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ORIGINAL PAPER

Resilience in the Aftermath of Childhood Abuse? Changes in Religiosity and Adulthood Psychological Distress

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Abstract

Of all the forms of adversity experienced during childhood, childhood abuse is known to have the largest impacts on mental health. Yet, we have a limited understanding of factors that may cushion the blow of these early insults, and it remains unclear whether stability or increases/decreases in religiosity facilitate or hinder the ability of religion/spirituality to act as a buffer. Using two waves of MIDUS data, results suggest that increases in positive religious coping (seeking comfort through religion/spirituality) during adulthood buffer the association between childhood physical and emotional abuse on psychological distress, while decreases in religious comfort exacerbate it. Religious attendance had no discernible buffering effect. Taken together, results show that the stress-moderating effects of religion depend on changes in religious coping processes over the life course.

Keywords Life course · Childhood abuse · Psychological distress · Tress buffering

Introduction

Positive developmental experiences in childhood are crucial in setting a foundation of lifelong health and well-being (Braveman et al. 2014). However, many children experience adversities that threaten their development and pose a lifelong risk to health and well-being (Finkelhor et al. 2013). Childhood adversity is a broad term used to denote stressful events and conditions in the early phases of the life course, including emotional and physical abuse, disruptions in childhood family structure (e.g., parental death or divorce), and low childhood socioeconomic status (Jung 2018; Schafer and Ferraro 2013). Of all the various forms of adversity that could be experienced during childhood, childhood maltreatment (emotional and physical abuse) is shown to have the largest impacts on mental health and well-being (Schafer and Ferraro 2013). This is because relative to

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other types of early adversity, childhood abuse is outside of a person's control, cannot be easily altered or reconciled, and often leaves victims feel betrayed, angry, and confused (Foynes et al. 2009).

A significant body of work has sought to understand why some victims of early abuse suffer immense mental health consequences later on in the life course, while others are better able to cushion the blow of these early insults. Research objectives such as this fall directly within the purview of life course research, where scholars have increasingly called for more attention to processes that can "turn off" or mitigate the influence of early-life risks on later well-being (Pearlin 1999; Schafer et al. 2011). Social support and self-esteem are two resources which have been consistently put forth as buffers against the toxic effects of abuse early in the life course (Hill et al. 2010; Jones et al. 2018; Nurius et al. 2015; Sachs-Ericcson et al. 2010). Both resources are thought to buffer against adversity by helping individuals reappraise stressful circumstances (e.g., by helping one to perceive their self-worth, and having this sentiment validated by close others) and by supporting constructive coping strategies. Yet, both social support and self-esteem are vulnerable to erosion by the adversities that spawn from stress (Nurius et al. 2015; Sachs-Ericcson et al. 2010). Among a broad array of potential "countervailing mechanisms" (Pearlin 1999) that individuals could use to cope with adversity, this study focuses on aspects of religion and spirituality. Religion/spirituality may be especially helpful in dealing with uncontrollable stressful life events and is perhaps more immune to the resource-depleting effects of childhood adverse experiences. Indeed, as Pargament (1997, p. 310) asserts, "[a]t any time, we may be pushed beyond our immediate resources, exposing our basic vulnerability to ourselves and the world. To this most basic of existential crises, religion holds out solutions."

Religion/spirituality is known to have broad use as a coping resource, offsetting the deleterious mental health consequences of some of life's most difficult challenges, including the death of a loved one (Wortmann and Park 2008), financial problems (Bradshaw and Ellison 2010), and serious illness or suffering (Pargament 1997). However, there is a dearth of research on the role of religiosity/spirituality in mitigating the deleterious effect of childhood maltreatment on long-term adult mental health (see Jung 2018 for a notable exception). This is somewhat surprising given the continued importance of religion in American life in general and the mounting evidence generally connecting religion/spirituality specifically to more favorable mental health outcomes (Koenig et al. 2012; Schieman et al. 2013; though see Bradshaw et al. 2010; Ellison and Lee 2010; Kent 2019 for evidence that certain aspects of religiosity/spirituality may undermine well-being).

While the utility of religion/spirituality as a buffer against the mental health consequences of stress has been well-documented (see Schieman et al. 2013), it remains unclear whether stability or increases/decreases in religiosity facilitate or hinder the ability of religion to act as a buffer. Using two waves of data from the National Survey of Midlife Development in the United States (MIDUS), this study considers if the potential buffering role of religiosity on the mental health of early abuse victims is contingent on whether it changes or remains stable in adulthood.

Literature Review

Religiosity is a cognitive, personal, and/or social resource that may be particularly efficacious in dealing with stress. Though wide in scope, "religious-based coping" typically involves drawing on religious beliefs, engaging in religious behaviors (such as prayer or attending religious services), and accessing social support through participation in faith-based communities (Bryant-Davis and Wong 2013). Religious coping occurs when life events are interpreted in relation to the sacred, and if engaged in a positive manner, are posited to serve five main functions: finding meaning, gaining control, gaining comfort from and closeness to God, finding intimacy with others, and aiding in the search for life transformation. According to Smyth and Koenig (2014), religion should have utility in dealing with abuse because "[religion] may promote forgiveness rather than retaliation, opportunities for cathartic emotional release, and social support, all of which have been linked with health outcomes…[religion] can also be a powerful source of hope, meaning, peace, comfort" (251).

To date, however, only a few empirical studies have explored the intersection between childhood abuse, religion as a stress buffer, and psychological distress (Dervic et al. 2006; Gall et al. 2007; Jung 2018). Dervic (2006) and colleagues found that religious beliefs predicted a lower likelihood of having suicidal ideation in a sample of nearly 2000 depressed inpatients who reported being abused as children. A more recent study found that religious salience and spirituality buffered the effect of childhood adversity (which includes abuse as one component) on changes in adult depression (Jung 2018). Despite making an important linkage between childhood abuse, religion, and mental health, past studies are limited because they do not consider the possibility that one's religiosity may change over time. As Dyslin and Thomsen (2011: 630) note, any "snapshot of religiosity among abuse victims, at a single point in time, may obscure actual effects of maltreatment on religiosity" and, more importantly, provides only a limited understanding of the role of religion as a potential buffering factor for depression for abuse victims. To foreground these considerations, I first review evidence on how childhood abuse may be associated with changes in religiosity over the life course.

