimated a model including all latent and measured variables depicted in Figure 1, but with all possible covariances between them specified instead of structural paths. Further, dyadic error covariances for pairs of latent indicators and error covariance to capture the shared method variance were included, as discussed**

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above. The measurement model was a good fit to the data, $\chi^2(129) = 217.59, p = .008, CFI = .963, TLI = .940, RMSEA = .038$.

Full structural model. Upon accepting the measurement model, the hypothesized full structural model was estimated to examine the effects maternal and adolescent religiosity on mother's and adolescent's reports of the adolescent's internalizing symptoms. This hypothesized model is depicted in Figure 1. The model, including both maternal and adolescent religiosity, was a good fit to the data, $\chi^2(129) = 217.59, p = .008, CFI = .963, TLI = .940, RMSEA = .038$. The interaction of adolescent religiosity and age had no statistically significant effects on mother's ($p = .399$) or adolescent's ($p = .870$) reports of internalizing, and a model comparison indicated that model fit would not significantly decline when removing these two paths ($\Delta\chi^2(2) = 0.62, p = .732$). As it was no longer a predictor of any **endogenous variables, we removed the** product of adolescent religiosity and age from the model entirely. This final trimmed model—depicted in Figure 2 with standardized path estimates—remained an excellent fit to the data, $\chi^2(117) = 191.37, p = .036, CFI = .973, TLI = .956, RMSEA = .033$.

Adolescent perception of maternal warmth ($\beta^2 = -0.31, S.E. = 0.06, p < .001$) and maternal and adolescent religiosity ($\beta = -0.28, S.E. = 0.69, p = .014$ and $\beta = 0.32, S.E. = 0.84, p = .010$, respectively) were statistically significantly associated with adolescent-reported internalizing symptoms. Higher levels of adolescent perceived maternal warmth (actor effect) and higher levels of maternal religiosity (partner effect) were related to lower levels of symptoms, while higher levels of adolescent religiosity were related to higher levels of youth symptoms (actor effect). The main effect of maternal religiosity on adolescent-reported

² With many model variables on different scales, standardized estimates are presented to allow comparisons between structural weights. One should keep in mind that different standard deviations between mothers' and adolescents' data render pairs of actor effects and pairs of partner effects not directly comparable; that is, these variables were not standardized prior to modeling using the pooled standard deviation as would be necessary for direct comparisons (Kenny, Kashy, & Cook, 2006).

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internalizing symptoms was qualified by a statistically significant interaction of maternal religiosity and age ($\beta = 0.17$, $S.E. = 0.24$, $p = .047$), such that greater maternal religiosity was protective for younger adolescents but had less of an effect as teens aged each year (see Figure 3).³ Unexpectedly, neither maternal **depressive symptoms** ($\beta = 0.11$, $S.E. = 0.03$, $p = .173$) nor maternal report of warmth ($\beta = -0.01$, $S.E. = 0.03$, $p = .885$) was significantly related to adolescent report of internalizing symptoms (partner effects).

Maternal report of adolescent internalizing symptoms was associated with maternal report of warmth ($\beta = -0.33$, $S.E. = 0.04$, $p < .001$; actor effect) and maternal depressive symptoms ($\beta = 0.33$, $S.E. = 0.02$, $p < .001$; actor effect). That is, as expected, higher levels of maternal warmth were related to mother's perceptions of lower levels of youth internalizing symptoms while higher levels of maternal depressive symptoms were related to higher levels of mother perceived youth internalizing symptoms. Recall that there was no statistically significant relationship between mother's reported depressive symptoms and adolescent self-reported internalizing ($p = .173$). Lastly, there was no a main effect of maternal religiosity on maternal report of youth internalizing symptoms ($\beta = -0.03$, $S.E. = 0.45$, $p = .738$; actor effect), and no interaction of maternal religiosity and youth age on mother's report of youth internalizing ($\beta = 0.11$, $S.E. = 0.17$, $p = .198$).

