

Article

The Role of Religious Behavior in Health Self-Management: A Community-Based Participatory Research Study

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Received: 18 September 2018; Accepted: 8 November 2018; Published: 13 November 2018



Abstract: Prevalence of chronic disease, mental health problems, and risk behaviors in San Bernardino (SB) County reflect some of the worst health outcomes in the State of California and the United States. Using the Integrated Theory of Health Behavior Change (ITHBC) as the theoretical framework, this community-based participatory research (CBPR) study aimed to determine how religious self-regulation skills and ability, and religious behaviors, jointly affect health promotion behaviors among socio-economically challenged residents of southwest SB County, California. A convenience sample of adult residents (N = 261) completed a series of inventories to measure the relationship between modified ITHBC constructs of religious self-regulation skills, religious self-management behaviors, and health outcomes. Structural Equation Modeling (SEM) analysis was conducted to validate the strong positive effect of religious self-regulation skills and ability on how frequently individuals engage in both organized and non-organized religious activities. Results also indicated a significant positive impact of religious behaviors towards healthy eating behaviors. However, without the engagement in religious activities, high religious self-regulation skills and ability inhibited the likelihood of healthy food intake. This faith-related theoretical model provides an avenue for faith-based organizations' capacity for contributing to community health promotion.

Keywords: religious self-regulation; religious self-management behaviors; healthy eating behaviors; health outcomes; religious support; low socio-economic status; organized and non-organized religious behaviors

1. Introduction

Multidisciplinary research reveals a range of health benefits through participation in religion (Ansari et al. 2017, p. 6; Koenig et al. 2012; Tan et al. 2013). Religiosity has been associated with health promoting behaviors, such as improved diet, attendance to preventive care, exercise, and moderate drinking, contributing to overall improved health status (Hill and Pargament 2008; Persynaki et al. 2017). Studies also indicate a positive association between religiosity and mental health, including well-being, self-esteem, and decreased stress levels (Krause et al. 2016). The range of health outcomes also involves lowered rates of cardiovascular disease, cancer, hypertension, and blood pressure, all-cause mortality, breast cancer risk factors, and improved fruit and vegetable intake (Gillum and Williams 2009; Gillum and Ingram 2006; Tan et al. 2013). Therefore, this area of research is of great interest among the San Bernardino County population who have higher prevalence rates for heart

disease and diabetes, compared to neighboring counties and state (San Bernardino County Board of Supervisors 2015). In addition, recent data reveals 38% of adults in the county were determined to be overweight and 34% obese (San Bernardino County Board of Supervisors 2015).

This research aims to examine quantitative assessment data of how religious behaviors function as health self-management strategies. The study methodology was developed by the Community-Based Participatory Research (CBPR) approach and the research questions and hypotheses were driven by the Integrated Theory of Health Behavior Change (ITHBC) (Ryan 2009) (See Figure 1 for the modified ITHBC model). Studies of CBPR have found various benefits, which rationalizes its use for this study and includes (1) its ability to support culturally relevant research and incorporate local community knowledge; (2) ability to recruit participants to interventions; (3) development and strengthening skills of the community and academic partners to address difficult issues; (4) productive conflict resolution strategies; (5) promotion of partnership synergy to strengthen collaboration; and (6) continuation of project efforts and sustainability of results beyond the funding period (Jagosh et al. 2015; Israel et al. 2001). Adopting the community-based participatory research approach (CBPR), which is a more desirable model for research with vulnerable populations than traditional research approaches that emphasize less on the context of a phenomenon (Holkup et al. 2004), the current research team sought to determine in what way can the faith community contribute to health status. Such exploration could achieve a balance between research and action that mutually benefits both science and the community, such as the reduction of health disparities. The research question was whether religious self-regulation and religious behaviors can change the individual health behaviors within a community.

