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Destroying God's Temple? Physical Inactivity, Poor Diet, Obesity, and Other "Sin" Behaviors

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Abstract On average, our participants ($N = 112$), who self-proclaimed to be Christians, believed that physically inactive lifestyles, unhealthy eating, overeating, and being obese destroy the body, God's temple. However, these beliefs were less definitive, than those of other common "sin" behaviors, such as drug use, smoking, and excessive drinking of alcohol. In addition, destroying the body with physical inactivity or poor diet was not necessarily viewed as sinful. Subsequently, these beliefs did not relate to self-reported physical activity, dietary behavior, or body mass index. It is possible that inactivity, poor dietary habits, and obesity are not internalized into the spiritual perspective as destroying the body, God's temple, in the same way as other "sin" behaviors.

Keywords Physical inactivity · Poor diet · Health · God's temple · Sin

Introduction

According to the World Health Organization (2015), 38 million people die worldwide (63% of annual global deaths) from chronic diseases, including cardiovascular disease (17.5 million deaths), cancer (8.2 million), respiratory disease (4 million), and diabetes (1.5 million). These four preventable diseases, alone, account for 82% of all chronic disease deaths. The impact of chronic diseases has spurred interest in understanding their lifestyle-related causes. Specifically, physical inactivity, poor diets, obesity, and smoking account for up to 80% of all chronic diseases, and are attributable to 222,004 American deaths per

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year from just the top four leading chronic diseases (Ford et al. 2009; Katz 2009; McGinnis and Foege 1993; Mokdad et al. 2004; Yoon et al. 2014). However, only 3% of Americans have been found to maintain all four of these lifestyle factors (Reeves and Rafferty 2005). Of specific interest here, 87% of Americans are not achieving standards for vegetable consumption, 80% are not meeting minimal physical activity guidelines, and 34% are estimated to be obese (Healthy People 2020; Moore and Thompson 2015). These findings highlight the urgent need for novel thinking on how to approach the difficulties surrounding the adoption of healthy lifestyles.

A Case for Religiosity and Spirituality

Religiosity refers to behaviors that suggest religious commitment, such as prayer and church attendance; while *spirituality* describes the personal relationship that one holds with God. Increased religiosity has been implicated as an important factor in both mental and physical health (Koenig 2015; Koenig et al. 2012). Subsequently, there is thought that religiosity/spirituality could be key factors in aiding in healthy lifestyle adoption, and is a common focus in church-based nutrition and physical activity interventions (Campbell et al. 2007; Yeary et al. 2012). Although the evidence with physical activity and dietary quality is generally positive, it is limited and inconclusive, especially in the relationship with religiosity or spirituality (Koenig 2015). In addition, these faith-based interventions show positive trends, but do not generally result in large effects on physical activity or dietary quality, with a majority of participants following the intervention who still do not meet physical activity or dietary guidelines. In addition, there is a general consensus that religiousness is either unrelated or positively associated with body weight (Cline and Ferraro 2006; Dodor 2013; Gillum 2006; Linardakis et al. 2015; Reeves et al. 2012; Yeary et al. 2009), with the potential that religiosity is associated with reduction in the self-perception of actually being overweight (Ruiz and Acevedo 2014).

These mixed results can be examined against the backdrop of particular characteristics of religious behavior. For example, rural southern churches are known to have religious events and activities centered on high-fat, high-sugar and processed foods, snacks, and desserts, while taking few, if any, steps to serve healthy foods (Kegler et al. 2012). Approximately 90% of rural churches have reported preparing meals to attract new members, with the majority admitting to no enforcement of dietary restrictions or health education programs (Roozen 2010). However, other denominations, such as Seventh-Day Adventists, promote healthier lifestyles, including diet and physical activity (Kwok et al. 2014; Orlich and Fraser 2014; Tonstad et al. 2013).

The Body as God's Temple

These individual differences might be attributed to the general belief that the body is God's temple, and should be treated with care and respect. It is possible that some behaviors are thought to destroy the body, while inactivity, poor diet, and obesity might not be viewed in this way. Holt et al. (2005) found the literal interpretation that the body is God's temple was a self-reported reason for not partaking in unhealthy behaviors, or behaviors thought to "destroy" the body. The authors state, "However, data from this study suggest that individuals perceive their religious beliefs to influence their avoidance of risk or 'sin' behaviors, such as alcohol and drug use, and pre- and extramarital sexual intercourse, to a greater extent than it spurs positive health behaviors, such as healthy diet and physical activity," (pg. 278). We are particularly interested in these findings, especially since no

known studies have further examined the views that physical inactivity, poor dietary intake, or obesity might destroy the body, God's temple, in comparison with other, more common "sin" behaviors.