Discussion

In the current study, the importance of two protective factors, maternal warmth and religiosity, and one risk factor, maternal depressive symptoms, in the context of youth age were explored in relation to youth internalizing symptoms among a sample of AA youth living in

³ In order to graph the interaction of mother's religiosity and adolescent's age on latent internalizing symptoms, the factor intercept of adolescent's report of internalizing had to be estimated. This was achieved by fixing one of the intercepts of the latent indicators (anxious subscale) to zero and freeing the latent variable intercept.

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single mother families. First, consistent with study hypotheses, maternal depressive symptoms and maternal report of warmth were significantly associated with maternal report of youth internalizing symptoms (**actor effects**), such that higher levels of depressive symptoms were related to higher levels of **perceived** youth symptoms while higher levels of warmth were related with lower levels of **perceived** youth symptoms. It is important to note, however, that **these associations were maternal actor effects; that is, a mother's report of her own warmth and depressive symptoms were related to her *perception* of her adolescent's internalizing symptoms and not the adolescent's self-reported internalizing symptoms. Importantly, there was also a negative adolescent actor effect of youth perceived maternal warmth on youth self-reported internalizing symptoms. Each of these actor effects is controlling for the partner's perception of maternal warmth. These findings are consistent with prior research documenting negative associations between positive parenting behaviors, such as warmth, and elevated depressive symptoms in youth (e.g., Suchman, Rounsaville, DeCoste, & Luthar, 2007) and research highlighting the increased likelihood of youth internalizing symptoms for offspring of depressed mothers (see Goodman et al., 2011, for a review). The current study advances this literature by indicating that the effect of maternal warmth on youth internalizing symptoms might better be thought of as the effect of *perceived* maternal warmth on *perceived* internalizing symptoms. A youth's report of his or her mother's warmth, rather than the mother's self-reported warmth, might be a more reliable indicator of his or her own internalizing symptoms.**

Second, maternal religiosity was inversely related to youth-reported internalizing symptoms (**mother to youth partner effect**), and this effect was moderated by youth age, such that the effect was strongest with younger youth but dissipated for older adolescents. Although

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religiosity has been associated with predominantly positive outcomes among AA youth in past studies, it was not shown to be equally protective for all youth in the current study, with significant and important differences emerging as a result of adolescent age. **Perhaps it is the case** that maternal religiosity has greater benefits for younger youth, as religion can serve as a coping mechanism for mothers and provide them social support, potentially enhancing effective parenting; however, the impact of such influences may wane as older youth become less involved at home and more involved with peers. Consistent with prior research suggesting a decrease in parental influence and closeness as adolescents near adulthood (Smetana, Campione-Barr, Metzger, 2006; Steinberg & Silverberg, 1986), this study advances the literature by examining associations in an at risk and underserved group and showing a lessened association between maternal religiosity and youth internalizing symptoms as youth age. It is possible that as relationship closeness decreases **when the youth nears adulthood**, the discrepancy between maternal and youth personal religiosity grows. Discrepant personal religiosity between parents and youth has been shown to be associated with adolescent internalizing symptomatology (Kim-Spoon, Longo, & McCullough, 2012), which may be exacerbated **by** the lack of a second parent in the household to provide a buffer.

Third, contrary to hypothesis, the interaction of youth religiosity and adolescent age was not related to youth self-report nor maternal report of youth internalizing symptoms. However, adolescent religiosity was positively associated with adolescent report of internalizing symptoms across all ages. **In summary, the partner effect of a mother's religiosity on youth's self-reported internalizing symptoms was reduced as the youth's age increased, but the adolescent actor effect of religiosity was unaffected by the youth's age—i.e., the mother to youth partner effect dampened as the youth neared adulthood, whereas the youth actor**