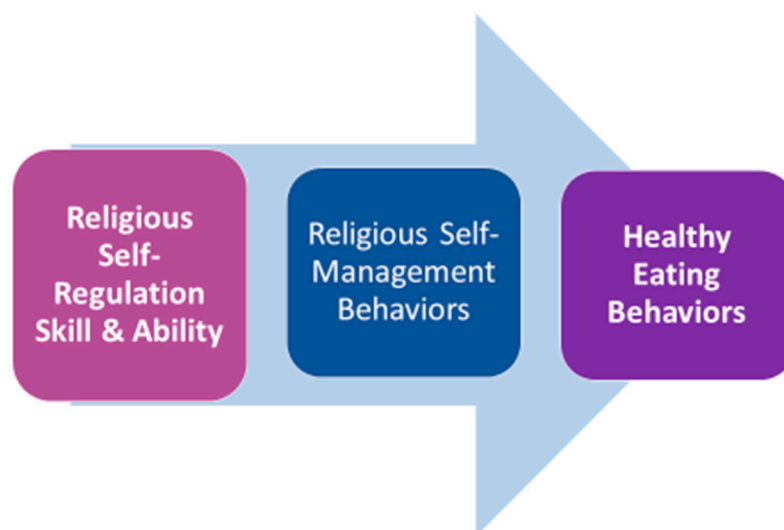


Figure 1. Modified Integrated Theory of Health Behavior Change model.

Before addressing results, a review of recent literature on factors associated with CBPR and health behaviors, including geographical factors, religious self-regulation, intrinsic religiosity, religious coping, religious self-management behaviors, and healthy eating behaviors, is given. Exploration of these constructs will aid in the description of health outcomes affecting at risk communities.

1.1. Community-Based Participatory Research (CBPR)

CBPR is an approach to research in public health that involves equitable partnerships and active participation in the decision-making process among community players and researchers to facilitate community health improvement and increase knowledge (Holkup et al. 2004; Jagosh et al. 2015). The CBPR approach has its strengths in sustaining supportive and power-sharing relationships among marginalized groups (Tremblay et al. 2018; Cargo and Mercer 2008; O'Brien and Whitaker 2011).

Moreover, CBPR has been identified as a successful approach to recruiting and retaining hard to reach participants for research (Israel et al. 2010; De Las Nueces et al. 2012). Through use of this participatory method, concerns of members may be addressed and effective interventions may be set in place to improve health outcomes among the target population.

Key characteristics of CBPR as outlined by (Israel et al. 2010) were used in the design of the research study, including (1) recognition of the community as a unit of identity, (2) development of resources and strengths in the community, (3) encouragement of learning and empowerment that aligns with social inequities, (4) incorporation of knowledge and action for the benefit of all members, (5) furthers the process of collaborative learning and enhances self-efficacy dealing with social inequalities, (6) communicates findings and information acquired to all members, and (7) necessitates a long-standing relationship by all members (Israel et al. 2001). A crucial aspect of successful CBPR involves the effort to build trust among partners and community members to participate equally throughout the research process (Bryan et al. 2014). Through this framework, communities benefit as health disparities are addressed by culturally appropriate interventions and researchers who may facilitate policy change (Israel et al. 2010; Cacari-Stone et al. 2014; O'Brien and Whitaker 2011).

1.2. Geographical Factors Affecting Health Behavior

Health behaviors are actions taken by individuals that affect their health and account for up to 40% of premature deaths in the United States (Saint Onge and Krueger 2017). Public health research reveals that these behaviors are reflective of a variety of social, environmental, and physical contexts (Short and Mollborn 2015). Recent statistics from San Bernardino County relating to these conditions of the built environment reveal an ongoing level of risk due to limited opportunities. For example, the US Census Bureau revealed an increase of San Bernardino County families living in poverty from 12.3% in 2005 to 16.3% in 2014 (United States Census Bureau 2014). Most recently, in 2016, the city of San Bernardino specifically had 28.6% of families living in poverty, the highest rate in the county (San Bernardino County Board of Supervisors 2016).

Additionally, the nutrition environment in San Bernardino has been identified as a “food desert,” with a Retail Food Environmental Index (RFEI) of 5.72, indicating a high prevalence of unhealthy food outlets, food deserts, increased obesity, and poor health outcomes in the region (Agboola et al. 2017). Moreover, health disparity trends exist between San Bernardino city and the state of California (Agboola et al. 2017). Specifically, residents of SB city are affected by limited access to fresh produce and instead the presence of more global-chain retail food outlets. Aside from these challenges, public safety is also of great concern in this region. A 43% increase in San Bernardino gang-related incidents were reported in 2015, compared to the previous year. Also, in the Riverside-San Bernardino area, crime rates are higher than the state and neighboring regions (San Bernardino County Board of Supervisors 2016).

Therefore, developing an intentional outreach intervention is critical to San Bernardino County (SBC) as residents are specifically challenged by “lifestyle” diseases related to aspects of health care, public safety, and environmental concerns affecting their quality of life (San Bernardino County Board of Supervisors 2016). This CBPR assessment study was conducted through close collaboration between the academic institutions, community (i.e., two elementary schools, one community church, and one low income trailer park), and the sponsoring church. The aim was to determine how self-regulation skills and ability, and religious behaviors, jointly affect health promotion behaviors among socio-economically challenged residents of southwestern San Bernardino County.

