

Social and Community-Level Factors in Health Effects from Religion/Spirituality



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Abstract This chapter reviews theories and empirical evidence on relations between religion and spirituality (R/S) and social factors. Religion and spirituality are conceived as evolving over time and residing at both collective and individual levels.

We first examine how community-level measures of R/S have predicted health outcomes, finding evidence in diverse ethnic groups for largely favorable effects on longevity, suicide, depression, psychological well-being, and/or self-rated health. Religious involvement is an enormous source of social capital, but different R/S dimensions and traditions are linked to different forms of social capital with different implications. Studies link R/S to higher US adolescent educational attainment, but R/S relations with socioeconomic status vary considerably across nations and cultures. Income inequality appears to spur religiousness, but R/S measures correlate little with economic attitudes. Evidence links community and individual R/S to lower crime and violence and buffering against diverse community-level stressors. Religion/spirituality also serve as resources for responding to disasters. We conclude by discussing the bases and promise of multi-level interventions that address R/S factors, and potential benefits from more broadly salutogenic approaches.

This chapter is one of thirteen reviews in this volume providing a public health perspective on the empirical evidence relating R/S to physical and mental health; with the next chapter (“[Social Identity and Discrimination in Religious/Spiritual Influences on Health](#)”), this is one of two reviews emphasizing factors of interest to social epidemiology.

Keywords Social capital · Socioeconomic status · Income inequality · Crime · Religion · Spirituality · Health · Public health · Social epidemiology · Spiritual intervention

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Social factors have emerged as a major topic of study in public health in recent decades. Widespread recognition of the importance of social factors has been reflected in the emergence of public health courses with titles such as “Health and Social Behavior” (Berkeley) or “Social Factors in Health” (Johns Hopkins), as well as the publication of many recent textbooks in social epidemiology (Berkman and Kawachi 2000; Berkman et al. 2014; Oakes and Kaufman 2006; Cwikel 2006; O’Campo and Dunn 2012).

Social factors are conceived as facets or features of the human environment, in contrast to physical factors (e.g., lead paint), and biological factors present in the natural environment (e.g., mosquitos). These three facets of the environment may mutually influence each other, as people shape their physical and natural environments, which in turn inform and constrain human culture and behavior. The local human, physical, and biological environments are three primary components of what may be called the community environment. Within the human environment, we may in turn identify social, economic and cultural components that partly overlap with each other.

This is the first of two chapters that review theory and evidence on the roles that social and other community-level factors play in the relations between religion/spirituality (R/S) and health. This volume’s next chapter, entitled “[Social Identity and Discrimination in Religious/Spiritual Influences on Health](#)”, represents a continuation of the present chapter’s focus on social factors. The conceptual framework underlying each of these chapters is represented in Fig. 1. Community-level factors are represented in the top row (Boxes A and B), and individual-level factors are represented in the middle row (e.g., Boxes C, D). Religion and spirituality are conceived as multidimensional and partly overlapping with each other, and as residing at both the community level (Box A) and the individual level (Box C) (for discussion of definitions and overlapping meanings of “religion” and “spirituality,” see chapters “[Elephant in the Room: Why Spirituality and Religion Matter for Public Health](#)” and “[Questions on Assessing the Evidence Linking Religion/Spirituality to Health](#)”, this volume).

The present chapter’s focus on factors conceptualized and/or measured at the community level complements the individual-level focus of this volume’s earlier chapter entitled “[Model of Individual Health Effects from Religion/Spirituality: Supporting Evidence](#)”. Examples of social and community-level factors that have drawn considerable attention and empirical documentation in public health research include socioeconomic status, social capital, social networks and support, society-wide income inequality, and ethnicity (Berkman and Kawachi 2000; Braveman et al. 2011; Schneider 2011). Race has been studied as both a social factor, where it predicts many health outcomes, and as a marker for genetic factors, where evidence suggests that genetic illnesses are only rarely linked to specific racial groups (Frank 2007; Collins 2004).

Including religion in the list of important social factors would seem a straightforward and obvious consequence of definitions of social factors such as “the circumstances in which people are born, grow up, live, work, and age” (Idler 2014a,

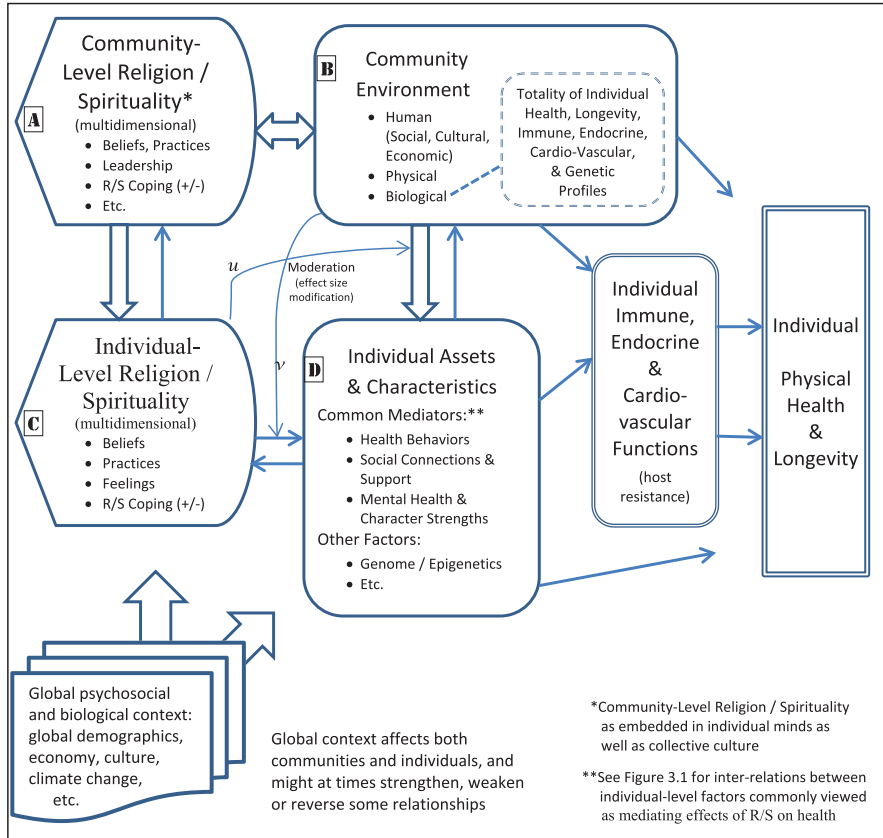


Fig. 1 Model of how community-level religion/spirituality causally affects physical health

p. 8).¹ Indeed, religion is widely admitted as perhaps the single largest source of social capital in the US (Smidt 2003a; Putnam 2000). Religion is also widely understood as socioculturally shaped, influenced, and perhaps constituted. One might expect, therefore, that the field of social epidemiology would long ago have incorporated the study of R/S factors as one of its major recognized subfields. Indeed, an array of articles has appeared in public health journals that emphasize R/S as a social epidemiologic topic (Levin 1996; Maselko et al. 2011; Chatters 2000). However, widespread recognition has been lacking. R/S factors are seldom mentioned in most social epidemiology textbooks, and only recently have books emerged about religion and health that highlight an explicit social epidemiology

¹ Idler (2014a) is quoting the World Health Organization’s Commission on the Social Determinants of Health, but she notes that religion was “notably... not mentioned among the ‘wider set of forces’.... A blind spot in nearly all of the current work on social determinants” (pp. 8–9) (see also chapter “Elephant in the Room: Why Spirituality and Religion Matter for Public Health” this volume).

approach (i.e., Idler 2014b). Perhaps it is ironic that the R/S-health topic has been so highly marginalized in a field with a major focus on overcoming inequality and marginalization.

