

July 2009

Role of Religiosity in the Lives of the Low-Income Population: A Comprehensive Review of the Evidence

Final Report

Prepared for

Department of Health & Human Services
Office of the Assistant Secretary for Planning and Evaluation
U.S. Department of Health and Human Services
200 Independence Ave SW, Room 404E
Washington, DC 20201

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The views presented in this report are those of the authors and do not necessarily represent the official position of the U.S. Department of Health and Human Services.

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EXECUTIVE SUMMARY

Religion and spirituality play a significant role in the lives of Americans. Although there is evidence of the potential for religiosity and spirituality to affect positive behaviors, there is also evidence of more complex associations with a variety of outcomes. This suggests that there is meaningful variation in the role that religion plays in different populations. To date, however, research on how religiosity and spirituality affect better life outcomes focuses almost solely on the general population, offering few insights on how religion and spiritual beliefs and practices may differentially affect the lives of low-income families.

RTI International was commissioned by the U.S. Department of Health and Human Services, Office of the Assistant Secretary for Planning and Evaluation (ASPE) to conduct a comprehensive literature review and provide a descriptive synthesis of the state of the research on the influence of religiosity and spirituality in the lives of the U.S. low-income population. The findings of this review will allow for a preliminary assessment of the evidence of the effects of religiosity and spirituality in the lives of the low-income population, identify knowledge gaps, and help to guide future interventions.

This comprehensive review is organized around a broad set of outcomes in key areas of program development: marriage and relationships, parenting, youth outcomes, mental and physical health, substance abuse, and crime and violence, homelessness and employment. A summary of the key findings from the religiosity literature includes the following:

- **Religion plays a significant role in the lives of Americans.**
More than 90% of Americans believe in God, over 50% attend church once or twice a month, 75% pray at least once weekly, and 62% reject the idea that religion causes more problems than it solves.
- **There is a growing body of literature highlighting the positive, albeit modest, association between religiosity and spirituality and better life experiences in the general population.**

Several comprehensive literature reviews point to the positive associations between religiosity measures across all the outcome areas reviewed in this report. Few studies focus on the magnitude of these effects. Most of the studies using meta-analysis techniques find a relatively modest effect of religiosity.

- **Survey data highlight differences in religious affiliation, activities, and beliefs between lower-income Americans and higher-income Americans.**

Analyses of nationally representative samples find that low-income youths and adults have higher levels of religious beliefs and adherence to doctrine but lower participation in religious institutions. There is some variation in these findings depending on how the study sample is defined and religiosity is measured.

- **Several scholars hypothesize that religiosity and spirituality may help to buffer some of the negative consequences of living in poverty.**

Higher levels of religiosity may provide a pathway out of multi-problem behavioral patterns that can accompany limited resources by promoting better coping mechanisms for economic instability and stress as well as better ways to self-regulate behavior and adhere to positive cultural norms and values.

- **Relative to the considerable body of research on religiosity and health, there is very limited research on the role of religiosity in the low-income population.**

Over 7,000 studies focus on the broad topic of religiosity and health. Fewer than 100 studies, however, focus on religiosity and the low-income population across eight outcome areas of interest to policymakers and practitioners.

- **The empirical literature focusing on religiosity and the low-income population is in the early stages of development.**

The majority of the studies identified use cross-sectional data, rely on single-item measures of religiosity, and do not use the most rigorous statistical methods. New studies are beginning to address these issues, which will move the field forward and help establish whether religiosity has an effect on outcomes that is independent of other selection factors that motivate participation in religious institutions and contribute to the strengths of beliefs.

- **In general, studies find positive associations between measures of religiosity and behavioral outcomes in the low-income population.**

Although some studies find positive associations for religiosity, other studies find no effects in the low-income population. In addition, there are very few studies that find a negative association between religiosity and outcomes. The causal paths that underlie these associations have not been established.

- **Religious denomination/affiliation does not appear to influence various marital and relationship outcomes in the low-income population, whereas church attendance is positively associated with these outcomes.**

These findings are consistent with studies in the general population that show similar patterns of associations. These conclusions are based on 11 studies that span several marital outcomes, such as union formation and dissolution, marital quality, and attitudes toward marriage. Most of the studies draw on couples-based data sources and indicate some preliminary evidence of gender differences in religiosity effects.

- **The associations between religiosity and parenting outcomes in low-income families vary widely depending on the outcome, the measure of religiosity, and the population examined.**

Based on the findings from 13 identified studies, the parental involvement research is fragmented because mothers and fathers are studied separately on several different outcomes and there are few studies on any one of the outcomes for individual parents. This limits the generalizability of the findings. The only consistent finding (in two studies) is a null effect of religious denomination on parental involvement and engagement.

- **Preliminary testing of the pathways that underlie positive associations between religiosity and outcomes in the family (marriage and parenting) suggests the presence of both direct and indirect religious effects.**

A few studies in the area of family research analyze whether religious beliefs, rituals, and practices directly affect behavioral choices and attitudes, or if religiosity exerts an indirect influence. In both the marriage and parenting literature, religiosity is found to both directly and indirectly affect outcomes; indirectly through increased partner supportiveness and reduced conflict over sexual fidelity for marital outcomes, and through the bolstering of parental cognitive and socioemotional resources for parenting outcomes. Direct effects of organizational religiosity are also found for marital and parenting outcomes.

- **For low-income youths, participating in organized religion is positively associated with psychological and academic outcomes and is negatively associated with risky behavior. The associations between individual religious beliefs and positive outcomes for youths are mixed.**

Among 17 identified studies focusing on youth outcomes, there are no clear patterns of effects when gender differences are explored.

- **The greatest number of religiosity studies involving the low-income population focus on the area of health outcomes.**

Among 14 identified qualitative studies and 23 quantitative studies, all but four of the quantitative studies are based on cross-sectional data.

- **There is a positive association between organizational religiosity, individual religiosity, and mental health outcomes for various subgroups of patients and community members who are economically vulnerable.**

Although the findings of one quantitative study and several qualitative studies point to stronger religious and spiritual beliefs as a positive coping strategy, other studies highlight the complexity of religious and spiritual beliefs that can lead to positive and negative coping mechanisms affecting mental health.

- **A limited number of studies examine the effects of religion on overall general and physical health, and the results are inconclusive.**

Five identified studies demonstrated positive, null, and mixed effects on diverse physical health outcomes from hypertension to asthma.

- **Educational screening interventions convened or promoted by churches do not appear to support the idea that religiosity increases participation in diagnostic tests such as cancer screening.**

This conclusion is based on the findings of four identified studies where the evaluation of secular educational interventions designed to promote awareness of cancer screening convened or promoted by churches does not support the idea that religiosity increases participation in diagnostic tests, such as mammograms and pap smears, for low-income women.

- **Studies of the effect of religiosity on substance use outcomes for low-income populations show a range of positive, negative, and null effects depending on outcomes and the population studied.**

Among the 11 identified studies, some find both buffering and risk-enhancing effects of religiosity for different substance use outcomes. In one study of an intervention program, religiosity is positively associated with seeking drug treatment. In another intervention program study, there is no effect on smoking cessation.

- **Very few studies focus on religiosity and violence and criminal behavior in the low-income population, limiting the ability to currently draw sound conclusions.**

Only five identified studies address religiosity and violence and criminal behavior. Two studies find that frequent church attendance is associated with lower crime and violence outcomes for low-income youths, but the effects are mixed for low-income adults. In three studies, religious beliefs do not appear to be associated with crime and violence outcomes.

- **More religiosity research and evaluations are needed for policymakers and practitioners to develop programs targeting specific subgroups of the low-income population.**

Going forward, research in the area of religiosity and behavioral outcomes in the low-income population needs to develop large-scale data sets, longitudinal data collection, and more focused measures of religious practices and religious beliefs that are directly related to the outcomes of interest. Identifying subgroups where religiosity has the greatest impact will aid program design.

1. INTRODUCTION

Increasing media attention has highlighted both the promise and the risk of religion's role in promoting health and well-being, fostering morality and values, and influencing the lives of the poor. A recent cover story in *TIME* magazine, for example, looked at "Faith and Healing"; and books and articles expressing diverse viewpoints on the effects of religiosity appear monthly—ranging from journalistic accounts of the global spread of modern American religion that can bring together isolated people and communities and contribute to positive outcomes (Micklethwait & Wooldridge, 2009), to medical research on the role of religiousness in patients' end-of-life treatment decisions published in top-tier academic journals (Phelps et al., 2009).

Not only are faith and religion the focus of a flurry of recent media and academic research, these topics are routinely discussed in policy circles. Interdisciplinary research and policy conferences have been convened recently to share collective knowledge about the potential for religiosity to influence positive health outcomes and the effectiveness of faith-based social services. The sheer volume of publications, public forums, and dissemination outlets is increasingly diverse, prestigious, and, taken together, difficult to ignore. Clearly, religiosity and spirituality, and their connections to improving lives, are of interest to the American public as well as policymakers.

While the consideration of religiosity and spirituality in solving social problems may be intuitively appealing, the charge of the newly reconstituted White House Office of Faith-Based and Neighborhood Partnerships reinforces a focus on better understanding how religion can affect outcomes, based on the available research. Part of the White House Office's charge is

- "...to promote the better use of program evaluation and research, in order to ensure that organizations deliver services as specified in grant agreements, contracts, memoranda of understanding, and other arrangements," and
- "Through rigorous evaluation, and by offering technical assistance, the Federal Government must ensure that organizations receiving Federal funds achieve measurable results in furtherance of valid public purposes." (White House, 2009).

If religiosity has the potential to increase positive outcomes, whether directly or indirectly, its effects can be encouraged through government partnerships that address a variety of outcomes for low-income and underserved populations (Dionne & Rogers, 2008; Fagan, 2006). If greater religiosity or spirituality helps build coping strategies that buffer negative experiences or if they are associated with better outcomes, it is possible that programs that consider or address religiosity or spirituality could be more effective than those that do not (Monsma & Soper, 2006). Understanding the differences that exist in religiosity between

socioeconomic groups will enhance the ability of policymakers and practitioners to design and deliver programs that best serve the needs of low-income groups.

This report highlights several reviews of empirical research studies that document the association religiosity has with positive behaviors, such as better mental health (Koenig, 2008), less crime (Baier & Wright, 2001) lower rates of substance use (Chitwood, Weiss, & Leukefeld, 2008), and healthy family relationships (Mahoney, Paragament, Tarakeshwar, & Swank, 2001). While the overall body of research that demonstrates a positive association between religion and positive behavior is promising, the empirical literature is still in its early stages of development. New research studies using methodologically rigorous designs can pave the way for developing more evidence-based programs and practices that could help improve outcomes among economically vulnerable families.

Existing Research Points to Differences in Religious Involvement by Income

While religion plays a significant role in the lives of Americans—over 90% believe in God, over 50% attend church once or twice a month, 75% pray at least once weekly, and 62% reject the idea that religion causes more problems than it solves (Pew Forum on Religion and Public Life, 2008)—there are considerable differences in the religious affiliations, activities, and beliefs of lower-income Americans compared with higher-income Americans, including the following:

- Religious affiliation is stratified by socioeconomic status (SES, which includes education, income, and occupation). Lower-income groups are affiliated with more theologically conservative institutions of worship, whereas higher-income groups are affiliated with more liberal institutions (Smith & Faris, 2005). These patterns have remained stable over time.
- Lower-income adults, as well as youths, have higher levels of religious beliefs and adherence to doctrine but lower participation in organizational religiosity (McCloud, 2007; Schwadel, 2008; Sullivan, 2006.) Lower SES is associated with more personal devotionalism, higher rates of adherence to doctrinal beliefs, and more religious experiences (Nelson, 2009). Lower-income teenagers are generally less likely to participate in organized religious activities, but they are more likely to engage in conventional religious practices, such as prayer and reading scriptures.
- Higher-income is associated with greater church attendance, higher levels of religious knowledge, and more participation in religious leadership positions among adults (Nelson, 2009).
- Several studies suggest that the lower-income individuals hold stronger religious beliefs than their higher-income counterparts; however, there is variation in these findings. Some studies do not show significant differences in the nature of religious beliefs or participation by income, suggesting that the differences in the findings could be caused by the lack of consistent measurement of income groups as well as of religiosity (Cnaan, Gelles, & Sinha, 2003).

While these questions cannot be answered directly in this literature review, it is important to consider how these differences in beliefs and participation could affect outcomes in the low-income population when assessing this literature. For example, do stronger religious beliefs among the low-income population translate into better or worse outcomes? Does affiliation with a more theologically conservative religion increase the probability of positive behavioral outcomes or does it foster rebellion among low-income youths? Do these effects differ depending on different demographic characteristics or levels of economic and social resources?

Although there is evidence of the potential for religiosity and spirituality to affect positive behaviors, there are also findings about more complex associations across family outcomes (Lippman, Michelsen, & Roehlekepartain, 2005). These findings suggest meaningful variation in the role that religion can play in different populations. For example, lower-income Americans have high levels of religious and spiritual beliefs that, in some cases, are greater than those of higher-income Americans (Ludwig & Mayer, 2006). Because poverty is correlated with several negative behavioral outcomes, and because the low-income population has high levels of religious beliefs, it has been suggested that religiosity and spirituality could help to buffer the negative consequences of living in poverty and provide a pathway out of the multi-problem patterns that can accompany limited resources (Dehija, Deleire, Luttmer, & Mitchell, 2007; Fagan, 2006).

Limited Research on Religiosity in the Low-Income Population

While there is a growing body of literature highlighting the positive, albeit modest, association between religiosity and spirituality and better life experiences in the general population (McCullough & Willoughby, 2009), little research focuses specifically on the low-income population. The limited available information on the role of religiosity in the lives of the low-income population suggests that the existing knowledge base is insufficient to fully inform policymakers about how best to incorporate religiosity in social policy approaches targeting lower-income Americans.

Closing the Knowledge Gap for the Low-Income Population

To help close the knowledge gap about how religiosity and spirituality affect outcomes in low-income families, this report provides a comprehensive review of published and unpublished empirical research literature in several areas of current policy and program interest, including healthy marriage and family relationships, parental involvement and child development, mental and physical health, substance abuse, and crime.

This review targeted articles published in peer-reviewed journals during the past 20 years that focused on the U.S. population. Because there are a

Policy-Relevant Topic Areas Covered in this Report

- **Healthy Marriage and Family Relationships**
 - **Parental Involvement and Child Development**
 - **Mental and Physical Health**
 - **Substance Abuse**
 - **Crime**
-

very limited number of empirical studies that focus on religiosity effects solely for the low-income population, the search strategy was widened to include working papers, conference papers, and policy research studies. While this strategy is intentionally broad, the study inclusion criteria for this review are narrowly targeted to include religiosity, the low-income population, and behavioral or attitudinal outcomes that are relevant to current public policy goals and program objectives.

The narrowly defined inclusion criteria eliminated several groups of studies. For example, evaluations of faith-based social services that do not include measures of low-income program participants' religiosity are excluded from this report. Also excluded are studies on general populations that do not focus on comparisons of how religiosity effects differ between high- and low-income populations. Studies that focus on the determinants of religiosity, rather than the effects of religiosity on behavioral outcomes, are also not included. And there are a host of studies conducted on populations outside of the United States that are beyond the scope of this report.

In sum, this report provides one of the first assessments of the state of the research on the effects of religiosity and spirituality on behavioral outcomes for the economically disadvantaged population in the United States.

Definitions Used in this Report

Before considering how conceptual models propose that religiosity and spirituality affect positive behaviors, it is important to define these two concepts as well as several other terms that will be used consistently throughout the report:

- **Religion** is characterized by a set of particular beliefs, shared by a group, about God or a higher power and by the practices that define how those beliefs are expressed (Miller, 1998).
- **Religious denomination** or affiliation refers to a specific religion, such as Christian, Hindu, Jewish, Mormon, or Muslim, to name a few.
- **Spirituality** is characterized by a deeply personal and individualized response to God or a higher power (NIAAA & the Fetzer Institute, 1999).

The concepts of religion and spirituality differ in that one does not have to be religious to be spiritual.

Researchers generally measure any involvement in religious activities, religious beliefs, and the importance of religion using the general term *religiosity*. Some scholars further distinguish two components of religiosity:

- **Organizational religiosity**, also termed public or extrinsic religiosity, refers to participation or involvement with religious institutions. Examples of organizational religiosity measures include frequency of attendance of services at churches, mosques or temples, and participation in youth activities or bible study at a religious organization.

- ***Nonorganizational religiosity***, also termed private, individual, or internal religiosity, refers to individual practices or religious beliefs practiced. Examples of nonorganizational religiosity measures include the importance of God in a person's daily life or how often an individual engages in prayer.

These five general definitions are used throughout this report. However, because the definitions of religiosity and spirituality vary across research studies, religiosity will be defined by the specific language used in a research study when it differs from these general definitions.

Methodological Considerations in the Religiosity Literature

Drawing a causal connection between religiosity and spirituality and behavioral outcomes presents a number of methodological challenges, including reverse causality, selection bias, and omitted variable bias.

Reverse Causality

Reverse causality is the potential for the effect of greater religiosity on positive behavioral outcomes to work in the opposite direction. In other words, it is possible that behavioral outcomes affect religious participation and beliefs. For example, high church attendance can be associated with a higher probability of marriage at one time point. However, it could also be that marriage encourages greater religious attendance. While reverse causality is an issue in cross-sectional studies that only examine church attendance and marriage at the same time point, using longitudinal data that follow study participants over time can help establish the direction of the effects from religiosity to a behavioral outcome because the ordering of the events are known.¹ Longitudinal data also allow researchers to study how changes in religiosity can affect changes in behavior.

Selection Bias

A more difficult methodological challenge to address is selection bias. It may be that there are unmeasured personal characteristics that are associated both with greater levels of religiosity and positive behaviors such that estimated effects of religiosity would be biased when these potential selection factors are not accounted for. For example, if individuals who are motivated to engage in positive health behaviors participate in religious activities and exhibit better mental health outcomes, without measuring motivation to engage in health practices, the effect of religiosity on better mental health would be overestimated.

While it is difficult to separate the causal effects of religiosity and spirituality from other variables that are correlated with behavioral outcomes, researchers have developed novel

¹ Using longitudinal data does not completely rule out the potential for reverse causality because an anticipated future outcome, such as marriage, could also influence baseline church attendance; however, there is general agreement that analyzing longitudinal panel data offers a significant improvement over cross-sectional data.

approaches to reduce selection bias by using proxy measures for religiosity (instrumental variables approach), such as the geographic density of ethnicity (Gruber, 2005) and historical religiosity in counties (Heaton, 2006) or using statistical techniques such as propensity score matching (Lillard & Price, 2007). Despite advances in the estimation of causal effects of religiosity on positive outcomes, most researchers agree that drawing conclusions about the causal impact of religiosity is difficult because of data limitations, such as the lack of religiosity measures in national data sets (Lillard & Price, 2007).

Omitted Variable Bias

Another important dimension to consider is whether the effect of religiosity has a direct influence on the outcomes of interest, or if the effect of religiosity operates indirectly by affecting factors such as self-control or participation in pro-social activities, which in turn affect positive outcomes. If variables that are associated with religiosity, such as involvement in church social networks, are not included in multivariate models, estimates of religiosity would be subject to omitted variable bias. It could be that the direct effect of attending religious services is less important for positive outcomes than the indirect effect of the social networks built through attending the services. The potential pathways of the effect of religiosity are outlined in more detail below.

Potential Pathways of the Effect of Religiosity

Within the sociology and psychology of religion, there is a long history of theorizing about how organizational and nonorganizational religiosity can foster normative behaviors. The basic logic is that religiosity can have direct or indirect effects on behavior, and sometimes both. Several scholars hypothesize that individual and organizational religiosity can provide indirect benefits that in turn affect positive behaviors. The hypothesized pathways through which religiosity influences behaviors can operate positively or negatively at the individual, family and/or community levels.

The major pathways described in the research literature include the following:

- Direct effect of organizational religiosity on outcomes
- Direct effect of individual religiosity on outcomes
- Indirect (or mediating) effect of individual religiosity on outcomes
- Indirect (or mediating) effect of organizational religiosity on outcomes
- Effect of family-level and community-level religiosity on outcomes
- Moderating effect of religiosity on outcomes

These pathways comprise the dominant theories about how religiosity can foster normative behaviors. The conceptual model for each outcome area will be described specifically in later

sections, which also will show that the vast majority of the empirically tested pathways are general in nature, rather than religiously specific.

Direct Effect of Organizational Religiosity on Outcomes

This set of conceptual models hypothesizes that aspects of organizational religiosity, including doctrine, practices and beliefs, have direct positive effects on outcomes by encouraging the practice of healthy behaviors (Hill, Ellison, Burdette, & Musick, 2006). Under this framework, the fact that an individual ascribes to a certain set of religious beliefs or adheres to religious doctrine and practices may directly influence behavior. In practice, the empirical literature generally tests these hypotheses using religious denomination and affiliation as measures of organizational religiosity.

Direct Effect of Individual Religiosity on Outcomes

This set of conceptual models hypothesizes that the way an individual practices religion in daily life may directly affect outcomes. Under this framework, religious practices, such as prayer, holidays or rituals, directly influence outcomes. An example would be an individual who finds emotional and/or physical healing through prayer.

Indirect (or Mediating) Effect of Individual Religiosity on Outcomes

Mediator variables help answer “why” a particular relationship exists between an explanatory and an outcome variable (Baron & Kenny, 1986). These models hypothesize that certain aspects of individual religiosity influence outcomes indirectly. In other words, the relationship between individual religiosity and outcomes is mediated by another factor (or set of factors).

In these models, religiosity is hypothesized to produce a change in a mediating factor, which, in turn, influences behavior. For example, practicing prayer and meditation at the individual level and salience of religious beliefs in people’s lives can offer positive psychological benefits, such as greater self-esteem, more hope and optimism, greater willingness to change, more positive coping, and higher self-control (McCullough & Willoughby, 2009). These positive benefits are hypothesized to lead to positive behaviors. Mediators can be specifically religious or generalized. For example, prayer can improve coping skills by offering generalized psychological benefits (e.g., the meditative nature of prayer offers a strategy for managing stress) or through specifically religious channels (e.g., through prayer a person turns his or her problems over to a higher power, thus decreasing perceived levels of stress). Prayer could also lead to negative coping if there is overreliance on religion to resolve every problem (Paragament, 2008).

Indirect (or Mediating) Effect of Organizational Religiosity on Outcomes

In these models, organizational religiosity is hypothesized to offer social benefits and/or to influence norms and values in ways that positively affect behavior. Under this framework,

organizational religiosity indirectly affects outcomes through connections to institutions that provide emergency assistance and counseling; social networks that can help during crises or life changes; peers that help reinforce healthy behaviors and social norms; connections to higher status circles; and educational activities, such as youth groups or bible study.

In addition to these pathways, organizational religiosity can influence outcomes through religiously specific pathways. For example, involvement with a religious community can provide a meaning system that “imbues family relationships with spiritual, enduring significance that includes divine accountability for the discharge of parental obligations” (Bartkowski 2008, p. 19). In this way, organizational religiosity is hypothesized to indirectly influence outcomes through a family’s “meaning system”; in this case, the pathway is religiously specific.

Effect of Family-Level and Community-Level Religiosity on Outcomes

Some conceptual models hypothesize that religiosity influences individual outcomes through family-level or community-level (versus individual-level) pathways. The nature and level of religiosity in a family or community can influence its functioning, cohesiveness, shared beliefs, and social norms, which can in turn influence individual behavior both directly and indirectly. For example, religiosity at the community level is considered a factor that can influence the behavior of youths through protective moral values offered by peers and community members, regardless of individual religious affiliation or beliefs (Guo, Tong, & Cai, 2008).

Moderating Effect of Religiosity on Outcomes

Moderator variables determine the direction or strength of the relationship between the explanatory and outcome variables in a given model (Baron and Kenny, 1986). In this case, moderator models are used to assess the differential buffering or protective influence of religiosity against negative outcomes for various subgroups (e.g., income, gender, race, chronically ill). As an example, under this framework, religiosity could be hypothesized to have a moderating effect between a “stressor” (e.g., stress associated with material deprivation) and a behavioral outcome. Moderating effects are considered indirect effects because they depend on interaction with another explanatory or descriptive/contextual factor.

Methods Used for the Literature Review

The literature review process for this project had three phases: search, sift, and review.