Childhood Abuse and Changes in Religiosity

A large body of research has illustrated that childhood abuse has an impact on future levels of religiosity over the life course (see Walker 2009 for a review). Of all the dimensions of religiosity, church attendance and religious affiliation tend to *decrease* after childhood abuse (Bierman 2005). There is also some evidence that those abused in childhood may view God as harsh, punitive, and ultimately distant from their lives (Reinert and Edwards 2009; Sansone et al. 2013). The latter finding is typically thought to reflect the tendency of some abused individuals to project a negative characteristic of their abuser (e.g., a parent) onto God or a divine power (Bierman 2005).

Another line of work suggests that abused individuals in childhood may experience *increases* in religiosity later on the in the life course. For instance, childhood abuse victims have been found to report more spiritual openness than non-victims (Dyslin and Thomsen 2011; Reinert and Smith 1997). Moreover, in a study of 50 victimized women, Ryan (1998) reports that more than half report an increase in spirituality. Among a sample of people who had experienced multiple traumas, almost 1 in 5 grew more religious after the second trauma, while less than 1 in 10 indicated they had a decline in religiosity (Falsetti et al. 2003). The trauma of childhood abuse may serve as a catalyst for spiritual growth, as individuals may seek out or strengthen religious beliefs or behaviors to re-establish a sense of meaning and order in their lives.

Taken together, existing evidence suggests that individuals abused as children could be susceptible to marked religious change during the life course. A question yet to be answered, however, is the degree to which religion and spirituality might moderate the development of other symptoms and/or allow for the *amelioration (or intensification)* of distress. As I outline in the next section, religiosity may have differing potential to buffer the impact of childhood adversity on psychological distress whether it remains stable over adulthood, or whether it increases or decreases.

Dimensions of Religious Change and Buffering Effects for Depression

Research within the life course perspective has suggested that individuals are prone to experience change in religiosity over time as they transition into various life course roles, or in response to adverse stressors or conditions (Hardie et al. 2016; Schafer 2014; Uecker et al. 2007; Upenieks et al. 2019). The current study considers whether *religious stability* in both attitudes and practices or *increases or decreases* across two facets of religiosity in adulthood (religious attendance, and the extent to which one seeks religious comfort) influence the psychological distress of childhood abuse victims. These two features of religiosity offer an important contrast, because while public participation in a religious community may offer a shared faith community ready to provide support, religion may also offer perceived comfort and reassurance through more private means of spirituality, such as through one's relationship with a divine power. No prior study has assessed whether public or private forms of religiosity may differentially buffer the effects of childhood abuse on later well-being.

Religious Attendance: Religious service attendance is the most general and most commonly studied form of religious involvement (Jung 2014). Frequent religious attendance is a potential mental health buffer against childhood adversity. A study by Jung (2018) found that religious attendance, measured at one time point concurrently with well-being, attenuated the negative effects of childhood adversity on positive affect. However, there is reason to expect that religious attendance must be observed *consistently over time* to function as a buffer against early adversity. Evidence suggests that social resources enhance the mental well-being of individuals, especially when these resources are found within the church (Hayward and Krause 2013).

The potential benefits of church-based attendance become clear when we look at the various supportive resources housed within religious communities. Tangible social support, such as financial aid and information provided through church programs or informal religious networks (Jung 2014; Marriot et al. 2014), can be an impactful source of comfort and hope for victims of childhood adversity who may suffer from economic hardship and physical illness. During public religious gatherings, being present to discussions about shared beliefs could help co-religionists confront their stressful personal situations within a less-distressing religious frame (Ellison et al. 2001; Jung 2014; Myers et al. 2013). Past evidence has suggested that individuals experience greater benefits of social support when it is provided by someone who shares a religious identity and beliefs (Krause 2006). Indeed, members of religious congregations usually rely on a shared set of religious discourses and meaning structures when it comes to making sense of and confronting human suffering. Like any other social relationship, support provision from co-congregants and clergy may take time to build up. While not assessing the cumulative role of social support specifically, Chen and VanderWeele (2018) found that stably high religious attendance from childhood to midlife was associated with better well-being at midlife compared to those that never attended religious services (see also Upenieks and Schafer 2020). Finally, religious participation tends to be associated with higher levels of psychosocial resources such as self-esteem, social support, self-efficacy, and possibly the sense of personal control, each of which could buffer the effects of negative life events (Ellison and Burdette 2012; Schieman 2008; Schieman et al. 2017). Thus, ongoing, frequent religious attendance in adulthood is better for building support networks and may be needed to offset the negative consequences of early-life adversity.

Though religious attendance may share obvious affinity with social support obtained in a religious community, a known stress buffer against childhood abuse (Jones et al. 2018), previous research has found that the beneficial effects of religious involvement for mental well-being cannot be solely reduced to processes of social support. In a ground-breaking study, Ellison and colleagues (2001) found that the link between religious attendance and lower psychological distress were not mediated by access to social or psychological resources, including self-esteem or social support. This led these authors to argue that, "[r]eligious groups and traditions may foster distinctive sets of spiritual or psychosocial resources (e.g., distinctive coping styles and practices, doctrines, support patterns) that bolster or undermine health and well-being" (p. 243). More germane to the stressor of early childhood abuse, Gall and colleagues (2007) found this same pattern for the moderating effects of religious involvement: engaging in coping with past abuse through religious involvement was more strongly associated with higher positive affect and lower psychological distress, an association which also held net of social support received.

There are also reasons to expect that increases or decreases in religious attendance may influence the role of religious attendance as a buffer against early adversity. Existing evidence suggests that religious decline among those abused as children are more likely to occur for these institutional aspects of religion (Bierman 2005). Previous research (unspecific to childhood adversity) has documented some adverse health consequences of declines in religious attendance. For instance, those

who declined their religious attendance experienced poorer health and well-being than the consistently religious and non-religious (Fenelon and Danielsen 2016). Though the mechanisms linking declines in religious attendance and health are still unclear, it may portend the loss of social support linked to church attendance and other collective expressions of religiosity (Fenelon and Danielson 2016; Krause 2006; Krause and Pargament 2017).

However, in light of research that has shown spiritual struggles to result for those abused as children as they come to question the nature of God (Bierman 2005), childhood abuse victims may benefit from *removing themselves from religious practice* and weekly reminders of such pain or doubt associated with their faith. Generally speaking, those who consider leaving their religious group but decide to stay experience higher depression than those who actually do leave (May 2018). Indeed, a growing body of work has suggested that unresolved religious doubts or struggles are detrimental for depression (Ellison and Lee 2010); thus, abuse victims may experience lower depression if they fully disengage from religious practice rather than remain in a place of religious uncertainty.