1 A Dynamic and Evolving Conception

Importantly, as we outline below, theory suggests that community-level R/S factors, like individual-level R/S factors, may potentially exert either beneficial or detrimental influence on health. For example, R/S traditions espouse values and behaviors that oppose crime, a social factor that is detrimental to health. And as Idler (2014a) has discussed in detail, religion is clearly relevant to economic inequality, one of the most important and highly studied social determinants of public health. Research in diverse societies worldwide documents an adverse and probably causal association between greater inequality and worse health (e.g., Kondo et al. 2009; Pickett and Wilkinson 2015; Wilkinson and Pickett 2006). Idler (2014a) notes that religion may act to reduce inequality itself, to buffer the adverse impact of inequality, or, in a negative manner, to exacerbate inequality.

Pro-equity influences from religion, when they occur, are consistent with the universality of *justice* as a central value in human culture and in much religion. Human *strength for enacting justice* is one of six major classes of virtues that positive psychologists Peterson and Seligman (2004) have identified as universally recognized across all human cultures, and most if not all R/S traditions teach the importance of enacting justice. For example, Idler (2014a) notes that “religious narratives about overcoming slavery and injustice, as in the exodus of the people of Israel from Egypt or the cries of the Old Testament prophets for social reform, provide models for a moral response to power and hope for peace and justice in the future for those who are oppressed in the present” (p. 15). Similarly, the Roman Catholic Church has published encyclicals about the dignity of labor, affirming that “Justice is the primary way of love... the constant and firm will to give to each what is due” (Melé 2011, p. 122) (see also Francis 2015).²

But human perceptions of the requirements of justice have changed a great deal over time, as reflected in the de-legitimation and then abolition of slavery, and the promulgation of numerous types of universal human rights. Religious traditions have taught the sanctity of justice as an abstract principle, but have also sanctified various specific principles or customs viewed as fostering the conditions of justice (e.g., jubilee as debt forgiveness, Donnelly 2007). The sanctification of what Pargament (1997, p. 60) calls “religious means,” in addition to justice *per se* as a

²For example, the recent Roman Catholic papal encyclical on the environment states that “we have to realize that a true ecological approach *always* becomes a social approach; it must integrate questions of justice in debates on the environment, so as to hear *both the cry of the earth and the cry of the poor*” (Francis 2015, p. 30, paragraph 49, emphasis in original).

more abstract “religious end,” enhances the ability of the R/S concern for justice to produce beneficial practical behavior that effectively fosters justice in society.

But the sanctification of religious means, such as codes of behavior within specific relational contexts, also opens various risks. On the one hand, sanctified codes can become too highly aligned with powerful vested interests (e.g., in the middle ages, sales of indulgences by the Roman Catholic Church). On the other hand, codes may potentially become antiquated by progressive cultural and spiritual evolution before they lose their official sanction (e.g., churches that resisted abolition of slavery). Changing and evolving views of justice are affected by diverse social, cultural, economic, and spiritual factors. Religious teachings about justice may evolve at correspondingly different rates in different communities, leading at times to profound disagreements between religious communities, as has happened on the abolition of slavery (Hammond 1974; McKivigan 1984; Budros 2005). In recent decades, widespread disagreements between religious communities as well as between religious individuals have been evident on justice-related issues that include the obligations of male and female spouses within a marriage and the legitimacy of same-sex marriage. Religious groups also show diverse attitudes towards the contemporary market-centered economic philosophies. Whereas sociologist Max Weber famously documented how certain forms of Protestant Christianity contributed to the rise of capitalism, the Roman Catholic social teachings are usually viewed as more ambivalent – a recent papal encyclical, for example, objects to the “deified market” (Francis 2015, p. 35, paragraph 56). One major tradition, Islam, has recently inspired an “interest-free” system of banking (Khan 2011, p. 142) that now manages more than \$700 billion in assets across 75 countries (Khan and Bhatti 2008; Reed 1995; Weber 1992).

Thus, through such processes, community-level R/S may causally generate either favorable or unfavorable effects on justice and health. Yet reverse causality is also a possibility. It is well known that individuals as well as communities may turn to religion for strength and comfort in times of distress.³ For example, after the attacks of September 11, 2001, levels of religious observance were elevated for a few weeks, but then reverted to normal (Hood et al. 2009; Walsh 2002). Such processes can generate easily misinterpreted associations between R/S observance and *greater* distress at both individual and community levels. Conversely, when life circumstances become less distressing and coping is easier, some people may attenuate or discard their previous coping practices, including religious and spiritual practices (although, consistent with R/S teachings, other people may intentionally seek and enduringly succeed in viewing their success through a spiritual lens that motivates continued intensity of R/S practice). At the community level, the tendency to relax suggests the possibility that community affluence could causally lead

³For example, consistent with such widely accepted perspectives, one cross-national European study found that religiousness was independently predicted by both economic and existential insecurity, measured at both individual levels (e.g., unemployment, loss of partner) and collective levels (unemployment rate, experience of war) (Immerzeel and van Tubergen 2013, European Values Study, 26 countries, n = 65,266).

to reduced religiousness, which would be observable as an inverse (negative) relation between *community-level* R/S and health.

From a theoretical standpoint, therefore, R/S factors may be expected to exhibit complex patterns of relations to social factors through several types of causality, both direct and reversed. As described in the following subsections, such complexity and bivalent relations are indeed apparent in the available empirical literature. The design and delivery of spiritually-infused multi-level interventions must be considered in light of these complex and evolving relations (Smedley and Syme 2000; Oman 2013).

2 Topic Reviews

In the following subsections, we review empirical evidence on the relation of religion/spirituality to several social and community-level factors of interest to public health. After examining how community-level measures of R/S have shown predictive power for longevity and health, we examine evidence related to social capital, socio-economic status and inequality, violence and crime, and coping with community stressors such as disasters. We also describe evidence that individual-level R/S factors can moderate the impact of community-level factors, and conclude by discussing salutogenic approaches and the bases and promise of multi-level interventions that address R/S factors. Social identity and discrimination are examined in the following chapter, entitled “[Social Identity and Discrimination in Religious/Spiritual Influences on Health](#)” (this volume).