The Search Phase

The search phase began by identifying expert scholars in the outcome areas around which the report is organized—marriage and relationships, parenting, youth, mental and physical health, substance use, and crime and violence. These experts were asked to help identify

the seminal works and recent or ongoing studies (not necessarily specific to the low-income population) in the topic area of their expertise. After this information was collected from experts, project team members identified and reviewed these works to create a detailed explanation of the overarching/guiding models, hypotheses, and processes at work in a given topic area. Next, formal searches of subject terms were performed in 10 databases of published, peer-reviewed articles.

Web site searches for publications and other unpublished materials were also conducted. The list included Web sites of relevant foundations, faith-based organizations, and policy think tanks. The results of all searches were organized and stored in a central Refworks database, a Web-based bibliographic management tool.

Database Searches

We searched 10 established social science research databases: PubMed, EBSCO (including PsychINFO), Educational Resources Information Center (ERIC), Science Citation Index Expanded, Social Sciences Citation Index, Social Services Abstracts, Sociological Abstracts, JSTOR, National Criminal Justice Reference Service, and Economics Literatures (ECONLIT). These databases include indexes of thousands of peer-reviewed publications across a range of academic disciplines from health to economics. The Computer Retrieval of Information on Scientific Projects (CRISP) database, which catalogues information on federally funded scientific project grants, was also searched.

Search Terms

In each of the social science research databases, subject heading searches were performed. Because subject heading terms vary by database, a base list of terms was developed as a guide for selecting subject heading terms across databases. The base list included the following terms: low income, poverty, poor, economic disadvantage, relig*, spiritual*, and faith*. The "*" denotes all possible variations using the root of that term (e.g., "relig*" captures religiosity, religion, religiousness, etc.). In instances where a database lacked a subject heading that exactly matched a base list term, the most closely related subject heading term was selected.

To perform searches, a religiosity-related and a low-income-related subject heading term were crossed until all possible combinations were searched. For example, PubMed was searched using predefined Medical Subject Heading (MESH) terms. For income-related terms, MESH terms "Poverty" or "Social Class" were used. For religiosity-related terms, "Religion" or "Spirituality" was used in the searches. Search parameters called for articles that included at least one of the two religiosity-related subject heading terms ("Religion" or "Spirituality") and at least one of the low-income-related subject heading terms ("Poverty" or "Social Class").

Other Key Search Parameters

Studies available since 1988. In consultation with the Office of the Assistant Secretary for Planning and Evaluation (ASPE), the focus was narrowed to studies made available over the past 20 years in order to identify studies with the most policy relevance. The cutoff date for inclusion was November 2008.

Studies that focus on U.S. populations and subpopulations (and were published in English-language publications). While international studies were available, religiosity and its associations with various outcomes can vary across region and culture. As a result, it was determined that the U.S. population had the most policy relevance for the purpose of this review.

Supplemental Search and Exclusions

Using the described search approach, no studies in the topic area of marriage accumulated in the search results. A supplemental search approach was used for this topic area that relied on team members' knowledge of the marriage literature and focused searches of studies from the Fragile Families data set, which is known to focus on family processes, including marriage and relationships, in the low-income U.S. population. A similar process was used to identify studies in the topic area of substance abuse.

Both qualitative and quantitative studies were included; however, dissertations were not included. And although a search of the unpublished literature preliminarily turned up several articles, most were excluded because of a lack of focus on low-income groups.

The Sifting Phase

The preliminary sifting phase began by organizing all of the search results by outcome/topic area. Once all materials were organized by subject area, the team member responsible for a given topic area sifted through the results in greater detail, examining the abstract and the article (if necessary) to determine whether to include the article in the review.

The three primary inclusion criteria for the review were

- focus on a low-income sample/population,
- focus on the effect of religiosity on outcomes, and
- the relevance to the research outcomes guiding this project.

Criteria for Considering a Study Population as Being Low Income

The definition of "low income" varied across studies. In larger scale studies, it was more common to find conventional definitions of a low-income sample (e.g., below 200% of the poverty line). Some researchers, however, defined the low-income population by dividing the sample into groups based on an income variable. Others researchers chose a study population involved in a social program, such as Temporary Assistance for Needy Families

(TANF), which was considered to be low income by definition. Inclusion criteria required that the population be low income according to either the author’s or generally accepted definitions of low income.

Common Reasons Why Articles Failed to Meet the Sifting Criteria

Using the search methods described above, several hundred articles were accumulated in the Refworks database. Because some databases lacked the option to specify geography of study population, search results often included studies with an international focus, which were excluded in the sifting phase.

Also, during the sifting phase it became evident that several of these studies did not meet the low-income criterion. Finally, many evaluations of relevant social policy programs did not include religiosity measures and were also excluded from the review.

The original search approach was organized around eight topical areas: marriage, parenting, youth, health, substance abuse, crime and violence, homelessness and welfare/employment. On finding very few studies for the homelessness and welfare/employment topic areas, we expanded our set of low-income-related search terms to include broader terms, such as “urban” or “rural.” Even with this modification, we found fewer than three studies in each of these two topic areas and therefore decided to exclude these topic areas from the report.

The Review Phase

Once the sifting phase was completed, resulting in a final list of bibliographic references, the review phase began. All team members used a common set of protocols for reviewing articles, completing common, predefined user fields in the central Refworks database. After all of the selected articles were reviewed, all references with completed annotations from the review process were organized by subject area and exported into tables to inform the report. Table 1-1 summarizes the number of studies that met the selection criteria.

Table 1-1. Total Number of Studies Included in the Literature Review, by Topic Area

Topic Area	Total	Qualitative Studies
Marriage and Relationships	11	0
Parenting	13	0
Youth	17	0
Mental and Physical Health	37	14
Substance Abuse	10	1
Crime and Violence	5	1

Organization of this Report

Each of the following six sections focuses on one of the policy-relevant topic/outcome areas covered in this report, including (in the following order) marriage and relationships, parenting, youth, religiosity and mental and physical health, substance use, and crime and violence. Each section is organized in a similar fashion, starting with a brief orientation to the literature on religiosity, a discussion of the specific hypothesized pathways through which religiosity influences the outcomes of interest, and a discussion of the key data types, research methods, and measures used in this line of research.

Next, the findings on how religiosity influences the focal topic for the general population are discussed, before turning to results specific to the low-income population. Key data sources and measures are first outlined for the low-income-focused studies before the results are presented. The results for low-income studies are organized around the research questions guiding the empirical research in the given topic area and are presented in a Question and Answer format.

Research gaps and implications for next steps are then discussed. Each section concludes with an overview of new, promising research in the given topic area that can help move the respective field forward.

The report concludes with a summary of the methods and data sources used in religiosity research, key themes across outcome areas, identified research gaps, and possible next steps in research.

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2. MARRIAGE AND RELATIONSHIPS

Overview

Since the 1950s, a significant body of research has focused on several key elements of the relationship between religiosity and marital outcomes, including:

- the role that an individual's religiosity or a couple's joint religiosity plays in the decision to form a marital or cohabitating union or divorce,
- the attitudes and expectations about marriage among couples and single adults, and
- the role that religiosity plays in the quality of a couple's relationship.

Potential Pathways Affecting Family Relationships

Several potential pathways, either positive or negative, in the public and private domains of religion may affect family relationships. For example, in many religions, the institution of marriage is sanctified by religious beliefs, rituals, and practices, and cohabitation and divorce is discouraged. These pathways can directly influence decisions that couples make about their relationships. For single parents or divorced adults, for instance, these religious views could be a source of stigma that turns them away from religious institutions (Sullivan, 2006). It is also possible that, to avoid offending their constituents, strict views about marriage are not uniformly promulgated by religious institutions (Wilcox & Wolfinger, 2008).

Religious institutions can also influence marriage and relationships in a number of indirect ways:

- by offering social networks that reinforce religious norms and views of relationships, such as monogamy;
- by offering financial and psychological resources to help keep couples together in times of crises; and
- by providing mentors and peers to model positive relationship and marital behaviors (Wilcox, 2004).

Numerous studies have attempted to understand the link between religion and marriage, although most of these studies draw on population-level data. Several studies examine whether the determinants of marriage outcomes differ by race and ethnicity; however, few focus specifically on the low-income population (Fein, Burstein, Fein, & Lindberg, 2003).

Data, Methods, and Measures

The bulk of the quantitative research literature that has focused on the relationship between religion and marriage relies on single-item measurement of religion and religious practice, consists mainly of cross-sectional samples, and uses research designs that do not address selection issues (Waite & Lehrer, 2003). These methodological limitations (discussed in Section 1) constrain understanding of the causal mechanisms that underlie these

relationships. In a recent article, Mahoney and Tarakeshwar (2005) note that “overall, social science research indicates that greater religiosity is clearly tied to multiple aspects of family life. However, this body of research is best described as embryonic” (p. 186). New research studies discussed in this section are beginning to address these limitations.

Findings for the General Population

Recent literature reviews point to the positive association between religiosity—as measured by frequent church attendance (regardless of denomination)—and multiple dimensions of marriage and relationship outcomes (Fagan, 2006; Weaver et al., 2002). While these findings are promising, not all studies indicate statistically significant effects. There are only a handful of studies that show any negative effect of religiosity (Mahoney, Pargament, Tarakeshwar, & Swank, 2001).

Meta-analysis

Using meta-analysis techniques can be useful to summarize disparate results when assessing the magnitude of the effect of religiosity on marriage. A meta-analysis of 78 studies conducted in the 1980s and 1990s confirms the overall significant positive effect of church attendance and homogeneity in couples’ religious denomination on the reduction in divorce, an increase in marital satisfaction, and an increase in commitment to marriage. This study did not, however, find a statistically significant relationship with marital conflict (Mahoney et al., 2001). Looking across studies, individual religious denomination does not appear to exert a strong effect on a couple’s relationship.

Effect of Religion and Religiosity on Marriage Outcomes

Commenting on the magnitude of the effect of religion and religiosity on marriage outcomes in the studies conducted before 2000, Mahoney et al. (2001) concluded that “although the average effect sizes of well-supported hypotheses were small ..., such associations for global variables in large, highly heterogeneous samples are not trivial” (p. 88). Studies conducted after 2000 find that religiosity reduces negative relationship outcomes that were not included in the meta-analysis. These studies find that religiosity is associated with lower marital infidelity (Burdette, Ellison, Sherkat, & Gore, 2007) and less domestic violence (Ellison, Trinitapoli, Anderson, & Johnson, 2007). Thus far, however, the spiritual dimensions of marriage and relationships have not been the subject of significant empirical research.

Studies Specific to the Low-Income Population

Following the research methods described in Section 1, we identified 11 quantitative research studies that consider the role of religious denomination and/or church attendance in marriage and relationship outcomes for the low-income population. Only three of these studies focus specifically on the effect of religion; the other studies focus in more detail on

additional determinants of marriage and include religion and church attendance as control variables in the multivariate analysis. We did not identify any published qualitative studies that focus specifically on religion and marriage for this population.

All of the identified research studies that focus on the low-income population were published within the past five years. This increase in research targeting low-income couples coincided with the implementation of the federally funded Healthy Marriage Initiative (HMI), which funds state and local efforts to provide marriage and relationship educational programming targeted primarily to low-income couples and communities. Several research and intervention studies were also funded as part of this effort.

Longitudinal Data Sources

In contrast to many studies of the general population, all but one of the empirical studies (10 out of 11) uses longitudinal panel data that includes measures of religious denomination and church attendance. Notably, the study relying on cross-sectional data uses couple fixed effects models to minimize selection bias. All of the quantitative studies control for an extensive set of demographic and economic characteristics associated with marriage. The studies that use the Fragile Families and Child Well-Being (FFCW) data (described subsequently) to study marriage formation and dissolution also control for relationship quality and attitudes toward marriage.

The majority of the studies (8 out of 11) draw on the FFCW Study, a unique research project that focuses on unmarried parents who recently had a child together. These families are known in the research and policy literature as “fragile families.” The FFCW Study measures several dimensions of relationship quality and attitudes, includes a comparison group of married parents, and contains some information about whether each partner has other children with the same or different partners (known in the literature as “multipartnered fertility”). At baseline, approximately two-thirds of the sample had incomes below 200 percent of the poverty line (McLanahan et al., 2003).

In addition to the FFCW study, other data sources used in the marriage studies include the National Longitudinal Survey of Youth (NLSY); Welfare, Children, and Families (WCF); and the Marital and Relationship Survey (MARS). All of these studies include a low-income subsample drawn from a national data set or a sample drawn from low-income communities.

Single Item Measurement

Almost all the identified studies rely on single item measures of religion. Notably, two of the four data sets include reports of religiosity and religious denomination for both males and females. Only one study, MARS, contains measures that go beyond individual denomination and church attendance to include multidimensional constructs of religious beliefs, centrality

of religion to the marital relationship, and joint participation of spouses in various religious activities, such as prayer and religious social activities.

Research Questions Guiding Empirical Studies

In general, the primary research questions about religiosity and marriage that guide empirical studies targeting economically disadvantaged groups parallel the studies of the general population. The empirical questions focus on how religious denomination and religiosity are associated with marriage, divorce, attitudes and expectations about marriage, and relationship quality. Few studies examine the potential mediators of the effect of religiosity and marriage and relationship outcomes. Other research is beginning to consider whether the effect of religiosity on the probability of marriage varies by race.

The studies focusing on the low-income population differ from studies that rely on population-level data by including diverse family structures (including couples who cohabit and unmarried parents). One study (Lichter & Carmalt, 2009) examines whether the effect of religiosity on marriage varies by high and low levels of material hardship.

Findings Specific to the Low-Income Population

- | |
|--|
| 1. Does religious denomination influence marriage and relationship outcomes? |
|--|

Similar to the research that draws on national and community samples, individual religious denomination and homogeneity of a couple's religious denominations do not appear to be a significant determinant of marriage outcomes for low-income couples. In contrast, the relationship between frequency of church attendance and marriage outcomes appears to be positive.

The findings from five longitudinal studies that examine the effects of religious denomination on various marriage and relationship outcomes are summarized in Table 2-1. In general, individual religious denomination does not have a significant effect on union formation or dissolution across the different groups. Similarly, having any religious affiliation compared with no affiliation shows minimal effect for unmarried parents and married couples. A notable exception is that wives in interfaith marriages rate their marital quality significantly lower than wives who share the religious affiliation of their husbands.

Religious denomination and homogeneity of a couple's denomination do not appear to be significant determinants of marriage outcomes for low-income couples. In contrast, the relationship between frequency of church attendance and marriage outcomes appears to be positive.

2. Do higher frequency of church attendance and other measures of religiosity influence marriage and relationship outcomes?

In order to establish the presence or absence of a direct effect of frequency of church attendance on marriage outcomes, we first examined studies that considered the effects of church attendance, controlling for other marriage-related covariates. In the next section we present the results of studies that consider whether there are direct and indirect pathways of religiosity effects—that is, did church attendance directly affect marriage outcomes as well as operate through other mechanisms such as social networks?

Table 2-1. Relationship between Religious Denomination and Marriage-Related Outcomes in the Low-Income Population

Marriage and Relationship Outcomes	Effect of Religious Denomination
Cohabiting women's marriage (Lichter et al., 2006; NLSY, ¹ n = 1,342)	No effect of Catholic or other denominations for poor and nonpoor women. Exception is that for nonpoor women, no religion increases the likelihood of marriage, compared with Protestant.
Unmarried parents' union formation (Wilcox & Wolfinger, 2007; FFCW, ² n = 3,069 and Caputo, 2007, FFCW, n = 600)	No effect
Cohabiting women's union dissolution (Lichter et al., 2006; NLSY, n = 1,342)	No effect
Single mothers' attitudes toward childbirth and marriage (Cherlin et al., 2008; WCF, ³ n = 1,722)	No effect
Unmarried parents' global relationship quality (Wilcox & Wolfinger, 2007; FFCW, n = 2,034)	No effect of couples' religious homogamy in denomination categories. Exception is that women of any denomination besides Protestant have higher marital quality than women with no religion. No effects for men.
Married couples—husbands' ratings of marital quality (Lichter & Carmalt, 2009; MARS, ⁴ n = 433)	No effect of denomination categories. Husbands with any affiliation rate two out of seven measures of quality higher than those with none. No effect of interfaith marriage on seven outcomes.
Married couples—wives' ratings of marital quality (Lichter & Carmalt, 2009)	No effect of denomination categories. Wives with any affiliation rate two out of seven measures of marital quality higher than wives with none. Wives in interfaith marriages report lower levels of marital quality on five out of seven measures.
Married couples—within-couple ratings (Lichter & Carmalt, 2009)	No effect of denomination categories or affiliation.

1. NLSY = National Longitudinal Survey of Youth

2. FFCW = Fragile Families and Child Well-Being

3. WCF = Welfare, Children, and Families

4. MARS = Marital and Relationship Survey

Five longitudinal studies that measure the direct effect of frequent religious attendance (without controlling for potential mediating variables) are highlighted in Table 2-2. All of these studies indicate that there are either positive or null effects of frequent church attendance on marriage and relationship outcomes for low-income parents. No studies point to negative effects.

Table 2-2. Studies of the Direct Effect of Frequent Church Attendance and Marriage-Related Outcomes in the Low-Income Population

Marriage and Relationship Outcomes	Effect of Frequent Church Attendance
Unmarried couples union formation (Carlson et al., 2004; FFCW, ¹ n = 3,285)	Reduces the probability of cohabitation for fathers and increases the probability of marriage for mothers.
Unmarried couples union formation (Caputo, 2007; FFCW, n = 600)	Reduces the probability of cohabitation for fathers. No effect for first-time mothers.
Marital dissolution (Waller & Peters, 2008; FFCW, n = 4,182)	Significant negative effect for mothers; fathers not measured.
Unmarried and married couples—multipartner fertility (Carlson & Furstenberg, 2006; FFCW, n = 4,300)	Significant negative effect for mothers; no effect for fathers.
Marital quality (Lichter & Carmalt, 2009; MARS, ² n = 433)	Wives who rate their church attendance as frequent and who have a shared denomination with their husbands rate two out of seven measures of marital quality higher than those who do not go to church regularly and have shared denominations with their husbands. No significant effect for husbands. Within couples, frequent attendance increased for two out of seven measures of marital quality (commitment and satisfaction).

1. FFCW = Fragile Families and Child Well-Being

2. MARS = Marital and Relationship Survey

Given the small number of studies and the different populations of couples (unmarried, married, combined) included in studies, it is difficult to make generalizations about how the overall effect of frequent church attendance on marital and relationship outcomes varies by gender. This initial variation in results for men and women calls for further study of the gender differences in the effects of church attendance on marriage and relationship measures.

One study points to the importance of including measures of couples' ratings of their joint religiosity and spirituality in terms of their activities together (including attending services, praying together and talking about spiritual issues, celebrating religious holidays, sharing religious social activities) and religious beliefs (e.g., "God is a part of our relationship," "our relationship is a holy bond," "relationship is an expression of spirituality"). Lichter & Carmalt

(2009) find that greater participation of each spouse in religious activities together and shared religious beliefs about their relationships were significantly positively associated with all seven of the indicators of marital quality (e.g., commitment to each other as a couple and to children, communication, satisfaction, intimacy, and positive conflict resolution).

3. What are the potential mediating pathways of the effects between church attendance and marriage outcomes?

Table 2-3 highlights the results of five studies that examined the potential mediating role of social networks, marriage attitudes, secular activities, and relationship behaviors (father highly supportive, no domestic violence, no conflict over fidelity).

Table 2-3. Effect of Frequent Church Attendance and Marriage-Related Outcomes in the Low-Income Population, Controlling for Potential Mediating Variables

Marriage and Relationship Outcomes	Effect of Frequent Church Attendance
Unmarried couples get married (Wilcox & Wolfinger, 2007; FFCW, ¹ n = 3,069)	Positive significant effect for mothers that attenuates but remains significant after controlling for fathers' religiosity and relationship behaviors. Positive significant effect for fathers that attenuates but remains significant after controlling for relationship behaviors.
Unmarried couples have pro-marriage attitudes (Shafer, 2006; FFCW, n = 5,945)	Positive significant effect for mothers' attitudes (5 out of 5 measures) and fathers (3 out of 5 attitudes). The significant positive effect for mothers is attenuated when relationship quality and partner variables are controlled, but remains significant. This is not tested for fathers.
Unmarried and married couples report high union satisfaction (Wilcox & Wolfinger, 2008; FFCW, n = 2,034)	Positive significant effect for fathers' high attendance that attenuates but remains significant after mediators. A significant effect for both partners attending frequently becomes nonsignificant after adding in mediators.
Mother married at the time of birth (Fragile Families Research Brief, 2004; FFCW, n = 4,840)	Positive significant effect for mothers is attenuated by marriage norms but remains significant. This is not tested for fathers.
Couples report high marital quality (Lichter & Carmalt, 2009; MARS, ² n = 433)	Positive significant effect of joint participation in religious activities is attenuated by joint participation in secular activities, but remains significant.

1. FFCW = Fragile Families and Child Well-Being

2. MARS = Marital and Relationship Survey

Four of the five studies draw on the Fragile Families survey to examine whether the direct effects of frequent church attendance diminish after controlling for potential mediators. All four studies show that the direct effect of church attendance is reduced with the addition of the mediating variables; however, in all but one study, the effects remained statistically significant. This suggests that there are likely to be both direct and indirect effects of

religiosity on marriage indicators. An example of one potential pathway is Wilcox and Wolfinger's (2008) findings that joint religious attendance by mothers and fathers has a positive effect on marital quality that could potentially operate only indirectly through constructive behaviors such as partner supportiveness and lack of conflict over sexual fidelity. Interestingly, this study shows that in couples in which men but not women attend church frequently, religious participation is associated with higher ratings of union satisfaction.

One study, which includes measures of the religious and secular activities in which spouses participate together, finds that both types of activities are important for relationship quality. Lichter and Carmalt (2009) note that their findings demonstrate that "the couple that prays together stays together" and that "the couple that *plays* together stays together" (p. 184).

4. Are there differences in the effect of religion and religiosity by race and the level of material hardship?

There is little initial evidence of subgroup differences in the effect of religion and religiosity. In terms of marital quality, Lichter and Carmalt (2009) do not find that religiosity affected marital quality differently depending on the level of material hardship. Wilcox and Wolfinger (2007) do not detect any race differences in the effects of frequent church attendance on the probability of forming a marriage.

Research Gaps

Based on this initial literature review, it appears that religious denomination generally is not a significant predictor of union formation and quality while attending church frequently is associated with relationship decision making and quality in the low-income population. Depending on the outcome of interest and whether mothers and fathers are examined together or separately, these effects operate directly and indirectly by encouraging positive relationship attitudes and behaviors.

This review also demonstrates that the religiosity and spirituality literature is in the early stages of development and has great potential to expand. Further research is needed to increase understanding of whether specific religious beliefs, practices, and activities engaged in by each partner and as a couple affect marriage outcomes, as well as to provide insight into how this process unfolds. There is also room for significant methodological innovation to decrease selection bias and to support more precise causal inferences.

This review identified the following gaps in the current empirical research focusing on low-income couples:

- **Limited measures of spirituality or religious beliefs and practices from diverse religions that are specific to marriage, cohabitation, and divorce.**

- **Limited measures of a couple’s individual and joint participation in secular as well as religious activities.**
- **A narrow focus on relationship indicators rather than a broader set of couple-reported indicators, such as multipartner fertility, fidelity, and conflicts over money.**
- **A lack of systematic analysis of subgroup differences by demographics, such as gender, race, ethnicity, and immigrant status as well as by economic resources.**
- **A lack of qualitative research focusing on a couple’s religious and spiritual practices at home, church, and in the community, as well as the specific norms, values, and practices about marriage and relationships at religious institutions that can inform the development of new measures of religious participation as well as mediators.**
- **A lack of any experimental studies to test premarital or marital enhancement interventions that build on clients’ religiosity or spirituality.**

New Research

Three studies that are currently underway will begin to fill some of the research gaps on the effect of religion and religiosity on marriage outcomes in low-income families (see Table 2-4). One identified gap is the need to delineate differences between a couple’s secular and religious joint marriage activities. The Program for Strong African American Families (PROSAAM) intervention study targeting African American couples will provide insights about the differences between the effects of secular marriage programs and secular plus prayer programs, compared with a control group.

Two other studies will help broaden the measures of a couple’s religiosity as well as the breadth of relationship outcome measures studied. Both of these studies will use evidence to identify potential differences in the effect of religiosity by race and ethnicity on marriage and relationships within the low-income population.