Religious Comfort: Though institutional religiosity is an important dimension of faith, Americans are increasingly losing their commitment to formal religious institutions while remaining interested in broader spiritual matters (Olson and Green 2017). *Religious comfort* is one such spiritual matter and refers to an active, positive form of spiritual coping (Pargament et al. 2000) where individuals seek comfort through religious or spiritual means in their daily lives (Pargament 1997; Bierman 2006). According to some observers, seeking comfort through one's faith is the ultimate spiritual purpose, as it helps individuals draw nearer to God and whatever is held sacred (Pargament et al. 2000). The current study thus explores the extent that a person seeks comfort through their religion, as this practice could help individuals gain meaning and purpose from past experiences of abuse, assisting them in reconciling questions of meaning raised by past or current stressors, and viewing hardship as an opportunity for growth rather than an impossibility to overcome (Idler 1995; Park and Folkman 1997). A higher sense of life meaning has been shown to reduce the impact of stressful life events on mental health (Cohen and Cairns 2012). Moreover, turning to religion for comfort could be construed as having taken constructive action in response to their hardship (e.g., forgiveness of abusers), and may aid in relinquishing feelings of anger, betrayal, and shame arising from their early misfortune (Krause and Ellison 2003). It is likely that these processes (e.g., reframing of hardships, forgiving abusers) may require a person to turn to religious coping methods for a significant portion of their lives.

We might also expect that increasing the extent to which one seeks comfort through their religion might be particularly efficacious for offsetting the negative health consequences of early-life abuse. An increasing reliance on seeking religious comfort may promote better health by providing a sense of life purpose and equipping individuals with better coping methods to deal with stressors (Koenig et al. 2012). Individuals may intensify their religiosity over time to gain meaning in life, to help with personal growth and development, and to have a resource at their disposal for coping with loss or stress (Schafer 2014; Silverstein and Bengtson 2018). Individuals who purposefully seek comfort through religion may benefit from a strong

feeling of connection with a perceived divine other (e.g., God). It is clear that many believers engage in a *collaborative* form of religious coping, the pursuit of partnership with God during stressful times to resolve problems (Pargament et al. 2000). This has since been developed by Krause (2005) into a concept called God-mediated control, where a person believes that they work together with God to address troubles that arise. This coping style, centered around the idea that oneself and God both play active roles in stress resolution, is thought to be adaptive for well-being in the face of a wide swathe of stressors (Koenig et al. 1998; Pargament et al. 2000). Compared to active surrender, where the responsibility for the outcome is left up to God, collaborative religious coping holds stronger links with well-being (Pargament et al. 2000). After the onset of stressful life events, individuals that view their life (and its challenges) as problems to be overcome with the support of a divine, loving power report lower psychological distress (Bradshaw et al. 2010). The belief in an all-loving deity may be empowering because people derive confidence that the challenges of their lives can be managed by combining personal efforts with those of a divine power (Schieman et al. 2005).

Taken together, these feelings of comfort and competence are likely to be valuable for victims of childhood abuse. Early abuse tends to foster feelings of both hopelessness and helplessness that undermine how one views themselves (Irving and Ferraro 2006). Likewise, examining the connection between religion and health using qualitative interviews, Idler (1995) found that many respondents were able to reframe their hardships using religious coping strategies (i.e., injuries, illness, etc.) into divine purposes such that they were no longer seen as a threat, but as an opportunity for meaning and growth. During difficult life circumstances, even early-life adversity that occurred as far back as several decades ago, seeking religious comfort may allow individuals to work with God or a divine being on a routine basis for solace, comfort, and guidance that may ease the burden and bring meaning to stressful events, thereby mitigating the long-term mental health consequences of abuse. Qualitative interviews further reveal that many people reported that God's voice offered them comfort during difficult times (Dein and Littlewood 2007). Thus, it is possible that the comfort of divine support could elicit the strength to confront challenges confidently (Hayward and Krause 2016).

Decreases in religious coping over time present a more complicated case in its potential links to adult mental health for childhood abuse victims. Negative religious coping strategies, including those involving doubt and struggle with faith, are generally more maladaptive for mental well-being (Exline and Rose 2005). The occurrence of major traumatic life events, particularly during an enhanced state of vulnerability during childhood, can shatter one's most fundamental beliefs and values, including those related to religion.

Scholars generally recognize three types of religious struggles: interpersonal struggles that involve tensions with others around spiritual issues, intrapersonal struggles that deal with doubts about matters of faith, and divine struggles, which focus on negative emotions directed toward God, including anger and feelings of abandonment (Pargament et al. 2005). A diminished reliance on religious coping may also represent the loss of a totalizing worldview to make sense of and effectively address life problems (see Park 2005) and could be linked with worse mental

health. Religious/spiritual struggles may place a stain on individuals' meaning systems and are related to a variety of negative outcomes, ranging from amplified distress to depressive symptoms (Abu-Raiya et al. 2015; Wilt et al. 2017), to lower personal adjustment (Zarzycka and Zietek 2019) and lower life satisfaction (Park et al. 2011). This could be especially detrimental for the mental health of abused individuals that at one time did rely heavily on religion for providing comfort in adverse circumstances, and for whatever reason, now no longer rely on that resource. Indeed, Pargament and colleagues (2004) noted that those who are unable to solve their religious struggles over time are at greater risk of poorer mental well-being, whereas individuals with temporary struggles do not face a similar risk. Since a decade elapsed between waves of the MIDUS survey, this offers a way to delineate the effects of resolved spiritual struggle from consistent or new spiritual struggle (e.g., a decreased reliance on religious coping methods over time).

Data and Methods

This study draws on the first two waves of data from the National Survey of Midlife Development (MIDUS) study. The MIDUS study is a nationally representative survey of non-institutionalized American adults aged 20–74 with an oversampling of older males between 65 and 74. The first wave of data collection took place in 1995. Data collection was carried out in two parts. Initially, 3487 respondents were contacted by phone through random-digit dialing and asked to participate in a 30-minute telephone interview. The response rate for these initial telephone interviews was 70%. Following this, respondents who participated in the telephone interview were mailed a more detailed, self-administered questionnaire (86.8% response rate). A total sample of 3032 respondents completed both the telephone and mail interviews at the baseline with an overall response rate of 60.76 (0.70 x 0.868).