Social support, another topic of major social epidemiologic interest has seldom if ever been measured at the community level, and its relation to R/S is reviewed at greater length in the chapter “[Model of Individual Health Effects from Religion/Spirituality: Supporting Evidence](#)”. As noted there, the proposition that religious involvement fosters social connections has never been controversial: More than five dozen studies, most conducted in Europe or North America, as well as a small number conducted elsewhere, have documented significant positive realtions between R/S factors and measures of social support (see Koenig et al. 2012, pp. 303, 306, 687–693; non-Western studies include Al-Kandari 2003; Heppner et al. 2006).

Published studies that we review in the following sections have employed community-level units of analysis that have ranged from census tracts to nations. Two main strategies for measuring community-level R/S factors have been to use counts of religious organizations, or, much more commonly, averages of individual survey responses to a census or, not infrequently, to the researchers’ own survey. Much of the international evidence cited in the following subsections is derived from major multi-wave international surveys, such as the World Values Survey (WVS), the European Values Study (EVS), and the European Social Survey (ESS).

Importantly, community-level and individual-level factors do not operate in isolation. Factors such as social networks have long been measured and studied on multiple levels. Therefore, although the following sections give special emphasis to

community-level measures, they also describe many relevant findings based on corresponding individual-level measures. And with only a few partial exceptions (e.g., Haynes et al. 2017; Joshanloo and Weijers 2016a), the overwhelming majority of reviewed evidence pertains to religion rather than spirituality, perhaps in part because of more options to measure religion at a community level⁴ (for relation between religion and spirituality, see chapter “[Elephant in the Room: Why Spirituality and Religion Matter for Public Health](#)” this volume).

2.1 *Community Level Religious Effects on Longevity and Health*

A variety of studies have examined health and/or longevity outcomes from religion measured at the level of the community environment. In one of the more ambitious recent studies, Blanchard et al. (2008) investigated how 1998–2002 standardized mortality rates in 3068 contiguous US counties were predicted by county-level variables that included the religious composition of each county (operationalized by counts of congregations), as well as control variables that included ethnic minority concentration, an indicator of health infrastructure, metropolitan status, population size, average income, and income inequality (Gini coefficient). Findings strongly supported hypotheses that lower mortality would be associated with greater concentration of Catholic, mainline Protestant, and Evangelical congregations, perhaps because these groups tend to be more externally and socially engaged, which may foster collective efficacy as well as encourage helping the needy, efforts to promote social justice, and support for public health infrastructure. In contrast, the presence of Pentecostal and fundamentalist Protestantism, which are more insular and espouse an “otherworldly theology” (p. 1610), were each associated with higher standardized mortality rates. Similar patterns were observed for specific causes of death that included curculatory diseases, cancer, and respiratory diseases (Blanchard et al. 2008). More recently, similarly constructed religious measures for 1900 US counties were also found to predict infant mortality rates, with largely similar patterns of advantage and disadvantage (Bartkowski et al. 2011). A higher state-level average *importance* of religion, however, has been linked to higher infant mortality rates and teen birth rate (Kimball and Wissner 2015).

These longevity findings were consistent with an earlier and more narrowly focused study by Dwyer et al. (1990), who used 1968–1980 data to examine how US county denominational composition was related to county mortality rates for various types of cancer. These investigators reasoned that the different content and

⁴Counts of religious congregations have been used to measure community-level religion, but no analogous strategy seems possible for measuring community-level spirituality, which possesses non-organizational connotations. More feasible is to measure community-level spirituality as the mean of individual-level spirituality assessments of community members, although it is unclear if any studies have done so (see also chapter in this volume entitled “[Social Identity and Discrimination in Religious/Spiritual Influences on Health](#)”).

intensity of denominational teachings about health behaviors would result in different risks for various types of cancers. The investigators found that even when controlling well-established group-level predictors that included demographic, environmental, and regional factors, religious denominational composition independently predicted mortality rates from respiratory, digestive, and all malignancies combined (Dwyer et al. 1990).

Outside of the US, some Israeli studies have also measured religion at the community level. For example, as noted in this volume's chapter entitled "[Environmental Health Sciences, Religion, and Spirituality](#)", an Israeli study reported that lower neighborhood-level mortality rates were significantly and favorably related to neighborhood-level religiousness, perhaps because R/S promoted "healthy behaviors and attitudes, reduction of stress, and the formation of strong social bonds" (Jaffe et al. 2005, p. 807). Earlier studies by Kark and colleagues had compared religious versus secular kibbutzim ($n = 22$), finding greater longevity in religious kibbutzim despite similarities in ethnicity, education, occupation, standard of living, and apparently only small and unexplanatory differences in social support, health behaviors and various physical, physiologic and biochemical measures (Kark et al. 1996a, b). Members of religious kibbutzim displayed lower levels of hostility and a higher sense of coherence, "consistent with an interpretation that Jewish religious observance may enhance the formation of certain protective personality characteristics [and thereby] increase host resistance to stressors" (Kark et al. 1996a, p. 185).

Aggregate group-level religious variables were perhaps most famously employed in Durkheim's (1951/1897) classic analyses of suicide, which argued that Catholic versus Protestant differences in religious culture could affect suicide rates. While Durkheim's original ideas have often required "rethinking and adaptation" when applied to new contexts, subsequent suicide research has confirmed that suicide rates often show religious patterning (Wray et al. 2011, p. 513). A range of recent studies have examined R/S-suicide relations using aggregate- or mixed-level analyses for grouping units ranging from municipalities to countries. For example, a study of 870 Dutch municipalities from 1936 to 1973 found that higher proportions of religious people in a community were associated with lower suicide rates among both religious and nonreligious individuals, results that "confirm the notion that religious communities have a general protective effect" (Van Tubergen et al. 2005, p. 797). A US study of 296 Standardized Metropolitan Statistical Areas (SMSAs) found that greater religious homogeneity predicted lower suicide rates from 1979 to 1981, especially in the Northeastern US, an effect that persisted despite controls for well-established predictors (Ellison et al. 1997). More recently, proportions of religious adherents in 920 US counties have been found to predict US Latino suicide rates (Barranco 2016). And Moore (2015) reported that religious heterogeneity predicted higher national suicide rates in 41 countries across 4 continents, even after adjusting for urbanism, population density, degrees of development and democracy, and income inequality (Gini coefficient).

Some studies have examined impacts of community R/S on various self-reported or psychosocially assessed outcomes, finding generally favorable effects. For example, better self-rated health was found to be predicted by a country's average

national levels of the importance of God or religion (Helliwell and Purnam 2004, 49 countries, $n = 83,520$). Similarly, better self-rated health in Canada was positively predicted by average census-level importance of God or religion (Helliwell and Purnam 2004, $n = 7483$). And lower rates of elderly female depression were found in European countries with higher rates of regular church attendance (Braam et al. 2001, 11 countries, $n = 17,739$). However, another country-level study reported that psychological well-being correlated positively with beliefs in heaven and negatively with beliefs in hell (Shariff and Aknin 2014, 68 countries). Finally, a much more locally-oriented US-based study discovered that closures of religious congregations, especially Roman Catholic congregations, predicted declines in neighborhood indices of well-being and vitality (Kinney and Combs 2016, census tracts in Saint Louis County, $n \approx 200$). Thus, in several different nations, community-level R/S measures have been found to predict, often favorably, outcomes ranging from reduced all-cause mortality, suicide, and depression to enhanced psychological well-being.