1.3. Religious Self-Regulation

Self-regulation is a process of applying knowledge and beliefs to incorporate a behavior change into one's daily routines and lifestyle. Self-regulation requires an application of knowledge to achieve the preferred, self-chosen goal, and all the self-regulatory thinking and behaviors necessary to achieve the goal. These include “monitoring and reflective thinking, decision making, planning and plan

enactment, self-evaluation, and management of emotions occurring with the change" (Ryan 2009). Thus, an intrinsic religious commitment or a positive coping that incorporates the divine (God) can assist in applying one's religious knowledge and beliefs involved in these daily decision making processes. Religious self-regulation was defined in this study as religious thinking, experiences, and how one understands and deals with major problems in life (McCullough and Willoughby 2009).

Intrinsic religiosity. Intrinsic religiosity (IR) is described as the degree of religious commitment and the ultimate goal of pursuing and internalizing religion (Koenig and Büssing 2010). Restated intrinsic religiosity assists an individual to integrate personal faith and its meaning and motivation into the daily decisions of life (Allport and Ross 1967). Though there is debate over the internal/external religiosity construct (Hall et al. 2008; Clements et al. 2015) one of the original Hoge (1972) questions for assessing IR ("I try hard to carry my religious beliefs over into all my other dealings in life") was used by Clements et al. (2015) as a single item in the Brief Multidimensional Measurement of Religiousness/Spirituality (BMMR) questionnaire. This question was used to demonstrate concurrent validity in their assessment of Religious Surrender and Attendance. For Religious Surrender, the two items used were "When my understanding of a problem conflicts with God's revelation, I will submit to God's definitions" and "Although I may not see results from my labor, I will continue to implement God's plans as long as God directs me to do so." Attendance was measured by the following question, "How often do you go to religious services?" Thus, IR was measured alongside these three questions among two groups of undergraduate university students and one pregnant women's population from Southern Appalachia, a region known for high religious attendance and health disparities. This, along with two other studies (Hafizi et al. 2015; Mosqueiro et al. 2015) support the positive effects of intrinsic religiosity on diverse groups of patients. Hafizi et al. (2015) also showed the use of Hoge (1972) IR measurement, as validated for use with Farsi-speaking populations in Iran, and inferentially to other Middle Eastern countries. Moreover, findings of Mosqueiro et al. (2015) among primarily white depressed inpatients in the South of Brazil uphold a protective effect of intrinsic religiosity on suicide and psychiatric inpatient admission.

Religious coping. Religious coping became defined as an effort to deal with life stressors through an association with the divine (Mpofu 2018), and it plays an active role in both positive and negative dimensions (Pargament et al. 2011). Specifically, positive religious coping was described as "having a spiritual connectedness with others and a benevolent worldview", whereas negative religious coping recognized tension or spiritual struggle with God (Fincham et al. 2018). Although the impact of the religious dimension of coping mechanisms is generally overlooked in research studies (Fincham et al. 2018), there are promising findings on its specific outcomes on health promotion. Previous research indicates that individuals utilize the expression of religious coping when facing chronic and acute stressors (Cummings and Pargament 2010; Schuster et al. 2001). Recent literature investigating its impact on health outcomes reveal a significant association with improved mental health status (Koenig et al. 1998; Olson et al. 2012), including reduced depression (Abernethy et al. 2002). Moreover, studies of individuals with medical conditions also identify a positive relationship between religious coping and quality of life and reporting of greater physical well-being (Cummings and Pargament 2010; Trevino and McConnell 2014). Similarly, religious coping among youth has also been associated with positive affect and life satisfaction (Van Dyke et al. 2009). Religious coping also holds potential in acting as an alternate strategy to maladaptive eating (Pirutinsky et al. 2012). Furthermore, one study reported that the utilization of religious coping provided an opportunity for African Americans to prevent cardiovascular disease through lowering their blood pressure level (Steffen et al. 2001).