Table 2-4. New Research Studies

Study	Research Focus
<p><i>Program Intervention</i> Evaluation of Program for Strong African American Families (ProSAAM) Principal Investigator (PI): Steven Beach</p>	<p>5-year intervention study targeting 500 African American couples in Atlanta metropolitan area; 200 couples will participate in secular marriage education (PREP),¹ 200 in PREP plus intercessory prayer, and 100 in control group. This project does not specifically target low-income couples, but has the potential to examine income differences.</p>
<p><i>Longitudinal Panel Data Collection</i> Development and Maintenance of Low-Income Newlywed Marriages PI: Benjamin Karney</p>	<p>Marriage licenses will be used to sample 513 Black, White, and Hispanic first-married newlywed couples living in low-income neighborhoods. Includes four interviews over the first 3 years of marriage. Focuses on a variety of indicators, including religiosity and spirituality.</p>
<p><i>Secondary Data Analysis</i> Soul Mates: Religion, Sex, Love & Marriage among African Americans and Latinos PI: W. Bradford Wilcox</p>	<p>The study consists of secondary data analysis of national data sets (GSS, FFCW, NSFG, NSFRL)¹ that will focus on race and ethnic differences in the effects of religion on marriage attitudes, union transitions, and relationship quality in unmarried and married couples. This project includes at least one data set that focuses on a lower-income sample (FFCW).</p>

1. PREP = Prevention and Relationship Enhancement Program
2. GSS = General Social Survey; FFCW = Fragile Families and Child Well-Being; NSFG = National Survey of Family Growth; NSFRL = National Survey Family Religious Life

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3. PARENTING

Overview

A number of studies, particularly since the early 1990s, have examined the relationship between religiosity and various parenting outcomes related to both parent and child well-being. Beyond simple associations, a number of these studies explore both the institutional and individualized pathways through which religiosity influences parenting attitudes, behaviors, practices, and approaches. The hypothesized links between religiosity and parenting emphasize institutional opportunities that religious involvement provides for family-centric activities, family-oriented networks, religious teachings that emphasize the centrality of family, the importance of positive relationships, and the virtue of caring for others.

Religious communities are thought to provide social support for parents and to informally promote and enforce social norms related to parenting that are based on religious ideology. For example, some religious ideologies endorse parent-oriented practices that emphasize child obedience, whereas other ideologies promote child-centered/responsive approaches (Bartkowski & Xu, 2000).

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Religiosity can also exert influence at a more individual or personal level by affecting attitudes about family issues and gender roles, for example, as well as affecting cognitive and socioemotional abilities related to parenting. Religious involvement can offer a resource for coping with difficult life stressors, whereas service to a religious community can enhance feelings of self-efficacy and mastery. In these ways, religiosity can bolster parental cognitive and socioemotional resources and/or serve as a protective factor for outcomes that harm parent-child relationships—a pathway of increased relevance for low-income parents experiencing high levels of stress.

Data, Methods, and Measures

The main outcome areas explored in this body of research include *disciplinary* attitudes and practices, *parenting style* (mix of warmth and demandingness), *parental involvement* (time spent interacting in one-on-one activities, family meals, youth activities), and *parental coping* (with stress related to child rearing). A substantial number of quantitative studies address these outcome areas, with the exception of coping, which has mainly been the subject of qualitative inquiry.

The most prevalent measures of religiosity used in the quantitative research include measures of religious attendance and affiliation. Other frequently used measures include theological conservatism (measured by Bible literalism or fundamentalist theological views)

and the importance of religion. Most studies rely on single-item measures, although a small number use multi-item scales (e.g., Gunnoe, Hetherington, & Reiss, 1999).

The quantitative studies use a mix of cross-sectional and longitudinal data, and many use multivariate regression techniques to control for relevant background factors. Relatively little quantitative research has been conducted to establish the mediating pathways between religiosity and parenting outcomes (with a few exceptions noted subsequently). Given these methodological limitations, scholars are working to move beyond the correlation phase to establish causal links between religiosity and parenting.

Summary of Research Findings for the General Population

Studies have found a positive association between parental religiosity (church attendance and other measures mentioned above) and increased parental involvement, warmth, and positive reinforcement (Pearce & Axinn, 1998; King, 2003). Gunnoe et al. (1999) found that greater maternal religiosity was associated with authoritative (versus authoritarian) parenting styles.² Research shows these positive associations to be mediated through marital quality and co-parenting skills, suggesting the presence of religious “carryover effects” that improve marital quality and thus positively influence parent-child relationships (Brody, Stoneman, Flor, & McCrary, 1994; Brody, Stoneman, & Flor, 1996). Attitudes about parental and gender roles also mediate the relationship between religiosity and parental involvement. For example, King’s (2003) findings indicate that religious fathers who are more likely to agree that men should share household and child-care tasks (i.e., equalitarian attitudes) are more likely to be involved with their children.

The evidence for how religious orientation (which typically considers affiliation and/or level of conservatism) influences parenting outcomes is more mixed. The findings from Wilcox (1998) and Bartkowski and Xu (2000) demonstrate that parenting styles of conservative Protestants are uniquely characterized by both strict discipline and an “unusually warm and expressive style of parent-child interaction” (Wilcox, 1998, p. 796). There are virtually no studies, however, that link affiliation and parenting outcomes of religious parents outside the conservative Protestant tradition. This lack highlights the difficulty of drawing direct links between specific religious beliefs and specific parenting outcomes (Mahoney, Pargament, Tarakeshwar, & Swank, 2001).

In addition, preliminary work has started to address the question of whether religiosity is a proxy for an underlying conventional orientation that makes people more likely to value membership in religious communities and prioritize familial involvement (Wilcox, 2002). In a

² Authoritative parenting has been found to be most effective for positive child development across several ethnic subcultures within the United States. It is characterized by high levels of parents demanding age-appropriate behaviors, while fostering child autonomy in a warm and supportive environment. In contrast, authoritarian parenting styles emphasize child obedience without questioning, in the context of low parental support.

study of fathers, Wilcox tests whether the effect of religiosity on parental involvement is an artifact of a conventional disposition or orientation found in men; that is, the type of men who are more conventional in their patterns of civic engagement and who exhibit broader social integration may be more likely to be religious and involved in their children's lives. Wilcox uses a measure of father's level of civic engagement as a proxy for "conventionality." The findings show that civic engagement does, in fact, mediate the relationship between religiosity and parental involvement but that religious involvement also has an independent effect on paternal involvement.

Summary of Research Studies Specific to the Low-Income Population

The primary research questions about religiosity and parenting among the low-income population in some cases mirror the questions guiding the broader literature and in other cases depart in meaningful ways. Studies of the general population focus primarily on the influence of religious involvement and affiliation on specific parenting practices and levels of parental involvement. The main point of departure in the low-income research is an increased focus on *parental cognitive and socioemotional resources* as a hypothesized pathway between religiosity and parenting outcomes.

The research questions guiding the literature on religiosity and parenting for the low-income population fall into two broad categories. The first set of questions is related to whether religiosity is linked directly to the outcome of interest. The second set of questions examines the pathways through which religiosity influences outcomes.

Using the report search methodology outlined in Section 1, we identified 13 relevant quantitative studies that examined relationships between religiosity and parenting outcomes in the low-income population. Of these studies, 8 use nationally representative data sets, whereas the remaining 6 studies use convenience samples. Only three of the studies that use national data primarily focus on the relationship between religiosity and parenting outcomes. The other five studies examine religiosity along with other effects, but they did produce relevant findings. Almost all of the smaller-scale, convenience sample studies focus primarily on relationships between religiosity and parenting. Several of the smaller-scale studies that use convenience samples also include a qualitative component.

National data sources include FFCW, WCF, the National Survey of America's Families (NSAF), and the National Survey of Families and Households (NSFH).

Most studies, particularly those using national data, use one or two single-item measures of religiosity—typically religious attendance and/or religious affiliation. The smaller-scale studies are more likely to use further developed, multi-item measures of religiosity, including scales that explore specific dimensions of religiosity (e.g., ideological, intellectual, experiential, ritualistic, and consequential). One study (Strayhorn, Weidman, & Larson, 1990) that focused solely on testing measures of religiosity in a low-income population

found two distinct empirical dimensions: one related to private aspects of religion and the other related to public aspects. The national studies are also more likely to address questions about associations between religiosity and parenting outcomes, whereas several of the smaller-scale studies test mediating variables and theoretical pathways between religiosity and parenting outcomes.

The low-income research explores a broad range of parenting outcomes, including paternal/maternal involvement, parental engagement, parenting style typology (e.g., authoritative), spanking, parental investment, parental attitudes, perceived demands, and stress. These studies explore a broader range of outcomes than the general population studies and more frequently examine specific dimensions of parenting.

Almost all of the studies address only a subset of parenting outcomes and many do so for a specific subgroup, such as single mothers or nonresident fathers. However, some of the more recent work, primarily using the FFCW and WCF data, has started to simultaneously examine religiosity, multiple parenting outcomes, and relevant mediators using a more comprehensive set of controls.

Findings Specific to the Low-Income Population

The first set of findings presented addresses the following general research questions:

1. Is greater religiosity, as measured by the institutional aspects of religion (church attendance and participation in organized religious activities), associated with more favorable parenting outcomes in low-income families?
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2. Do religious beliefs play a different role in the development of parenting values for the low-income population relative to more economically advantaged populations?
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Findings about Religiosity and Parenting Outcomes

Table 3-1 presents the findings that mainly address the questions of whether religiosity is related to parenting outcomes in the low-income population and to what extent religiosity, *independent of other factors*, drives associations found in the research.

Two of the larger-scale studies focus on fathers, one larger study focuses on mothers and fathers, and one small qualitative study focuses solely on mothers. At first glance, it may appear that there is little research on this topic, but it is important to bear in mind that other studies (discussed subsequently) address questions about the direct effect of religiosity on parenting and then examine potential mediators of the association. Additional studies also address these questions but do so indirectly, examining religiosity alongside other relevant factors.

In general, the existing research suggests that greater parental religiosity is positively associated with parenting outcomes in low-income families. Also, in the studies that control for parental pro-social orientation or social integration, religiosity is generally shown to have an independent (albeit small) effect.

Table 3-1. General Findings about Religiosity and Parenting Outcomes

Study/Data Source	Relevant Findings
"Religious participation, religious affiliation, and engagement with children among fathers experiencing the birth of a new child" (Petts, 2007)/FFCW ¹ Data	<ul style="list-style-type: none"> ▪ Religious attendance has significant positive effect on paternal engagement, especially for first-time fathers. ▪ The effects persist even after controlling for marital status, resident status, relationship transition, pro-fathering attitudes, and first-time fatherhood. ▪ Affiliation has no effect.
"Good dads: Religion, civic engagement, & paternal involvement in low-income communities" (Wilcox, 2001)/NSFH ² Data	<ul style="list-style-type: none"> ▪ Religious involvement has a significant positive effect on a father's likelihood of dining frequently with children and participating in youth-related activities. ▪ Effects are only significant for low-income men. ▪ "Broader social integration" (measured by civic engagement) attenuates effect, but independent religious effect persists.
"Family structure and children's health and behavior data from the 1999 National Survey of America's Families" (Wen, 2008)	<ul style="list-style-type: none"> ▪ Parental participation in religious work is significantly positively associated with child health and behavior. ▪ Participation in secular volunteer work is not significantly associated.
"A comparative study of values and attitudes of inner-city and middle-class postpartum women" (Minton et al., 2004)	<ul style="list-style-type: none"> ▪ Middle-class mothers rank intrapersonal and personal values highest as the values they would like to develop in themselves, whereas low-income mothers rank social and religious goals more highly.

1. FFCW = Fragile Families and Child Well-Being

2. NSFH = National Survey of Families and Households

There is also evidence to suggest that the independent relationship between religiosity and certain parenting outcomes is unique to low-income parents (Wilcox, 2001). Finally, qualitative work by Minton, Shell, and Solomon (2004) raises the possibility that social and religious values influence the formulation of parenting values differentially for low-income (versus middle-income) parents.

The second set of studies examines a broader array of religiosity measures and process variables by asking *what are some of the specific factors about religiosity and the potential mediators* that influence parenting outcomes. These studies explore both institutional and individualized aspects of religiosity. Primary research questions include:

1. To what extent do parental resources, such as social networks and cognitive or socioemotional adjustment, mediate the relationship between religiosity and parenting outcomes?

2. To what extent do religious ideologies and other institutional aspects of religion (e.g., time spent in structured, family-centric religious activities) influence parenting outcomes?

Parental Resources

The relevant findings about the influence of religiosity on parental outcomes via their effects on parental resources are presented in Table 3-2. While a majority of the studies reviewed discuss parental resources as a pathway or mediating influence between religiosity and parenting outcomes, empirical examination of these relationships is the focal point for only four of the studies.

Hill, Burdette, Regnerus, and Angel (2008) hypothesize that religious involvement influences parenting outcomes through three primary pathways—increased social supports, higher self-esteem, and reduced psychological distress. Religious involvement is hypothesized to bolster maternal social support by increasing access to social networks and resources.

As noted in Table 3-2, there is a statistically significant effect of religious attendance on parental satisfaction, perceived demands, and distress for low-income, urban mothers (Hill et al., 2008). In addition, social support, self-esteem, and depression each mediate the relationship between religious attendance and parenting outcomes for low-income urban mothers. Interestingly, these factors relate differently to the different parenting outcomes measured. For example, while social support is not a significant mediating factor for parental satisfaction, it is significant for parental perceived demands and distress. This study concludes that this finding suggests that religious involvement is more than an indicator of certain dispositional characteristics, and validates the idea that religious involvement bolsters maternal resources through increased social supports.

Interestingly, the findings of Fagan and Palkovitz (2007) and Roggman, Boyce, Cook, and Cook (2002) suggest that religion may be more likely to influence cognitive and socioemotional abilities and to serve as a protective factor more for women than for men. Recall that evidence from Hill et al. (2008) indicated that maternal religiosity is positively associated with maternal social supports, self-esteem, self-efficacy, and depression; and that it mediates the association between religiosity and parenting outcomes. Roggman et al. (2002) show that, for men, relationship anxiety/social avoidance and depression do not mediate the positive associations between spiritual support or religious activity and father involvement. Similarly, Fagan and Palkovitz (2007) did not find religiosity to be a protective factor for men with risk profiles that predict low levels of paternal involvement. The

discrepancies in these findings highlight the need for an integrated study of men and women to determine whether parental cognitive, socioemotional, and social outcomes operate differently depending on gender.

Table 3-2. Religiosity and Parental Resources

Study/Data Source	Relevant Findings
"Religious involvement and attitudes toward parenting among low-income urban women" (Hill et al., 2008)/WCF ¹ Project data	<ul style="list-style-type: none"> ▪ Greater religious attendance is associated with greater parental satisfaction and lower levels of perceived demands and distress. ▪ Social support, self-esteem and depression each substantially mediate the religiosity effect for perceived demands and distress (only self-esteem and depression mediate the effect for satisfaction).
"Unmarried, nonresident fathers' involvement with their infants: A risk and resilience perspective" (Fagan & Palkovitz, 2007)/FFCW	<ul style="list-style-type: none"> ▪ Resilience (comprising employment, social support, religion, having grown up with own father) had a positive association with involvement. ▪ Resilience did not moderate the relationship between relationship status and involvement or that between risk factors and involvement.
"Getting dads involved: Predictors of father involvement in Early Head Start and with their children" (Roggman et al., 2002)/Geographic-Convenience Sample	<ul style="list-style-type: none"> ▪ Spiritual support and religious activity had a significant positive effect on father involvement. ▪ No effect for affiliation. ▪ Relationship anxiety and depression did not mediate these effects.

1. WCF = Welfare, Children, and Families

2. FFCW = Fragile Families and Child Well-Being

The Wilcox (2001) study provides evidence about how religious involvement influences parenting outcomes for low-income fathers. Wilcox suggests that there are four mechanisms through which religious involvement fosters paternal involvement: (1) religion includes family-centered rituals and discourse, (2) religion offers opportunities to spend time with children, (3) churches attract families with young children, and (4) religion serves as a protective factor against stresses that harm parent-child relationships. The study findings suggest that greater religious involvement predicts that fathers will dine more frequently with their children and will be more likely to participate in youth-related activities. In contrast, religious involvement is not associated with greater one-on-one interaction, when the study controls for fathers' "broader social integration."

While Wilcox does not examine the exact mechanisms through which religiosity influences paternal involvement, the nature of the outcomes that are affected may suggest that the pathways between religion and outcomes are more closely related to the institutional (rather than personal) dimensions of religion for fathers. Religion may be more likely to

increase a father’s attention to structured, traditional family-centric activities, such as eating dinner together or being formally involved in a child’s activities, than to informal bonding activities, such as one-on-one playtime.

Religious Beliefs and Parenting Practices

A second strand of research focuses on how the religious beliefs of low-income parents influence their approach to discipline, parent-child interactions, and responsiveness. While a substantial amount of research in this area focuses on the general population, only two studies (with small convenience samples) in this review were found to focus on low-income parents (see Table 3-3).

Table 3-3. Religious Beliefs and Parenting Practices

Study/Data Source	Relevant Findings
“Determinants of disciplinary practices in low-income black mothers” (Kelley et al., 1992)/Geographic-Convenience Sample	<ul style="list-style-type: none"> ▪ Intellectual subscale of the religiosity scale and maternal education were positively correlated with child-oriented disciplinary attitudes. ▪ The study found no association between religiosity and parental disciplinary behaviors.
“Maternal resources, parenting practices, and child competence in rural, single-parent African American families” (Brody & Flor, 1998)/Geographic-Convenience Sample	<ul style="list-style-type: none"> ▪ Greater maternal religiosity is directly linked to more “no nonsense” parenting, harmonious mother-child relationships, and involvement in child's school activities. ▪ Effect of parenting only indirectly affected child outcomes through increased child self-regulation.

Kelley, Power, and Wimbush (1992) examined the relationship between religiosity and disciplinary practices of low-income black mothers, using a five-dimensional fundamentalist religiosity scale (Faulkner & DeJong, 1966) that assesses ideology, intellectual knowledge, and the ritualistic, experiential and consequential aspects of religiosity. The study findings differ from studies focusing on the general population that suggest a connection between fundamentalist religious beliefs and parenting practices that emphasize strict child obedience. These findings suggest that only two of the factors examined—the intellectual aspects of religiosity (e.g., knowledge of gospels) and maternal education—are significantly positively correlated with child-oriented disciplinary attitudes³. The other dimensions of religiosity (ideological, experiential) are statistically insignificant for low-income parents. Kelley et al. suggest that fundamentalism may foster a more humanistic and in-depth understanding of Christian doctrine (not a focus on child obedience), which translates into more child-responsive parenting values.

³ Kelley et al. (1992) characterize parenting styles that rarely consider child needs/wants and exact unyielding obedience to parental authority (e.g., authoritarian parenting) as “parent-oriented”. In contrast, they describe more child-responsive parenting styles (e.g., authoritative parenting) as “child-oriented.”

Brody and Flor (1998) also conducted a small-scale study of maternal resources, parenting practices, and child outcomes in rural, single-parent, African American families. The findings show that greater maternal religiosity is directly linked with “no nonsense” parenting (characterized by high levels of parental control along with affectionate behaviors), more harmonious mother-child relationships, and increased involvement in child’s school activities. Maternal education and family resources are not linked with these outcomes. Parenting is only indirectly linked to positive child outcomes, through increased child self-regulation.

These two studies highlight the need for more extensive research on the specific mechanisms through which religiosity influences parenting styles in the low-income population. They also draw attention to the need to integrate research on parental resources and parenting styles/approaches for the low-income population. Finally, these two studies highlight the importance of examining relevant denominational and racial subgroups within the low-income population.

Research Gaps

The existing research for the low-income population on religiosity and parenting leaves gaps in understanding about the presence of connections between religiosity and parenting, and of the more in-depth questions of *how* religiosity influences parenting outcomes.

The primary knowledge gaps include the following:

- **A lack of religiosity measures that are relevant to specific outcomes in larger-scale studies.** For studies seeking to understand the direct links and the mediators between religiosity and parenting outcomes, more in-depth, outcome-specific measures of religiosity are required.
- **A lack of a complete, comprehensive set of parenting outcome measures.** Disparate parenting outcome measures are analyzed in isolation. Outcomes range from parental attitudes and satisfaction to perceived demands to distress to parenting style (authoritarian vs. authoritative) to parental involvement (emotional and instrumental) to frequency of interaction to spanking to parental values. The results can vary depending on the chosen outcome measure.
- **A lack of a complete, comprehensive set of parenting structure and relationship controls.** Many studies do not control for relevant aspects of the family/parenting context. For example, a study might examine only single mothers without controlling for the nature of the co-parenting relationship.
- **A lack of comprehensive studies to examine effects for mothers and fathers parenting together and separately.** Almost all of the studies in this topic area elected to focus on either maternal *or* paternal parenting issues. The result is family-context-specific findings that leave an incomplete understanding of family context, the nature of co-parenting relationships, and how mediators between religiosity and parenting interact.
- **A lack of comprehensive, integrated research that includes a complete set of outcome and control measures.**

- **A lack of research on subgroup differences, especially for studies of mediating effects.** Much of the research in this area is focused on African American parents. Additional research is needed to understand how pathways and mediators differ for income, as well as denominational and racial subgroups.
- **A lack of qualitative research on the specific aspects of religiosity that influence parenting outcomes.**

Although significant knowledge gaps remain in the area of religiosity and parenting outcomes, the existing conceptual and empirical research provides a strong foundation; however, it requires further integration. For example, it is possible that existing measures and data from the Fragile Families project can be examined in a more integrated fashion that simultaneously examines family context, gender and mediating factors to address several of the existing knowledge gaps. In addition, researchers could leverage existing household data sets that include more developed measures of religiosity—e.g., NSFH—to explore differences in the relationship between religiosity and parenting for low-income groups. The downside to conducting secondary analysis of these data sets is that most either lack comprehensive measures of relevant control factors or have underdeveloped measures of religiosity. Therefore, additional qualitative research or development of a national data set, designed to comprehensively examine the role of religiosity in low-income families, may prove more informative in the long run.

The review of the literature on the relationship between religiosity and parenting outcomes suggests that three closely related bodies of work have evolved simultaneously. One is focused on paternal involvement for both residential and nonresidential fathers. The second addresses single mothers and the unique set of parenting challenges they face. The third is the broader family process literature that considers diverse family structures and processes. Now that large-scale data sets include measures relevant to all three research bodies, this topic area would benefit from enhanced conceptualization that uses all three bodies of research to develop empirical testing of more comprehensive models. Key to the conceptualization process is the further development of a set of religiosity measures that can effectively assess both the institutional and individualized pathways through which religiosity operates in diverse low-income family contexts.

Lessons from Fragile Families

The disconnected and sometimes conflicting findings of the five recent Fragile Families studies highlight the major existing gaps in this research (see Table 3-4). The findings from only two of the five studies show that religiosity has an effect on parenting. The findings from Carlson et al. (2005) show a small, positive effect of religiosity, but the study only examines couples that are romantically involved (i.e., it excludes single parents that are in a nonromantic, co-parenting relationship involving a nonresident parent). The findings from Petts (2007) also indicate a small positive effect for fathers, but the study does not control for relationship quality between parents. The three other studies examine family structure

effects and parents' relationship status and quality. None of these three studies shows religiosity to be associated with the parenting outcomes analyzed.

Moreover, the two studies showing a religiosity effect focus on parental engagement and spanking as outcome measures, whereas the other studies use a wider range of measures, including parental involvement (different measures for nonresident vs. resident parents), parental investments, levels of aggravation, and various types of parental support (to promote emotional, social and cognitive competencies in children). Studies also differ in whether they use maternal reports of paternal involvement or father self-reports. This difference also corresponds with varied results.

Before empirical research can address these gaps, researchers need greater conceptualization of the potential connections between religiosity and parenting—that simultaneously considers family context, relevant gender differences, and hypothesized pathways.