Mahoney et al. (2005) did examine the relationship of self-perceived manifestation of God in the body (i.e., view of body as the temple of God) within a sample of college students, and found that such manifestation was weakly related to healthy behaviors, including more strenuous exercise ($r = .12$) and less unhealthy dieting practices ($r = -12$). Despite the weakness of the relationships, they do highlight the potential of the belief that the body is God's temple could subsequently relate to, and possible encourage, physical activity and dietary behavior. However, these findings warrant extension and further examination.

Needed Research

Clarification of the aforementioned research questions would provide further insight into the role that spirituality, religiosity, and associated beliefs might hold in aiding the adoption of healthy lifestyles, including physical activity, healthy eating, and weight control. Thus, our first aim was to simply assess current beliefs and attitudes regarding the role of physical inactivity, poor diet, and obesity in the destruction of the body, God's temple, in a sample of self-professed Christians. Subsequently, our second aim was to determine whether these beliefs and attitudes, alongside self-perceived manifestation of God in the body, were correlated with actual, self-reported physical activity, dietary intake, and body mass index (BMI).

Methods

Participants

Participants were recruited through seven local churches within Nacogdoches County and Angelina County of East Texas, Orange County of Southeast Texas, and online through social media. In-person recruitment varied by church, as meetings with the pastors determined the specific method. Recruitment mainly occurred through a combination of notifications within the bulletin, and support of the pastor from the pulpit. The researchers were also brought into two churches to present the study to the congregation or Sunday School group. During this recruitment, potential volunteers were also asked to share the study with others, including via social media. In addition, the research team and close contacts posted an announcement and link to the survey on social media, while also asking their network to share the link.

An initial response of 123 participants was trimmed due to incomplete data resulting in the final sample size of $N = 112$. On average, participants were 39.77 ± 17.54 years of age, with a mean BMI of 26.36 ± 6.29 kg/m^2. Participants self-reported their gender as 90% female ($n = 84$) and 10% male ($n = 28$), and race/ethnicity as 88% White, 8% Black, 2% Hispanic, 1% Asian, and 1% other. All participants answered "yes" to the question, "Would you describe yourself as a Christian?" Participants self-reported their religious affiliation as 29% Baptist, 21% Non-denominational, 8% Methodist, 8% Catholic, 7% Protestant, 3% Pentecostal, 1% Presbyterian, 0% Latter Day Saints/Mormon, and 0% Seventh-Day Adventist. In addition, 22% of participants chose "other" and were not asked to provide their specific religious affiliation.

Procedure

The study was advertised as a short survey assessing adults' (≥18 years of age) thoughts on spirituality and health. After providing informed consent, participants self-administered all measures through a confidential and anonymous online survey program. Approval from the Institutional Review Board was obtained prior to data collection. Informed consent was obtained from all individual participants included in the study. All procedures performed in this study involving human participants were in accordance with the ethical standards of the institutional and/or national research committee, and with the 1964 Helsinki Declaration and its later amendment or comparable ethical standards.

Measures

Manifestation of God in the Body

The manifestation of God in the body is a 12-item scale that assesses an individual's perception of the manifestation of God in the body (Mahoney et al. 2005). All items use a 7-point scale from 1 (strongly disagree) to 7 (strongly agree). All items are summed (84 total possible points), with higher scores representing self-reported belief of the embodiment of God within them. Of importance in the present study, manifestation of God in the body was used as an assessment of the degree to which each participant viewed their body as the temple of God. Internal consistency in the present study was acceptable ($\alpha = .98$).

Beliefs and Attitudes

For beliefs that certain factors destroy the body, participants were first presented with scripture on the body as the temple (1 Corinthians 3:17, 6:19). Participants were then presented with a list of lifestyle factors and were asked, "Which of the following do you believe destroys your body (God's temple)?" Participants rated on a 5-point scale from 1 (definitely no) to 5 (definitely yes). Specifically, the factors presented were drug use, smoking tobacco, excessive drinking (alcohol), premarital sex, tattoos, body piercings, lust, obesity, stress, inactive/sedentary lifestyle (physical inactivity), unhealthy eating/poor diet (poor food choices), and overeating.