1.4. Religious Behavior

Organizational religious activities (ORA). Numerous research studies reveal positive health outcomes among those who frequently attend religious services. For example, religion has been found to aid in stress reduction through coping and allows individuals to engage in healthier lifestyles

(George et al. 2002; Koenig et al. 1998). Moreover, frequency of church attendance has been positively associated with maintaining good mental health, marital stability, improved social interactions, healthier dietary and physical activity behaviors, reduction of cardiovascular risk, and a suppression effect of obesity (Arredondo et al. 2005; Nam 2013; Oexmann et al. 2001; Strawbridge et al. 2001). The protective effect of religious service attendance against major depression has also been identified in numerous studies (Balbuena et al. 2013; Koenig 2004; Norton et al. 2008; Strawbridge et al. 2001). For example, a 30% lower odds ratio for lifetime prevalence of depression was reported among those who attended religious services (Maselko et al. 2009). One possible mechanism through which church attendance promotes well-being is that it allows social support, building relationships, and provides participants with a sense of belonging. Religious support can therefore aid in adherence to health programs, seeking help from clergy or church members, and fellowship in stressful events that can reduce negative emotions (Behere et al. 2013).

Non-organizational religious activities (NORA). Although church attendance is one type of organizational religious activity, it promotes private religious behaviors, including prayer and studying scripture (Koenig 1993). Prayer, a type of spiritual activity expressed as words or thoughts addressed to a divine force (Andrade and Radhakrishnan 2009), has also been associated with numerous health benefits. For example, one study revealed that participation in private religious activity, such as prayer or Bible study, was linked to a survival advantage among an elderly community (Helm et al. 2000). In addition, prayer has been associated with a decrease in adverse outcomes among patients suffering from cardiac disease (Çoruh et al. 2005). Intercessory prayer has also been linked to improved success rates of in vitro fertilization, improved immune function, improved rheumatoid arthritis, anxiety reduction, and reduced hospital stay by septic patients (Çoruh et al. 2005).

1.5. Fast Food Intake

Diet is an important factor in the development of chronic disease. Recent studies reveal the impact of dietary habits on a variety of cardio-metabolic risk factors, such as obesity, glucose-insulin homeostasis, cardiac function, cholesterol, weight-regulation pathways, and the microbiome (Mozaffarian 2016). Evidence-based nutrition research recommends dietary patterns that can improve cardio-metabolic health, such as consumption of fruits, nuts/seeds, vegetables, legumes, whole grains, and yogurt, while reducing intake of red meats, sodium, refined grains, and added sugars (Mozaffarian 2016).

Although these dietary patterns produce cardio-metabolic benefits, they are not accessible in all food environments. For example, low-income neighborhoods struggle with inequitable distribution of healthy foods, indicated by limited access to healthy food sources and yet abundant access to nutrient deficient foods from local fast-food outlets or convenience stores (Hilmers et al. 2012; Zenk et al. 2014). As a result, neighborhood residents who have limited access to supermarkets (vs. convenience stores) have higher rates of obesity and unhealthier eating diets (Larson et al. 2009; Morland and Evenson 2009).

Another contributor to negative health outcomes in at risk populations is the consumption of sugar-sweetened beverages. Recent studies demonstrated that consuming beverages with sucrose and high fructose corn syrup is linked to increased risk of cardiovascular disease, chronic kidney disease, obesity, metabolic syndrome, dental caries, and type 2 diabetes (Bomback et al. 2010; Malik and Hu 2015; Rosinger et al. 2017). Despite the dire consequences of high-fructose for developing cardio-metabolic diseases, data collected from 2011 to 2014 revealed that 49.3% of U.S. adults and 62.9% of youth aged 2 to 19 consumed at least one sweet beverage on a given day (Rosinger et al. 2017). Such a level of sweetened beverage intake also increased calorie intake among these two groups, with approximately 143 kcal for youth and 145 kcal for adults (Rosinger et al. 2017). It is therefore projected that a reduction of sweetened beverage consumption may lower BMI, blood pressure, risk of diabetes, and CHD (Mekonnen et al. 2013).

2. Results

The partnership of faith and health is revealed in the relationship of latent variables (i.e., religious self-regulation skills, religious self-management behaviors, and healthy eating behaviors) identified by use of Structural Equation Modeling (SEM) (see Figure 2 of SEM latent variables). The hypothesized model appears to be a good fit (chi-squared = 15.98, $df = 11$, $p > 0.05$; CFI = 0.99; RMSEA = 0.042, 90% CI = [0.000, 0.083]). The factor loadings from all three latent variables to their corresponding measurable variables range from 0.56 to 0.83. Specifics of measures used are given in the methods section.