Table 3-4. Lessons from the Fragile Families Studies

Study/Data Source	Relevant Findings
"Unmarried but not absent: Fathers' involvement with children after a nonmarital birth" (Carlson et al., 2005)	<ul style="list-style-type: none"> ▪ The study examines five groups of variables as predictors of paternal involvement: parents' relationship status and quality, fathers' human capital, fathers' cultural and attitudinal characteristics (including religiosity), fathers' health and sociodemographic characteristics, and child characteristics. ▪ The study finds no significant relationship between religiosity and paternal involvement.
"Family structure effects on maternal and paternal parenting in low-income families" (Gibson-Davis, 2008)	<ul style="list-style-type: none"> ▪ The study finds no effect of religiosity on parenting outcomes.
"Unmarried, nonresident fathers' involvement with their infants: A risk and resilience perspective" (Fagan & Palkovitz, 2007)	<ul style="list-style-type: none"> ▪ The study examines the extent to which predictors of father involvement are influenced by mother-father relationship status and various risk and resilience variables. ▪ Resilience (religiosity) does not moderate relationship between relationship status and involvement, or between risk and involvement.
"Strengthening unmarried families: Could enhancing couple relationships also improve parenting?" (Carlson & McLanahan, 2006)	<ul style="list-style-type: none"> ▪ This study examines the association between relationship quality and parenting in low-income couples (religiosity as mediating factor). ▪ The study finds a significant (but small) positive effect of religiosity on parental engagement for mothers and fathers.
"Religious participation, religious affiliation, and engagement with children among fathers experiencing the birth of a new child" (Petts, 2007)	<ul style="list-style-type: none"> ▪ Participation has significant positive effect on paternal engagement, especially for first-time fathers. ▪ Religion has an <i>independent</i> effect even controlling for marital status, resident status, relationship transition, pro-fathering attitudes, and first-time fatherhood.

New Research

New research shows movement toward a more integrated approach. For example, a comprehensive qualitative study of fathers (Nelson, Edin, & Lein, forthcoming) is using an integrated approach that examines paternal involvement while simultaneously examining relevant contextual factors, including aspects of a father's relationship with the co-parenting mother. Examining the religious and spiritual dimensions of these parenting relationships and participation in church activities and social networks would be a fruitful avenue of research for new studies.

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Low-Income Parenting References

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4. YOUTH OUTCOMES

Overview

Extensive research has focused on understanding the relationship between religiosity and youth problem behaviors, including alcohol and substance use, delinquent behavior, age of initiation of sexual intercourse, and number of sexual partners. More recent research has begun to examine the influence of religiosity on fostering positive youth development outcomes.

Potential Pathways Affecting Youth Outcomes

Smith and Denton (2005) summarize nine pathways through which religiosity could exert a positive influence on youth outcomes:

- Moral directives
- Spiritual experiences
- Role models
- Community and leadership experiences
- Coping skills
- Cultural capital
- Social capital
- Network closure (the degree to which everyone knows everyone else in a social network)
- Extracommunity links

Some of these pathways suggest the *direct* influence of religiosity on youths through, for example, encouraging beliefs about morality. Others suggest that religiosity affects youth *indirectly* by bolstering social and emotional resources—such as coping skills and cultural and social capital—that enhance youth development and can serve as protective factors against psychological distress that may otherwise translate into negative behaviors.

“Scholarship on religion and youth has demonstrated that faith is generally important to American teens, and that religion reduces adolescents’ involvement in risk activities while fostering pro-social behaviors. Thus, religion would seem to function as a positive influence in the lives of youth.” (Bartkowski, Xu, & Levin, 2008, p. 19)

Data, Methods, and Measures

While associations between greater religiosity and positive youth outcomes are well documented, less is understood about how a combination of complex individual and social processes interact to produce these associations. Limited quantitative work, particularly using large national data sets, has been done to establish the mediating pathways between religiosity and youth outcomes. The field is moving in this direction, but most studies acknowledge the difficulty of establishing the direction of causality and the lack of contextual controls, such as youths’ level of social support or participation in secular activities, that can limit the identification of unique religious effects on youth outcomes.

Religiosity Measures Used in Youth-Focused Research

Studies of religiosity and youth problem behaviors typically draw from large, nationally representative (often longitudinal) data sets, but rely on single-item measures of religiosity, typically youth church attendance. Attitudinal measures, including importance or salience of religion, also appear, but less frequently. A new strand of research has emerged that examines the role of parents' religiosity on early childhood development. Early findings are discussed in this section.

National Study of Youth and Religion

The large-scale, nationally representative National Study of Youth and Religion (NSYR) is the largest, most comprehensive study on diverse religious affiliations, religiosity, and youth outcomes to date, and the first of its kind to focus solely on the role of religion in American teenagers' lives. NSYR surveys over 3,000 American teenagers (and their parents) and conducts follow-up interviews for a subsample of respondents. Teenagers are asked about various dimensions of their religious and spiritual lives, including religious affiliation, beliefs, public religious practice, evaluations of religious congregations, personal religiosity and spirituality, and personal religious change.

Methodological and Measurement Innovations

The quantitative studies in this domain use a mix of cross-sectional and longitudinal data sets and most use multivariate regression techniques to control for personal and family background factors. Some promising recent research (discussed later in this section) has begun to identify methods and data sources that help establish causality and advance our understanding of how social context influences relationships between religiosity and youth outcomes. A new set of innovative research studies examines measures of community religiosity, and gene-environment interactions between individual religious participation and the effects of specific genes found to be associated with youth behavior (Guo, Tong, & Cai, 2008). Also, while most research in this area has examined the general population, more recent work has started to explore religiosity-life outcome relationships for different gender, racial, and income groups.

Findings for the General Population

While extensive research has documented the positive association between greater religiosity and lower rates of youth problem behaviors (see Bartkowski et al., 2008, for a list of review articles), a 2005 study by Smith and Denton (using NSYR data) represents the most current and comprehensive knowledge about religiosity and youth outcomes. Smith and Denton (2005) categorized teenagers into one of five categories based on multiple dimensions of religiosity (devoted, regular, sporadic, disengaged, and other/mixed), including attendance and affiliation with a religious tradition.

National Study of Youth and Religion Findings

Using multivariate regression analyses, and controlling for key background factors (including gender, age, race, region, parent marital status, parent education, and family income), the authors find that more religious teenagers (e.g., the “devoteds” and “regulars”) have more positive outcomes in the areas examined. Findings are consistent across socioeconomic groups. Key findings for the general youth population are described in Table 4-1. While Smith and Denton (2005) do not establish causality in their analyses, they highlight the striking consistency with which religiosity is positively associated with the wide range of outcomes examined.

Table 4-1. Findings for General Youth Population about Religiosity and Youth Behavioral Outcomes (Smith & Denton, 2005)

More Religious Teenagers Have More Positive Outcomes in These Areas:	
▪ Risk behaviors	▪ Media consumption
▪ Quality of family/adult relationships	▪ Sexual activity
▪ Moral reasoning/behavior	▪ Emotional well-being
▪ Community participation	

Smith and Denton (2005) provide initial evidence about why religious teenagers have better life outcomes (see Table 4-2). Preliminary evidence suggests that quality of parent-child relationships, network closure, and religious practices could be important pathways for how religiosity influences youth outcomes. These pathways, however, are not formally tested in their statistical models.

Table 4-2. Findings for General Youth Population about *Potential Pathways Of Relationships between Religiosity and Youth Behavioral Outcomes* (Smith & Denton, 2005)

Areas in Which More Religious Teenagers Have More Positive Outcomes:
▪ Parent-child relationships: Parents and other adults found to exert significant influence on youth religious experiences. Religious teenagers spend less time without parental supervision, are more likely to report they “have fun” with their parents and are more likely to believe that their parents understand and accept them.
▪ Network Closure: Religious teenagers are more likely to experience network closure. Religious teenagers are more comfortable talking with adults other than parents and relatives and parents of religious teenagers are more likely to know these “other” adults.
▪ Religious Practices: Among the religiously devoted, religious practices appear to play the most important role in teenagers’ faith lives. Few religious teenagers are “spiritual seekers”, but rather define their religiosity in terms of more conventional/institutional aspects of religion. In contrast, guilt (a non-institutional, personalized/moral dimension of religiosity) is found not to be a significant mediator.

Taken in combination, these findings highlight the need to understand whether it is the institutional or the indirect/personalized aspects of religion that more likely mediate

religious effects in youths. This remains an open research question that requires further empirical testing.

Early Childhood Findings

A burgeoning second strand of research in this area focuses on the influence of religiosity on early childhood development outcomes. Only a handful of studies have been completed on this topic. A smaller-scale study (Strayhorn et al., 1990) of Early Head Start families finds positive religiosity effects for parents, but no effect on child well-being outcomes. Using evidence from the Early Childhood Longitudinal Study (ECLS-K) of over 9,000 kindergartners and first graders, Bartkowski et al. (2008) found significant associations between religiosity and a range of psychological and social adjustment outcomes in early childhood (including social competence, internalizing problem behaviors, externalizing behaviors, and cognitive ability).

Notably, specific measures of religiosity meaningfully influence the results. Three measures are examined—parents' religiosity, religious homogeneity of couples (couples that share the same religious beliefs, attitudes and denominations), and family religious environment. Parental church attendance has consistent positive effects, but results for family religious environment and parental religious homogeneity are mixed. Family and couple discordance or arguments about religion are found to hinder child development. Moreover, Dye (2008) employs measures of child religiosity (based on parent reports) and also finds that children who attend religious activities fare better across a range of cognitive and socioemotional development outcomes than children who do not.

Studies Specific to Low-Income Populations

Following the report search methodology, 17 studies related to religiosity and youth outcomes within the low-income population were identified. All of the studies are quantitative; 5 use large national data sets and 12 use convenience samples. The convenience samples are generally moderate to substantial in size, typically comprising between 200 and 2,000 observations. A mix of cross-sectional and longitudinal data sets is used.

Religiosity Measurement

The studies that examined youth problem behaviors as the key outcome of interest typically used large national data sets, and measures of religiosity are limited to one or two single-item measures—typically attendance and importance or salience of religion (in youths' lives). However, most studies of other youth outcomes (including developmental, psychological, social, and academic outcomes) use multiple single-item measures (typically attendance, importance/salience, and participation in youth religious activities) or multi-item scales that incorporate various dimensions of religiosity (e.g., attendance, importance, and ritualistic aspects, like prayer). In two studies, measures of parent and family religiosity are used.

In some of the smaller-scale studies, measures are developed with the social context of the study population in mind. For example, one differentiating aspect of these measures is the inclusion of the degree to which youth embraced religious beliefs. Grant et al. (2000) suggest that measuring this construct is important given that youth living in poverty-distressed areas may be at increased risk of “disconnection” or “rejection” of God as a way to cope with or understand their marginalized position.

Exploring Direct and Moderating Effects

The identified studies explore a mix of the direct effects of religion on outcomes and the moderating effects of religion on risk factors that predict negative outcomes (particularly for the studies that focus on psychological outcomes). In almost all the studies, mediating pathways between religiosity and youth outcomes are not formally tested. More recent work (e.g., Lillard & Price, 2007; Dehejia, DeLeire, Luttmer, & Mitchell, 2007) has started to move from correlational to causal research designs. However, to date, the studies that draw on methodologically rigorous designs are limited to single-item measures of religious attendance.

Findings Specific to the Low-Income Population

The first set of studies examines the relationship between religiosity and various youth outcomes. Researchers primarily assess direct religiosity effects without exploring potential mediators between religiosity and outcomes. The first study explores value orientations and the second set explores a range of behavioral and developmental outcomes.

1. Does religiosity differentially influence value formation among low-income (compared with higher-income) youths?

Beutel and Marini (1995) explore how religiosity, gender, and social support are associated with youth value orientations, which are measured by compassion (concern for well-being of others), materialism (emphasis on material benefit and competition), and meaning (philosophical concern with finding purpose and meaning in life). Greater religiosity, measured by a two-item index (attendance and importance of religion), is associated with greater compassion, less materialism, and greater concern with finding meaning. Social support is also positively associated with compassion, but it is not formally tested as a mediator between religiosity and compassion.

2. What is the relationship between religiosity and a range of youth behavioral and developmental outcomes among low-income youths?

A second set of studies, summarized in Table 4-3, examines the association between religiosity and various youth behavioral and developmental outcomes. In these studies, the dependent or outcome variable is the behavioral or developmental outcome of interest and

Table 4-3. Summary of Findings: Religiosity and Behavioral Outcomes (Main Effects)

	Sample/ Data Source	Other Explanatory Factors	Outcome Variable(s)	Measure(s) of Religiosity	Effect
Psychological/Development Outcomes					
Graham-Bermann et al., 2006	N = 218 Convenience/ Geographic	Exposure to intimate partner violence, mother social support (including religiosity)	Posttraumatic stress disorder	Unspecified religious measures embedded in social support index	+ ^f
Bolland et al., 2005	N = 5,895 Convenience/ Geographic	Risk & protective factors ¹	Hopelessness	Importance/salience	+
Pedersen et al., 2005	N = 560 Convenience/ Geographic		Depression	Religious Contextual Profile ² : participation in religious activities, centrality of religious beliefs, belief in God	Mixed
			Self-esteem		Mixed
Vaughn & Roesch, 2003	N = 182 Convenience/ Geographic		Psychological health (stress-related growth, depression)	Index: four religious coping strategies	+ ³
			Physical health		+ ³
Ball et al., 2003	N = 492 Convenience/ Geographic		Sexual behavior	Index: organized religion and subjective religiosity	Null
				Attendance	+
			Self-esteem	Family's religiosity	Null
				Index: organized religion and subjective religiosity	-
			General psychological functioning	Attendance	Mixed
				Family's religiosity	+
				Index: organized religion and subjective religiosity	Null
				Attendance	+
Family's religiosity	Null				

(continued)

Table 4-3. Summary of Findings: Religiosity and Behavioral Outcomes (Main Effects) (cont.)

	Sample/ Data Source	Other Explanatory Factors	Outcome Variable(s)	Measure(s) of Religiosity	Effect
Academic Outcomes					
Hodge, 2007	N = 84 Convenience/ Geographic		Academic test scores	Participation in religious activities (spiritual instruction)	Null
Pedersen & Seidman, 2005	N = 560 Convenience/ Geographic		Academic achievement	Participation in religious youth group	+
			Self-esteem		+
			Antisocial behavior		Null
Gardner, 2004	N = 12,144 National Educational Longitudinal Survey	Participation in secular activities	On-time graduation	Index: participation in organized religious activities, importance of religious participation to friends, self-reported religiousness	+
			Educational attainment		+
Regnerus & Elder, 2003	N = 9,667 National Longitudinal Study of Adolescent Health	Risk & protective factors ¹	Academic "on-track" performance	Attendance	+
				Importance/salience	Null
				Attended Catholic school	Null
Problem/Risk Behavior Outcomes					
Lillard & Price, 2007	N>70,000 National Longitudinal Survey of Youth (NLSY), Panel Study of Income Dynamics (PSID), and Monitoring the Future (MTF)		Commit property or violent crime	Attendance	+
			Behavior problems		+
			Reading scores		Null
			Substance use		+
			Risky behaviors		+
			Hurt others		Null

NOTE: For studies that examined multiple outcomes, effects are reported by outcome. For studies that examined multiple outcomes and multiple measures of religiosity, effects are reported by outcome and by religiosity measure.

1. In Bolland et al. (2005), risk factors include disruptive events (e.g., Pan factors include child-specific and home-life characteristics. Risk factors include things like absence of biological parent and child learning disability, while protective factors include things like family socioeconomic status and child self-image.
2. Findings for psychological health only significant for Mexican Americans and Asian Americans (not for African Americans). Findings for physical health only for Mexican Americans.
3. Adolescents were assessed on several dimensions of self-reported engagement with six social contexts—peer, academic, athletic, employment, religious and cultural contexts. Youth meeting the Religious Contextual Profile showed commitment to the religious context.

the key explanatory variables include a measure of religiosity. In some studies, religiosity is the sole key explanatory variable (in addition to relevant controls). In others, religiosity is tested as one item in a broader set of factors that can be correlated with religiosity (e.g., social support and participation in secular activities). The outcomes explored in these studies can be divided into three main categories: (1) developmental/psychological, (2) academic/school-related, and (3) risk behaviors/deviance.

In general, the studies that measure religiosity with church attendance and/or participation in organized religious activities, and include only religiosity as the key explanatory factor, find positive associations between religiosity and outcomes in all three categories, developmental/psychological, academic/school-related, and risk behaviors/deviance (see Ball, Armistead, & Austin, 2003; Lillard & Price, 2007; Pedersen & Seidman, 2005). However, the findings become more complicated when studies (1) use alternate measures of religiosity—including importance of religion and other measures of subjective religiosity, (2) simultaneously examine additional key explanatory factors that are likely to be correlated with religiosity, (3) examine multiple measures of religiosity *and* multiple key explanatory factors, or (4) explore gender differences.

In general, the studies that measure religiosity with church attendance and/or participation in organized religious activities, and include only religiosity as the key explanatory factor, find positive associations between religiosity and outcomes in all three categories, developmental/psychological, academic/school-related, and risk behaviors/deviance.

For example, the findings for subjective religiosity are not as straightforward as the findings for church attendance. Among low-income, urban African American females, Ball et al. (2003) find positive associations between church attendance and three outcomes: sexual behavior, self-esteem, and general psychological functioning.⁴ However, subjective religiosity (e.g., importance of religion) and family religiosity have no association with sexual behavior or psychological functioning and mixed associations with self-esteem.

Findings for studies that include multiple measures of religiosity *and* other key explanatory variables—specifically youths' participation in or engagement with secular activities and risk or protective factors—also vary depending on the outcome of interest, the specific measure of religiosity used and the explanatory variables included.

Two studies that examine psychological outcomes (Bolland, Lian, & Formichella, 2005; Vaughn & Roesch, 2003) find positive associations between religiosity and stress-related growth,⁵ depression, and hopelessness. Both studies use subjective measures of religiosity and include relevant risk and protective factors as other key independent variables. However, when Regnerus and Elder (2003) examine the relationship between subjective

⁴ The highest levels of self-esteem are found for youths who attend church a "few times a month" but not "almost every day," suggesting that the relationship may not be linear.

⁵ Stress-related growth is defined as personal growth or development in response to stressful life events.

religiosity and academic outcomes, while also including relevant risk and protective factors, they find no significant association. These findings raise the possibility that the influence of subjective religiosity is outcome-specific for low-income youths.

Pedersen et al. (2005) and Gardner (2004) both find that inclusion of youths' level of participation in secular activities affects the interpretation of religious effects. Notably, Pedersen et al. (2005) perform an empirical analysis that assigns youth into a "contextual profile" based on their engagement with different types of activities. The contextual profiles allow for youths to identify with multiple domains. Youths in the "Strong Religious Connection" domains have more positive psychological outcomes (self-esteem and depression) than those who are "Unengaged" but do not do as well as: (1) youths who associate with other secular domains and (2) youths who associate with multiple domains. Gardner finds that, while religious participation is positively associated with academic outcomes (particularly for low-income youths), the associations between secular involvement and academic outcomes are substantially larger than those between religious involvement and outcomes. These findings suggest that inclusion of measures of secular involvement can affect interpretations of religiosity effects by capturing the simultaneous influences of the multiple domains that youths inhabit. Religiosity models that include secular involvement are therefore likely to prevent overestimates of religiosity effects.

Other nuances to certain findings also highlight gaps in current knowledge about religiosity and youth outcomes. For example, Vaughn and Roesch's (2003) findings apply for Mexican Americans and Asians but not for African Americans, highlighting the need for further examining of racial groups within the low-income population. In addition, while Ball et al. (2003) find that church attendance is positively associated with self-esteem, the highest levels of self-esteem are found among youth who attend church "a few times" a month. Those who said they attend "never" or "almost every day" had the lowest levels of self-esteem. This raises the possibility that the nature of these relationships may not be entirely linear and that religious involvement is most beneficial to youths when incorporated into a broader mix of engagements, activities, and values. However, further analysis about the youths residing in the tails of the religiosity distribution is warranted.

3. Is religiosity a protective factor that moderates the potential negative relationship between high levels of risk exposure and adverse outcomes among low-income youths?

A third set of studies, summarized in Table 4-4, assesses whether religiosity serves as a protective factor by diminishing the potential negative relationship between high levels of risks or stressors and adverse outcomes. In these studies, the dependent or outcome variable is the behavioral or developmental outcome of interest, the key explanatory variables are individual risk factors (or set of factors) that predict adverse outcomes, and religiosity is included as a moderating factor. Outcomes explored in these studies include: (1) developmental/psychological, (2) academic/educational/school-related, (3) risk

behaviors/deviance, and (4) economic/financial, including income or receipt of public assistance as an adult.

Five of the six studies in this third set find that religiosity is a significant moderating factor between risk factors or negative life events—including childhood disadvantage and exposure to high levels of stress, intimate partner violence, community violence, or child maltreatment—and outcomes in each of the four categories described above (see Table 4-4 for more detail). Four of the six studies use multi-item religiosity measures, which combined church attendance and subjective religiosity items. Two studies use only family-level religiosity measures, including parental religious church attendance (Dehejia et al., 2007) and family moral-religious emphasis (Overstreet & Braun, 1999). At least two of the studies develop their measures of religiosity to have increased relevance for low-income, urban, minority youth (described in previous section on “Religiosity Measurement”).

Notably, four of the six studies only find effects for females. Also no studies, for males or females, find religiosity effects for externalizing behaviors (e.g., aggression), which are a more common response to maltreatment among males. The moderating effects of religion between stress and depression, found by Carleton, Esparz, Thaxter, and Grant (2008), only held for youths experiencing moderate to low levels of stress, not those experiencing the highest stress levels. These findings raise the possibility that religiosity moderates the link between exposure to stressors and outcomes differentially for males and females and that its protective power could be more limited for the most highly stressed and/or maltreated youths.

The Overstreet and Braun (1999) findings also warrant further discussion. They find that children who perceived very high achievement expectations *and* a very strong moral-religious emphasis were most at risk for poor academic functioning as exposure to community violence increased. This study identifies another relevant set of questions about how the entire set of family social and religious values interact to influence youth outcomes.

- | |
|---|
| <p>4. When religiosity exerts statistically significant moderating associations between adverse life events/stressors and outcomes, what aspects of religiosity drive these associations?</p> |
|---|

Because of the paucity of studies that address this question for the low-income (and general) population, the literature only rarely mentions the specific mechanisms through which religiosity functions to influence youth outcomes. Only one study of the moderating effects of religiosity between harmful life events/stressors and outcomes provides relevant evidence on this topic.

Table 4-4. Summary of Findings: Religiosity and Behavioral Outcomes (Moderating Effects)

	Sample/Data Source	Risk Factor	Moderating Protective Factors	Outcome Variable(s)	Measure(s) of Religiosity	Effect
Psychological/Development Outcomes						
Carleton et al., 2008	N = 2,100 Convenience/ Geographic	Stress	Religiosity, nonreligious social support	Depression	Religious coping resources	+ ^{f1}
Grant et al., 2000	N = 224 Convenience/ Geographic	Stress	Religiosity, coping strategies, family relationships	Internalizing behaviors	Socioculturally relevant religiosity measures (developed for study)	+ ^f
				Externalizing behaviors		Null
Jones, 2007	N = 71 Convenience/ Geographic	Exposure to Community Violence	Religiosity, nonreligious social support	Posttraumatic stress disorder	Socioculturally relevant religiosity measures (developed for study)	+
Kim, 2008	N~400 Convenience/ Geographic	Child maltreatment	Religiosity	Internalizing behaviors	Index: attendance, importance/salience, ritualistic-prayer	+ ^f
Other Outcomes						
Dehejia et al., 2007	N~1952 NSFH ²	14 child disadvantage measures	Religiosity, parent participation in social organizations	12 life outcome measures (e.g., educational attainment, income as adult, receipt of public assistance, risky behavior, psychological well-being)	Parent religious attendance	+
Overstreet & Braun, 1999	N~45	Exposure to community violence	Family moral-religious emphasis (exposure x family moral-religious emphasis) & family achievement orientation (exposure x family achievement orientation)	Academic functioning	Family moral-religious emphasis	-

1. f = effect significant for females only.

2. NSFH = National Survey of Families and Households

Carleton et al. (2008) perform supplemental analyses to assess whether religious coping resources continue to serve as moderators of the stress-depression link once the effects of other social support coping strategies are removed from the equation. To do this, they controlled statistically⁶ for the effects of social support on religious coping strategies and then re-ran the moderator analysis (in which religiosity was included as a moderator of the stress-depression link). Examining religious coping strategies, net of their social support dimensions, Carleton et al. (2008) find that religiosity no longer has a moderating effect on the relationship between stress and depression.