Ten years later (2005–2006), participants in the first wave were recontacted for a follow-up survey. Of the 3487 participants initially contacted, 1748 participants (roughly 50%) completed both the telephone interview and self-administered surveys at the second wave. Of the 1748 Wave 2 respondents, less than 7% did not have complete data scores across all study variables. Listwise deletion was used to deal with missing data (though results are substantively similar using multiple imputation). Thus, my final analytic sample is 1613 cases.

Dependent Variable: Psychological Distress

Psychological distress was measured with an identical index composed of six items at each wave of MIDUS, and was based on the *K6* scale, a widely validated and commonly used measure to screen for depression and anxiety (Kessler et al. 2010). Respondents reported how often in the last 30 days they had experienced the following symptoms: "felt hopeless," "felt nervous," "were restless or fidgety," "were so sad nothing could cheer you up," "felt that everything was an effort," and "felt worthless." Responses were coded where 1 = "none of the time" to 5 = "all of the

time." Responses to each of these six items were averaged to form a continuous scale at Waves 1 and 2 of the MIDUS study ($\alpha = 0.85$ at Wave 1 and $\alpha = 0.86$ at Wave 2). Wave 2 psychological distress served as the dependent variable, with a control for the Wave 1 lagged measure of psychological distress.

Focal Independent Variable (Emotional and Physical Abuse)

Extant research has operationalized childhood abuse in several ways, including through two-item indexes of abuse (combining emotional and physical maltreatment) (Bierman 2005), binary indicators distinguishing relatively frequent and infrequent childhood abuse (Irving and Ferraro 2006), and latent classes of adverse childhood experiences (Schafer et al. 2011; Schafer 2014). The approach taken in this study is to consider an average of physical and emotional abuse severity across individuals' mothers and fathers (though results are robust to other coding schemes, as noted below). Emotional and physical abuse was measured at Wave 1 of the MIDUS study. The specific measures were drawn from the Conflict Tactics Scale (Straus 1979). *Emotional abuse* was a measure of how often the respondent's mother and father "insulted or swore at them, sulked or refused to talk to them, stomped out of the room, did or said something to spite them, threatened to hit them, and smashed or kicked something in anger" (coded where 1 = "Never," 2 = "Rarely, 3 = "Sometimes," and 4 = "Often"). I averaged this measure over the two parents to create an index ($\alpha = 0.70$). *Physical abuse* was a scale consisting of two items pertaining to the respondent's mother and two to the respondent's father. The first item measured moderate physical abuse and asked respondents to consider how often each parent "grabbed or showed them, slapped them, or threw something at them." The second item gauged severe physical abuse, and asked respondents to consider how often each parent "kicked, bit, or hit them with a fist; hit or tried to hit them with something; beat them up, choked them, or burned or scalded them" (coded where 1 = "Never," 2 = "Rarely," 3 = "Sometimes," and 4 = "Often"). I averaged these four scores into a variable comprising physical abuse ($\alpha = 0.84$).

Supplemental analyses also considered whether the source of victim perpetration mattered (father versus mother). There is some precedent in the literature that only maltreatment perpetrated by fathers have a significant negative effect on religiosity, this coming from a cross-sectional analysis of the MIDUS data (Bierman 2005). Main findings were identical when the source of perpetrator was a father or mother. Therefore, for the sake of parsimony, I present only the results with the combined parental emotional and physical abuse scale.

Dimensions of Religiosity

Two dimensions of religiosity were considered in the present study. These were chosen because they were *measured in an identical fashion* across the first two waves of MIDUS survey. Since the primary interest is in change in religiosity over time, consistency in measurement between waves was crucial to the analyses.

Religious attendance was comprised of a measure of how often the respondent attended religious services (1 = "Never," 2 = "Less than once a week," 3 = "1–3 times a month," 4 = "About once a week," and 5 = "More than once a week"). *Religious comfort* was measured by the following question: "When you have problems or difficulties in your family, work, or personal life, how often do you seek comfort through religious or spiritual means, such as praying, mediating, attending a religious or spiritual service, or talking to a religious or spiritual advisor?" (coded where 1 = "Never" 2 = "Rarely," 3 = "Sometimes" to 4 = "Often").

For my focal analyses, following work in the sociology of religion assessing religious change across two survey waves (Schieman and Bierman 2007), I created change scores that subtracted Wave 1 scores on each dimension of religiosity from Wave 2 scores. Positive values on each change score represent increases on each dimension of religiosity, while negative values represent decreases. A score of 0 would represent no change in religiosity from the prior time point.

Covariates

The analysis adjusts for several covariates known to be associated with childhood adversity and psychological distress. First, I include a measure of race, which contrasts White respondents with Black, Hispanic, and Other racial categories. I also adjust for gender (female = reference group). Analyses also feature a measure of the highest level of educational attainment the respondent has attained across the two waves of MIDUS, with less than high school (reference group), high school or equivalent, some college education, or a university degree or higher as the categories. I also adjust for age (coded in years), and whether the respondent was married (married = 1, all other forms of relationship status = 0).

Additionally, I adjusted for respondents' current religious affiliation (at Wave 2 of MIDUS) MIDUS respondents could indicate denominational affiliation using a 46-item list of denominations. Affiliation was coded using a modified version of the RELTRAD coding scheme (Steensland et al. 2000), which contrasted Mainline Protestant (reference group) to Liberal Protestant, Conservative Protestant, Catholic, Jewish, None/Atheist/Agnostics, and Other religion. While it is possible that individuals may change their religious denominational affiliation over time in response to early-life adversity (e.g., Schafer 2014), denominational change is beyond the scope of this study.

Finally, the analyses control for additional background factors that could raise the likelihood of having experienced abuse in childhood and have also been shown to be related to religiosity, such as family socioeconomic status during childhood (Sedlak 1997). This was captured through a dichotomous measure of whether the family was ever on welfare during childhood (1 = yes, 0 = no). Furthermore, children in relatively dysfunctional or unstable families are more likely to be victims of abuse (Zuravin and Fontanella 1999). I thus include a control variable for whether the respondents' parents divorced during childhood (1 = yes, 0 = no). For the sake of a parsimonious presentation of results in the main body of the study, I do not present results for control

variables (but they are available upon request). Descriptive statistics for all study variables are presented in Appendix Table 3.