2.2 Social Capital and Social Cohesion

The concept of social cohesion, stemming from the work of Durkheim (1951/1897), refers to two intertwined features of a group: strong bonds and absence of latent conflict (Kawachi and Berkman 2000). It is closely related to one of the important connotations of a currently popular term, “social capital,” which may refer either to an individual-level or to a group-level attribute (Portes 2000). As initially developed by sociologists Pierre Bourdieu and James Coleman, social capital was an individual-level construct that referred to an individual’s social relationships and the resources to which they gave access (Fig. 1, Box D). In the 1990s, political scientist Robert Putnam (1993, p. 36) extended the term to refer to a group’s, community’s, or even nation’s “stock” of relationships that facilitate activity and access to resources, yielding a group-level construct referring to important features of the community environment (Fig. 1, Box B).

Some early public health writings defined social capital as inherently a “public good” (Kawachi and Berkman 2000, p. 177). Yet as Portes (1998, p. 18) pointed out, “sociability cuts both ways. While it can be the source of public goods... [social capital] can also lead to public ‘bads’” such as exclusion of outsiders, excess claims on group members, restrictions on individual freedom, and downward levelling norms. More generally, concerns were soon expressed that the social capital construct was ambiguous and undertheorized (Wakefield and Poland 2005), and it has been recurrently described as an “umbrella concept” that possesses an urgent need to be parsed into coherent components (Brunie 2009, p. 252).

Thus, several different *types* of social capital have been identified, including *bonding* with “people similar to oneself,” *bridging* with people who are different but at similar status levels, and *linking* between people at different levels in social hierarchies (Ferlander 2007, p. 119). It has been said that bonding social capital is most vital for “getting by,” whereas bridging social capital is most important for

“getting ahead” (Ferlander 2007, p. 119, quoting X. S. Briggs). The literature also distinguishes between ties that are *strong* versus *weak* in emotional closeness, and *formal* versus *informal* ties, such as those reflecting organizational versus ad-hoc individual contexts and motivations. Families commonly represent networks of strong ties that are bridging with regard to age and gender. An additional distinction is between *cognitive* components of social capital (e.g., social trust) and *structural* components (e.g., group memberships) (Story 2013). Finally, while the social capital construct was preceded by the notion of “human capital” used by economists to designate productive skills, these two concepts have in turn inspired more recent and sometimes controversial extensions, still contested and not yet in widespread use, that include religious capital and spiritual capital⁵ (Baker and Miles-Watson 2010; Montemaggi 2011).⁶

Community-level social capital and social cohesion have generated ongoing public health interest (e.g., Ferlander 2007; Kawachi and Berkman 2000). A recent meta-analysis reported that compared to measures of individual-level social capital, measures of social capital at an ecological (group) level showed a stronger overall favorable relation to physical health ($k = 16$, $OR = 1.36$, Gilbert et al. 2013). However, a mixture of favorable and unfavorable associations has been found between ecological level social capital and mental illness ($k = 7$, De Silva et al. 2005). Only a very small number of studies have examined collective-level social capital in lesser-developed countries, also yielding mixed results (Story 2013).

Religious involvement is an enormous source of group-level social capital – in the US, the single largest source, according to Putnam (2000). Smidt’s (2003b, p. 217) edited book examined much of the early theory and research on how social capital is related to religion, suggesting that religious social capital may be distinctive in terms of quantity, durability, and range, partly because “religions often encourage their adherents to deal positively with others, regardless of the particular benefits that may or may not be derived from such relationships.” Similarly, Putnam (2000) noted that compared to other voluntary associations, membership in religious groups is “most closely associated with other forms of civic involvement, like voting, jury service, community projects, talking with neighbors, and giving to charity” (p. 67).

A handful of studies have examined how community-level religious measures (Fig. 1, Box A) are related to other measures of social capital. Consistent with Portes (1998, p. 18), and the cultural evolutionary perspective presented earlier in this chapter, linkages have been observed to both “goods” and to “bads.” One of the rare US-based aggregate-level studies of religion and social capital investigated crime rates in 3157 counties (Beyerlein and Hipp 2005). The investigators drew on prior

⁵Reviewing multiple academic definitions, Baker and Miles-Watson (2010, p. 63) note that “religious and spiritual capital are contested terms [while] the public space into which they are placed is increasingly complex and fluid.”

⁶Even leaving aside its emerging derivatives, the “umbrella” notion of social capital encompasses a wide array of other constructs ranging from social trust to network ties, most of which were the focus of pre-existing empirical literatures. Such conceptual breadth and terminological diversity pose obstacles to comprehensive reviews. Hence the present subsection will emphasize primarily literature that explicitly self-identifies as about social capital.

research documenting that due to contrasting theological orientations “adherents of the major U.S. religious traditions behave in ways that give rise to very different network structures in communities” (p. 998). More specifically, mainline Protestants and Catholics tend to develop bridging capital supporting “broad network structures that allow communities to mobilize effectively to protect collective interests” (p. 997), whereas Evangelical Protestant communities are more inwardly-focused and disproportionately foster bonding capital. Consistent with expectations, even after numerous adjustments, proportions in each county of Evangelicals correlated with higher crime rates, whereas proportions of mainline Protestants and Catholics correlated with lower crime rates.

Community-level R/S-social capital studies are slightly more plentiful in Europe, where EVS responses have been aggregated to produce country-level R/S measures. One study used this method and found that volunteering rates were negatively predicted by country-level religious attendance, but positively predicted by individual-level religious attendance (Prouteau and Sardinha 2015, 27 countries, $n = 37,232$). Another recent European study reported that countries higher in religiosity and religious diversity possessed higher levels of structural social capital, whereas countries with more adherents to “hierarchical” religions (Catholicism, Orthodoxy, Islam) tended to possess lower levels of cognitive social capital (Kaasa 2013, p. 581, based on 29 countries). A recent study of 109 countries worldwide and 43 U.S. states reported negative correlations between community-level importance of religion and social trust, an indicator of cognitive social capital, although some previous studies using other designs have in contrast reported positive social trust associations with some R/S dimensions (Berggren and Bjørnskov 2011).

Religious culture may also matter at the local level. In the US, Wood (2002) documented coherent patterns linking different denominational religious cultures to greater or lesser capacity to mobilize effective collective democratic action. Similarly, evidence from eastern India suggests that the capacity of women’s micro-credit organizations to engage in collective action may be moderated by their predominant religious composition (Sanyal 2015 found greater capacity among Hindu than among Muslim organizations).