While the evidence presented here is preliminary and from only one study, it supports the notion that the social support aspects of religiosity may be an important pathway through which religiosity influences youth outcomes.

Research Gaps

While the presence of a relationship between religiosity and various youth outcomes is well-documented in the literature, the existing research leaves gaps in our understanding of how religiosity influences outcomes directly or indirectly, what specific aspects/dimensions of religiosity have the strongest effects, and how these patterns vary depending on the outcome of interest for the low-income population.

Key areas in which there are identified gaps in research targeting the low-income population:

- **Lack of quantitative research on the mediators of the relationship between religiosity and youth outcomes.** Few to no quantitative studies exist that are specific to low-income youths. Also, there is not yet enough use of newly developed quantitative methods and longitudinal data to establish causality.
- **Lack of qualitative/observational work on how specific aspects of religiosity influences youths' lives.** In their preliminary qualitative/interview work, Smith and Denton (2005) identify how challenging it is for youth to articulate how religiosity factors into their lives. Those authors suggest that understanding religiosity's influence on youths' lives requires both self-reported and observational data.
- **Need for additional quantitative analysis testing the specific mechanisms through which religiosity functions,** ensuring proper controls for two main factors that can be correlated with youth religiosity involvement—social support and participation in other secular activities.
- **Only preliminary testing of the interaction effects of religiosity and other developmental/psychological "assets."** Preliminary findings suggest that religiosity can have multiplicative effects when "mixed" with other activities. These multiplicative effects should be confirmed with more empirical evidence and understood in greater depth.

⁶ To control statistically for the effects of social support on religious coping resources, religious coping strategies are regressed on social support-seeking measures. The residuals from this regression (that captured the variance in religious coping strategies not otherwise explained by social support coping strategies) are then included as the religiosity measure in the moderator model.

- **Need for additional subgroup analysis to understand how relationships between religiosity and outcome varies (or does not vary) by religious denomination, gender, and race, and by outcome of interest.**
- **Need for additional studies that employ multidimensional measures of religiosity and more studies that vary both the religiosity measure and the outcome of interest.** because findings from existing research suggest that the religiosity measure-outcome pair influences findings and conclusions.

Another evident gap is our understanding about how religiosity (in particular parent and family religiosity) influences early childhood developmental outcomes. As mentioned previously in this section, this line of work is early in its development—only a handful of studies exist on this topic (including one low-income study). However, the availability of national data sets and the already well-developed set of measures of religiosity (which consider child and parent religiosity and family religious context) provide a promising foundation for future research.

New Research

Two studies discussed in this review provide promising models for future quantitative research. In a 2007 National Bureau of Economic Research Working Paper, Dehejia et al. used longitudinal NSFH data to analyze 14 measures of childhood disadvantage, ranging from familial indicators such as family income, poverty, and parental education; to child-specific characteristics; and 12 outcome measures ranging from child educational attainment and psychological well-being to adult outcomes such as income and receipt of public assistance. They systematically tested each disadvantage-outcome dyad, including measures of participation in religious organizations and participation in social organizations, as two potential moderators. While the study is limited because it does not examine specific dimensions of the moderating effects of religiosity and engagement with social organizations (they find few effects for social organizations), the authors provide a sound research model that eliminates reverse causality issues by using longitudinal data and that systematically examines the moderating effects of religiosity for specific disadvantage-outcome dyads. Future research could replicate this model, including not only participation in religious activities, but all other available NSFH religiosity measures and measures of potential mediating factors in the relationship between religiosity and youth outcomes.

The 2007 study by Lillard and Price provides a fairly comprehensive overview of the various methodologies that can be used to tackle the selection challenges of determining the relationship of religiosity with various youth outcomes. In their study of church attendance and various youth outcomes, Lillard and Price test and compare the same set of outcome and explanatory variables with five different quantitative approaches, including multivariate regression analysis, matching estimators/propensity score matching, fixed effects (individual and family), and instrumental variable techniques. They compile and examine measures from three national youth data sets (National Longitudinal Study of Youth, Panel Study of Income Dynamics and Monitoring the Future) and then compare and contrast

results using the various approaches. While acknowledging the strengths and limitations of the various approaches and the limitation of using only one religiosity measure, Lillard and Price provide a model for the field that can be helpful as the quantitative research seeks to move from the correlational to the causal phase.

Also, the recently initiated National Study of Youth and Religion holds promise as a key data source for future quantitative and qualitative research. This data set simultaneously provides longitudinal data, multiple measures of religiosity, and income and demographic data. In addition to the potential for performing additional quantitative work on the existing data set for low-income survey respondents, there is also the potential to add survey items related to mediating factors that are not currently included in the survey.

Some examples of current studies and centers that have the potential for producing findings specific to low-income youths include current research funded by the Search Institute Center for Spiritual Development in Childhood and Adolescence; the Youth and Religion Project, focusing on the Chicago metropolitan area; and current research by Professor Guerda Nicolas at the University of Miami, focusing on immigrant children and adolescents. Also, the Spirituality and Human Development Program at Tufts University's Institute for Applied Research in Youth Development is performing a mixed-methods study on youths and religiosity/spirituality. This study involves researchers from a wide range of disciplines and employs techniques rarely (if ever) used in the past to study religiosity in youth. For example, through a partnership with Harvard University/Massachusetts General Hospital researchers are performing a brain imaging study that investigates relationships between emotional regulation in the brain and indicators of spiritual practices and positive youth development. While this study is not currently specific to low-income youth, modifications to their data collection to include either income data from a parent or guardian or other relevant economic indicator information would increase the relevance of this study.

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5. RELIGIOSITY AND MENTAL AND PHYSICAL HEALTH OUTCOMES

Overview

Scholars note that after years of separation between religious and medical research, during the past decade, there has been an outpouring of interest in the connections between the two research areas (Koenig, 2008a). Since 2000, the field of religion, spirituality, and health has grown exponentially to include more than 7,000 studies (Koenig, 2008b).

Despite this burgeoning interest and the large number of recent studies, the field exploring the influence of religion/spirituality on health is still a relatively young, developing research area with evolving research measures and methods. There is an increasing number of randomized trials that test the effects of religious practices, such as intercessory prayer (Benson et al., 2006) and faith-based service components, on health outcomes (Johnson, Tompkins, & Webb, 2002). The breadth of this research area spans several health outcomes including:

- mental health (e.g., depression and trauma),
- well-being (e.g., quality of life and happiness),
- physical health (e.g., acute and chronic illness),
- prevention and treatment, and
- use of health care services.

Potential Pathways Affecting Health

There is a range of views about how much religion and spirituality affect health outcomes, and whether and when the effects are positive or negative (Miller & Thoresen, 2003; Pargament, 2008). As discussed in Section 1, there are several potential pathways by which religion can affect health outcomes through individual religious beliefs and practices or through participation in religious institutions.

Individual Beliefs and Practices

At the individual level, religious and spiritual beliefs, prayer, and other religious practices are hypothesized to have direct effects on health behaviors, interactions with health providers, attitudes toward treatment preferences, physical symptoms/illnesses, and recovery from or coping with illnesses. Religious beliefs can also indirectly influence health behaviors by influencing stress levels, which in turn can influence health outcomes. In part because of strong religious beliefs, high frequency of prayer in economically vulnerable populations, and that prayer is considered a free resource, one hypothesis advanced at a

recent research conference is that there will be stronger effects of religious involvement on health outcomes when economic resources are lower.

Organizational Participation

At the organizational level, religious institutions can address health issues both formally, through sermons, prayers for members' health issues, health education, screening programs, individual counseling, and emergency services, and informally, through peer groups. Participants can recommend doctors or screening programs to each other. Religious institutions can offer forums in which health issues can be discussed among religious leadership and worshippers. Specific health practices can be enforced by social networks and norms. Prevention education and screening programs can be offered to worshippers. At times, these programs are extended to include the broader community. Research is beginning to examine how religious institutions address health issues and to evaluate their health education and promotion programs that may or may not contain any religious content (Johnson et al., 2002). Similarly, at a very practical level, the empirical research literature is beginning to gauge the effectiveness of some everyday practices, such as pastoral counseling in hospitals and health clinics that are relevant to patients' religious preferences.

Health Practitioner Perspectives

The interest in the influence of religion on health is due, in part, to the practical implications for service delivery. Some physicians note that the science of medicine is meant to be rational, but the healing of patients is relational and goes beyond the purely scientific realm (Fosarelli, 2008). A holistic view of treatment requires health care providers to be responsible for treating the whole person rather than narrowly defined health problems; holistic providers argue that religion and spirituality, which are important in the lives of many Americans, are dimensions that should be considered when providing health services (Koenig, 2008a). Religious denominations also promulgate specific beliefs about health that could be positive or negative for health practices. On one hand, these beliefs can be useful for providers to understand when addressing medical care issues, including mental health and preventive health behavior, and in formulating treatment plans (Pargament, 2007). On the other hand, some patients may not be comfortable making their preferences known. As Sloan et al. (2000, p. 1915) note, "Many patients regard their religious faith as even more personal and private than their health." While there is disagreement about the extent of religion's influence on health and for which groups, there is also growing recognition that religious and spiritual beliefs are factors that should be considered in studying health behavior and treatment (Miller & Thoresen, 2003).

Data, Methods, and Measures

Several authors describe the limitations of the early phase of literature in this area of research and the recent evolution to more sophisticated data collection and research

designs of new studies, including experimental research designs. Waite and Lehrer (2003, p. 256) note that “many of the early studies in this literature [religion and health] suffer from methodological shortcomings, including small, unrepresentative samples, lack of adequate statistical controls and a cross-sectional design that confounds causality.”

Limited National Data Collection

The shortcomings are due, in part, to limitations in the availability of national data sources with relevant information on religion, spirituality, and health. Nationally representative longitudinal studies that collect detailed health outcomes generally lack information on religious denomination and attendance, let alone more extensive measures of religion and spirituality. Therefore, links between religious beliefs or practices and the prevention or treatment of specific health issues cannot be examined using these national surveys. At the same time, studies that collect detailed measurement of religion rely on convenience samples that can have limited variability in religiosity and/or are too small to detect statistically significant differences. Further, most of the data collection is cross-sectional. The lack of systematic nationally representative longitudinal data collection with both extensive religiosity measures and health assessments (medical test results as well as self-ratings of health) makes drawing generalizable conclusions in this research field particularly challenging (Fagan, 2006).

Findings for the General Population

Several recent literature reviews spanning hundreds of studies point to an overall positive association between religiosity and mental and physical health outcomes (Koenig, McCullough, & Larson, 1999; Koenig, 2008a; Johnson, 2008). There are few studies that report detrimental effects for some aspects of religious beliefs under varying conditions (Williams & Sternthal, 2007). A limitation to these literature reviews is

Several recent literature reviews spanning hundreds of studies point to an overall positive association between religiosity and mental and physical health outcomes.

that the manner in which religiosity and spirituality is measured varies tremendously across studies, making the comparison of effects across studies problematic.

At a recent research conference sponsored by the Heritage Foundation, Child Trends and Baylor University in December 2008, *Religious Practice and Health: What the Research Says*, experts summarized the main research findings in the field. These conclusions, along with the results of recent reviews of religion and health, are summarized subsequently.

- **Mental health:** Koenig (2008a) finds that studies of religious involvement suggest an association with better mental health outcomes by reducing psychological stress, buffering against depression, and speeding recovery from emotional disorders. These positive effects are in part due to religion’s effectiveness as a coping behavior. Johnson’s (2008) recent review also concludes that there is a positive association between religion and lower rates of depression. He finds that 116 studies find positive effects of religion on reducing depression, 43 find null effects, and 4 find

negative effects. Although the effects of various religious dimensions including denomination, individual beliefs, and religious participation on health are overall positive, given the data and methodological limitations, researchers note that these findings are suggestive rather than definitive.

- **Physical health:** Recent reviews summarize that religious involvement is associated with less stress and depression, which in turn can positively affect stress-related medical conditions including cardiovascular disease and high blood pressure (Koenig, 2008a), and can lead to slower AIDS progression (Ironson, 2008). Johnson's (2008) review of religious involvement on decreasing hypertension finds 31 studies showing positive findings, 6 null, and 1 negative. While some authors conclude that these studies show significant positive effects on physical outcomes, other reviews critique the literature review methodologies and do not draw similar conclusions from the empirical literature specifically in the area of physical outcomes such as cardiovascular disease (Sloan & Bagiella, 2002). There are recent studies that suggest the strongest empirical evidence to date appears to be in mortality, with a 64% higher mortality risk for individuals between the ages of 51 and 61 who are nonattenders of church compared to those who attend on a frequent basis (Hummer, 2008).
- **Health services utilization and treatment:** An active area of research identifies whether religious organizations are useful places to provide health screenings, health education, and other types of prevention services. Koenig (2008a) reports that health education programs in churches are associated with positive changes in diet, weight, exercise, and other health behaviors, particularly for minorities and low-income populations because they may have limited access to these services or information through traditional health care providers. Because religion has the potential to play an important role in how patients cope with stress and disease management, research has focused on the role that religiosity plays in making treatment decisions, especially in the case of terminal illnesses. Recent studies find that higher levels of positive religious coping among patients with advanced cancer are associated with a higher probability of receipt of intensive life-prolonging care (Phelps et al., 2009).

Studies Specific to Low-Income Populations

This literature review yielded 23 quantitative research studies and 14 qualitative studies of the role of religiosity on health in low-income populations. Most of the quantitative studies (17) focus on the relationship between religiosity, depression, and other mental health outcomes. One subset of studies that focus on mental health (6) also includes indicators of overall health status and physical health (e.g., self-ratings of asthma or diabetes). Only one study focuses solely on physical health (dental decay). An additional 5 quantitative studies examine the relationship between individual religiosity and use of preventive health services (e.g., mammograms). Of these 5 studies of preventive health services, 3 are part of larger evaluations of cancer awareness education programs.

Cross-Sectional Data Sources

Almost all of the identified research focused on religion and mental and physical health outcomes uses cross-sectional data (i.e., the measures of religiosity are collected only at

one time point). There are a small number of recent evaluation studies of church-based health interventions that collect longitudinal data that measure religiosity at baseline and follow participants' health outcomes over time. The primary focus of these studies is on the role of religion as a main effect on health outcomes. This focus contrasts with some of the other behavioral outcomes studies in this report, in which religiosity is included solely as a control variable.

Diverse Study Populations

None of the identified research studies targeting low-income populations analyze nationally representative data sets. Study populations include both clinical and nonclinical research samples. Both the quantitative and qualitative studies draw on diverse geographical samples ranging from multiple sites in different states to specific low-income neighborhoods. Study samples include patients who are recruited from a range of health delivery settings (e.g., urban hospitals, prenatal clinics, community health centers), have particular diseases or health conditions (e.g., pregnancy, depression, cancer), and/or are members of specific demographic groups (e.g., elderly populations, African American women). The definition of low-income varies among studies and includes individual incomes; residence in a low-income community; participation in means-tested social programs such as Temporary Assistance to Needy Families (TANF), Women, Infants and Children Program (WIC) or Supplemental Security Income (SSI); and/or receipt of services from community-based organizations that serve low-income populations such as the homeless.

Multi-Item Measurement

Surprisingly, religious affiliation is not assessed in most studies. A single-item measure of the frequency of church attendance is a widespread appraisal of religiosity. Distinguishing between organizational and nonorganizational religiosity is common across studies. Many studies include multi-dimensional scales that measure general religious beliefs or the importance of religion in everyday lives. In addition, many studies create religiosity scales by combining responses to multiple questions. The questions included on scales measuring religious beliefs or practices are not specific to a particular religion or to a health outcome. There are some notable exceptions including questions such as, "My religion tells me that Emergency Contraception is morally wrong" and "If God wants me to have cancer, it's His will."

Mediating versus Control Variables

Almost all of the identified quantitative studies use multivariate statistical techniques and control for participants' basic demographic characteristics. Distinguishing between control variables and mediators is inconsistent across studies, however. Although many studies control for social support, there are few studies that formally test the potential mediating

role of social supports and coping mechanisms in order to disentangle the specific direct and indirect effects of religion. Therefore, most studies are inconclusive about whether the effects of religiosity directly affect health outcomes or operate indirectly through other factors such as social supports or greater self-esteem.

Notably, several studies control for variables that are associated with mental and physical health outcomes including functional limitations, disease stage, treatment, and potential sources of stress ranging from domestic abuse to perceived racism. Not all studies include a comprehensive or a consistent set of control variables, which complicates comparison of the effects across studies.

Statistical Techniques and Selection Issues

Addressing the causal ordering of religion and health, researchers are beginning to use more rigorous statistical techniques such as structural equation modeling and simultaneous equations. Using hierarchical linear modeling techniques, investigators are beginning to estimate the differential effects of individual religiosity and community religiosity. An example of community religiosity includes the number of nearby churches in individuals' neighborhoods of residence.

Although these statistical techniques can establish more precise estimates of the direct and indirect effects of religion and spirituality on health and distinguish between the individual versus community effects of religion, these approaches do not eliminate selection bias. Selection issues arise, for example, if some participants go to church because of an underlying motivation to engage in healthy behaviors or they are experiencing a severe or terminal illness. If these health-related motivations to participate in church activities are not measured and are not included in statistical models, the positive effect of religion on health may be overestimated. Notably, one study reduces the scope of estimation error by controlling for several measures of motivation to participate in religious organizations (Franzini, Ribble, & Wingfield, 2005).

Mental Health, Physical Health, and Health Services Outcomes

Similar to the research literature on the general population, the majority of the identified quantitative studies for low-income populations have been undertaken within the last decade. Empirical questions focus on how organizational religiosity, as measured by church attendance and participation in religious social activities, and nonorganizational religiosity, such as religious and spiritual beliefs, rituals, and prayer, are associated with health outcomes in three general areas: mental health, physical health, and use of preventive health services.

Given the diverse samples and measures of religiosity, we summarize the findings for the effects of religiosity on health in the low-income population by these three primary health outcomes (mental health, physical health, and use of preventive health services). The tables

in this section summarize the results for the quantitative studies, and the text highlights the results of quantitative and qualitative studies. We have noted mediating and moderating effects when they have been formally tested in the statistical models.

Findings Specific to the Low-Income Population

- | |
|--|
| <ol style="list-style-type: none">1. Are religiosity and spirituality associated with lower levels of depression and better mental health outcomes among low-income populations? |
|--|

Overall, measures of religiosity and spirituality have significant, positive associations with some or all of the mental health outcomes assessed in 12 out of 17 cross-sectional quantitative studies reviewed. One study finds only statistically insignificant effects of religiosity. There are 4 studies that find a combination of statistically significant negative and statistically insignificant effects. Table 5-1 provides a summary of the 17 quantitative studies of mental health, including a description of the research findings, samples, religiosity measures, and key control variables.

Depression

With the caveat that all the research studies focused on mental health are based on cross-sectional data, the answer to the question of whether religiosity is associated with lower incidence of depression for low-income individuals is a qualified “yes.” In five studies of diverse populations, ranging from cancer patients to single mothers receiving welfare assistance, organizational religiosity, measured by church attendance, is significantly associated with lower rates of

With the caveat that all the identified mental health research studies are based on cross-sectional data, the answer to the question of whether religiosity is associated with lower incidence of depression for low-income individuals is a qualified “yes.”

depression. With the exception of one study, the frequency of prayer, whether measured by a single question or included in a multiple-item scale, is also positively significantly associated with lower rates of depression. The importance of faith is not associated with depression in the one study that measured this concept. For pregnant women receiving prenatal services in two different regions, there are conflicting results of religiosity and spirituality and their association with depression, which suggests site-specific differences in the effects of religiosity for this population.

General Mental Health

In terms of overall ratings of mental health, four out of five studies find a statistically significant positive association between more frequent participation in religious organizational activities (church attendance and other activities in places of worship) and better mental health outcomes. Nonorganizational religiosity, measured by higher levels of individuals’ spiritual and religious beliefs, also has a statistically significant positive association with individuals’ self-reported mental health.

Table 5-1. Summary of Religiosity and Mental Health Findings in the Low-Income Population

Study	Sample	Key Control Variables ¹	Measure of Religiosity ²	Effect
Depression³				
Aranda, 2008	Convenience sample 230 older Latinos in hospital in Los Angeles	Stress, social support, functional limits	Church attendance Prayer	– Null
Jesse & Swanson, 2007	Convenience sample 324 pregnant women at prenatal clinic in the Southeast	Abuse, stress, social support, satisfaction with support	SPS ⁴ JAREL ⁵	+ Null
Jesse et al., 2005	Convenience sample 130 pregnant women at prenatal clinic in the Midwest	Abuse, stress, social support, Medicaid receipt, health risk behaviors	SPS ⁴ JAREL ⁵	Null +
Dyeson, 2000	Convenience sample 286 chronically ill elders receiving home health services in Texas	Health status, financial resources, perceptions of caregiving	Index: prayer, read religious material, watch or listen to religious programs	Direct: Null Indirect: –
Garrison et al., 2004	Convenience sample 131 single mothers, living in rural areas in 8 states who receive public benefits (TANF, WIC, etc.)	Demographics only	Index: strength and support from God, prayer helps me, importance of seeking God's guidance Index: church attendance	– –
Kalil et al., 2001	Random sample of 580 single mothers who are first-time welfare recipients in Maryland	Multiple measures of stressors and social support	Church attendance	–
van Olphen et al., 2003	Random sample of 679 African American women in east side of Detroit	Physical functioning, church social support	Church member Importance of faith Church attendance Prayer	– Null Direct: – Indirect: Null Direct: – Indirect: –
Mental Health Inventory⁶				
Gore et al., 2005	277 men with prostate cancer in free treatment program in CA	Cancer stage, ratings of physical health	FACIT-sp ⁷	+
Romero et al., 2004	Convenience sample 81 women treated for breast cancer at county hospital in Houston	Quality of life, self-forgiving attitude	Rating of how spiritual/religious one considers oneself	+
Friedman et al., 2005	Convenience sample 58 women 40 and over receiving home health care in Texas	None	Belong to church, congregation or religious group and when last active	+
Franzini et al., 2005	Multistage probability sample of 3203 individuals in 13 low-income communities in Houston	Motivation to participate in religious organization, perceived racism, trust, personal opportunity, social support, victimization	Organizational: church attendance, other activities in place of worship Nonorganizational: prayer, importance of religious or spiritual beliefs in daily life and as a source of meaning in life	+ –
Franzini & Fernandez-Esquer, 2004	Subsample of 1,745 Mexican-origin respondents from the sample above	Factors above except motivation	Index: church attendance, other activities in place of worship	Null

(continued)

Table 5-1. Summary of Religiosity and Mental Health Findings in the Low-Income Population (cont.)

Study	Sample	Key Control Variables ¹	Measure of Religiosity ²	Effect
<i>Suicide Attempt</i>				
Meadows et al., 2005	200 African American women who experienced intimate partner violence receiving care at urban hospital	Spousal abuse, protective factors such as social support, self-efficacy, hopefulness	SWBS ⁸ Index of protective factors including spirituality	Null –
Anglin et al., 2005	200 African American women and men seeking medical or psychiatric care at urban hospital	Homeless status, suicide acceptability	RWB subscale ⁹	–
<i>Psychological Distress</i>				
Prado et al., 2004	Convenience sample 252 HIV-positive African American mothers in S. Florida	Stress, social support, coping styles	Index: church attendance, religious and spiritual activities, read religious materials, prayer or meditation	Direct: Null Indirect: –
<i>Psychological Adaptation</i>				
Simoni et al., 2002	Convenience sample 230 African Americans and Puerto Ricans with HIV/AIDS in New York City	Social support, coping strategies	Church membership Church attendance Spirituality Spirituality-based coping ¹⁰	Null Null + +
<i>Post-traumatic Stress Disorder (PTSD)</i>				
Bradley et al., 2005	Convenience sample 134 African American women with history of interpersonal violence receiving care at urban hospital	Coping strategies, self-esteem, abuse, and trauma	Positive religious coping Negative religious coping	Null +

1. Includes independent variables other than basic demographics (race, age, marital status, gender, region)
2. Includes single-item measures unless indicated.
3. Includes multi-item depression scales.
4. SPS = Spirituality Perception Scale—10 items including spirituality measures such as frequency of discussion of spiritual matters and feelings of closeness to God or a higher power.
5. JAREL spirituality scale—3 items including how often attend religious services, how important is religious services, how often would you attend if able.
6. Mental health indicators include: Mental Health Inventory (MHI-5)—emotional well-being, SF-12/36 health-related quality of life (social/family and emotional well-being), MCS = mental component summary.
7. FACIT = Functional Assessment of Chronic Illness Therapy scale—spirituality subscale is a 12-item survey measure including measures such as sense of purpose in life and comfort from spiritual beliefs.
8. SWBS = Spiritual Well-being Scale comprised of 13 attitudes—ranging from spirituality provides sense of hope to prayer.
9. RWB subscale = Religious Well-being—10 items measuring the degree to which individuals report a satisfactory relationship with God.
10. Spirituality-based coping—prayed or other spiritual activities, found new faith, mediated or used relaxation or visualization to solve problem.