Five items to assess attitudes of physical inactivity and poor diet were created for this study. These items were guided by the Theory of Planned Behavior (Ajzen 1991) and followed instructions for construction of items (http://people.umass.edu/aizen/pdf/tpb.measurement.pdf). Participants were asked two separate questions, "My being *physically inactive* (*eating unhealthful*) and destroying my body, God's temple, would be…" and then presented with five, 7-point bipolar attitude items, with the following anchors: A good thing–a bad thing, irrelevant–relevant, not important–very important, not sinful–sinful, right–wrong. All items were averaged to represent overall attitude for physical inactivity ($\alpha = .85$) and unhealthy eating ($\alpha = .85$), respectively.

Spirituality

Spiritual assessment inventory (Hall and Edwards 1996) assesses spirituality, or the personal relationship that participants have with God. Six items were taken from a larger inventory and were chosen because they include awareness of the individual into the role

that God plays in life. Each item is measured on a 5-point scale from 1 (not at all true) to 5 (very true), with higher scores meaning that God is a powerful presence in that individual's life. Items were summed for a possible score of 30. Internal consistency in the present study was acceptable ($\alpha = .97$).

Religiosity

Religiosity was assessed with two simple items measuring frequency of prayer and church attendance (Cornwall 1989). Specifically, prayer frequency was assessed by a single-item, "Other than blessing the food, how often do you usually have personal prayer?" Responses ranged from 1 (never) to 7 (daily). For church attendance, another single-item asked, "How often do you attend church?" Responses ranged from 1 (never) to 5 (weekly).

Physical Activity

Physical activity was measured with the short-form of International Physical Activity Questionnaire (IPAQ-SF; Craig et al. 2003), which assesses the frequency (days per week) and duration (minutes per day) of vigorous intensity physical activities, moderate intensity physical activities, walking, and sitting over the last 7 days. Total minutes per week were calculated for moderate intensity, vigorous intensity, and walking. Sitting time was calculated as minutes per day.

Dietary Intake

The Starting the Conversation dietary recall is a brief, 8-item scale validated to assess dietary habits over the past few months (Paxton et al. 2011). All items are summed, with lower summary scores representing more *healthy* diets, and higher scores representing more *unhealthy* diets. Internal consistency for this scale in the present study was just below the common, acceptable level ($\alpha = .70$) at $\alpha = .62$. Further analysis revealed that the deletion of any one, single item would not have improved internal consistency to or above $\alpha = .70$; thus, no items were deleted.

Results

Beliefs and Attitudes

General beliefs about different lifestyle factors destroying the body, God's temple, are found in Table 1. On average, participants had a moderate–high belief that their body was God's temple (i.e., manifestation of God in the body; $M = 64.84$ out of possible score of 84), with 30% of the sample self-reporting the max score (84), and 13% self-reporting the minimal score (12). On average, participants believed that obesity, physically inactive lifestyle, poor diet, and overeating destroy the body, God's temple. These means were similar to those beliefs regarding drug use, smoking, and excessive drinking, but higher than premarital sex, tattoos, body piercings, and lust. However, as shown in Table 2 the frequencies of responses illustrate that obesity (56.3%), overeating (50.9%), unhealthy eating (49.1%), inactive lifestyles (48.2%), and stress (41.1%) had a lower percentage of max responses (5 = "definitely yes," on the 1 to 5 scale). In comparison, 78.6% of the

Table 1 Descriptive statistics for all measures for the attitudes/beliefs of the body as God's temple, spirituality, religiosity, physical activity, and dietary intake ($N = 112$)

	Mean	SD	Min	Max
View the body is God's temple				
Manifestation of God in body	64.84	24.64	12	84
Destroys body, God's temple?				
Excessive drinking	4.61	.93	1	5
Drug use	4.56	.98	1	5
Smoking	4.54	1.02	1	5
Obesity	4.29	1.02	1	5
Overeating	4.20	1.02	1	5
Unhealthy eating, poor diet	4.15	1.07	1	5
Inactive, sedentary lifestyle	4.14	1.06	1	5
Stress	4.04	.98	1	5
Premarital sex	3.23	1.54	1	5
Lust	3.20	1.54	1	5
Tattoos	2.14	1.28	1	5
Body piercings	2.12	1.25	1	5
Attitude: destroy body, God's temple				
Being physically inactive	5.83	1.29	1	7
Eating unhealthful	5.90	1.17	2	7
Spirituality and religiosity				
Spirituality	21.91	7.73	6	30
Prayer frequency	4.90	2.20	1	7
Church attendance	3.71	1.60	1	5
Physical activity				
Moderate PA (min/week)	127.42	142.33	0	720
Vigorous PA (min/week)	102.77	147.77	0	720
Walking (min/week)	312.37	596.65	0	3360
Sitting (min/day)	341.08	199.78	30	1000
Dietary intake				
Healthy diet[a]	14.41	2.60	9	21

[a] A higher score represents a more unhealthy dietary intake

sample answered "definitely yes" to excessive drinking and smoking as destroying the body. Drug use was a close second with 77.7%. Only 7.3 and 8.3% answered "definitely yes" to body piercings and tattoos, respectively.