Analytic Plan

Analyses feature OLS regression models predicting change in psychological distress from MIDUS 1 to MIDUS 2. I utilize a lagged dependent variable model (LDV) and include a control for Wave 1 depression (Johnson 2005). Such a design helps prevent endogeneity bias due to any change across the two dimensions of religiosity considered here brought about by baseline levels of psychological distress (see Doane and Elliot 2016). Moreover, an LDV approach helps ensure unbiased coefficients because it adjusts for the autocorrelation between psychological distress at Wave 1 and Wave 2. LDV models are not without their limitations, however. Some analysts have noted that unobserved individual effects may be correlated with the lagged dependent variable (Raudenbush and Bryk 2002). While some scholars have recommended change score models over LDV models (e.g., Johnson 2005), recent evidence using Monte Carlo simulations has shown that LDV models in a regression framework generally produce accurate estimates with no more bias introduced than alternative estimation strategies (Wilkins 2018). Moreover, even critiques of LDV models argue that such models are more likely to cause Type 2 error, suppressing significant effects rather than artificially inflating them (Achen 2000), as it is possible that psychological distress from a prior wave may capture most of the variance in distress at the final wave because of a correlated error term or shared variance among the independent variables (Mowen and Culhane 2017). In this, LDV models would likely yield more conservative estimates regarding the focal relationship between childhood abuse, changes in religiosity, and psychological distress. Ancillary analyses revealed that the same pattern of results was observed if a baseline measure of psychological distress was removed.

The two-step Heckman method is also used to address the possibility that sample attrition between Wave 1 and Wave 2 of MIDUS may bias the results. Probit regression was used to predict which individuals remained in the sample from Wave 1 to Wave 2. Predictors included a wide range of demographic variables available in the MIDUS data, including gender, age, race, and education level. As the second step of the Heckman procedure, I obtained a hazard of non-selection based on the inverse of the Mills ratio from the stage-one probit model and used the resulting selection instrument () to adjust the ensuing regression models (coefficient not shown). Additional analyses reveal that results do not differ if selection bias is not accounted for.

Finally, to detect multicollinearity since my main analyses involved interaction terms, I reviewed the variance inflation factor (VIFs) for all regression models, none of which exceeded the standard threshold of VIF = 2.00 (see Allison 1999).

Results

As a prelude to my main regression analyses, I discuss a few noteworthy descriptive statistics. Psychological distress scores changed very little over the 10-year study period, as respondents had an average psychological distress score of 1.54 at Wave 1, and 1.53 at Wave 2. On average, rates of emotional and physical abuse were fairly low in the MIDUS sample. Respondents reported an emotional abuse score of 2.06, which corresponds to "rarely abused" and a physical abuse score of 1.76, which falls between the categories of "never" and "rarely" abused.

Looking at changes across the two dimensions of religiosity considered, 31% of respondents reported a decrease in the extent to which they sought religious comfort to handle challenges in life, and 19% reported an increase. Moreover, 26% reported a decrease in attendance at religious services, and 22% reported an increase. On average, of the two dimensions of religiosity considered, the more volatile one was religious comfort. Indeed, the average respondent reported a decline of -0.16 in their religious comfort scores across waves, compared to a -0.01 average decline in church attendance, respectively.

Multivariable Analyses

Table 1 shows the results of OLS regression analysis that are designed to examine whether childhood emotional and physical abuse are associated with changes in depressive symptoms between Waves 1 and 2 of MIDUS. As shown in Model 1 of Table 1, emotional abuse in childhood is associated with an increase in psychological distress ($b = 0.04$, $p < 0.05$), net of Wave 1 psychological distress and the entire host of study covariates. Moving to Model 2, higher levels of physical abuse in childhood are also associated with an increase in psychological distress at the second wave of MIDUS ($b = 0.03$, $p < 0.05$). However, when physical and emotional abuse are entered into the model at the same time in Model 3, only emotional abuse maintains its significance ($b = 0.05$, $p < 0.05$). Childhood emotional abuse may thus hold a stronger association with changes in psychological distress than physical abuse. In addition, a higher religious salience, frequency of seeking religious comfort, and frequency of religious attendance all had significant main effects and were each associated with decreases in psychological distress.

Table 2 presents results of OLS regression analysis designed to examine my main research question: do changes in each facet of religiosity *moderate* the association established between childhood abuse and psychological distress? All models shown in Table 2 adjust for the full set of study covariates (coefficients not shown for ease of presentation), with the exception of specific dimensions religiosity. For example, in models assessing the potential role of change in religious attendance as a moderator in the relationship between childhood abuse and depressive symptoms, I do not include an adjustment for Wave 1 or 2 measures of religious attendance.

Table 2 shows a series of models with interaction terms for changes in each dimension of religiosity with both emotional (Models a) and physical abuse (Models b).

Table 1 Wave 2 psychological distress regressed on childhood abuse and adult religiosity, (MIDUS Waves 1 and 2, 1995–2006) (standard errors shown in brackets N = 1613)

	Model 1	Model 2	Model 3
Emotional abuse	0.04*		0.05*
	(0.02)		(0.02)
Physical abuse		0.03*	−0.03
		(0.01)	(0.03)
Religious comfort, W2			
Rarely[a]	0.03	0.03	0.03
	(0.04)	(0.04)	(0.04)
Sometimes[a]	0.06	0.05	0.06
	(0.04)	(0.04)	(0.04)
Often[a]	−0.06*	−0.07*	−0.07*
	(0.03)	(0.04)	(0.04)
Religious attendance, W2			
Once a year[b]	−0.08*	−0.08*	−0.08*
	(0.04)	(0.04)	(0.04)
Less than once a month[b]	−0.01	−0.01	−0.01
	(0.05)	(0.05)	(0.05)
One to three times a month[b]	−0.06	−0.06	−0.06
	(0.05)	(0.05)	(0.05)
About once a week[b]	−0.17**	-0.18**	-0.17**
	(0.06)	(0.06)	(0.06)
More than once a Week[b]	0.03	0.04	0.04
	(0.11)	(0.11)	(0.11)
Psychological distress, W1	0.45***	0.45***	0.45***
	(0.03)	(0.03)	(0.03)

All models adjust for all study covariates, unless otherwise noted. Coefficients for control

variables are not shown

[a]Compared to Never

[b]Compared to Never attends

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, † $p < 0.10$

Models 1a and 1b reveal significant, negative interaction terms for the role of change in seeking religious comfort, for both emotional abuse (b = -0.04, $p < 0.01$) and physical abuse (b = -0.03, $p < 0.01$).