Although lacking community-level measures, a much larger number of studies, many based in the US, have shed light on how various *individual-level* dimensions of social capital are related to R/S factors (see Koenig et al. 2012, pp. 691–693). Such findings help to illuminate how religion may affect community-level social capital, often suggesting dynamics or hypotheses meriting exploration at the community level. For example, a study using a US nationally representative sample reported that some R/S dimensions (e.g., membership in a congregation) were related to greater chance of linking (“status-bridging”) network ties (Wuthnow 2002, p. 669). Another study reported that religious observance, religious worldview identification, and participation in a religious student organization were significantly related to cross-racial interaction, “a form of bridging social capital” (Park and Bowman 2015, p. 21). However, a small study of US adults reported that “bridging trust” with those outside of one’s congregation was lower among frequent attenders (Maselko et al. 2011, $n = 104$). Another study found support that religious involve-

ment fosters *intergenerational closure*, “the extent to which parents know the friends of their children and know the parents of their children’s friends,” a factor believed to support better developmental outcomes (Glanville et al. 2008, p. 108).

Some of these individual-level studies have probed relations with health. For example, findings from a nationally representative sample of US adults (n = 10,828) showed that social capital partially mediated the relationship between a religiosity and self-rated health (Yeary et al. 2012). And a US nationally representative study of African Americans (n = 803) reported that among women but not men, religious capital (“capital generated by religious groups”) predicted better functioning above and beyond benefits associated with other forms of social capital (Holt et al. 2012, p. 347).

2.3 *Socio-Economic Status*

Socioeconomic status (SES), typically understood as encompassing income, education, and occupational status, represents perhaps “the most important predictor of health” among all psychosocial factors (Schneider 2011, 226). SES has been linked to gradients in health and longevity, so that the poor tend to be less healthy than the middle class, who are less healthy than the rich, who are less healthy than the very rich (Adler et al. 1994). SES is also a plausible “fundamental cause” of health that tends to “maintain an association with disease even when intervening mechanisms change” (Link and Phelan 1995, p. 80).⁷ Evidence indicates that these SES gradients are attributable to causal influences of SES on health, rather than selection due to health status (Kröger et al. 2015).

In many European countries, poorer people tend to be more religious, and the US, which often exhibits a positive correlation between income and religiousness, represents a “curious outlier” (De La O and Rodden 2008, p. 469). Consistent with this European background, classical Marxist-inspired theories have viewed religion as an “opiate” that gives comfort to lower SES groups while inducing passivity. Yet this classical view is too simplistic, as religion has often been observed to function as a disruptive social force (Smith 1996). Evidence reviewed in the following subsection on social inequality indicates more complex and bidirectional associations (see also Schwadel 2016).

Studies focusing on R/S-to-SES relations, and how these two sets of factors are related to health and well-being, have yielded complex and varying findings, including much evidence for statistical moderation. Such findings, we suggest, underscore the importance of investigating R/S phenomena through flexible frameworks such

⁷It has been proposed that religion/spirituality may also be a fundamental cause of health in the sense that it will “maintain an [inverse] association with disease even when intervening mechanisms change” (Link and Phelan 1995, p. 80) (see Hummer et al. 1999). If such a relationship holds, it is unclear whether the fundamentally causative agent should best be viewed as R/S as a whole, or one or more specific R/S dimensions, especially more cross-culturally generalizable dimensions (Oman 2009). Additional discussion of R/S as a fundamental cause occurs in the chapter entitled “Weighing the Evidence: What is Revealed by 100+ Meta-Analyses and Systematic Reviews of Religion/Spirituality and Health?” (this volume).

as the *dynamic and evolving* conception articulated earlier in this chapter, which can accommodate variations in both the circumstances and the local meaning of religion/spirituality.

Studies on an individual level, for example, have repeatedly found that engagement with R/S is positively linked to educational outcomes and attainment in US nationally representative samples of adolescents, perhaps due to processes such as friendship networks, extra-curricular activities, and norms, with benefits sometimes greatest among lower-SES adolescents (Erickson and Phillips 2012; Glanville et al. 2008; Kim 2015). Koenig et al. (2012, pp. 786) identified 11 studies of R/S and school grades or performance, all US-based and all showing positive relations. Favorable R/S-educational attainment relations have also been observed among adults (Brown and Gary 1991). Among immigrants, especially second-generation immigrants, attendance at worship services has been linked to higher occupational attainment (Connor and Koenig 2013). However, adult-focused US studies suggest that educational attainment may either attenuate or enhance a person's level of R/S, with effects that vary between traditions (McFarland et al. 2011). And worldwide, educational attainment often varies greatly between denominations and sometimes within denomination by gender (Norton and Tomal 2009).

Importantly, although many published health studies contain measures of both R/S and socio-economic status, only a small number have focused on the relation between these variables. Among studies examining R/S-SES interactions, one European study reported moderating effects by both national and individual-level religiosity which were "so pervasive that religious individuals in religious cultures reported better psychological adjustment when their income was low than high" (Gebauer et al. 2013, p. 565, 11 European countries, n = 187,957). And in the US, educational attainment as a measure of SES has been found to moderate the relation between R/S and psychological well-being, with the stronger effects observed among those with lower education (Ellison et al. 2014).

R/S-health relations also vary (are moderated) by national per-capita income, which in several ways represents a country-level analogue of individual SES. For example, positive individual-level R/S relations with psychological well-being are much stronger in poorer countries than in richer countries (Crabtree and Pelham 2009, March 6, n(1000 in each of 143 countries).

Finally, there is reason to believe that the neglect of R/S factors may have led to *underestimates* of SES-health relations. Such underestimates may occur whenever higher R/S and higher SES non-interactively predict better health, and when R/S levels are higher among lower-SES respondents. Such a configuration of R/S, SES, and health is quite common, especially outside of the US. Evidence demonstrates the complementary phenomenon that failing to adjust for SES statistically suppresses R/S-health relations, which strongly suggests the likelihood that failing to adjust for R/S will in turn statistically suppress SES-health relations. This strongly suggestive evidence is present in at least two prominent R/S-mortality studies: In these studies adjusting for SES *strengthened* R/S-longevity associations (see Hummer et al. 1999, Models 2 and 4 in Tables 3 and 4; Oman et al. 2002, Models 1 and 2 in Table 2). Few if any empirical investigations, however, have focused upon or clearly

documented R/S suppression of SES-health relations, and the magnitude and pervasiveness of such suppression remain unknown.

In sum, consistent with the dynamic and evolving conception of religion/spirituality presented earlier in this chapter, evidence indicates that relations between SES and R/S factors vary considerably between societies and traditions. In the US, multiple studies link R/S engagement with indicators of higher SES, especially greater adolescent educational attainment; but worldwide, educational effects vary between traditions and by gender. R/S-well-being relations appear especially strong in poorer countries, whereas European evidence reveals pervasive mutual moderation (statistical interaction) between SES and R/S in their effects on well-being, encompassing interactions between both individual and collective-level measures. Such variability underscores the need for interpretations grounded in local social conditions and cultural meanings.