When these beliefs were correlated with the manifestation of God in the body, only premarital sex ($r = .68$), lust ($r = .62$), tattoos ($r = .42$), body piercings ($r = .38$), drug use ($r = .26$), and smoking (r = .19) were found to be significant ($p \leq .05$). Self-perceived manifestation of God in the body was significantly positively correlated ($p < .01$) with prayer frequency ($r = .65$), church attendance ($r = .67$), and spirituality ($r = .76$). Spirituality was positively correlated ($p < .01$) with prayer frequency ($r = .77$) and church attendance ($r = .66$).

The mean attitudes that physical inactivity ($M = 5.83$) and eating unhealthful ($M = 5.90$) destroy the body were generally negative on the 7-point scale, and were both positively correlated with self-perceived manifestation of God in the body ($r = .47$ and $r = .42$, respectively). In other words, those who had a stronger view that their body was a

Table 2 Frequencies, as a percentage of the total sample ($N = 112$), regarding beliefs that the particular lifestyle factors destroy the body, God's temple

Destroys body, God's temple?[a]	Definitely no			Definitely yes	
	1 (%)	2 (%)	3 (%)	4 (%)	5 (%)
Excessive drinking	4.5	0	4.5	12.5	78.6
Drug use	4.5	.9	6.3	10.7	77.7
Smoking	4.5	.9	9.8	6.3	78.6
Obesity	3.6	2.7	11.6	25.9	56.3
Overeating	3.6	1.8	17	26.8	50.9
Unhealthy eating, poor diet	4.5	2.7	15.2	28.6	49.1
Inactive, sedentary lifestyle	4.5	1.8	17.9	27.7	48.2
Stress	1.8	2.7	26.8	27.7	41.1
Premarital sex	21.6	12.6	18.0	16.2	31.5
Lust	22.5	11.7	19.8	15.3	30.6
Tattoos	44.5	19.1	21.8	6.4	8.2
Body piercings	43.6	21.8	20.9	6.4	7.3

[a] Participants were asked, "Which of the following do you believe destroys your body (God's temple)?" Participants rated on a 5-point scale from 1 (definitely no) to 5 (definitely yes)

temple of God had a greater, negative attitude (e.g., a bad thing, not important, wrong) toward physical inactivity or eating unhealthful destroying God's temple.

Physical Activity and Dietary Intake

As shown in Table 1, participants had a wide range of self-reported physical activity, with the mean moderate intensity falling just short of commonly prescribed guidelines of 150 min/week at 127.42 min/week. With a minimal total score of 8 (healthy diet), and maximum score of 24 (unhealthy diet), the mean dietary quality of the present sample was 14.41 ± 2.60, representing a moderately healthy diet, on average.

Partial correlations (controlling for gender and race) between measures of manifestation of God in the body, beliefs, spirituality, and religiosity with BMI, physical activity, dietary intake, and age are shown in Table 3. To highlight, manifestation of God in the body was not correlated with physical activity, dietary intake, or BMI. The only significant correlations, although weak, were with moderate intensity physical activity and the beliefs that obesity ($r = .26$), inactive lifestyle ($r = .21$), unhealthy eating ($r = .21$), and overeating destroy the body ($r = .23$).

Discussion

Our first aim was to assess beliefs about physical inactivity, poor diet, and obesity as destroying the body, in comparison with other "sin" behaviors thought to be commonly indicated in such destruction across religions (e.g., drug use, excessive alcohol, tattoos). Our sample, on average, believed that obesity, physically inactive lifestyle, unhealthy

Table 3 Partial correlations between measures assessing attitude that unhealthy lifestyle factors destroy the body (God's temple), with self-reported lifestyle factors (controlling for race and gender)