Figure 1 shows the predicted psychological distress scores for three categories of emotional abuse: no abuse, moderate abuse (roughly the mean score of 2 on the 4-point scale of emotional abuse), and high abuse (defined by a score of 4, the highest score on the 4-point scale of emotional abuse), across three different levels of the moderator, seeking religious comfort: decreasing, stable, and increasing religious comfort. As displayed in Fig. 1 through the dark gray bars at the far right of each series of bars, the positive association between high childhood emotional abuse and psychological distress was *attenuated* (i.e., weaker) for individuals that reported increasing religious comfort. However, for those with high childhood emotional abuse, decreasing religious comfort appears to *exacerbate* the association between early-life abuse and increases in psychological distress. Comparing respondents who

Table 2 Change in religiosity as moderators of the relationship between childhood abuse and psychological distress (MIDUS waves 1 and 2, standard errors shown in brackets, N = 1613)

Main effects	Model 1a	Model 1b	Model2a	Model2b
Emotional abuse	0.03 (0.02)		0.03* (0.02)	
Physical abuse		0.11 (0.02)		0.01 (0.02
Change in religious Comfort, W1–W2	0.06* (0.03)	0.05* (0.02)		
Change in religious attendance, W1–W2			0.02 (0.03)	0.01 (0.03)
Interaction Terms				
Emotional abuse*Change in religious comfort, W1–W2	−0.04* (0.01)			
Physical abuse* Change in religious Comfort, W1–W2		−0.03* (0.01)		
Emotional abuse*Change in religious attendance, W1–W2			−0.02 (0.01)	
Physical abuse*Change in religious attendance, W1–W2				−0.01 (0.01)

All models adjust for all study covariates. Coefficients for control variables are not shown

*** $p < 0.001$, ** $p < 0.01$, * $p < 0.05$, †$p < 0.10$

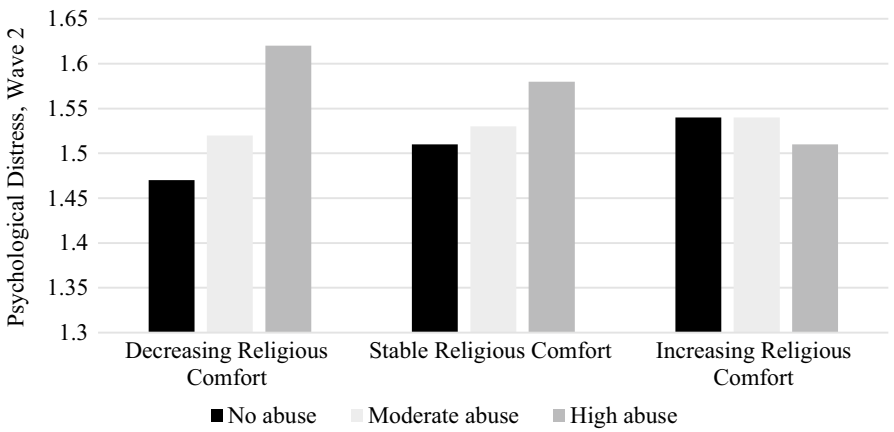

Fig. 1 The moderating role of changes in religious comfort: emotional abuse, *Note*: Estimates shown adjust for all covariates included in Model 1a of Table 2

experienced high emotional abuse, those who increased religious comfort reported significantly less psychological distress (avg. distress score = 1.51) than those who reported decreasing religious comfort (avg. distress score = 1.62) ($p < 0.05$), for a difference of 0.11 of a symptom of psychological distress between these groups, or

nearly 1/5th of a standard deviation in Wave 2 psychological distress scores. While these effects may seem relatively small, the LDV models measured psychological distress at Wave 2 *net* of baseline (Wave 1) psychological distress.

Figure 2 depicts the predicted psychological distress scores for three categories of physical abuse: no abuse, moderate abuse (roughly the mean score of 2 on the 4-point scale of physical abuse), and high abuse (defined as 4, the highest score on the 4-point scale of physical abuse), at the same three levels of religious comfort displayed in Fig. 1. We observe a similar pattern as that observed for emotional abuse. As shown by the series of gray bars shown in Fig. 2, the association between high childhood physical abuse and psychological distress was mitigated among respondents that increased in religious comfort. Here again, the relationship between high physical abuse and an increase in psychological distress was exacerbated for respondents that decreased their reliance on religious comfort over the study period. The latter group reported an average psychological distress score of 1.61, while the former reported an average of 1.51 at the second wave of MIDUS. This difference was statistically significant at the $p < 0.05$ level and corresponds to just under $1/5^{th}$ of a standard deviation difference in Wave 2 psychological distress scores.

As a sensitivity analysis for both interaction analyses, I considered whether differing stable levels of religious comfort matter to this overall pattern. Individuals who experienced no change in religious comfort may *consistently* seek religious comfort at stably moderate or low levels. Treating these cases all as "0" scores may mask important differences among these groups, especially those that remained high in religious comfort over time (N = 374, 23% of the sample). I thus reanalyzed Models 1a and 1b of Table 2 as interaction terms with religious comfort considered as a five-category variable: (a) stably low ("never" seek religious comfort across time points) (reference group), (b) stably moderate ("rarely" or "sometimes" seek religious comfort), (c) stably high ("often" seek religious comfort), (d) increases in levels of religious comfort, and (e) decreases in levels of religious comfort. Main

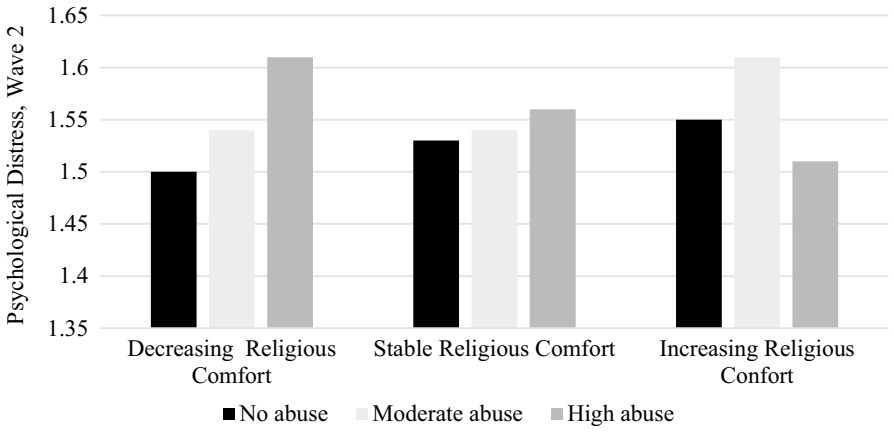

Fig. 2 The moderating role of changes in religious comfort: physical abuse, *Note*: Estimates shown adjust for all covariates included in Model 1b of Table 2

results remain unchanged: increases in religious comfort buffered the deleterious effects of high childhood emotional and physical abuse on increases in psychological distress, while decreases in religious comfort exacerbated this relationship.