Notably, one study that includes measures of both organizational and nonorganizational religiosity points to the potential differential effects of religiosity depending on type of measurement and whether the study sample is drawn from a community or a hospital or clinic setting. In this study, organizational religiosity has a significant positive association with good mental health outcomes while nonorganizational religiosity has a significant negative association (Franzini et al., 2005). In a separate study, these authors find a statistically insignificant association between organizational religiosity and mental health for individuals of Mexican origin (Franzini & Fernandez-Esquer, 2004). Because this study draws on a community sample of residents from low-income neighborhoods rather than a clinical sample, it may be that the effects of religiosity and spirituality are strong and positive for overall mental health when low-income individuals are facing serious health conditions such as cancer or chronic diseases in patient samples, but community samples show weaker effects.

Other Mental Health Outcomes

While the majority of studies focus on the effects of religiosity and spirituality on depression and overall mental health, there are five additional studies that examine other mental health outcomes including suicide attempts, psychological distress and adaptation, and post-traumatic stress disorder (PTSD). Four of these five studies find that religiosity is significantly positively associated with reductions in negative mental health outcomes (suicide attempts and psychological distress) and increases in positive mental health outcomes (psychological adaptation). One study highlights the importance of distinguishing between positive and negative religious coping strategies (Bradley, Schwartz, & Kaslow, 2005). In this study of low-income African American women who experienced intimate partner violence, positive religious coping, measured by an index of respondents' connections with God and the extent of focus on religion instead of problems, is not associated with higher levels of PTSD symptoms. In contrast, negative religious coping, measured by feelings of abandonment by God and questioning the power of God, is associated with increased PTSD symptoms.

Qualitative Research

Qualitative research studies point to the saliency of the emerging positive findings gleaned from the quantitative literature. Several studies that draw on one-on-one interviews, focus groups, and longitudinal ethnography find that organizational religiosity such as church membership, attendance, and social networks as well as individual religious and spiritual beliefs and prayer buoy mental health and increase positive coping with illnesses such as cancer (Collins, Villagran, & Sparks, 2008), chronic illness (Shawler & Logsdon, 2007), and arthritis (Abraído-Lanza, Guier, & Revenson, 1996). Black (1999) finds that elderly African American women living in poverty view their relationship with God as a partnership that

allows them to keep their despair at bay and liberates them from their experiences of economic hardship.

Two studies of economically disadvantaged women find a more nuanced picture of religious coping. These women use religion as a way to understand and cope with illness and disability; however, religion is not viewed as a passive coping strategy when dealing with health issues and interacting with health providers (Abrums, 2000; Parish, Magaha, & Cassiman, 2008). Instead, the women interviewed in these studies consider their strong religious beliefs to be an “active resistance” strategy that helps them positively interact with health care providers even though they perceive providers as having negative stereotypes about their health practices (Abrums, 2000). While these women may not trust health providers, they follow their treatment advice and regimens because they believe that God is operating through them and therefore appropriately handling their health care.

Findings from qualitative studies also highlight the connection religiosity has to individuals’ ability or motivation for problem-solving that improves mental health. One study finds that strong spiritual beliefs in a higher power, especially when they are connected with beliefs about purpose, motivation, and learning from experiences, encourage positive health behaviors and help treat depression symptoms in a sample of inner-city pregnant and parenting teenagers (Shanok & Miller, 2007). Similarly, female child abuse survivors reported that their transition to positive behaviors involved a spiritual connection that allowed them to reframe their negative experiences to focus on what can be learned from them to move beyond them (Hall, 2003).

Although the qualitative studies point to the positive coping of religiosity, there are studies that highlight the complexity of religious beliefs that could act as both positive and negative coping mechanisms affecting mental health. One example includes a study of cancer patients of Mexican origin by Collins et al. (2008). Study participants use prayer to God as an active way to ask for help and gain strength or “luchar (fight)” to deal with their family members’ health problems. However, the study also finds negative religious coping that can lead to feelings of loss of control over the treatment of the disease and the avoidance of treatment information.

Another important issue raised in the qualitative research is that organizational religion is not always available to low-income elderly and nonelderly disabled who are too ill or frail to participate in church. It could be that strong religious beliefs coupled with limited ability to participate in organizational activities negatively influence overall mental health (Shawler & Logsdon, 2008). In sum, although the importance of religious beliefs and coping are confirmed by the qualitative studies, these findings point to the need for more tailored measures of religious beliefs, and the testing of a broader set of mediating pathways in quantitative models in order to disentangle positive and negative effects of religiosity.

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| 2. Are various dimensions of religiosity and spirituality associated with better physical and self-rated health status among low-income populations? |
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The research literature in the area of physical health is not developed enough to draw any general conclusions about the effects for the low-income population. Because there are few studies that examine the relationship between religiosity and any one physical health indicator for the low-income population, the answer to this question is that it is too soon to tell. Table 5-2 highlights this review, which identifies 5 studies of diverse physical health outcomes that include self-ratings of chronic conditions such as asthma, arthritis, hypertension and diabetes, overall rating of health, physical quality of life, and records of dental caries (the number of untreated decayed surfaces on teeth). The findings from these 5 studies show positive, negative and null effects.

The research literature in the area of physical health is not developed enough to draw any general conclusions about the effects for the low-income population.

Complexity of Findings

A comprehensive study of a representative sample of African American women in east Detroit illustrates the complexity of the associations between organizational and nonorganizational religiosity on chronic conditions, disease, and general self-reported health status (van Olphen et al., 2003). This study finds that women who are church members are less likely to report better general health and more likely to report hypertension and diabetes than are women who are not church members. Church membership does not affect the likelihood of self-reported asthma or arthritis. Attending church frequently is associated with higher self-reported general health but is not related to any physical indicators. The importance of faith, an indicator of religiosity deemed important in these qualitative interviews, is associated with lower reported levels of arthritis and asthma, but not with any other indicators of general or physical health conditions. Prayer does not have any statistically significant effects on physical health.

Examining a subsample of the women who are church members, van Olphen et al. (2003) find that church social support partially mediates the direct effects of organizational and nonorganizational religiosity for asthma, arthritis, diabetes and hypertension and for general health outcomes. These results suggest that church social support is a significant pathway by which organizational religiosity can influence church members' physical health.

Two studies find that organizational and nonorganizational religion could potentially work at cross-purposes in terms of influencing physical health outcomes. For the subgroup of African American women who are church members in the van Olphen et al. (2003) study, church attendance decreases the chances of reporting diabetes and hypertension while prayer

increases the probability of reporting these diseases. The findings could reflect reverse causality—individuals who develop these conditions may be more likely to start praying to

Table 5-2. Summary of Religiosity and Physical Health in the Low-Income Population

Study	Sample	Key Control Variables ¹	Dependent Variable	Measure of Religiosity ²	Effect
van Olphen et al., 2003	Random sample of 679 African American women in east side of Detroit	Physical functioning, church social support	Combined measure of asthma and arthritis	Church member Importance of faith Church attendance Prayer	Null – Null Null
van Olphen et al., 2003	Random sample of 679 African American women in east side of Detroit	Physical functioning, church social support	Combined measure of hypertension and diabetes	Church member Importance of faith Church attendance Prayer	+ Null Null Null
van Olphen et al., 2003	Random sample of 679 African American women in east side of Detroit	Physical functioning, church social support	General health	Church member Importance of faith Church attendance Prayer	– + Null Null
Franzini et al., 2005	Multistage probability sample of 3,203 individuals in 13 low-income communities in Houston	Motivation to participate in religious organization, perceived racism, trust, personal opportunity, social support, victimization	General health	Organizational index Nonorganizational index	+ –
Franzini et al., 2005	Multistage probability sample of 3,203 individuals in 13 low-income communities in Houston	Motivation to participate in religious organization, perceived racism, trust, personal opportunity, social support, victimization	Physical QOL ³	Organizational index Nonorganizational index	+ –
Franzini & Fernandez-Esquer, 2004	Subsample of 1,745 Mexican-origin individuals from the sample described above	Foreign born, language, all factors above except motivation	Physical QOL ³ General health	Church attendance, Other activities in place of worship	Null +
Tellez et al., 2006	Random sample of 1,005 African American caregivers with children under 6 in Detroit	Emotional support, availability of services, physical health, contextual indicators	Dental caries ⁴	Religiosity ⁵ Number of churches	– –

1. Includes independent variables other than basic demographics (race, age, marital status, gender, region)

2. Includes single-item measures unless otherwise indicated

3. QOL = quality of life; health-related quality of life indicator, the SF-12—social/family and emotional well-being

4. Untreated decayed surfaces on teeth

5. Very religious, fairly religious, not too religious, not religious at all

cope with them. Similarly, Franzini et al. (2005) find that organizational religiosity is positively associated with self-rated general health and higher physical quality of life, while the nonorganizational religiosity index is negatively associated with both health outcomes. In this study, the divergent effects for organizational and nonorganizational religiosity remain significant despite the inclusion of control variables measuring respondents' motivations for participating in religious organizations.

Community Religiosity

Lastly, a research study conducted by Tellez, Sohn, Burt, and Ismail (2006) points to the importance of considering community religiosity when studying physical health outcomes. These researchers examine dental records of a representative sample of African American caregivers in Detroit and find that after controlling for an array of indicators of health status, social support and access to service providers, the number of churches in respondents' neighborhoods decreases the number of untreated tooth decay problems while individual religious beliefs are not statistically significant. This may be related to findings from the study by Aaron, Levine, and Burstin (2003), discussed in the next section, which indicate that more frequent church attendance is associated with increased likelihood of dental visits. This study also indicates that without appropriately modeling the community and individual effects of religiosity, it is possible that the effects of individual religiosity on physical health outcomes could be overestimated.

3. Are religiosity and spirituality associated with use of preventive health and treatment services such as cancer screening and reproductive health services among low-income populations?

Cancer Screening

Based on the results of four studies, there are no statistically significant direct effects of frequency of church attendance, religious affiliation, general religious beliefs, and specific health-related religious beliefs on cancer screening use, including mammograms and pap smears for low-income women. Notably, one study measures health services such as mammograms and pap smears based on insurance claims data, while the other study uses self-reported measures, and both find a null effect. Table 5-3 highlights these findings.

Based on the results of four studies, there are no statistically significant direct effects of frequency of church attendance, religious affiliation, general religious beliefs, and specific health-related religious beliefs on cancer screening use, including mammograms and pap smears for low-income women.

Although these studies find no significant direct effects of religiosity on the likelihood of receiving cancer screening, one study conducts subgroup analysis and finds that church attendance increases the likelihood of pap smears in at-risk groups in a community sample of low-income African American women (Aaron et al., 2003). At-risk groups include women who are uninsured and who have two or more chronic health conditions. This study does not

control for any potential mediating factors; therefore, church attendance could be a proxy for church-based social support. This study does find a direct effect of religiosity on use of preventive health services other than cancer screening. More frequent church attendance increases the likelihood of dental visits and blood pressure measurement.

Table 5-3. Summary of Religiosity and Cancer Screening and Reproductive Health Findings in the Low-Income Population

Study	Sample	Key Control Variable Constructs ¹	Dependent Variable	Measure of Religiosity ²	Effect
Paskett et al., 1999	Random sample panel of 290 women over 40 in low-income housing in one North Carolina county	Screening in the past year, social organization, moral support, insurance	Breast and cervical-cancer screening (pap smear, mammogram) between time 1 and time 2	Church member Attendance Denomination Five items on religiosity ³	Null effects for all 3 religion measures for both tests
Husaini et al., 2001	Group level intervention study of 364 African American women over 40	Social support, family history, education program, health beliefs, insurance	Mammogram status obtained last year, obtained between wave 1 and 2 and no mammogram	Two-item scale frequency of church attendance and other church activities	Null
Aaron et al., 2003	2196 adults in low-income, African American neighborhood	Comorbid conditions, insurance, regular source of care	Dental visits, blood pressure, pap smear, mammogram	Two-item scale ever attend church and how often	+ + Null Null
Katz et al., 2008	Randomized trial, 851 women over 40 who had not received a mammogram in the past year in a rural county. ROSE project	Treatment, insurance, smoking	Mammogram in the past year (medical record) 12 months after enrollment	Religious affiliation Frequency of church attendance Spirituality ⁴	Null Null Null
Romo et al., 2004	297 Latino women receiving care at two university reproductive health clinics in southeast Texas	Language, foreign born, contraception and birth history	Unwillingness to use emergency contraception (EC)	Roman Catholicism Church attendance Religious morality ⁵	Null Null +

1. Includes independent variables other than basic demographics (race, age, marital status, gender, region).
2. Includes single-item measures unless indicated.
3. Respondents were asked if they agreed or disagreed with the following questions: (1) "If God wants me to have cancer, it's His will"; (2) "God is my doctor"; (3) "God gives doctors wisdom and skill to heal"; (4) "God wants us to help ourselves"; and (5) "I need to be in good health to do God's work."
4. Frequency with which women asked God for help, the proximity of their relationship to God, and the extent to which their life had a religious purpose, were used to assess spirituality.
5. "EC is morally wrong," "my church disapproves," "it is against my religion," "it interferes with God's will."

Cancer Screening Educational Interventions

Although there are only a small number of studies focused on the role of baseline religiosity in preventive and treatment-related health services use among low-income individuals, it is important to note that these studies analyze longitudinal data. This is noteworthy partly because two of the identified studies focus on evaluating the effectiveness of secular educational programs in increasing women's use of breast and cervical cancer screening services over time. These research designs that use random assignment evaluate the effects of the educational intervention and include religiosity measures as control variables because some participants were recruited from churches (Husaini et al., 2001) and because of generally high levels of religiosity in the rural population served by the intervention (Katz, Kauffman, Tatum, & Paskett, 2008). These studies do not examine whether the effects of the intervention differ by participants' levels of religiosity or how the intervention may have changed religiosity levels that would influence participation in cancer screening. One reason for these omissions is the high levels of religiosity of both program and control group participants at baseline. The authors speculate that finding no statistically significant effects of church attendance is likely due to the lack of variation in participants' religiosity.

Reproductive Health

One other study of health care service use focuses on reproductive health services (Romo, Berenson, & Wu, 2004). This study of low-income Latina women receiving family planning services at two health clinics finds that being Catholic and frequently attending church are not associated with women's willingness to use emergency contraception services. However, if Latina women have strong religious views about the morality of emergency contraception, the study finds that they are more unwilling to use these services. These findings demonstrate that it may be that measuring specific religious beliefs about health treatments can disentangle the effects of religiosity from other reasons why patients use services.

Qualitative Research

Although there are only a small number of qualitative research studies that focus on religion and health care treatment and services in the low-income population, these studies highlight the positive role that religion can play in helping families engage in positive health behaviors and treatment regimens. One study of asthma treatment decisions finds that low-income Puerto Rican families use spiritually based folk remedies such as prayer to saints (Espiritismo) during times of stress. These practices supplement medical treatment routines administered to children that are closely managed by parents (Pachter, Cloutier, & Bernstein, 1995). The authors conclude that the spiritual and medical treatments do not interfere with each other.

Also, two studies highlight the positive role that religion can play in comforting economically vulnerable individuals when thinking about end-of-life decisions (Born, Greiner, Sylvia,

Butler, & Ahluwalia, 2004; Tarzian, Neal, & O’Neil, 2005). Religious and spiritual influences are apparent when focus group participants discuss end-of-life decisions, and these beliefs appear to provide positive coping mechanisms. The influence of religious beliefs does not seem to push people in specific directions about their preferred treatments. As Tarzian et al. (2005) note, homeless individuals interviewed appear to have a range of preferences about end-of-life care, and many seem to be “making decisions in the moment and abiding by God’s messages” (p. 41).

One study highlights the potential for positive and negative effects of religion in promoting screening and treatment of sexually transmitted infections (STIs). Lichenstein (2003) reports that in a sample of patients, college students, and community health clinic workers, which included a sizable low-income population, about half reported that religion promoted STI stigma that could create a barrier to treatment, while the other half believed that positive moral messages could help prevention. Patients in the study sample viewed religion as a treatment barrier while community health workers had the opposite view of religion. The differing perspectives about the effects of religion on treatment behavior highlight some of the communication difficulties between providers and patients about religion.

The qualitative research studies also highlight factors that influence treatment decisions that are not generally considered in the quantitative empirical research literature. These factors include family of origin religious beliefs and treatment practices, potential stigma of treatment, the role of folk remedies, and perceived discrimination from health care providers. Adequately controlling for these determinants of health outcomes that are also likely to be correlated with religious beliefs and practices can increase the precision of the estimated associations between religiosity and mental and physical health outcomes.

Research Gaps

Consistent with research conducted on the general population, this initial review of the literature indicates a positive association between organizational and nonorganizational religiosity and mental health outcomes for various subgroups of patients and community members who are economically vulnerable. The research findings do contain important nuances, however. There is some indication that the effects may be stronger for low-income clinical populations that are coping with diseases such as cancer compared with low-income community members. Some studies point to contradictory effects of organizational and nonorganizational religiosity on mental and physical health outcomes. There are a limited number of studies of the effects of religion on overall general and physical health, and the results are inconclusive. Evaluations of secular cancer screening educational interventions convened or promoted by churches do not find that religiosity increases participation in diagnostic tests such as mammograms and pap smears for low-income women.

The literature focused on religion and health is voluminous and spans several outcomes. Going forward, this research area needs to develop large-scale data sets, longitudinal data collection, and more focused measures of religious health practices and religious beliefs. The causal mechanisms and paths that underlie the positive associations between religion and health have not been established. In sum, the literature to date leaves policymakers and practitioners with more questions than answers.

The religion and health research focused on the low-income population is sparse and needs to increase markedly to catch up to the research focused on the general population. Thus, the first gap to address is the lack of research. Specific gaps in the current empirical research for the low-income population include:

- **A lack of national longitudinal data collection** that focuses on detailed measures of behavioral and physical health that includes comprehensive measures of religiosity for diverse religious groups, as well as preferences for religious or spiritually based health services.
- **Inadequate measures of spirituality or religious beliefs and religious practices from diverse religions that are specific to health.** Most measures focus on individuals' religiosity in general and do not include religious practices from diverse religions. Religious measures are also not specific to economically vulnerable groups, such as barriers to church participation due to limited resources, stigma, or lack of churches in poor neighborhoods.
- **Inconsistent distinctions between private or nonorganizational religiosity compared to public or organizational religiosity.** Preliminary results show some indication that organizational religiosity may affect health outcomes differently compared with nonorganizational religiosity. These differences should be tested systematically.
- **A lack of research on the effects of religiosity and spirituality on physical health, treatment, and use of health services.** Most of the studies of physical health in the low-income population are based on self-ratings of health conditions without measures of provider assessments, biological markers, or diagnostic tests. It is unclear whether patients with higher levels of religiosity respond to treatments or take up services differently compared with less religious patients. When possible, studies of patients' services utilization should be linked to insurance claims data.
- **Inconsistent testing of mediating pathways between religion and health and a lack of consistent set of control variables.** It is unclear whether the effects of religiosity operate directly on health outcomes or indirectly through various mechanisms including increased social networks or peer effects or physiological processes. None of the studies in the low-income population controlled for secular activities that may influence health.
- **A lack of systematic analysis of whether religiosity has any buffering effects or operates differently for particular subgroups.** There are a limited number of studies that examine differences in the effects by demographics and economic resources. Few studies examine whether religiosity exerts different effects depending on health status, acute and chronic conditions, and health insurance.

- **Limited research designs that do not go beyond establishing correlations.** Addressing selection issues and motivation to participate in religious activities has not been adequately addressed.
- **A limited number of qualitative research studies** focusing on religious and spiritual attitudes about health practices and how these practices and attitudes affect health behavior and interactions with health care providers.
- **A lack of any experimental studies** of programs that use religious messaging or curricula to improve health outcomes.
- **Limited research on community religiosity** and how attitudes and access to religious organizations affect individual health behaviors.

New Research

Several scholars note the lack of a national census of religious participation that includes indicators of economic, health, and family well-being (Fagan, 2006). Although there are several nationally representative data sets that include extensive measures of family income and health outcomes (e.g., National Longitudinal Survey of Youth, Panel Study of Income Dynamics, Health and Retirement Study, National Longitudinal Study of Adolescent Health), few include detailed measures of religiosity beyond affiliation and church attendance. Secondary data analysis of these existing data sets to establish baseline religiosity effects on health across income groups is an important first step in this research area.

There are several new studies currently under way that will begin to address knowledge gaps, although it is unclear to what extent they will focus on low-income populations. The John Templeton Foundation recently funded seven new studies that will begin to address several limitations of this literature. These studies focus on delineating the pathways of effects between religion and mental and physical health outcomes for a diverse set of racial and ethnic groups. One study described in Section 6 (Substance Use) focuses on the low-income population. Some of the study populations may contain sufficient sample sizes to examine whether religiosity is associated with differential health effects depending on income levels. For example, one grantee will add a new group of respondents of Mexican origin to an existing longitudinal survey (Religion, Aging and Health Survey) that consists of 1,500 white and African American U.S. elderly individuals. This new data set will be an important source for studies of the effects of religiosity on health by income group in a nationally representative and racially and ethnically diverse sample of elderly Americans.

Lastly, there are several evaluations of church-based health promotion programs under way across the country. Many of these programs target underserved populations that are likely to live in low-income communities. In addition to examining the effectiveness of the educational programs, researchers should examine the extent to which individual religiosity, participation in religious institutions, and community religiosity influence program effects positively or negatively, and the extent to which the effects differ by the economic resources of program participants. Disentangling individual religiosity effects from the educational

program effects can help improve the tailoring of health-related messages as well as the target groups served.

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6. SUBSTANCE USE

Overview

The literature has explored the relationship between religiosity and substance use (alcohol, drugs, and cigarettes) for several years; however, a well-defined body of knowledge on the influence of religiosity and spirituality on substance use has just been developed within the past decade (Chitwood, Weiss, & Leukefeld, 2008). The number of empirical articles examining this relationship has been relatively modest compared with the number of empirical articles exploring religiosity and other topic areas (Chitwood et al., 2008). The federal faith and community-based policy initiative over the past decade encouraged an increase in research on religiosity and substance use. More recently, two literature reviews have been conducted that take stock of research findings, gaps in knowledge, methodological challenges, and areas requiring future and further study (Chitwood et al., 2008; Geppert, Bogenschutz, & Miller, 2007).

Potential Pathways Affecting Substance Use

There have been several pathways hypothesized to explain the ways in which religiosity directly or indirectly influences substance use outcomes (Wills, Yager, & Sandy, 2003).

Direct Effects

The direct effect of religiosity on substance use can occur as a result of specific religious denominations' behavioral sanctions that discourage substance use. For example, a high proportion of individuals who are Seventh Day Adventists or Mormon rate the teachings of their religions as strongly discouraging drinking alcohol (Michalak, Trocki, & Bond, 2007). As a result, it is hypothesized that the first use of alcohol and drugs may happen at later ages. However, because these sanctions are concentrated within specific denominations that represent a small proportion of individuals in the United States, it is possible that the effects of religious denomination may not be demonstrated in studies of the general population.

Indirect Effects—Psychological Domain

Another strand of research suggests that individual religious beliefs and attitudes operate by impacting multiple psychological domains that can indirectly influence substance use outcomes (Wills et al., 2003). For example, religiosity can indirectly influence substance using behaviors by generally encouraging healthy lifestyles and acknowledging the need for treatment, which in turn could decrease substance use.