Beliefs/attitudes	Lifestyle factors/behaviors						
	BMI	Moderate PA (min/week)	Vigorous PA (min/week)	Walking (min/week)	Sitting (min/day)	Healthy Diet[c]	Age
Manifestation of God in the body	.14	−.08	.17	.05	−.01	.04	.13
Spirituality	.17	−.05	.10	−.00	−.04	−.05	.36**
Prayer frequency	.10	−.07	.04	−.02	.03	.05	.34**
Church attendance	.10	−.10	.02	.04	−.07	.04	.29**
Destroys body, God's temple?[a]							
Obesity	−.03	.26**	−.05	.04	−.11	−.05	.01
Inactive, sedentary lifestyle	.02	.21*	−.09	.13	−.12	.03	.11
Unhealthy eating, poor diet	−.03	.21*	−.18	.17	−.01	−.16	.08
Overeating	.01	.23*	−.15	.16	−.02	−.08	.18
Attitude: destroy body, God's temple[b]							
Being physically inactive	.06	.05	−.06	.18	−.02	−.05	.31**
Eating Unhealthful	.10	.00	−.08	.17	.02	−.04	.27**

* $p \leq .05$; ** $p \leq .01$

[a] On a scale from 1 (definitely no) to 5 (definitely yes)

[b] A higher score represents a more negative attitude about destroying the body, God's temple, with that particular behavior

[c] Lower score represents a more healthful dietary intake

eating, and overeating *do* destroy the body, God's temple—with all belief mean scores ranging from 4.14 to 4.29 out of 5.00—similar to drug use, smoking, and excessive drinking (Table 1).

Interestingly, when frequencies of responses were examined (Table 2), participants were less definite that obesity, overeating, unhealthy eating, inactivity, or stress destroy their body, in comparison with excessive drinking, drug use, and smoking. These results could suggest the novelty of these lifestyle factors in the spiritual context of God's temple. Interestingly, only half of the sample was definite that overeating destroyed the body, and less than half was definite that unhealthy eating and a physically inactive lifestyle destroyed the body. Yet, the scientific evidence points to these factors as two of the top three true causes of chronic disease death (McGinnis and Foege 1993; Mokdad et al. 2004).

In addition, the general attitude that being physically inactive or eating unhealthful and destroying the body (God's temple) was negative (5.83 and 5.90, respectively, out of a 7-point scale). With further examination, we found that the reason the mean was not higher, was due to the single item that asked with anchors "not sinful" to "sinful," which had a mean score of 4.88 ± 2.14 for being physically inactive and 4.94 ± 2.15 for eating unhealthful. All other items had a mean score of 5.93 to 6.80.

Thus, these data suggest that our sample believed that being physically inactive and eating unhealthful to the point of destroying the body were generally wrong, a bad thing, relevant and important, but there was more variability in the attitude that unhealthy lifestyle behaviors were actually sinful. It is possible that participants had not considered inactivity, poor diet, and obesity as sinful until this survey, but the variation does indicate important individual differences in how Christians view such behaviors from a spiritual perspective, with some not considering such behaviors as "sin" behaviors or capable of destroying the body.

At the present time, it is unclear why there appears to be a disconnect of physical inactivity, poor diet, and obesity with the perspective that the body is God's temple. However, we might speculate. First, there appears to be a lack of awareness in the church of the extent of the destruction; that up to 80% of all chronic disease deaths in the USA related to unhealthy lifestyles (Ford et al. 2009; Katz 2009). For example, in a sample of religious, adult African-Americans, Holt et al. (2009) found that many participants recognized that physical activity and healthy eating contribute to their overall health. However, in another sample, the notion of the body as a temple of God was frequently cited as a scriptural basis for taking care of the body for certain health behaviors, such as alcohol, tobacco, illegal drug use, and pre- and extramarital sex, but not others, including dietary behaviors, exercise, or adequate amounts of sleep (Holt and McClure 2006).

It is also possible that one's spiritual identity includes standards for certain behaviors, but not others. Thus, if one's spiritual self does not include standards related to inactivity, diet, and obesity, one would theoretically not experience dissonance (mental distress and conflict) with doing those behaviors. To illustrate, if my spiritual identity includes a standard that I am to be an honest person who does not lie, which I believe to be a sin, then when faced with an opportunity to lie, I should experience dissonance. I should seek to eliminate the distress, hopefully, by being honest in order to stay in line with my standard set by my spiritual identity (i.e. to be honest).

Unlike lying (or premarital sex, drugs, alcohol, etc.), we would hypothesize that fewer Christians connect inactivity, poor diet, and obesity to their spiritual identity. In other words, their spiritual identity is not threatened when eating an unhealthy meal, being lazy instead of exercising, or having excess body fat. If not, then there would be little reason to identify such behaviors as sinful and damaging to God's temple, or manage to stay in line with a spiritual identity. Of course, there are also deeper spiritual implications, with the role of sanctification in the Christian's life, shaping spiritual disciplines, controlling fleshly appetites, and strengthening one's relationship with God. Could self-controlling these unhealthy lifestyle factors fall in line with one's process of sanctification? Future research should examine interventions that seek to bring about greater awareness of how unhealthy lifestyles can destroy the body, while connecting to one's spiritual role or identity.