Finally, Models 2a and 2b of Table 2 show that changes in religious attendance do not buffer the association between either emotional or physical abuse on adult mental health.

Discussion

Although resilience is a deeply rooted human capacity (Bonanno 2012), the imprint of pernicious stressors early in life sets in motion both social and biological chains of exposures that can cause stress accumulation, and often overwhelm individual coping and available resources to support recovery and health (Min et al. 2013). Despite a large body of work on the broader topic of childhood abuse and well-being (Hill et al. 2010; Jones et al. 2018; Nurius et al. 2015; Sachs-Ericcson et al. 2010), we do not yet have a solid understanding of the role of religion in mitigating the deleterious effect of childhood maltreatment on long-term adult mental health. The chief objective of this study, therefore, was to examine whether the potential buffering role of religion for the mental health of early abuse victims was contingent on whether religiosity changes or remains stable in adulthood.

Replicating the findings of a vast body of research assessing the persistent association of childhood abuse with worse mental health (Jung 2018; Schafer and Ferraro 2013), the current study found that higher frequencies of both childhood emotional and physical abuse were both longitudinally associated with an increase in psychological distress over time in adulthood. This finding aligns with work within the life course perspective, which recognizes the long-term damage that begins in developmentally sensitive periods during childhood (Ben-Shlomo and Kuh 2002).

Religiosity was hypothesized as a resource that could "turn off" or mitigate some of the negative consequences of childhood maltreatment. Building on previous research that has treated religiosity as a static construct in its role as a buffer against early adversity (Jung 2018), this study proposed that much can be gained from considering how this resource may change over time. Of the two religious dimensions considered, increasingly seeking comfort through religion in adulthood was associated with a decrease in psychological distress for those who had experienced high levels of childhood emotional and physical abuse. Similar patterns emerged for the moderating role of religious comfort for victims of emotional and physical abuse, which should provide further confidence in the study results.

Seeking comfort through religion is typically considered a form of active, problem-focused coping where individuals can derive support from a divine being, from other members of a religious group, and from making meaning of distressing events, which can lead to the promotion of resilience, healing, and well-being (Pargament et al. 2000). These forms of coping are found to be beneficial for mental health and related constructs such as self-esteem and life satisfaction (Good and Willoughby 2008). In particular, the act of seeking more comfort through religion may be especially helpful in the aftermath of child abuse. It may promote a peaceful acceptance

of past events, helping to buffer against the effects of these early insults. Further, individuals seeking religious comfort may be more likely to interpret their lives as part of a greater divine plan; this may help them let go of past injustices during adulthood and reframe their early hardship as opportunities for spiritual growth (Idler 1995). The process of seeking religious comfort may facilitate more positive beliefs about oneself and one's world and can protect abuse victims from hopelessness or the tendency toward negative attribution style compared to those with decreasing levels of comfort (Pearce et al. 2003).

All in all, the results of this study suggest that increases in religious comfort are positively associated with adult mental health for victims of both emotional and physical childhood abuse. This is inconsistent with some prior research that suggests relying *more heavily* on one's religion to be a crux that works to undermine agency and individual problem solving and undermines mental health (Pargament et al. 2000). This finding does, however, resonate with an ever-growing body of work that has suggested religion to be a particularly useful resource for dealing with adversity (Bierman 2006; DeAngelis and Ellison 2017). In the case of childhood maltreatment, thought to be an especially taxing stressor and residing fully outside of an individual's control, religious comfort is an important countervailing mechanism that may help buffer against the effects of early misfortune later on in the life course.

While increases in religious comfort seemed to confer mental health benefits on victims of abuse, decreases in religious comfort over time were associated with *increases in psychological distress* for those who had experienced high levels of childhood emotional and physical abuse. Supplementary analyses revealed that the most common path of decline in religious comfort were individuals that "often" relied on religious coping to either "sometimes" relying on religious coping, followed by "often" to "rarely or never" using religious coping. The latter case, while not representative of a complete dismissal of religious coping practices, suggests a decline in the use of this strategy among people who, at some point in their adult lives, were likely to seek comfort through religion. Becoming less reliant on this form of religious coping may represent the loss of a "totalizing worldview" (e.g., Park 2005) that individuals may have turned to for at least a portion of their life course. For victims of frequent childhood maltreatment, a change of this nature appears to be negative for their longer-term mental health.

Given that increases or decreases in religious coping over time appeared to be beneficially and detrimentally associated with mental health for victims of childhood abuse, it is somewhat surprising that no moderation patterns were detected for changes in religious attendance for either emotional or physical abuse. However, one of the main advantages of using a measure like religious comfort is that it *measures directly* how individuals use religion in their daily lives to help them solve problems or deal with the effects of childhood adversity (see Pargament et al. 2000). As Pargament et al. (2000, p. 521) assert, "[i]t is not enough to know that the individual prays, attends church, or watches religious television. Measures of religious coping should specify *how* the individual is making use of religion to understand and deal with stressors" (emphasis added). Compared with a simple measure of religious attendance, the measure of religious comfort provided in the MIDUS data comes closer to specifying precisely how the individual is using religion on a regular basis.

As an alternative reason why no buffering role for attendance was observed, recent research has found religious attendance to be relatively stable following traumatic life events (Manning and Miles 2018). Though religious attendance was found to change somewhat over the two waves of MIDUS in the current study, this null finding suggests that a person's institutional religious practice may be less efficacious for offsetting the mental health impact of abuse compared to more private, or spiritual, dimensions. This also suggests the importance of considering religious resources in a longitudinal framework, as past research measuring attendance at one point in time did reveal a stress-buffering role against early adversity (Jung 2018). In addition, past work has shown the most precipitous decline in religiosity for victims of childhood abuse occurs for religion (Bierman 2005). This is not to say, however, that religious attendance, or increases in religious attendance, are not linked to well-being. Religious attendance is a strong predictor of mental health (Schieman et al. 2013) and increasing one's religious attendance over the life course is found to be beneficial for health (Chen and VanderWeele 2018).