Indirect Effects—Peer and Community

From a social network perspective, higher levels of religiosity may be associated with an individual's network of religious peers, and the larger community through participation in social and service activities, which could decrease the probability of substance abuse

(Wallace & Williams, 1997). Religious adolescents could have more conventional friends, as well as strong bonds to people and institutions known to reduce drug use. Similarly, religiosity is hypothesized to help adolescents avoid drug use when they live in high-poverty neighborhoods by enhancing self-control, deference to authority, and adherence to rules and laws (Hill & McCullough, 2008; Welch, Tittle, & Grasmick, 2006).

Data, Methods, and Measures

Despite the growing research exploring the role of religiosity in substance use, the conceptualization and measurement of religiosity is not standardized in research studies (Chitwood et al., 2008). Although the same measures are not used systematically, a recent systematic review of literature on religiosity and substance use finds that there are eight common dimensions of religiosity/spirituality that have been used in studies examining substance abuse (Chitwood et al., 2008). These dimensions include:

- **Organizational religiosity** refers to participation in formal religious activities requiring some level of social interaction with other persons. Attendance at religious services is the item that was used most frequently to operationalize organizational religiosity.
- **Religious affiliation** refers to identification with a particular religious group.
- **Subjective religiosity** refers to an internal evaluation or self-ranking of individual religiousness. Questions that ask respondents to report how religious they consider themselves or how important religion is in their lives are frequently used to operationalize subjective religiosity.
- **Religious belief** refers to the adherence to and/or respect for specific religious teachings, principles, and rituals. Questions that ask respondents about their belief in God or their belief in life after death are examples of how this construct can be operationalized.
- **Religious coping** refers to religious behaviors and activities in which people engage to cope with stress or difficult life situations.
- **Spirituality** refers to an overarching concept that includes religion but may be operationalized in measures that are conceptually distinct from religiosity. Questions that ask respondents about their personal quest for understanding answers to ultimate questions about life, about meaning, and about relationship to the sacred or transcendent are examples of how this construct can be operationalized.
- **Multidimensional religiosity** refers to combined indicators of two or more dimensions into a single multidimensional measure of religiosity.

The majority of studies include one dimension of religiosity in their analyses, and the most prevalent of these dimensions are organizational religiosity, religious affiliation, subjective religiosity, and religious belief.

Cross-Sectional Research

The majority of research on religiosity and substance use involves cross-sectional data. In fact, a systematic review conducted by Chitwood and colleagues (2008) found that 80% of studies examining substance use and religiosity were cross-sectional. Researchers in this area have called for more studies to make use of longitudinal designs that capture the changing nature of religiosity and inform the field how religiosity/spirituality processes may help alleviate substance use (Weiss, Chitwood, & Sanchez, 2008). Unfortunately, studies that employ longitudinal designs are few in number.

Limited Use of National Data

There are a variety of data sources used in studies that explore the role of religiosity in substance use. A review of the literature suggests that there are a number of studies using either primary data collected from local communities or data from nationally representative samples. One of the potential challenges in using a survey designed to obtain data from a nationally representative sample is that it may have a limited number of religiosity and substance use variables. Examples of national data sets with measures of both include the National Youth Survey, the National Survey on Drug Use and Health, Monitoring the Future Survey, National Longitudinal Survey of Adolescent Health, and the National Survey of Children. Many of the methodological problems that exist in research exploring the relationship between religiosity and behavioral outcomes are detailed in Section 1.

Findings for the General Population

Recent literature reviews in the area of religiosity/spirituality and substance use find an inverse relationship between religiosity and substance use – i.e., highly religious people are less likely to use drugs and alcohol (Geppert et al., 2007). Studies of adolescents find that both organizational/public and individual/private religiosity are associated with lower levels of drug use, alcohol consumption, and cigarette smoking (Rew & Wong, 2006). Some studies suggest the importance of examining the differences in types of religiosity and their effects on different types of substance use behaviors. For example, Nonnemaker, McNeely, and Blum (2003) find that private religiosity is associated with less experimental behavior in substance use while participating in organizational religiosity has a larger association with regular use.

Multiple studies point to moderating effects of race and culture, suggesting that racial and cultural differences in religiosity may help account for differences in substance use (Wallace, Brown, Bachman, & Laveist, 2003). However, the studies examining race, culture, religiosity, and substance use do not find consistent effects. For example, Wallace et al. (2003) find that higher rates of religiosity are more prevalent among African Americans but the positive effects of religiosity are stronger for whites (Wallace et al., 2003). Another study examining American Indian culture, religiosity, and substance abuse suggests that

religious affiliation is associated with fewer alcoholism symptoms compared with no religious affiliation (Yu & Stiffman, 2007).

Overwhelmingly, the role of religiosity in the use of alcohol has been studied more often than has the use of all other drugs combined. Chitwood and colleagues (2008) find that “most studies that contain measures of religiosity/spirituality are primarily epidemiological in orientation and concentrate on the identification of risk factors for substance use” (p. 673).

Studies Specific to Low-Income Populations

Using the methodology detailed in Section 1, we identified 10 studies that explore the role of religiosity/spirituality and substance use in low-income populations. Of these studies, 9 are quantitative, and 1 is qualitative. The identified studies have been published since 2000 with the majority of them published within the last four years. The main outcomes of interest in the identified studies include smoking and substance use in pregnancy, treatment-seeking behaviors, drug use among adolescents and young adults, smoking abstinence, alcohol and drug addiction severity, alcohol intoxication, drug use and reuse of drug paraphernalia among addicted populations, and protective factors used to avoid the initiation of drug use.

Of the 10 studies included in the current review, each has a unique definition for low-income status and uses different measures of assessment for religiosity, making comparisons across studies challenging.

In two of the studies, there is no information provided about how low-income status is determined. In these cases, the authors indicate that the samples are low-income and recruited from an urban setting. The majority of studies define low-income status based on the type of housing or the communities in which the sample resided.

Three of these studies used multidimensional religiosity scales to assess religiosity whereas the remaining seven studies use one-, two-, or three-item measurements of religiosity, primarily assessing organizational (church attendance) and subjective religiosity (how important religion is to the participant) dimensions. The multidimensional scales include the spirituality perspective scale, which is designed to capture spiritual views; the spiritual well-being scale, which provides an overall measure of the perception of spiritual quality of life; and the spiritual involvement and beliefs scale, which assesses both spiritual and religious practices and beliefs across a wide variety of religious/spiritual traditions. The majority of quantitative studies use either single-item measures of religiosity or two and three items relating to religiosity that are analyzed and reported individually in the findings. Church attendance is the most prevalent single-item measure of religiosity.

Three of the studies included in this topical review used data from a nationally representative sample of the population. These data are derived from the National Youth Survey, the Survey of Inner-City Black Youth, and Welfare, Children and Families. The data from the latter two sources focus on low-income populations. The study that used data from the National Youth Survey limited the data and analysis to a population of poor urban youth. The remaining studies used local data from convenience samples.

Findings Specific to the Low-Income Population

- | |
|---|
| 1. Does religiosity/spirituality exert a protective effect reducing substance use outcomes? |
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Table 6-1 highlights the findings from the eight studies that conducted analyses exploring the effects of religiosity or spirituality on substance use outcomes. Overall, findings from these eight studies are mixed; therefore, there is not enough evidence to draw conclusions about the direction of the effects of religiosity on substance use in the low-income population.

Three of the studies find that religiosity/spirituality have a positive or protective effect on reducing substance use outcomes. In the Sanchez et al. (2008) study, religiosity is viewed as having an important role in primary prevention. One group of study participants indicated that religiosity is the primary way that they keep away from initiating drug use, whereas others attributed religiosity as a secondary or tertiary protective factor. This group of study participants believed that religion helped them to quit using drugs or contributed to a drastic reduction in substance use. The second study (Johnson, 2008) provides empirical support for how harmful environmental influences can be lessened by a youth's individual religious commitment. The third study (Hill & McCullough, 2008) finds that religious involvement protects adherents from high levels of intoxication. In fact, not only does religious attendance lead to a lower level of intoxication among low-income urban women, religious attendance is also associated with a sustained lower level of intoxication for 2 years.

Overall, findings from these eight studies are mixed; therefore, there is not enough evidence to draw conclusions about the direction of the effects of religiosity on substance use in the low-income population.

Two of the studies find no statistically significant positive or protective impact for religiosity/spirituality on substance use outcomes. However, one of these studies (Weiss et al., 2008) examines multiple substance use outcomes and reveals inconclusive findings for one of the three outcomes.

Table 6-1. Associations between Religiosity and Substance Use Outcomes

Substance Use Outcomes	Association with Religiosity
<i>Positive or Protective Association</i>	
Prevention of initial use of drugs (Sanchez et al., 2008)	Religiosity is the second protective factor most cited by study participants.
Adolescent use of illicit drugs (Johnson, 2008)	Individual religious commitment reduces the effects of perceived neighborhood disorder on adolescent use of illicit drugs. The beneficial effect of individual religious commitment is independent of social and family bonding variables. The beneficial effect of individual religious commitment on teen drug use becomes stronger the older a teenager gets. Religiously committed adolescents from bad neighborhood are less likely to use illicit drugs than those with low levels of religious commitment from good neighborhoods.
Level of intoxication (Hill & McCullough, 2008)	Religious involvement is associated with lower levels of intoxication and lower levels of sustained intoxication over 2 years among low-income women
<i>No statistically significant association</i>	
Alcohol and drug addiction severity (Arevalo et al., 2008)	The association between spirituality and alcohol and drug addiction severity is not significant.
Heavy drinking (Weiss et al., 2008)	Religious intentionality (measured by how strongly beliefs of religious group influences behavior) worship attendance and religious self-perception are unrelated to heavy drinking.
Heavy crack use (Weiss et al., 2008)	Religious intentionality, worship attendance, and religious self-perception are unrelated to heavy crack use.
<i>Inconclusive findings</i>	
Alcohol and hard drug use (Schensul & Burkholder, 2005)	Lower religiosity is associated with more frequent alcohol use, and higher religiosity is associated with more frequent hard drug use.
Drug use and drug selling (Johnson et al., 2000)	Church attendance is associated with decreased drug use and drug selling; however, religiosity is not associated with drug use and drug selling.
Smoking and substance use during pregnancy (Jesse et al., 2006)	Women with low levels of religiosity are more likely to smoke during pregnancy; however, the association between religiosity and substance use during pregnancy is not significant.
Reuse of needles/syringes (Weiss et al., 2008)	Religious intentionality is significantly associated with reuse of needles/syringes among heroin injectors, but worship attendance and religious self-perception are unrelated to reuse of needles/syringes.

Inconclusive findings are revealed in four studies. Religiosity has both a buffering and risk-enhancing effect, and a positive and null effect on substance use in these studies. In the Schensul & Burkholder (2005) study, religiosity protects against alcohol use but enhances

risk in the use of hard drugs. Research conducted by Johnson, Larson, Li, and Lang (2000) finds a positive association between church attendance and decreased drug use and drug selling; however, when the same study explores religious salience, it finds that this construct is not associated with drug use and drug selling. Similarly, Jesse, Graham, and Swanson (2006) find that low levels of religiosity are associated with an increased likelihood of smoking during pregnancy; however, the association between religiosity and substance use during pregnancy is not significant. The last study (Weiss et al., 2008) finds that heroin injectors who reported that the beliefs of their religious groups strongly influenced their behaviors were protected from increased reuse of needles/syringes. Worship attendance and religious self-perception are not related to reuse of needles, and none of the religious dimensions used in this study (religious intentionality, worship attendance, and religious self-perception) are related to other substance use behaviors common to heroin injectors, such as heavy alcohol use and daily crack use.

2. What role does religiosity play in drug use interventions or drug treatment?

Two studies explored the role of religiosity within the context of a drug use intervention and drug use treatment paradigm. One study focuses on the role of religiosity on a smoking cessation intervention, and the second study focuses on religiosity and seeking drug use treatment (see Table 6-2). Religiosity does not predict or mediate the relationship between the smoking cessation intervention and actual smoking cessation. Religiosity was more positively associated with seeking drug treatment. The Spence, Wallisch, & Smith (2007) research focused on Hispanic residents living in the U.S./Mexican border area. One community, termed colonias, has a deficit of protective factors compared with other border communities in terms of having a lower socioeconomic status and lacking community institutions. Despite the general deficits in protective factors, religiosity appeared to be an important factor in acknowledging the need for and seeking drug treatment.

Table 6-2. Effects of the Importance of Religiosity on Drug Treatment

Substance Use Outcome	Role of religiosity
<i>Drug Use Intervention</i>	
Smoking cessation (Andrews et al., 2007)	Religiosity does not predict or mediate the relationship between the intervention and smoking cessation.
<i>Drug Use Treatment</i>	
Drug treatment seeking behaviors (Spence et al., 2007)	In socially isolated rural communities, higher religiosity is related to greater drug treatment seeking.
Severity of need for drug treatment (Spence et al., 2007)	In socially isolated rural communities, low religiosity is related to greater severity of need for drug treatment.

Research Gaps

Based on this review, we have identified several gaps in the current research literature on religion and substance use focused on low-income populations:

- **Limited research on service needs and drug treatment seeking behaviors among residents in socially isolated rural areas.** Religiosity may play a facilitative role in encouraging residents who are in need to seek treatment. This may be particularly helpful for ethnic and linguistic minority populations, who for cultural, economic and legal status issues may be socially isolated and not seek treatment when needed.
- **A lack of qualitative or mixed-method (both qualitative and quantitative) studies.** Using qualitative methodology permits for a more in-depth investigation of how religiosity may play a role in substance abuse prevention or treatment among low-income populations. This gap in research is highlighted in the work of Sanchez and colleagues (2008). They indicate that further studies are needed to understand the protective role of religiosity and whether religiosity acts by itself or indirectly through the influence of other factors.
- **Limited number of longitudinal studies focused on low-income populations.** Such studies are needed to determine when in the developmental process prevention and intervention programs should be implemented and/or which programs may lead to sustained behavior change.
- **A lack of studies that focus specifically on low-income populations and the role of individual-level religiosity/spirituality.** A first step includes analyzing the existing data sets and testing for income differences in the effects of religiosity on various substance use outcomes for adults and adolescents.
- **A lack of detail in research studies on how low-income is defined.**
- **A lack of program evaluations for low-income populations that assess the baseline levels of participants' individual religiosity to examine how program components may impact outcomes, including changes in participants' levels of individual religiosity.**

New Research

Table 6-3 highlights examples of three studies that are currently under way that fill in some of the research gaps in this literature for religiosity and substance use among low-income populations. One identified gap is the need to increase the number of qualitative or mixed-method studies so that a deeper understanding of how religiosity impacts substance use outcomes in low-income populations can be gained. The current research led by Gais and Arria begins to address these issues. Other gaps include the need for more research on ethnic and linguistic minority populations, particularly those residing in rural communities, and the need for more longitudinal studies to inform treatment providers on which types of strategies work best for particular populations and which strategies support sustained behavior change. New research being conducted by Janette Beals focusing on rural Indian reservation populations and that of Elizabeth Robinson that employs a longitudinal research design to examine the roles that spirituality and religiosity may play in recovery are examples of

how research is beginning to fill the gaps on rural populations and the lack of spirituality measurement.

Table 6-3. Examples of New Research Studies

Study	Research Focus
<p>Understanding the comparative effectiveness of faith-based and secular social service organizations</p> <p>Principal Investigators (PIs): Thomas Gais and Amelia Arria</p>	<p>Funded by foundation and federal grants, this is a two-phase study designed to understand whether and how religiosity in substance abuse treatment programs increases, decreases, or has no impact on the effectiveness of such programs in treating low-income patients with substance abuse problems. An important contribution of this research is that the study uses an experimental research design including random assignment to assess overall treatment effectiveness. In addition, this study will examine the individual level of religiosity among clients and the impact on client outcomes. This study is an example of a mixed-method study using both qualitative and quantitative data.</p>
<p>Chronic stressors and drug abuse in two Indian populations</p> <p>PI: Janette Beals</p>	<p>Drug use has been documented among low-income American Indian reservation populations with American Indian youth reporting greater use of drugs and tobacco than many others in the United States. New research funded by the National Institute on Drug Abuse seeks to understand the relationship between chronic stressors and drug use among American Indian populations. It will also examine the role of personal resources such as spirituality in understanding this relationship.</p>
<p>Long-term spiritual changes in recovery from alcoholism</p> <p>PI: Elizabeth Robinson</p>	<p>This ongoing study funded by the National Institute on Alcohol Abuse and Alcoholism is designed to better characterize the dimensions and relevance of changes in spirituality that may occur over the 3 years following treatment entry for alcohol dependence. The significance of this new research is that it will provide a greater understanding of the roles that spirituality and religiosity may play in recovery. This work will inform future research on spirituality's role in recovery, the types of spiritual and religious change that may occur in recovery, the variations in rates of change, and identification of those for whom spiritual change may be important.</p>

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7. CRIME AND VIOLENCE

Overview

The effect of religion on crime has been documented in research for the past century and continues to be explored in current times (Baier & Wright, 2001; Hirschi & Stark, 1969; Lombroso, 1911; Rohrbaugh & Jessor, 1975). According to Baier and Wright (2001), from 1969 to 1998, social scientists produced an average of two studies per year that estimated the effect of religion on crime. Since 2002, there has been a marked increase in the number of research studies in this area. Johnson (2008a) examines studies conducted between 2002 and 2008 and classifies 134 studies that find beneficial effects of religion on rates of delinquency, 19 that find null effects, and 2 that find harmful effects. While most of the research in this area has documented correlations between religion and crime, in recent years, the studies exploring the relationship between religion and crime have started to use more rigorous statistical techniques to identify causal paths.

Potential Pathways Affecting Crime and Violent Behavior

Several theoretical perspectives provide a basis for viewing religiosity as a deterrent for crime. The potential pathways of effects of religiosity on crime and violence have been reviewed by Baier and Wright (2001) in their meta-analysis of the effect of religion on crime. These include:

- **The “hellfire” hypothesis**, which predicts that religion deters individual-level criminal behavior through the threat of supernatural sanctions and promotes normative behavior through the promise of supernatural reward (Hirschi & Stark, 1969).
- **Social control theory**, which posits that religious institutions instill normative beliefs and foster individual attachment, commitment, and involvement with the larger society (Hirschi & Stark, 1969; Marcos, Bahr, & Johnson, 1986).
- **Rational choice theory**, which asserts that religious individuals are deterred from committing criminal acts through shame from deviant acts and self-imposed sanctions on behavior (Grasmick, Bursik, & Cochran, 1991).
- **Differential association theory**, which emphasizes that religion deters crime through both social selection (the selection of peers with similar beliefs) and socialization (religious peer influence alters individual commitments through positive reinforcement) (Burkett & Warren, 1987; Burkett, 1993; Wright et al., 1999).
- **Reference group theory**, which suggests that religion deters crime through the interaction with a religiously centered peer group that shares similar prosocial backgrounds and beliefs and shapes each other’s behaviors and attitudes (Bock, Cochran, & Beeghley, 1987).

Data, Methods, and Measures

Although a small number of studies use longitudinal data, cross-sectional convenience samples are the most prevalent. Recent studies are beginning to use nationally representative data sets such as the National Education Longitudinal Study of 1988 and the National Longitudinal Study of Adolescent Health. Recent research has linked county-level data on current and historical religiosity and crime rates to explore the relationship between community religious membership and frequency of criminal acts such as murder, rape, larceny, and assault (Heaton, 2006).

The majority of studies on religion and crime use quantitative research or mixed methods that include both a quantitative and qualitative component. Most of these studies do not pay adequate attention to the direct and indirect effects of religiosity on crime and do not use random sampling or multiple indicators to control for measurement errors (Johnson, Larson, McCullough, 2000a). Recent research papers improve on these methods by testing causal models of the direct and indirect effects of religiosity as a protective or a risk factor (Jang & Johnson, 2008) as well as addressing selection issues using an instrumental variables approach (Heaton, 2006).

Religious measures have been used in a variety of ways in research exploring crime and religion. The number of factors used to measure religion is also important. In a systematic review of the religiosity and delinquency literature, Johnson and colleagues (2000) found that the majority of studies measure religiosity with a single-item measure, and this item is usually church attendance. When considering the dimensions of religious measures, six categories are typically used. These include:

- **Attendance**—how often participants attend religious services;
- **Salience**—the importance of religion in participants' lives;
- **Denomination**—denominational affiliation of the participants;
- **Prayer**—the degree to which participants indicate that prayer is an active or meaningful part of their lives;
- **Bible study**—the tendency to participate in the independent study of sacred texts; and
- **Religious activities**—participation in religious activities both in and out of typical church settings.

Findings for the General Population

Since Hirschi and Stark's (1969) landmark study, which finds a nondeterrent effect of religion on delinquency, several studies have explored the association between religion and crime and have generated inconsistent findings. More recently, researchers have conducted two reviews that examine the relationship between religiosity and crime and offer methodological explanations for the mixed results.

Systematic Reviews of the Religiosity and Delinquency Literature

A systematic review of 40 religiosity and juvenile delinquency studies conducted by Johnson and colleagues (2000a) concludes that many studies do not explore the role of religiosity in explaining and understanding delinquency. The authors posit that the ways in which religiosity is measured may explain some of the inconsistent findings in research. For example, studies that use multiple indicators to measure religiosity and studies that make a decision to use religiosity measures based on their reliability tests tend to find that religion consistently has a deterrent effect on delinquency. In contrast, studies that do not use multiple indicators of religiosity and do not administer reliability tests for multi-item measures of religiosity typically find inconsistent effects for the deterrent role of religion on delinquency. Overall, this review concludes that religion has a negative association with delinquency, and with improvement in measurement as well as analytic methods, there should be more consistent empirical results that support this perspective.

Baier and Wright (2001) systematically review the findings of 60 studies about the effect of religion on crime. This review provides additional possibilities for understanding why inconsistent findings exist. The authors assert that (1) studies using religiously based samples tend to produce significantly stronger deterrent effects for religion, (2) studies examining nonviolent crime tend to show stronger deterrent effects, and (3) studies using small sample sizes and more racially diverse samples tend to show stronger deterrent effects. This meta-analysis finds evidence for a moderately strong deterrent effect of religion on crime. Similar to Johnson and colleagues' review, this study concludes that a better understanding of the impact of research methodologies on outcomes will increase the quality and consistency of future research in this area.

Studies Specific to Low-Income Populations

Following the methodology detailed in Section 1, we identified four quantitative and one mixed-methods (quantitative and qualitative) research study that explores crime and violence and the role that religiosity/spirituality plays in the lives of the low-income population.

Single-Item Measurement

Similar to the studies that focus on the general population, the majority of the five studies are cross-sectional and the measurement of religiosity varies by study. Two of these studies view religiosity from a one-dimensional perspective, with church attendance as the sole measure of religiosity. The other three studies include a two-item measure of religiosity. In one, church attendance is included along with a measure of how close one feels to God; in another, church attendance is included with the importance of religion in one's life; and in the third study, church attendance is included along with a measure of church membership. While the latter three studies use a two-item measure of religiosity, they do not combine

the items to produce an overall score; rather they analyze data separately for each item. These findings of one-dimensional measurement are consistent with those from the systematic review of religiosity and delinquency conducted by Johnson and colleagues (2000a).

Outcomes of Interest

In the four quantitative studies included in this review, the outcomes of interest vary considerably. They range from delinquent behaviors as measured by a total of 19 items relating to personal, property, and illegal service offenses that have been combined into a single scale of general crime, to engagement in child maltreatment behaviors, to the intentions to use violence and lastly to involvement in any nondrug illegal activities. The mixed-methods study uses self-reported adult crime and incarceration data as the crime outcomes of interest. The majority of the studies in this topical review use primary data or local secondary data. To understand unemployment among American black youths living in inner-city poverty tracts, Johnson et al. (2000b) use the Survey of Inner-City Black Youth. This survey was administered in 1979 and 1980 to black males aged 16–24 living in Boston, Chicago, and Philadelphia. The Johnson (2008b) study used a subsample from the National Youth Survey of youths who reside in disordered neighborhoods. This survey is a longitudinal study of a national probability sample of youths designed to examine the entire range of self-reported norm-violating behavior for which youths could be arrested.

Statistical Techniques

While cross-sectional studies flourish among research examining religiosity and crime, they are limited and cannot establish a causal relationship between variables. Researchers are beginning to move beyond cross-sectional studies to the use of longitudinal studies and more rigorous statistical techniques such as formulating growth curve trajectories and using multilevel analysis. While these techniques can improve the precision of the estimates of religiosity, they do not address the selection issues inherent in conducting religiosity research discussed in Section 1.