One-way straight arrows connecting the three latent variables into a triangle are accompanied with numbers denoting standardized regression coefficients (β s), which can be used as effect size estimates. For purposes of explanation, letters, A, B, and C, are designated to represent the religious self-regulation skills factor, the religious self-management behaviors factor, and the healthy eating behaviors factor, respectively. Thus, the strongly positive effect of A toward B ($\beta = 0.81$) indicates the more religious self-regulation skills one has, the more engagement there is in B, religious self-management behaviors. Likewise, the positive effect of B towards C ($\beta = 0.86$) indicates that higher engagement in religious self-management behaviors produces more healthy eating behaviors. However, A is inversely correlated to C, with a strongly negative A toward C effect ($\beta = -0.62$). The model also indicates religious self-management behaviors serve as a moderating factor for healthy eating behaviors. A total of 26% variance in healthy eating behaviors is accounted for by this model.

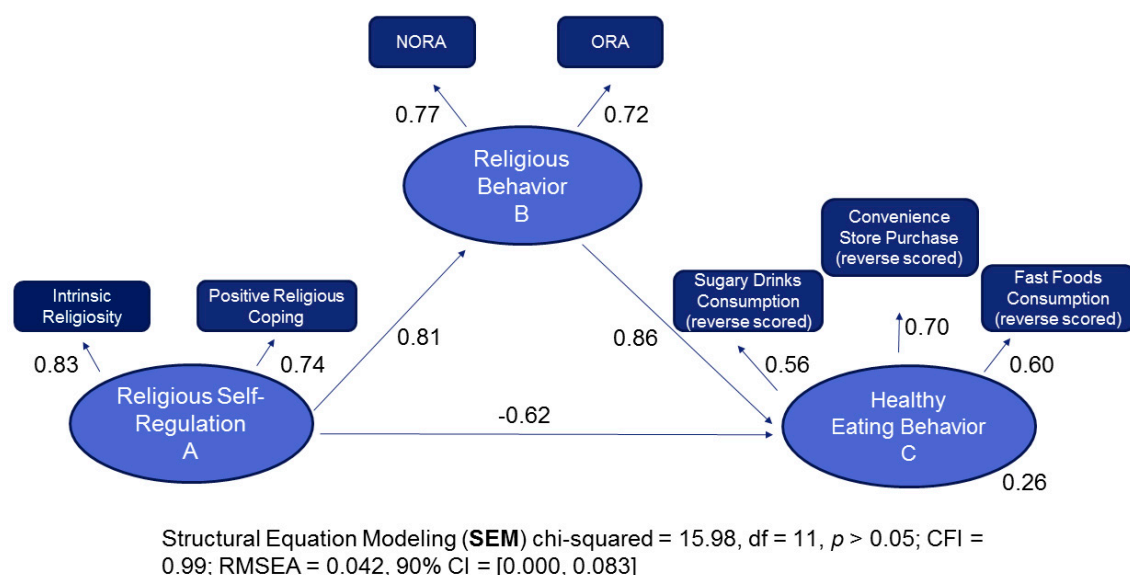


Figure 2. Structural Equation Modeling of latent variables.

3. Discussion

Gary Gunderson (1997) describes the mutually enriching role of health and faith in his quote, “Faith needs the language of health in order to understand how it applies to life; health needs the language of faith in order to find its larger context, its meaning” (p. 4). The effect of religious behaviors on healthy eating is not new (Clark et al. 2018; Orlich et al. 2015; Beezhold et al. 2010). However, noting that religious self-regulation is, in part, a matter of perception of both the issue or challenge and the resources to adequately address it for positive health outcomes adds weight to the health and religion interface. The effect of God’s people gathered (the church) on healthy eating behaviors is reinforced by the combination of personal religious perceptions, personal commitments to non-organized religious practices (e.g., pray privately, or Bible-reading), and corporate expressions of faith and belief (e.g., worship, service to community, educational offerings). Often privatized religion makes the individual wholly responsible for the being and doing aspects of health and faith. Bringing those individual commitments to the church-gathered allows multiple levels of intellectual, emotional, and spiritual