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effect did not. Although previous studies have focused predominantly on religious adults, evidence in the literature has shown adolescent religiosity to be associated with both higher (Elliasen, Taylor, & Lloyd, 2005; Schnittker, 2001) and lower levels of internalizing symptoms (Ball, Armistead, & Austin, 2003; Wright, Frost, & Wisecarver, 1993). Given these past mixed findings, the cross-sectional nature of the data, and the positive association between only adolescent report of religiosity and internalizing symptoms (and not maternal report of adolescent internalizing symptoms), one possible consideration is that youth who are more distressed seek religion to cope and thus may report higher levels of religiosity (Murphy et al., 2000). Additional explanations emerge from the work on identity formation. For example, some previous researchers have reported a negative association between adolescent religiosity and identity achievement (Markstrom-Adams et al., 1994), and failure to reach identity achievement has been associated with greater internalizing symptoms and anxiety (Schwartz, Zamboanga, Weisskirch, & Rodriguez, 2009). Although we were not able to explore it here, consideration of the impact of the church community and its culture on identity is warranted as it may **mediate** the impact of religiosity on youth symptoms.

Strengths, Limitations, and Conclusions

This study advances the field by using an ecological and familial framework to better understand the associations between maternal depression, warmth, both maternal and adolescent religiosity, and youth age in predicting youth internalizing symptoms. Second, both parent and youth report of internalizing symptoms were included in the same model, eliminating reliance on a single reporter, **allowing estimation of both actor and partner effects**, reducing potential response bias (e.g., distortions) and shared method variance and, thus, potentially enhancing measurement of adolescent internalizing symptoms. Positive associations between parent and

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youth religious involvement are documented in the current literature (Smith & Lundquist Denton, 2005), and although the two reports in this sample were associated ($r = .43, p < .001$), the correlation was of medium size, and they had different associations with youth symptoms. As such, our approach answers De Los Reyes & Kazdin's (2005) call to examine reporter discrepancies, and to take into account potential biases of each reporter (e.g., effect of elevated depressive symptom in maternal reporter). Third, the sample, composed of single **AA** mothers and offspring, is especially important to target based on the high levels of documented internalizing symptoms in AA youth and the additional risk conferred on these youth given the stressors associated with living in a single-parent headed household (Gore & Aseltine, 2003; Kessler et al., 2012). Fourth and finally, the sample was diverse with regard to socioeconomic status, which adds to the literature that has primarily focused on **AAs** in the low socioeconomic stratum.

In addition to the study's strengths, its limitations deserve consideration. **First**, the assessment of religiosity utilized is a global construct including both religious beliefs and behaviors. Previous literature has called for specificity in measurement, such as assessing religious practices or beliefs in the context of interest (i.e., measures of religious coping, or salience of religiosity in family life). Despite the fact that many studies continue to rely on global measures of religiosity (see Pargament, 2002, for a review), future studies may wish to further investigate these findings with alternate measurement strategies. Considering other important aspects, such as the experiences had in the church (e.g., feeling welcomed and accepted), could further enhance future findings (Pearce, Little, & Perez 2003). **Second**, data from this study were drawn from families living in the Southeastern region of the United States where youth are more likely to attend church services and be involved in youth groups (Smith, Lundquist Denton,

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Faris, & Regnerus, 2002). As such, the associations between religiosity and internalizing symptoms may be stronger in this sample compared to more secular regions like the Northeast, potentially limiting generalizability. **Third, the literature is clear that gender differences do exist in regard to both religiosity and internalizing symptoms, so although the current sample size precluded an investigation of the role of gender, it should be considered in future work. Finally, this study utilized a cross-sectional, non-experimental design, which restricts the ability to attribute causality to the findings.**

In summary, the associations between religiosity and youth internalizing symptoms are nuanced. Results suggest that maternal religiosity may be a positive influence, particularly for younger adolescents, while adolescent religiosity may be associated with higher levels of pathology across ages, when examining overall internalizing symptoms. The direction of influence remains unclear; more religious youth may subsequently experience more depression or youth struggling with depression and anxiety may seek religious practice to provide comfort. Continued investigation of the interactions of religiosity and age in **AA** youth with longitudinal data is needed to **find evidence for causation** between religion and internalizing symptoms. Special attention should be paid to contributing factors such as parenting behaviors (i.e. warmth), adolescent age, and maternal depressive symptoms.

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