2.4 *Socio-Economic Inequality*

Beyond social epidemiology's longstanding interest in how individually measured SES relates to health, social epidemiology has also devoted substantial attention to *collective social inequality*, which is most commonly measured through the Gini coefficient (Kawachi and Kennedy 1997). Evidence has accumulated from diverse societies worldwide for an adverse and probably causal association between greater socioeconomic inequality and worse health, a phenomenon that has drawn increasing attention in public health literature (e.g., Kondo et al. 2009; Pickett and Wilkinson 2015; Wilkinson and Pickett 2006).

Theory and evidence suggests that R/S factors are related to such socioeconomic inequalities in a complex manner: *Bidirectionally* in causality – as both cause and consequence – and also *bivalently*, with various R/S dimensions acting as impediments or exacerbators of inequality, and sometimes as buffers against the adverse effects of inequality (Idler 2014b).

Available longitudinal evidence suggests that high levels of religiousness/spirituality may be more of a consequence than a cause of socioeconomic inequality. More specifically, evidence from several longitudinal studies suggests that national or state-level social inequality causally fosters increased R/S, perhaps as a response to the existential insecurity that it may induce. One recent study used yearly time series data on religiousness, income inequality (Gini index) and average income (GDP per capita) from 50 US states since the 1950s. Changes in inequality predicted subsequent changes in religiousness 1 year later, whereas the reverse was not true, suggesting that “inequality would appear to drive religiosity, and not the reverse” (Solt et al. 2011, p. 462). Very similar results emerge from analyses of German national data (1969–2008), and from pooled cross-national data from 34 countries in 5 continents (1964–2010) (Solt 2014).

Other studies have used single-timepoint multi-national surveys to examine how inequality may affect R/S, often finding strong relations between elevated inequality and higher R/S. For example, one study employed a dozen different R/S measures ranging from beliefs to worship service attendance and prayer, finding that in

most cases, “economic inequality [was] estimated to powerfully increase religiosity and to do so regardless of income” (Solt et al. 2011, p. 457, WVS/EVS, 76 countries, $n > 200,000$); Similarly, a European study found that income inequality (Gini coefficient), independent of various individual-level measures of insecurity, predicted greater attendance at religious services (Immerzeel and van Tubergen 2013, EVS, 23 countries, $n = 134,009$). And a worldwide study reported high correlations between income inequality (Gini coefficient) and national average frequency of personal prayer, after adjustments for other key theoretically supported country-level variables ($r = 0.50$, Rees 2009, 55 countries). Inequality may also foster desire for non-privatized expressions of R/S: A cross-national study found that greater societal income inequality (Gini coefficient) predicted lessened support, especially among the poor, for secularized politics (Karakoç and Başkan 2012, WVS, 40 countries from 4 continents, $n = 41,564$).

When religion is present, evidence suggests that it may exert mixed effects on inequality. Much evidence links R/S factors to higher levels of charitable giving and community volunteering, each of which helps foster broader social welfare (Saroglou 2013). Evidence from the World Values Survey also suggests that attending religious services correlates with moral issue conservatism, but has only a “miniscule” relation to preferences on economic issues (De La O and Rodden 2008, p. 455, Figure 5b, 16 countries, $n = 15,332$). Indeed, in major Western industrialized countries, “the difference between the voting behavior of secular and religious individuals can be attributed to large differences in preferences on the moral values issue dimension, and little, if any, of the difference can be attributed to differences in preferences on economic issues” (De La O and Rodden 2008, p. 469, 16 countries, $n = 15,332$).⁸

Evidence does, however, suggest that religious *division* in society affects attitudes toward fostering equality through redistributive policies. European studies report that lower support for income redistribution is predicted by greater religious heterogeneity (“fractionalization”) as well as by greater religious versus secular polarization (Finseraas 2009, 22 countries, $n = 40,997$; Stegmueller et al. 2012, ESS, 16 countries, $n = 79,679$).

Yet on the local level, religion may contribute to mitigating inequality in ways that go beyond charity. As noted earlier, Wuthnow’s (2002, p. 669) US nationally representative study found that membership in a congregation was related to greater chance of “status-bridging” social relationships. Similarly, other US studies have found that although US religious congregations tend to lack ethnic diversity, they

⁸Voters who hold heterogeneous moral and economic preferences (i.e., partly liberal, partly conservative, depending on the issue) frequently face dilemmas, especially in countries with “majoritarian” electoral systems that are dominated by two major parties, because party issue positions on these diverging dimensions are by necessity “bundled together” (De La and Rodden 2008, pp. 441, 469). Such dilemmas are not uncommon, because “in every single one of our countries, the [moral versus economic] issue scales had opposite correlations with income, and they never exhibited a positive correlation with one another” (p. 469). Conflicts may be fewer in proportional representation electoral systems, however: “faced with the menu of choices available in the Netherlands, Germany, and the Scandinavian countries... voters need not choose one preference dimension on which to base their vote” (p. 470).

encompass a great deal of educational and income diversity, especially congregations that are urban (Schwadel 2009).

In sum, increases in inequality appear to spur enhanced religiousness, which may contribute, to some degree, to mitigating inequality. R/S measures correlate substantially with attitudes on moral issues but are mostly uncorrelated with economic attitudes, except that religious divisions in society are associated with lower support for redistributive policies.

2.5 *Violence and Crime*

Violence, which is closely related to crime, is a social problem that has been recognized as a public health issue in recent decades, perhaps inspired in part by successes in public health approaches to injury prevention (Rutherford et al. 2007; Schneider 2011; Winett 1998). Among factors relevant to the preventive approaches emphasized by public health are religion and spirituality, which have long been investigated by various social scientists and criminologists for potential preventive effects. Building on Durkheim's (1995/1912) work on social cohesion, the "moral community" hypothesis suggests that higher aggregate community-level R/S will foster various motivational and social processes that lead to lower crime rates (Baier and Wright 2001; Lee and Bartkowski 2004). And either in tandem with community or on its own, individual-level adherence to R/S may also potentially reduce criminal behavior through a number of processes, including fear of supernatural or karmic consequences (e.g., Shariff and Rhemtulla 2012).

Many empirical studies have investigated R/S-crime relations at the individual level. Koenig et al. (2012, pp. 243–255, pp. 780–785) identified 63 studies published since 2000, of which 61 were individual-level, and 50 (79%) reported significant or near-significant inverse relationships between R/S and delinquency or crime, a pattern that was "almost identical" (p. 248) to significant protective findings from 31 of 39 published before 2000. A systematic review of 60 studies reported a significant inverse relationship between individual R/S and crime (overall $r = -0.12$, Baier and Wright 2001).

Other published studies have examined community-level factors in US counties or at the level of nations. Among county-level studies, the existence of community-level R/S effects (moral community hypothesis) was suggested by a national study that found lower crime rates in US counties with larger numbers of churches per capita (Lee 2006, 902 rural counties). Similarly, greater proportions of religious adherents in a county have been found to predict lower arrest rates for violent crimes by whites, blacks, and hispanics (Ulmer and Harris 2013, 182 counties). However, as noted earlier, another US nationwide study of adults reported that proportions in each county of Evangelicals correlated with higher government-tabulated crime rates, whereas proportions of mainline Protestants and Catholics correlated with lower crime rates (Beyerlein and Hipp 2005, 3157 counties). Greater religious homogeneity has also been found to predict lower county crime rates (Trawick and

Howsen 2006, 120 counties in Kentucky). Some county-level studies have also provided evidence on how certain forms of religion may have supported violence-prone regional subcultures (Lee et al. 2010, 1068 counties).