Next, the lack of connection could be due to little effort from the church to accommodate these unhealthy lifestyles, while perpetuating them as a part of the church culture. Many church events and fellowships are built around unhealthy food, especially here in the south. Donuts are offered, without fail, in many churches each Sunday morning, as are unhealthy fellowship meals. Culturally (outside of the church), gluttonous eating of unhealthy food might be considered socially acceptable. Perhaps, such acceptance in social culture has crept into the church culture. However, such acculturalization might have its limits. For example, alcohol consumption is acceptable in some religious affiliations. Yet, in these same churches, alcohol is not served at church events, perhaps in fear of tempting someone to lose their self-control. But, buffets of unhealthy options are provided with little to no concern of tempting one's self-control over their diet.

These behaviors can be sensitive topics in the church, and anecdotally, some churches find it taboo to discuss them. Such behaviors are not commonly preached from the pulpit, as are other "sin" behaviors, especially considering the possibility that clergy might feel pressured to modify or avoid certain spiritual disciplines to maintain relevance in society and the "unchurched." Similarly, few positive examples are being set from the church clergy. Proeschold-Bell and LeGrand (2010) found in a large cross-sectional sample that United Methodist clergy in North Carolina had 10% higher rates of obesity than their non-clergy counterparts (40% were obese), while reporting significantly higher rates of multiple chronic diseases. Another study of clergy in Kansas found that 77.4% were classified as overweight or obese (Lindholm et al. 2016). Interestingly, only 31% of these clergy stated that cultural change from their hierarchy was a potential solution to assist in achieving a healthy lifestyle. Thus, there appears to be a strong need for more efforts to provide awareness, programming, and services within the church (its clergy and members) regarding how unhealthy lifestyles and behaviors are connected to the spiritual identity, sanctification, church culture, and the premature destruction of God's temple.

Our second aim was to determine whether these beliefs and attitudes, alongside manifestation of God in the body, were correlated with self-reported physical activity, dietary intake, and BMI. Significant relationships would suggest a potential connection between one's spirituality and these health behaviors. A lack of relationships, which we found in the present study (Table 3), would suggest the opposite and support the research review provided in the introduction that expresses weak to no relationships of spirituality and religiosity with physical activity, healthy eating, and body weight. In other words, just because someone goes to church, prays with some frequency, and reports a strong, personal relationship with God does not mean they also are also living a physically active and healthy dietary lifestyle, or maintaining a healthy body weight.

A key measure in our assessment was the self-perceived manifestation of God in the body, which assessed the belief that one's body is a temple of God, created in His image, and is connected with and used by God. Overall, our sample held a stronger belief ($M = 64.84$) than was found in previous research in college students ($M = 55.70$; Mahoney et al. 2005). Generally, the stronger the belief that one's body is the temple, the more certain one was that specific behaviors destroy the body—premarital sex, lust, tattoos, body piercings, drug use, and smoking. However, our sample was not as certain that inactive/sedentary lifestyle, unhealthy eating/poor diet, overeating, obesity, or stress destroyed the body in relation to their beliefs that their body was actually God's temple. These findings support those by Holt et al. (2005), who suggested that positive health behaviors, such as a healthy diet and physical activity, might not be influenced by religious beliefs like traditional "sin" behaviors (e.g., alcohol and drug use, and pre- and extra-marital sex).

These results also highlight the importance of the relationship between the belief that a particular unhealthy behavior or factor will destroy the body *and* one's view that the body is God's temple, rather than each belief individually. Theoretically, the relationship might represent one's internalization of an unhealthy lifestyle factor into the spiritual life, possibly influencing their behavioral choices. Future research should examine whether those who actually do internalize physical inactivity, poor diet, and weight status are more successful in creating healthy behavior change than those who do not. This insight could be especially important in those using religion, spirituality, or prayer as a self-control or self-regulatory tactic (Friese and Wanke 2014; McCullough and Willoughby 2009), as prayer might be a more effective intervention in those who are more spiritual and internalize the behaviors they are seeking to control as destroying the body, God's temple.