support to interact in a synergistic fashion. The Christian church would attribute this support dynamic to the presence and power of the Spirit of God at work with people who gather to pursue God's agenda of love. Gunderson (1997) describes the church and her motivation as people intent on well-being grounded in God and his purposes. He states, "Congregations are where people come together, gathered by God to serve God's intentions of renewing and redeeming the whole world, this is done not in domination, but in love" (emphasis added) (p. 2). Thus, the church intercepts the individualistic pursuit of health and well-being, and acknowledges that health behavior change requires knowledge, support, and self-regulation skills beyond the individual to be successful. While this is not akin to a "Prosperity Gospel",¹ it is a belief in the abundance of life (John 10:10) as promised by God. This is not financial blessing, but a whole-health perspective. What ancient Jewish tradition would call a life of "Shalom" and Christian adherents would call a life of abundance. Health and wellness are held deeply within this theological tradition, understanding that God is a god who created whole persons, and that health is a key part of living a "whole" life. A community-based participatory research approach can also emphasize the community's responsibility to individuals to change structural aspects of food deserts and unsafe streets for navigating to and from community resources. Without social advocacy, individuals are left encumbered with social determinants of health they cannot change. Yet, this study offers one bright light, one ray of hope for low income, un-resourced, and marginalized neighborhoods; that of partnership with the church, strengthening personal choices in the midst of less than equitable situations.

Community connection, meaningful work, and social relationships are found within the rubric of faith and faith communities. As "eating behavior is strongly influenced by social context" (Higgs and Thomas 2016, p. 1), it would be reasonable to infer that faith and faith communities, those corporate expressions of faith that happen within a particular social context, would add to the increased healthy eating habits of an individual. As well, commonality in lifestyle and belief systems, something that happens in faith communities with shared values and beliefs, may influence healthy eating "because diet similarity among friends and family is most likely when concerns with behaving 'correctly' are high." (ibid).

Those who work in the area of faith understand that the mystery of faith means that there is an indefinable layer of well-being that can be accessed. Christian Scripture calls it "the peace that passes understanding" (Phil. 4:7). In other words, regardless of the situation, peace (well-being) can be obtained by the idea of faith or belief. However, faith is only as valuable as its object, this is why we say we have faith "in" something. When that something or someone is seen as eternal, loving, caring, and unchangeable, there is a unique understanding that somehow works within to create a sense of protection against context.

Without the moderating effect of religious behaviors, religious self-regulation skills appear truncated in their ability to influence healthy eating behaviors. One possible explanation for this comes from Holt et al. (2003, 2015). Spiritual health locus of control (SHLOC) concept, which adds active and passive factors distinct from internal and external dimensions of the locus of control. An active SHLOC mindset sees partnership with God and a shared responsibility in the pursuit of health as a daily reality. In contrast, a passive SHLOC understands God to be in control of all things, including one's health. Therefore, it is not necessary to take individual responsibility for any health promoting actions. A more passive SHLOC does not negate the vision of being involved with a higher power nor seeking the support and guidance of this higher power. What it seems not to envision is a personal responsibility related to health behaviors.

Another possible explanation for the strong negative influence of religious self-regulation skills and ability, if without the engagement in religious activities, on healthy eating behaviors lies in the

¹ The Prosperity Gospel is the doctrine that God wants people to be prosperous, especially financially; adherents to the Prosperity Gospel believe that wealth is a sign of God's blessing and the poor are poor due to a lack of faith. Koch, Bradley. Journal of Ideology Volume 36, 2014.

countering epidemiological forces in religion and health. Could crisis religiosity as opposed to resting religiosity determine whether one waits until there is a crisis of health to engage in actively working with God for one's health? (see [Hvidt et al. 2017](#), for full description). Until such time, there may be a restful God-is-in-control belief or a there-is-no-God belief that neither seeks involvement of a higher power nor perceives such involvement as possible, reasonable, or desirable.

Excitingly, this research demonstrates one important promising mechanism to eliminate the potential adverse effect of a God-is-in-control belief on seeking health-promoting eating behavior; that is, taking actions and participating in religious activities at both the individual level and the organizational level. Only when people are willing to do so, will they be able to eat healthier or try to avoid eating unhealthy foods. In sum, the partnership of God and his people demonstrates the strong, positive influence of religious activities on healthy food intake as a proximal health outcome. While a system wide approach would offer a more sustained improvement at the community level, there is still action in which individuals and organizations can engage to make improvements in health. Just as the CBRP approach builds relationships with the community to determine what action is desirable and deemed helpful for the particular community, so can organized and non-organized religious behavior build relationships with God and his people to pursue individual and community health.