Adolescent crime and delinquency have also been examined in multiple county-level studies. For example, one US nationwide study found that county-level and school-level measures of conservative Protestant homogeneity, but not general religiosity, were related to modestly reduced adolescent self-reports of delinquency (Regnerus 2003). Another study found that a higher proportion of rural counties' residents who adhered to civically engaged religious traditions predicted lower juvenile homicide rates (Lee and Bartkowski 2004, 1889 counties). On the individual level, correlations of R/S with lower rates of youth delinquency have been documented in multiple meta-analyses (overall $r = -0.21$, Cheung and Yeung 2011, $k = 40$ studies; $r = -0.21$ Yonker et al. 2012, $k = 10$ studies of deviant behavior) (see also chapter “[Maternal/Child Health, Religion, and Spirituality](#)”, this volume).

National-level R/S effects on crime have also been observed. One cross-national study reported that higher rates of belief in hell were associated with lower national crime rates, but that beliefs in heaven were associated with higher crime rates, leading the authors to suggest that effects may be driven by “fear of supernatural punishment” (Shariff and Rhemtulla 2012, p. 3). Another study of 36 nations found that individual attendance at worship services reduced the acceptability of tax fraud overall, and that within each nation, tax fraud was viewed as less acceptable among religious adherents when at least half of the population adhered to some form of religious tradition (OR = 11.84 Stack and Kposowa 2006, WVS, $n = 45,728$).

A handful studies have also examined relations between individual-level R/S factors and domestic violence. Protective effects have been observed, such as reduced odds of perpetrating domestic violence (OR = 0.91, $p < 0.001$), although evidence suggests effects are moderated by ethnicity and perhaps other sociocultural factors (Ellison et al. 2007, $n = 3134$) (see also Mahoney et al. 2001). A recent systematic review has described how among immigrant populations in the US, religious leaders and norms can both contribute to and help address problems of intimate partner violence (Choi et al. 2016).

2.6 Individual Religiosity/Spirituality as Moderators of Effects from Communal Adversity

A diverse array of empirical studies have reported evidence that individual-level R/S (Box C) may buffer effects on the individual from adverse factors in the community environment. In Fig. 1, this is represented by the arrow labeled “u” showing the capacity of individual R/S (Box C) to moderate the influence of the community environment (Box B) on non-R/S individual characteristics (Box D). For example, multiple studies by Krause and his colleagues have reported that individuals higher in R/S were less affected by the adversity of dwelling in a deteriorated

neighborhood (Krause 1998; Krause et al. 2017). Similarly, public religious affiliation has been reported to buffer the tendency of community violence to lead to increased substance abuse (Fowler et al. 2008). And spiritual meaning has been found to buffer against post-traumatic stress of disaster survivors (e.g., Hurricane Katrina, Haynes et al. 2017). And as described in the chapter in this volume on “[Social Identity and Discrimination in Religious/Spiritual Influences on Health](#)”, multiple studies have reported that individual R/S moderates distress from perceived ethnic discrimination.

Similarly, in cross-national data, reports of multi-level analyses have indicated that belief-based measures of religiosity buffer the adverse effect of national income inequality on life satisfaction, both in Europe and worldwide (Joshanloo and Weijers 2016a, ESS, 27 nations, n = 49,7636 self-reporting degree of religiousness & WVS/EVS, 85 nations, n = 217,591 reporting importance of God). Relatedly, and entirely at the ecological level, religiosity exerted a buffering effect against the adverse effects of societal injustice on well-being in 121 nations (Joshanloo and Weijers 2016b).

2.7 *Collective Coping*

Excessive psychological stress partly mediates adverse effects from discrimination, social inequality, and many other psychosocial risk factors (e.g., Adler et al. 1994). Pargament (1997) synthesized a great deal of research showing how individuals and groups turn to distinctively religious and spiritual methods of appraisal and coping (see discussion in the chapter “[Model of Individual Health Effects from Religion/Spirituality: Supporting Evidence](#)”, this volume). Although most often studied at the individual level, stress and coping frameworks have been applied at the collective level to conceptualize and study group stressors, group appraisals, and group coping responses. Religious and other community leaders who shape collective appraisals are said to function as “appraisal makers” (Jerusalem et al. 1995, p. 113).

While a few studies have investigated R/S coping by families (Mahoney et al. 2001), much or perhaps most scholarship on the role of R/S in collective coping has focused on responses to disasters. Religious organizations, East and West, are well-known for engaging in disaster relief efforts (see reviews in Joakim and White 2015; see also Cheema et al. 2014; McLaughlin 2016; Samuels 2016). Long neglected in disaster-response scholarship, religious actors are now receiving increased attention, as evidenced by multiple special issues, including one in the *International Journal of Mass Emergencies and Disasters* (Fountain et al. 2015; Gaillard and Texier 2010). In the US, attention is being given to developing partnerships between clergy and mental health professional to address spiritual needs during disasters, and to developing cross-traditionally pan-inclusive clergy networks for partnering with local disaster-preparedness authorities (Aten et al. 2013; Chaffee 2012, February 1).

2.8 *Multilevel Spiritual Interventions*

Community-level factors, notwithstanding their entrenchment, have also been made the focus of interventions. Indeed, recent scholarship in public health and other fields has emphasized the value of multi-level interventions that target both individual-level and community-level processes (Smedley and Syme 2000; Schensul and Trickett 2009). Questions about the value of interventions that address R/S factors at multiple levels arise naturally from the large R/S-focused intervention literature, which includes many randomized trials (DeHaven et al. 2004; Worthington et al. 2011) (see also this volume's chapter entitled "[Weighing the Evidence: What is Revealed by 100+ Meta-Analyses and Systematic Reviews of Religion/Spirituality and Health?](#)"). Such interventions have aimed to accommodate, support, or exert beneficial effects at least in part through participants' engagement with spirituality or religion. However, most previously studied interventions have been conceptualized and evaluated primarily if not exclusively at the individual level. For example, many studies have evaluated R/S-infused or R/S-tailored forms of psychotherapy or counseling (Worthington et al. 2011) (see also chapter on "[Public Health Education, Promotion, and Intervention: Relevance of Religion and Spirituality](#)", this volume).

Yet even individually-focused interventions may sometimes produce community-level changes through changed individuals (Schensul and Trickett 2009). Such changes are perhaps especially likely if many intervention recipients are members of the same community. In fact, many spiritually-tailored interventions have used religious congregations for recruitment and delivery of health interventions. It would seem possible to measure the resulting changes in the congregational sociocultural environment, although it is unclear if any studies have attempted such measurement in a systematic way. If such group-level changes can be measured, their mediational roles in individual change could also be investigated. As an additional step, a multi-level intervention might plan – in collaboration with community leaders – to implement changes in the congregational environment. Such changes may also at times emerge spontaneously through community-based participatory research.