Limitations

The present study has several limitations to note. First, because our study was cross-sectional in nature, the proposed causation of relationships is speculative and highlights the need for future research to examine with different methodologies. The present sample size, although adequate, was small, mostly Caucasian women from South and East Texas. We did succeed in obtaining an adequate range of BMI, physical activity, and dietary intake, which was helpful in exploring our specific research questions. However, we did not have a diverse enough sample to compare differences in beliefs between men and women, race/ethnicity, nor between different religious affiliations. Thus, generalizability to women from other ethnicities/races, religions, men, and other geographical locations is limited. Future research should examine similar research questions on a larger and more heterogeneous sample. Discovering key differences in the religion, spirituality, and health behavior connection across these populations could be an interesting area of exploration. In addition, we depended on self-reported measures, and future research should seek to compare to more objective assessments, especially with physical activity, dietary intake, and body weight. The *Starting the Conversation* dietary assessment utilized in the present study had internal consistency just below the common, acceptable level ($\alpha = .70$) at $\alpha = .62$. It is possible, then, that this scale is not unidimensional. We did not find any previous research that has examined a multidimensional possibility for this measure, thus could be a fruitful possibility for future research.

Conclusion

On average, our participants believed that physically inactive lifestyles, unhealthy eating, overeating, and being obese destroy the body, God's temple. However, these beliefs were less definitive, than those of other common "sin" behaviors, such as drug use, smoking, and excessive drinking of alcohol. Destroying the body with physical inactivity or poor diet was not necessarily viewed as sinful, on average, with variation in this view. These beliefs did not relate to self-reported physical activity, dietary behavior, and body weight (i.e., BMI). Also, the view that one's body is God's temple (i.e., manifestation of God in the body) did not relate to beliefs that physical inactivity, poor diet and obesity destroy the body, but did relate to beliefs that premarital sex, lust, tattoos, body piercings, drug use, and smoking destroy the body. It is possible, then, that physical inactivity, poor dietary habits, and obesity are not internalized into the spiritual perspective as destroying the body, God's temple, in the same way as other "sin" behaviors. Such findings provide a foundation for future research to expand our understanding of the confluence of health and spiritual lifestyles (Lucchetti and Luchetti 2014). In addition, a better understanding of the connection of inactivity, poor diet, and obesity to one's spiritual identity, and the role of awareness within the church are warranted, as are studies that examine barriers and solutions to the adoption of healthy lifestyles in the church (e.g., Lindholm et al. 2016). Such efforts could help elucidate why there is limited connection between such behaviors and the belief that the body is God's temple, as well as elucidate novel avenues for interventions to exploit for promoting positive health behavior change.

Compliance with Ethical Standards

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

References

Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179–211.

Campbell, M. K., Hudson, M. A., Resnicow, K., Blakeney, N., Paxton, A., & Baskin, M. (2007). Church-based health promotion interventions: Evidence and lessons learned. *Annual Reviews in Public Health, 28,* 213–234.

Cline, K. M. V., & Ferraro, K. F. (2006). Does religion increase the prevalence and incidence of obesity in adulthood? *Journal for the Scientific Study of Religion, 45*(2), 269–281.

Cornwall, M. (1989). The determinants of religious behavior: A theoretical model and empirical test. *Social Forces, 68*(2), 572–592.

Craig, C. L., Marshall, A. L., Sjostrom, M., Bauman, A. E., Booth, M. L., Ainsworth, B. E., et al. (2003). International physical activity questionnaire: 12-country reliability and validity. *Medicine and Science in Sports and Exercise, 35*(8), 1381–1395.

Dodor, B. A. (2013). Effects of religiosity on physical activity, fast food intake, and obesity in emerging adults. *Journal of Behavioral Health, 2*(1), 19–26.

Ford, E. S., Bergmann, M. M., Kroger, J., Schienkiewitz, A., Weikert, C., & Boeing, H. (2009). Healthy living is the best revenge: Findings from the European Prospective Investigation Into Cancer and Nutrition-Potsdam study. *Archives of Internal Medicine, 169*(15), 1355–1362.

Friese, M., & Wänke, M. (2014). Personal prayer buffers self-control depletion. *Journal of Experimental Social Psychology, 51,* 56–59.

Gillum, R. F. (2006). Frequency of attendance at religious services, overweight, and obesity in American women and men: The third national health and nutrition examination survey. *Annals of Epidemiology, 16*(9), 655–660.

Hall, T. D., & Edwards, K. J. (1996). The initial development and factor analysis of the spiritual assessment inventory. *Journal of Psychology and Theology, 24*(3), 233–246.

Healthy People 2020. Nutrition, physical activity, and obesity. Retrieved from http://www.healthypeople.gov/2020/leading-health-indicators/2020-lhi-topics/Nutrition-Physical-Activity-and-Obesity/data.