Research suggests that faith-based organizations (FBOs) can promote health and well-being both within congregations Caldwell and throughout communities ([Ayton et al. 2017](#)). However, faith communities and their leaders, because of their localized context, do not often seek a research- and data-based approach to understanding the needs of their communities. For instance, when a pastor has a congregation of 30–50 people, it is often felt that there is little need for academic evidence to understanding the felt needs of the community. Therefore, faith communities often opt out of a more research oriented methodology to understanding the needs of the communities they serve outside of their congregations. Strategic alignment of initiatives and dollars within the multiple institutions addressing healthcare needs can be a factor when it comes to directing energy to one or more identified health needs within the community. Working in concert, hospitals, churches, not for profits, and academic institutions can use the community health needs assessments, often done by faith-based not-for-profit health systems, as a road map for strategic planning. This alignment in population health strategies results in the betterment of the communities that overlap each entity's service area ([Levin 2013](#); [Plunkett et al. 2016](#)).

Future Research Directions: It would seem reasonable to assert that the frequency that one interacts with corporate expressions of faith might have a direct correlation to the efficacy of one's overall health. As well, research to understand the role of increased acceptance into the community could have a positive effect on the trajectory of one's health. One interesting question that warrants further research is whether one specific church outreach model or denomination produces better health behavior than others. For instance, is the health management role of religious behavior more significant when the church is built around a worship-centered model, a social network model, a justice-oriented model, or a combination of these? Also, does the specific health emphasis of a particular denomination have an impact on one's health, as opposed to a faith tradition with less emphasis on personal health? More importantly, future research can focus on the testing of the generalizability of this three-factor model to see to what extent it can be applied to non-religious populations. Moreover, rather than limiting the model to predict or explain healthy eating behavior, future studies could focus on testing the effects of religious self-regulation and behaviors on additional health behavior outcomes, such as smoking, drinking, and exercising, etc. Going to church increases social connection and, therefore, there is less social isolation. Thus, future research could examine the extent to which reduction in social isolation accounts for the associations identified in current research. Lastly, studies which address topics of health disparity, such as cancer screening rates, access to health care, and pre- and post-intervention behavior change, will also clarify what role the church, academic institutions, and community partnerships can have in influencing individual and community health.

4. Methods and Materials

The current study arises from a three-phase, mixed method study conducted within southwestern San Bernardino County, with partners, including a church and two local universities—named removed for blinding and review purposes. The target areas included three specific cities, Loma Linda (zip code 92354), Redlands (zip codes 92373 and 92374), and San Bernardino (zip code 92408). Two of the original research team members (one faculty and one church leader) met with the principal from a local elementary school who assisted in selecting six school parents to form the first pilot focus group. This was conducted in the spring of 2016 at the local elementary school. Masters of public health students conducted the focus group and analyzed the concerns of the community (under review), and reported back to the school administration. The principal initiated a crossing guard, and other school drop off and pick up actions followed. The current research team continued the assessment activity into 2016–17 school year, with recruitment for participation. Principals from both elementary schools and the trailer park administrator cooperated in fliers being sent home in school children’s backpack, a phone message sent from one of the principals, and door to door fliers delivered in the trailer park by the primary investigator (P.I.). The church supplied staff support and coordination of office xeroxing of the surveys, and data entry by church members who were also research team members.

The P.I. recruited participants on site at the schools with a table and banner offering free gift cards for participation in the study. Momentum gained as the P.I. met parents at school functions, and was present at 7:30–8:30 a.m. and again at 1:30–2:30 p.m. for drop off and pick up of children at the school. Similarly, a table with a banner was set up twice daily at the trailer park at times recommended by the administrator there, and at one church service chosen by the pastor. At one school, a station was set up with I-pads and surveys loaded online via Qualtrics during their fall festival evening. Here, the research team learned parents much preferred a paper and pencil version of the survey. Thus, data collection from that point forward involved hard copies of the survey.

A convenience sample of adult residents (N = 261) in the target areas participated in the Quantitative Assessment Phase (See Table 1 for Demographic Data). Participants were either parents of children attending two local elementary schools or residents of one community trailer park. The assessment phase involved community engagement strategies, surveys, and focus groups. This article solely reports quantitative findings based on the survey collection. Data collected from focus interviews conducted in 2017 revealed resident concerns regarding environmental stressors, physical safety, mental health, and alcohol and drugs, and will be reported elsewhere.