Findings Specific to the Low-Income Population

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| 1. Does church attendance influence crime and violence? |
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Research with general populations tends to emphasize religiosity as a deterrent to crime and violence. Not surprisingly, the empirical questions found in the body of research focused on the role of religiosity in low-income populations are similar to research with the general population.

Table 7-1 highlights the findings for church attendance on crime outcomes from the five studies. The findings from two studies indicate that there are positive effects of frequent church attendance on crime and violence outcomes for low-income youth, but the effects of church attendance on crime and violence are mixed for low-income adults in three studies.

The findings from two studies indicate that there are positive effects of frequent church attendance on crime and violence outcomes for low-income youth, but the effects of church attendance on crime and violence are mixed for low-income adults in three studies.

Table 7-1. Relationship between Church Attendance and Crime-Related Outcomes in the Low-Income Population

Crime and Violence Outcomes	Effects of Frequency of Church Attendance
Decision to use nonviolent methods to resolve hypothetical conflict (DuRant et al., 1996)	Significantly less likely to engage in violence to resolve hypothetical conflict during adolescence.
Nondrug illegal activities (Johnson et al. 2000b)	Significantly less likely to engage in nondrug illegal activities during adolescence.
General crime among adolescents (Johnson, 2008b)	Church attendance mediates the harmful effects of neighborhood disorder on general crime among black youth such that when youth attended church, the negative effects of neighborhood disorder on general crime were reduced.
General crime among adolescents (Johnson, 2008b)	The constraining effect of church attendance on general crime remains significant, even after controlling for social bonding and social learning variables as well as sociodemographic characteristics.
General crime among adolescents (Johnson, 2008b)	The buffering effect of church attendance on general crime was not significant. However, when general crime was separated into minor and serious crime, church attendance significantly buffered youth from the effects of neighborhood disorder with regard to serious crime but not for minor crimes.
Self-reported adult crime (Giordano et al., 2008)	Significantly less likely to commit crime at first follow-up. The effect of church attendance on crime is not significant at second follow-up.
Pattern of offending (Giordano et al., 2008)	Increased church attendance during adolescence has no association with increased odds of sustaining a crime-free life in adulthood.
Child maltreatment (Cox et al., 2003)	Never attending church resulted in a twofold increase in the risk for child maltreatment among low-income mothers.

Findings for Youths

With low-income and delinquent youths, higher levels of religiosity increase the probability that youths choose nonviolent methods to resolve hypothetical conflicts (DuRant, Treiber, Goodman, & Woods, 1996) and decrease the probability that they engage in illegal activities (Johnson et al., 2000b). These findings support the basic tenets of reference group theory.

According to this theory, if groups are highly religious, then they shape the beliefs and behaviors of their members, who are thus more likely to engage in nonviolent methods for conflict resolution and less likely to engage in illegal activities. Higher levels of religiosity are positively associated with lower involvement in general crime among low-income youths who resided in disordered neighborhoods. Johnson (2008b) finds that church attendance reduces the negative effects of living in a disordered neighborhood on involvement in criminal activity. This remains true even when the development of social bonds and social networks that are likely to dissuade youth from engaging in criminal acts are considered. An interesting finding in the Johnson (2008b) study is that church attendance does not buffer youths from disordered neighborhoods from engaging in crime from a general perspective. However, when the crime variable is separated into minor and serious crime, Church attendance buffers youths from disordered neighborhoods from serious crime but not from minor crime.

Findings for Adults

With low-income adults, there are mixed findings. A mother's involvement in a religious community, as measured by church attendance, is a protective factor against child maltreatment. Without this involvement, low-income mothers have a twofold increase in risk for child maltreatment. However, when examining the findings from longitudinal data, the deterrent effect of religiosity on crime diminishes as the participants become older. For example, low-income delinquent youth who reported greater church attendance are less likely to report criminal involvement 13 years after the first data collection; however, the older participants became, the more the effect of church attendance diminished. Hence, 21 years after the first data collection, there is no significant relationship between church attendance and criminal involvement.

Analyses are also conducted to estimate longer-term offender patterns, and the findings suggest that church attendance is not related to a pattern of sustained desistance from crime. According to qualitative data collected from adults, many individuals believe that their spirituality was critical to their desistance efforts. These findings highlight the advantage of incorporating quantitative and qualitative data into understanding how religiosity operates in the lives of the low-income population. Although the quantitative longitudinal data do not show significant main effects of religiosity on life-course patterns of crime, the in-depth qualitative data show religiosity can serve as a blueprint for change and a guide for how to access pro-social peers. Qualitative data can also highlight how other factors, such as unemployment, can derail the progress associated with religiosity.

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| <p>2. Are the religious dimensions of perceived closeness to God and religious salience associated with crime and violence outcomes?</p> |
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As indicated in the previous section, three of the studies include measures of religiosity that are two-item measures. In addition to church attendance, the other measures of religiosity include whether one is a church member, how close one feels to God, and how important religion is. Interestingly, the study that includes a measure of church membership does not incorporate this measure into the multivariate analysis. The findings for the perceived closeness to God and religious salience are highlighted in Table 7-2.

Table 7-2. Relationship between Perceived Closeness to God and Church Members and Crime-Related Outcomes in the Low-Income Population

Crime and Violence Outcomes	Effects of Perceived Closeness to God
Self-reported adult crime (Giordano et al., 2008)	There is a significant inverse association with outcome at first follow-up and no association with outcome at second follow-up.
Pattern of offending (Giordano et al., 2008)	Perceived closeness to God has no association with increased odds of sustaining a crime-free life in adulthood.
Effects of Church Salience	
Nondrug illegal activities (Johnson et al., 2000b)	Church salience has no association with nondrug illegal activities in adolescence.

Most of the studies show nonsignificant findings of religious beliefs and church salience on crime and violence outcomes; however, the small number of studies limits the ability to draw firm conclusions about the relationship between these religious dimensions and crime/violence outcomes. One of the conclusions drawn by Johnson and colleagues (2000b) is that church attendance and church salience have distinct associations with crime and that research exploring religiosity and delinquency should include more than one measure of religiosity.

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Research Gaps

The available research that examines the role of religiosity on crime/violence in low-income populations highlights several gaps in the literature:

- **The reliance on one-item measures to assess religiosity/spirituality rather than using more comprehensive and multidimensional measures of religiosity.**
- **The limited number of studies that treat religious variables as the central focus of the study or that specifically explore the role that religiosity/spirituality plays in crime and violence research among low-income populations.**

- **Crime and violence are broad topic areas and thus have a vast number of measurement options.** This creates a challenge to drawing specific conclusions about the role of religiosity in crime or violence research among low-income populations.
- **The limited number of qualitative or mixed-method studies that can provide context for understanding the influence of religiosity on crime and violence within this population.**
- **The limited number of longitudinal studies that can elucidate the long-term impact of religiosity on crime and violence.**
- **Samples do not contain a sufficient proportion of disadvantaged youths, a population in which religion may have its most important effects.**

New Research

The limited number of studies that focus on the role of religiosity on crime and violence outcomes among low-income populations and the gaps in research described in the previous section suggest that this research area is fertile ground for future research. Although the one mixed-method study included in this topical review provided some context for understanding the role of religiosity in crime and violence outcomes, future studies may benefit from collecting data that examine the level of integration individuals have with a religious community and the amount of time spent socializing with members of a religious organization. These factors may have a powerful deterrent effect on crime and violence.

Giordano, Longmore, Schroeder, and Seffrin (2008) highlight some of the difficulties in effecting lasting changes in crime-related outcomes through religious faith alone. Giordano concludes that there may be social and economic factors that also influence one's desistance from crime either alone or in combination with religiosity factors. This idea is consistent with some of the current work in prisoner rehabilitation research (Johnson & Larson, 2006). In this work, employment counseling and job training, along with spiritual guidance, operate as a multicomponent rehabilitation program.

Lastly, there is an abundance of research examining specific low-income populations that have engaged in crime and/or violence, but most studies do not include measures of religiosity. Such studies include research on individuals who are re-entering their communities after tenures in prisons or juvenile facilities, at-risk youths, and gangs, to name a few. Understanding the role that religiosity may play in the deterrence of crime for these populations may have significant implications for program development and for general life outcomes in these populations.

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8. CONCLUSION

Implementation of sound social service programs depends on rigorous evaluation and research to validate the effectiveness of initiatives. Given the investment and growth in faith-based and neighborhood partnerships over the past decade, the results and outcomes achieved from these efforts are increasingly relevant for policymakers and practitioners. Understanding how religiosity and spirituality affect behavioral outcomes is an important step in developing logic models to help guide program design and evaluation in this area. This literature review is one of the first to examine the state of the research on the effect of religiosity and spirituality on behavioral outcomes for the economically disadvantaged population in the United States. For programs targeting poor populations, the findings from this review suggest that the results from religiosity research focused on the low-income population can better inform this process.

Religiosity research targeting this population is in the beginning stages. Consequently, this review required a broad sweep of the literature rather than a narrower focus on more rigorously designed studies. Thus, the report focuses on six behavioral outcomes that are the subject of current policy and programmatic focus: marriage and healthy relationships; parenting; child and youth development; mental and physical health; substance use; and violence and criminal behavior. (Two other outcome areas, homelessness and employment, were considered but excluded due to a low number of studies identified in these areas.) Each section of this report, representing one of these topical areas, summarizes the research studies for the general population and then describes the research studies specifically for the low-income population.

This section summarizes the results across the outcome areas and (1) reviews the strengths and weaknesses of the study methods and data sources, (2) synthesizes patterns that emerge from the findings, and (3) discusses research gaps and potential next steps for religiosity research focused on the low-income population. This summary is intended to help inform policymakers and practitioners about the existing religiosity knowledge base pertinent to low-income families and individuals. This knowledge will help to formulate the next phase of research and evaluation of faith-based and neighborhood partnerships.

Data Sources and Methods Used in Religiosity Research Targeting the Low-Income Population

Distinguishing a correlational relationship from a causal relationship for religiosity and positive behaviors is not a straightforward endeavor, as there are several methodological challenges to address. One of the primary challenges of conducting research in this area is limited national data collection. That is, there are an insufficient number of data sets containing a comprehensive set of measures of organizational religiosity and individual religious beliefs, behavioral outcomes, and detailed income measures. Even the Decennial

Census of the U.S. population does not include basic questions about religion. To date, data sets that include detailed religiosity measures generally have smaller sample sizes. Even studies that include detailed religiosity measures have limitations. For example, non-Christian religious traditions are often underrepresented, and measures of religiosity are typically not specific to particular religious beliefs or religious institutions. Therefore, the lack of data limits the types of research that can be conducted to help guide policy development in this area.

Data Sources

The data sources used in low-income religiosity studies across outcome indicators are highlighted in Table 8-1. Notably, for most of the topical areas, except for health, there is research that uses nationally representative panel studies to follow individuals over time. The limitation is that most of the national longitudinal data sources do not include rich multi-variable religiosity measures and they are limited to measures of religious denomination and attendance. These national panel studies described throughout this report include, for example, the National Longitudinal Study of Youth (NLSY) and the Panel Study of Income Dynamics (PSID). Similarly, nationally representative studies that include detailed modules focused on religion, such as the General Social Survey (GSS), do not include a comprehensive set of policy-relevant outcome measures.

New longitudinal studies, such as the National Study of Youth and Religion, are starting to fill in the research gaps. There are also newly designed studies that concentrate specifically on religion and family relationships, but data have only been collected at one point in time. These surveys can include multiple family members that are interviewed, such as both members of couples or parents and children. The newer surveys generally use more detailed measures of both organizational and individual religiosity and spirituality that include general measures as well as religiosity measures specifically relevant to family process/relationship outcome measures. In addition, these surveys include parallel secular measures. These newer data sources can be extended so that families can be followed over time.

Across the outcomes, there are also data collection efforts that draw representative samples from low-income communities. These studies measure the effects not only of individual religiosity, but also of community religiosity. For this review, studies focusing on low-income communities occur across all outcome areas, although there are only one or two community studies within each outcome.

Within the health area, there are two studies that draw on administrative records. Administrative data can be used to draw specialized samples or be used to formulate outcome measures. For example, in one study, administrative data are used to draw a random sample of mothers receiving welfare assistance. Another study uses patients'

medical records as an outcome measure in a randomized trial of educational programs hosted at churches to promote breast cancer screening.

Lastly, with the exception of marriage, there are studies across the outcome measures that draw on convenience samples, which can be drawn from existing studies taking place within correctional institutions, hospitals, or clinics to study the role of religiosity and spirituality. Convenience samples can also be collected specifically to study the effects of religiosity and spirituality on a particular population. Samples can be drawn from the social service population, such as homeless shelters. These samples are most common in the health, substance abuse, and criminal justice fields.

Table 8-1. Summary of Religiosity Findings for the Low-Income Population: Number of Research Studies, Data Sets, and Research Methods

	Marriage	Parenting	Youth	Health	Substance Use	Crime and Violence
Number of Research Studies Identified	11	13	17	37	10	5
Data Set						
Nationally representative (or large cities) longitudinal panels	■	■	■		■	■
Nationally representative cross-sectional	■	■	■			
Low-income neighborhoods	■	■	■	■	■	■
Administrative records				■		
Social service clients			■	■		
Other convenience samples		■	■	■	■	■
Program intervention participants				■	■	
Research Method						
Single equation linear/nonlinear models – OLS, logit/probit, seemingly unrelated regressions	■	■	■	■	■	■
Testing for basic mediators	■	■	■	■	■	■
Simultaneous equation models – Includes structural equations				■	■	
Instrumental variables			■			
Basic linear unobserved effects models – Fixed effects	■		■			
Propensity score matching			■			
Duration analysis – Event history/hazard models	■					
Experimental study design				■		
Quasi-experimental study design				■	■	

Methods Used in Low-Income Studies

Compared with studies focusing on the general population, the majority of studies focusing on the low-income population are in the early stages of methodological development (with some exceptions, as described within this report). As indicated in Table 8-1, all of the studies included in this review conducted multivariate regression analysis across each outcome area.

In addition, Table 8-1 highlights that research across all of the topical areas has included some initial test of mediators to distinguish between pathways of the direct effect of religiosity and possible indirect pathways through which religiosity can affect outcomes. Few studies distinguish between organizational and nonorganizational religiosity when testing for mediating effects. One thing that is problematic in the religiosity literature is that basic tests of mediators are not consistently implemented. Further, there are fewer than five studies that attempt to comprehensively model the direction of effects by estimating simultaneous equations. Studies using this approach typically are in the health and substance abuse fields.

As with any developing research literature, the bulk of the research begins by establishing an association; researchers then use more rigorous methods to establish causal paths. Recently, a small but increasing number of studies started to use more rigorous estimation methods to advance religiosity research focused on the low-income population beyond the associational phase. Table 8-1 highlights some of the methods being used.

In the area of marriage, one study uses within-couple fixed effects analyses drawing on religiosity measures that range from general indicators of church attendance to more directly relevant relationship-specific religiosity measures (e.g., homogamy of couple religious denomination) to study marital quality. In the area of youth development, there is a set of new studies that estimates the effects of religiosity on youth development using multiple longitudinal data sets that draw comparisons between higher- and lower-income groups. These studies compare and contrast the findings using propensity score matching, instrumental variables, and fixed effects models. In the areas of health services utilization and substance abuse treatment, a number of randomized trials and quasi-experimental evaluations are testing the effect of religiosity and program interventions delivered at faith-based institutions on outcomes over time. Going forward, it will be important to build on the approach of using multiple statistical techniques that help to establish the causal paths between religiosity and outcomes, especially when randomization at the client level to test program effects is not feasible.

Findings Specific to the Low-Income Population

Table 8-1 presents the distribution of studies across outcome variables. Notably, there are fewer than 100 studies focused on the low-income population. The most heavily researched

area is health outcomes (37 studies), which comprises primarily mental health but also includes physical health and educational program interventions. This area also includes the greatest proportion of qualitative research studies. The next largest area of research is youth, which includes a variety of outcomes in psychological, academic, and behavioral risk areas. The number of studies for substance abuse, marriage, and parenting ranges from 10 to 13. Surprisingly, there are only 5 studies in the area of crime and violence focusing on economically disadvantaged families.

Because of the low number of studies that focus specifically on low-income families, a broad set of outcomes is included in this review. Specific findings across outcome areas are presented in the Highlights section and within each section. While the outcomes included in this review are intentionally broad, common themes emerge from the literature on low-income families.

Common Themes across Outcomes

- Although scholars hypothesize that religion can buffer the effects of poverty across outcome measures, few empirical studies draw on theories or formulate conceptual models that hypothesize why there may be differences in the effect of religiosity for low-income families compared with higher-income families. One exception is the studies conducted on family-related outcomes in marriage, parenting, and youths. For example, some researchers propose that religious denomination-specific views on marriage before parenthood may deter single low-income mothers from participation in religious institutions, which could lead to less marriage.
- Qualitative research, primarily conducted in the area of health but also in other outcomes, points to potential pathways wherein religiosity can positively or negatively affect healthy behaviors and service utilization. These studies can help to formulate conceptual models specific to low-income populations that can guide further research in the field and help practitioners develop comprehensive logic models.
- Religious denomination/affiliation does not appear to have a direct association with any of the six behavioral outcomes at the individual level. In contrast, religious affiliation can influence outcomes when there are differences in affiliation within families. For example, religious denomination appears to have an effect when husbands and wives have different affiliations and strong religious beliefs.
- Single-item measures of frequent church attendance generally show a positive effect on outcomes across program areas. Some studies do not show any significant effects of church attendance, and a few studies find negative effects. Whether or not a study finds an effect can vary depending on what other explanatory and relevant contextual factors are examined.
- The few studies that include secular measures of participation in activities and beliefs alongside measures of participation in activities at religious institutions find that both are important. For example, in the areas of marriage and youths, engaging in both types of activities increases marital quality and youth development outcomes.
- Although national surveys highlight stronger individual religious beliefs (nonorganizational religiosity) among the poor population and less participation in

religious institutions (organizational religiosity) than higher-income groups, results from multivariate models do not find consistent effects for these measures of religiosity across outcomes. Preliminary results show that both types of religiosity measures are statistically significant in parenting, youth, marriage and health, but the direction of the effect can vary across the specific outcomes measured within each area. Both types of religiosity are not consistently included in models, and outcome measurement varies widely, making it difficult to draw firm conclusions.

- Of the six health and substance abuse intervention studies targeting low-income populations that include a measure of religiosity, five studies do not find a significant effect of religiosity on changes in cancer screening or smoking cessation enrollment over time. One study finds that greater religiosity is associated with drug treatment seeking behavior. It is important to note that these studies control for religiosity at baseline and do not examine changes in religiosity. In addition, many studies are conducted in rural areas where there is little variation in religiosity.
- For youths, parenting and marriage, studies generally examine gender differences in the effect of religiosity on outcomes. The findings indicate some differences between how religiosity affects marriage, parenting and relationship outcomes for adult men and women, and differences in developmental outcomes for girls and boys.
- In areas such as health, youth, parenting and marriage, the research indicates that there are both direct and indirect effects of religiosity that operate through social networks and social support.

Research Gaps and Next Steps

Within each topic area, summaries of research gaps specific to an outcome are included within each section. While some outcome areas include more studies and more detailed measurement of religiosity, all the outcomes are subject to a similar set of research limitations because all of the research fields are in the early developmental stages.

Research Gaps

- **A lack of research on homelessness and employment.** This review identified fewer than five studies on homelessness and underemployment in the low-income population. In addition, there are a limited number of studies on religiosity and crime in the low-income population.
- **A lack of national longitudinal data collection.** There is scant research using national longitudinal data that focuses on detailed outcome measures, including comprehensive measures of religiosity for diverse religious groups, as well as preferences for religious or spiritually based services.
- **Inadequate measures of spirituality or religious beliefs and religious practices from diverse religions that are specific to outcome measures.** Most measures focus on individuals' "general religiousness" and do not include religious practices from diverse religions. Religious measures are also not specific to economically vulnerable groups, such as barriers to church participation due to limited resources, stigma, or a lack of neighborhood churches. Many studies rely on single-item measurement.
- **Inconsistent distinctions between private or nonorganizational religiosity compared with public or organizational religiosity.** Preliminary results indicate

that to a limited degree organizational religiosity may affect outcomes differently compared with nonorganizational religiosity. These differences should be tested systematically.

- **A lack of research using data sources that goes beyond self-reported measures to study the effects of religiosity.** Most of the studies in the low-income population are based on self-ratings of behavior without measures of provider and teachers' assessments, biological markers, and standardized and diagnostic tests. Also, linking to administrative records—such as marital and divorce records, insurance claims, school performance indicators, or criminal justice statistics—can help to independently corroborate outcome measures.
- **Lack of comprehensive logic models within outcome areas.** Very few studies utilize logic models that consider how specific aspects of religiosity and spirituality affect specific behavioral outcomes and how the religiosity-outcome connections vary with relevant contextual factors. Logic models (with corresponding empirical findings) are an essential tool as policy makers seek guidance from research findings to improve program and evaluation study design.
- **Inconsistent testing of mediating pathways between religion and behavioral outcomes and a lack of a consistent set of control variables.** For the most part, it is unclear whether the effects of religiosity operate directly on outcomes or indirectly through various mechanisms, including increased social networks or peer effects or physiological processes. More work is necessary to establish the relative influence of religiously-specific and generalized pathways. Some research areas, such as marriage, tend to use a similar set of control variables, whereas health studies vary widely.
- **A lack of systematic analysis of whether religiosity has any buffering effect or operates differently for particular subgroups.** A limited number of studies examine differences in the effect of religiosity by demographics and economic resources.
- **Limited research designs that do not go beyond establishing correlations.** Selection bias issues and motivation to participate in religious activities have not been adequately addressed.
- **A limited number of qualitative research studies.** Relatively few qualitative studies focus on religious and spiritual attitudes and practices at home, church, and in the community, and how these practices and attitudes affect behavior and interactions with providers. Content analysis of the spiritual and religious messages and observations of the interactions within church-based social networks would help to develop new measures that can be included in quantitative analysis.
- **A lack of experimental studies.** Few experimental studies were identified that examine programs using religious messaging or curricula, or building on clients' levels of religiosity to improve outcomes. There is a general lack of analysis for groups with differing levels of religiosity.
- **Limited research on community religiosity.** There is very little research exploring community religiosity and how attitudes about and access to religious organizations affect individual behaviors.

Next Steps

The current state of religiosity research on the low-income population raises more questions than it provides specific answers to guide further program development. Fortunately, studies are underway within each of the topical areas that will help to address these gaps. In addition, while this literature is still emerging, it does provide enough of a basis to help guide the next steps for research.

A number of steps can be taken to advance the religiosity literature to answer basic questions about the effect of religiosity on behavioral outcomes in the low-income population. Some of the following suggestions are more immediate to help fill gaps in the knowledge base, whereas others are longer-term and will require new rounds of data collection.

Suggestions for research in the shorter-term:

- Define common measures of organizational and individual religiosity and spirituality across disciplines to help guide research and evaluation efforts.
- Analyze existing secondary data sets to systematically study the differential effects of religiosity by income groups across outcomes of current policy interest. Explore whether definitions of income vary the results.
- Consistently test for secular and religious-specific mediating pathways and for differences across sociodemographic characteristics and different resource levels.
- Use multiple estimation methods to conduct sensitivity analysis of the results. Such analyses can help identify appropriate rigorous methods in this area.
- Use existing studies and samples to interview low-income participants (and higher-income participants if they are available) to help inform the development of pathways, new measures, and religious-specific outcomes.
- Visit the religious institutions of a subset of respondents and conduct a content analysis of religious activities, such as sermons, social networks, and available activities.
- Commission interdisciplinary conceptual papers that review the potential pathways of the effect of religiosity on outcomes in the low-income population and develop hypotheses about why these effects would differ by income.
- Include measures of religiosity in existing program evaluations of faith-based or church-based programs to examine their impact on religiosity and how religiosity affects outcomes.

Suggestions for research in the longer-term:

- Consider adding basic measures of religion to the Decennial Census.
- Commission new surveys that collect longitudinal extensive measures of religiosity, income, and behavioral outcomes for households. Oversample individuals who are non-Christian to develop adequate sample sizes.

- Survey religious institutions about practices and activities that can be linked to individuals participating in panel surveys.
- Collect biomarkers, similar to the National Longitudinal Study of Adolescent Health (Add Health) data set.