Despite the fact that religious attendance failed to moderate the association between childhood abuse and adult psychological distress, the attention that religious service attendance garners within the broader body of work on religion and health is not misplaced. Indeed, religious attendance serves a crucial function of religious life, exposing and reinforcing the values, behavioral expectations, and spiritual teachings of religious communities (Stark and Finke 2000). The absence of a moderation effect for changes in religious attendance simply indicates that attendance does not have a *more pronounced effect* on mental health for childhood abuse victims compared to people that have not experienced abuse and may be more broadly beneficial. Other studies have also failed to find a significant stress-buffering role of religiosity after substantial stress exposure (Ellison et al. 2001; Manning and Miles 2018; Rainville 2018). In spite of the role of service attendance in imparting religious content and assuring group cohesiveness, the low-interaction format of worship services (readings and sermons delivered from the pulpit, the performance of rituals and hymns, etc.) may suggest one explanation for the null interaction terms observed in past work and in the current study. And while attendance at religious services may evoke "good feelings" and potential rejuvenation (Tabak and Mickelson 2009) and practical support (Bradshaw and Ellison 2010), it may fall short of enabling processes of reframing life events within a religious framework that are central to religious coping. This cognitive reframing process may be especially important in overcoming the damage caused by early-life parental abuse which occurs outside individual control.

Therefore, for all of the reasons offered above, it is not entirely surprising that religious service attendance does not serve as a stress buffer. It is possible that other public religious activities (e.g., bible study groups, religious volunteering) may allow for greater co-religionist interactions in smaller and more intimate settings than those afforded in larger church gatherings (Bradshaw and Ellison 2010). The premise of such groups is to come up with spiritual solutions to personal problems, inciting open discussions that could assist in the reframing process.

Taken together, a main conclusion to be derived from the results of the current study is that there is no single religious belief, practice, or experience that holds

the key to effective religious coping. This study has shown that under conditions of past childhood abuse, personal coping through seeking comfort from religion is more helpful for lowering psychological distress than public or community-based facets of religious life. In a consideration of a different set of stressors, the measures of religious coping shown to be effective against childhood abuse may prove to be ineffective.

Limitations and Future Directions

While this study appears to be the first to connect childhood abuse, change across various forms in adult religiosity in adulthood, and adult psychological distress, there are several limitations that readers should bear in mind. First, childhood abuse, as measured in the MIDUS survey, is a retrospective measure that is subject to potential recall bias. Individuals that report higher psychological distress in adulthood may retroactively interpret their childhood conditions in more negative terms and thus report higher levels of abuse. However, somewhat assuaging this concern, prior research shows that the ability to recall significant experiences and events is relatively stable (Hardt and Rutter 2004). Moreover, it is important to note that results indicating the protective effects of a more private religiosity (e.g., religious comfort) may be picking up elements of selectivity, especially if preexisting distress or other personality elements (e.g., introspection) are not adequately controlled in the model. While previous psychological distress at the first wave of MIDUS was included as a control in lagged dependent variable models, it is possible that my results pertaining to religious comfort may say more about the characteristics of people who sharply increase their religiosity.

Second, more frequent assessments of religiosity over the life course, including prospective childhood assessments of religious belief and behavior, would help determine if childhood abuse is linked to an increase or decrease in religiosity, or a possible return to previous levels of religiosity following an increase or decrease. Furthermore, religious stability between Waves 1 and 2 may not capture more fine-grained variations that occurred during the ten-year lag between waves and which could ultimately influence mental well-being. Speaking to both of these issues, the current study was not able to assess *why* individuals decrease, increase, or remain stable in their religious attendance and especially religious comfort over time. A greater understanding of the reasons and motivations underlying such changes could provide key information helpful for conceptualizing the role of religious change as a moderator between early-life adversity and depression. This may also help better establish causal order, as some depressive symptoms (e.g., feeling that everything is an effort) make it more difficult for individuals to seek religious comfort or otherwise stay involved in aspects of religious life (Maltby and Day 2000). Understanding these mechanisms is an important next step and will likely require qualitative study designs to capture individual narratives of reasons for religious change (see Silverstein and Bengtson 2018). Finally, while beyond the scope of the current study, future research should specify the intervening variables that link changes in adult

religiosity to mental health for victims of childhood maltreatment—for instance, by boosting self-esteem and a sense of personal control.

To conclude, results from the current study add to an ever-growing body of life course scholarship that suggests that the pernicious effects of childhood abuse last a lifetime, but that increasing in religious coping mechanisms over time in adulthood may be beneficial in reducing psychological distress. However, more research is needed study to determine whether religious change across a number of dimensions is beneficial for health. This study should be viewed as a first step in understanding that the stress-buffering effects of religion for victims of childhood maltreatment are contingent on the stability or increases or decreases in religiosity over the life course.

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Compliance with Ethical Standard

Conflict of interest The authors declare that they have no conflict of interest.

Ethical Approval Ethical approval was not required for this paper. The data we used are publicly available through the Inter-university Consortium for Political and Social Research (ICPSR website, https://www.icpsr.umich.edu/icpsrweb/ICPSR/series/203).

Appendix

See Table 3.

Table 3 Descriptive statistics, MIDUS (N = 1613; all results weighted)

	Range	Mean/Prop	SD
Psychological distress, W2	1–5	1.53	0.59
Psychological distress, W1	1–5	1.54	0.61
Emotional abuse	1-4	2.06	1.14
Physical abuse	1–4	1.70	1.00
Change in religious comfort, W1-W2	− 3 to 3	− 0.16	1.02
Change in religious attendance, W1-W2	− 4 to 4	− 0.01	1.10
Religious comfort, W2			
Never		0.19	
Rarely		0.17	
Sometimes		0.23	
Often		0.41	
Religious attendance, W2			
Never		0.26	
Once a year		0.22	
Less than once a month		0.09	
One to three times amonth		0.30	
About once a week		0.10	
More than once a week		0.03	
Religious Affiliation, W2			
Mainline protestant		0.29	
Liberal protestant		0.10	
Conservative protestant		0.19	
Catholic		0.25	
Jewish		0.02	
Other religion		0.05	
None/Atheist/Agnostic		0.10	
Age, W2	30-84	56.62	12.47
Male		0.46	
Race			
White		0.91	
Black, non-Hispanic		0.05	
Hispanic		0.03	
Other		0.01	
Married, W2		0.69	
Education			
Less than high school		0.06	
High school education or equivalent		0.29	
Some college education		0.30	
University degree or higher		0.36	
Parental divorce (childhood)		0.09	
Parents on welfare (childhood)		0.05	

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