More challenging, but perhaps still feasible, is to conduct multi-level R/S--focused interventions in non-sectarian (non-congregational) settings, such as neighborhoods, workplaces, or non-sectarian schools. The existence of many commonalities across traditions has made possible the existence of non-sectarian spiritually-focused interventions at the individual level (e.g., Bormann et al. 2013; Oman et al. 2006). The emerging social science of spirituality also suggests possible conceptual bases for identifying ethically grounded non-sectarian spiritual group-level intervention approaches (Oman 2013). In settings such as educational institutions, an initial group-level intervention may perhaps most feasibly be conceived as a motivational support and complement to a set of voluntary-enrollment individual-level interventions that allow for diverse R/S orientations (Oman 2016; Oman et al. 2008; Sarath 2003). Multi-level spiritually-infused interventions represent a challenging but potentially highly rewarding frontier for public health investigation and application.

2.9 *Other Salutogenic Factors: Expanding Social Epidemiology?*

This chapter's review has emphasized relations of R/S to factors of major interest in contemporary social epidemiology, an emphasis continued in the next chapter's review of discrimination and health (see "[Social Identity and Discrimination in Religious/Spiritual Influences on Health](#)", this volume). But apart from its attention to social capital and social support, contemporary social epidemiology tends to disproportionately emphasize pathogenic factors, devoting less attention to salutary factors in the social environment that foster better health.

Evidence strongly indicates that religion and spirituality often function as positive health-inducing factors, famously called *salutogenic* factors by pioneering social epidemiologist Aaron Antonovsky (Antonovsky 1996; Levin 1996). But religion and spirituality are not the only salutogenic factors that may be embedded in social environments through norms, culture, and widespread individual behavior. Social identity itself may function at times as a salutogenic factor (see chapter "[Social Identity and Discrimination in Religious/Spiritual Influences on Health](#)", this volume). Additional potentially salutogenic factors viewable as at least partially embedded in sociocultural environments include numerous character strengths and virtues studied in positive psychology, such as compassion, forgiveness, altruism, and various other prosocial virtues, many of which have demonstrated favorable empirical health associations (Koenig et al. 2012; Peterson and Seligman 2004; Riek and Mania 2012). Another salutogenic factor is the possession of a cogent world view, called a *sense of coherence* by Antonovsky (Eriksson and Lindström 2006; Jeserich 2013). Perhaps because it espouses them, much evidence links religion/spirituality to higher levels of these other salutogenic factors (see review in "[Model of Individual Health Effects from Religion/Spirituality: Supporting Evidence](#)", this volume). For example, among adolescents, R/S often correlates favorably with *developmental assets* (see chapter on "[Maternal/Child Health, Religion, and Spirituality](#)" this volume).

It would seem natural to study R/S in the context of these other factors that may clarify its operations. Yet apart from social capital and sense of coherence, these factors have been neglected epidemiologically. The health consequences of their greater or lesser embedding in sociocultural environments has remained largely unexplored in epidemiologically oriented studies. Better understanding of such embedded salutogenic factors could clarify what mediates R/S-health relations, as well as open up new approaches to health promotion and multi-level intervention. Salutogenically oriented approaches might also shed light on key factors in the internal social environments of religious communities, such as the conduct and tone set by leaders or other community exemplars and "appraisal makers" (Jerusalem et al. 1995, p. 113), whose aggregate impact may either enhance or dilute the health effects flowing from membership in specific religious communities (Oman 2013; Pargament et al. 1983; Taylor et al. 2000) (see also chapter on "[Public Health Education, Promotion, and Intervention: Relevance of Religion and Spirituality](#)", this volume). Salutogenic approaches clearly need much more exploration.

3 Summary: Social and Community-Level Factors

Several ideas for application to public health practice are provided in Box 1. In summary, reviews of research on R/S and social and community-level factors reveal that

- Lower mortality rates in US counties have been predicted by county-level measures of more socially engaged religiousness, and of less insular religiousness (counts of types of congregations). Measures of community religiousness have also predicted Israeli neighborhood mortality rates and US county mortality rates for various cancers;
- Consistent with early work by Durkheim, community suicide rates often show religious patterning, with greater measured community religiousness often predicting lower suicide rates in diverse ethnic groups in the US;
- Community-level measures of religiousness have been found to predict other health-related outcomes that include lower depression, better psychological well-being, and higher self-rated health;

Box 1: Ideas for Application to Public Health Practice: Social and Community-Level Factors

Community-level concepts, theories and evidence can inform public health professionals' intervention development, partnering and relationship building with religious/spiritual communities:

- ✓ Be aware and acknowledge that religious communities are perhaps the single largest source of “social capital” in the US (and many other countries), and that engagement in such communities can buffer against many community stressors that include disasters, violence, discrimination, and income inequality;
- ✓ Be aware and acknowledge that different religious communities sometimes foster different types of social connection and “social capital” that may possess different implications for health-related outcomes such as crime rates and volunteering;
- ✓ Be aware that religious communities are often among the most important responders to disasters, and consider partnering with clergy networks or other R/S-based groups or networks;
- ✓ Consider exploring multi-level interventions that seek to address both individual-level and community-level factors, such as individual behavior as well as congregational climate or neighborhood cohesion.

Please see chapters in Part II of this volume for in-depth discussion of the relevance of religion and spirituality to applied public health work. See Part I's first chapter for an overview of major application themes.

- Religious involvement is an enormous source of group-level social capital, arguably the largest single source in the US (Putnam 2000), but different denominations and different R/S dimensions are linked to different forms of social capital that may differ in their health effects, and occasionally be linked to poorer health;
- Relations between SES and R/S factors vary considerably between societies and traditions, with R/S associations with educational attainment being favorable in the US, but varying by tradition and gender worldwide;
- Income inequality appears to spur enhanced religiousness, which may then in turn help somewhat to mitigate inequality on local levels. Internationally, R/S measures have been mostly uncorrelated with economic attitudes, except that religiously divided societies show lower support for redistributive policies;
- Lower crime rates are predicted by greater community-level religiousness, especially for civically engaged traditions, and meta-analyses indicate that lower individual criminality is predicted by many dimensions of R/S engagement;
- Individual-level R/S often appears to buffer against adverse effects of community-level stressors, including disasters, community violence, racial discrimination, income inequality, and dwelling in a deteriorated neighborhood;
- Religious communities are often among the most important responders to disasters, and are receiving increased attention in disaster-response scholarship (Fountain et al. 2015);
- Multi-level spiritually-infused interventions represent a challenging but potentially highly rewarding frontier for public health investigation and application;
- Salutogenically oriented studies of the community-level embedding of positive factors such as prosocial virtues and spiritual exemplars could potentially clarify pathways underlying health effects from membership in R/S communities, and help guide multi-level intervention design.

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