The survey packet entailed a series of inventories to measure intrinsic religiosity (IR), positive religious coping (PRC), organizational religious activity (ORA), non-organizational religious activity (NORA), as well as three healthy eating indicators. Specifically, IR was measured by the 10-item Intrinsic Religiosity scale (Hoge 1972), a 5-point Likert scale ranging from *definitely not true* to *definitely true of me*. A sample question was “My faith involves all of my life.” The Cronbach’s alpha of IR in this study was 0.77, indicating a sufficient level of reliability. Positive Religious Coping was measured by the 3-item positive coping subscale of the Brief Religious Coping Scale (Pargament et al. 1988) with a 4-point Likert scale ranging from *not at all* to *a great deal*. A sample question was “I think about how my life is part of a larger spiritual force.” The Cronbach’s alpha of PRC was 0.87, indicating a good level of reliability. In addition, the frequency of engaging in ORA and NORA was measured using the corresponding questions in the Duke University Religion Index (DUREL) (Koenig et al. 1997). Specifically, respondents were asked to rate how often they attend church or other religious meetings on a 6-point scale ranging from *never* to *more than once per week*, and how often they spend time in private religious activities, such as prayer, meditation, or study of scripture, on a 6-point scale ranging from *never* to *more than once a day*. Lastly, respondents were asked to report in the previous week how many days they drank at least one sugary drink, how frequently they ate fast food, and how frequently they purchased food from a convenience store, on 3 separate 4-point scales ranging from *never* to *over 5 days*.

Table 1. Demographic data.

Demographic Data (N = 261)	N	%
Gender—Female	191	74.3
Age—30–49 years	119	46.5
Religious preference		
Christian	110	42.1
Seventh Day Adventist	48	18.3
Catholic	45	17.2
Ethnicity		
Non-Hispanic	138	55.2
Hispanic	112	44.8
Annual income		
<\$30,000	128	56.6
\$30,000–<\$50,000	38	16.8
\$50,000	29	12.8
Prefer not to answer	31	11.7
Education		
High school degree, GED, or less	115	44.6
Some college, associate, or bachelor’s degree	128	48.1

5. Conclusions

This study adds quantitative evidence to support a positive relationship between religious self-regulation skills and abilities and healthy eating behaviors, moderated by the combination of non-organized and organized religious self-management behaviors. This study suggests religiosity as an individual and as a corporate expression of faith offers support for improving a particular public health component, that of healthy eating behaviors. Faith gives purpose and meaning, and in that meaning and purpose is a broader understanding of the trajectory of one’s life. In so doing, it is reasonable to think that one would want to be healthier in order fulfill the purpose that is given by the object of that faith.

The impact of a faith community on an individual’s life, in relation to healthy eating habits, as seen in this study, is an alert to faith community leaders and coordinators that they have a role to play in this aspect of the lives of their constituents. If social gathering, beliefs, religiosity, and the creation of meaning in people’s lives makes a difference, it would behoove faith communities to take the health of the congregants and their community seriously.

The study also demonstrates religious involvement serving as a crucial protective factor for those who identify with God and his people. Faith is always a bit of a mystery, and how faith interacts with the biological processes of any given individual is not known, but the increased health outcomes as related to someone’s faith and religiosity suggest that there is an intangible quality that faith brings to an individual that helps them to cope with life in general. Faith is in no way a “fix-all”, but does play into one’s overall feeling of well-being, purpose, and meaning.

The study also strengthens pursuit of health in community settings by partnership of neighborhoods with the local faith community and surrounding academic institutions. Creating models of Faith, Health, and Community interaction can increase the health outcomes of any community. Research such as this can help to inform the increased health outcomes that can take place through a faith community partnership.

This is especially true when a CBPR approach is used to seek community leadership and ownership of desired changes for improved public health indicators. Rather than waiting for government or community organizations to take action, faith communities can lead the way. When a CBPR approach is used, the data received can be used as a road map to create interventions that addresses the actual needs of a community, rather than a “random acts of kindness” approach to serving the community. As well, the data set can be shared with other community leaders to help align

the work of multiple entities within the community (Healthcare, Education, Not-for-Profit sectors, community member, and other faith-based organizations) in order to develop a stronger collective impact that will increase the health outcomes of a given population.

Author Contributions: Conceptualization of the study was done by, J.P. and T.G.; Formal analysis by J.P. and H.L.; Investigation by, J.P., M.M. and T.G.; Methodology by, J.P. and T.G.; Project administration, J.P.; Supervision, J.P.; Writing of original draft, J.P., H.L., M.M. and T.G.; Writing – review & editing, J.P., H.L., M.M. and T.G.

Funding: This research received no external funding.

Conflicts of Interest: The authors declare no conflicts of interest.

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