Holt, C. L., Lewellyn, L. A., & Rathweg, M. J. (2005). Exploring religion-health mediators among African American parishioners. *Journal of Health Psychology, 10*(4), 511–527.

Holt, C. L., & McClure, S. M. (2006). Perceptions of the religion-health connection among African American church members. *Qualitative Health Research, 16*(2), 268–281.

Holt, C. L., Schulz, E., & Wynn, T. A. (2009). Perceptions of the religion—health connection among African Americans in the southeastern United States: Sex, age, and urban/rural differences. *Health Education and Behavior, 36*(1), 62–80.

Katz, D. L. (2009). Life and death, knowledge and power: Why knowing what matters Is not what's the matter. *Archives of Internal Medicine, 169*(15), 1362–1363.

Kegler, M. C., Escoffery, C., Alcantara, I. C., Hinman, J., Addison, A., & Glanz, K. (2012). Perceptions of social and environmental support for healthy eating and physical activity in rural southern churches. *Journal of Religion and Health, 51*(3), 799–811.

Koenig, H. G. (2015). Religion, spirituality, and health: A review and update. *Advances in Mind-Body Medicine, 29*(3), 19–26.

Koenig, H., King, D., & Carson, V. B. (2012). *Handbook of religion and health* (2nd ed.). New York, NY: Oxford University Press.

Kwok, C. S., Umar, S., Myint, P. K., Mamas, M. A., & Loke, Y. K. (2014). Vegetarian diet, Seventh Day Adventists and risk of cardiovascular mortality: A systematic review and meta-analysis. *International Journal of Cardiology, 176*(3), 680–686.

Linardakis, M., Papadaki, A., Smpokos, E., Sarri, K., Vozikaki, M., & Philalithis, A. (2015). Are religiosity and prayer use related with multiple behavioural risk factors for chronic diseases in European adults aged 50+ years? *Public Health, 129*(5), 436–443.

Lindholm, G., Johnston, J., Dong, F., Moore, K., & Ablah, E. (2016). Clergy wellness: An assessment of perceived barriers to achieving healthier lifestyles. *Journal of Religion and Health, 55*(1), 97–109.

Lucchetti, G., & Lucchetti, A. L. G. (2014). Spirituality, religion, and health: Over the last 15 years of field research (1999–2013). *The International Journal of Psychiatry in Medicine, 48*(3), 199–215.

Mahoney, A., Carels, R. A., Pargament, K. I., Wachholtz, A., Leeper, L. E., Kaplar, M., et al. (2005). The sanctification of the body and behavioral health patterns of college students. *The International Journal of the Psychology of Religion, 15*(3), 221–238.

McCullough, M. E., & Willoughby, B. L. (2009). Religion, self-regulation, and self-control: Associations, explanations, and implications. *Psychological Bulletin, 135*(1), 69–93.

McGinnis, J. M., & Foege, W. H. (1993). Actual causes of death in the United States. *Journal of the American Medical Association, 270*(18), 2207–2212.
Mokdad, A. H., Marks, J. S., Stroup, D. F., & Gerberding, J. L. (2004). Actual causes of death in the United States, 2000. *Journal of the American Medical Association, 291*(10), 1238–1245.
Moore, L. V., & Thompson, F. E. (2015). Adults meeting fruit and vegetable intake recommendations: United States, 2013. *Morbidity and Mortality Weekly Report, 64*(26), 709–713.
Orlich, M. J., & Fraser, G. E. (2014). Vegetarian diets in the Adventist Health Study 2: A review of initial published findings. *The American Journal of Clinical Nutrition, 100*(Supplement 1), 353S–358S.
Paxton, A. E., Strycker, L. A., Toobert, D. J., Ammerman, A. S., & Glasgow, R. E. (2011). Starting the conversation: performance of a brief dietary assessment and intervention tool for health professionals. *American Journal of Preventive Medicine, 40*(1), 67–71.
Proeschold-Bell, R. J., & LeGrand, S. H. (2010). High rates of obesity and chronic disease among United Methodist clergy. *Obesity, 18*(9), 1867–1870.
Reeves, R. R., Adams, C. E., Dubbert, P. M., Hickson, D. A., & Wyatt, S. B. (2012). Are religiosity and spirituality associated with obesity among African Americans in the Southeastern United States (the Jackson Heart Study)? *Journal of Religion and Health, 51*(1), 32–48.
Reeves, M. J., & Rafferty, A. P. (2005). Healthy lifestyle characteristics among adults in the United States, 2000. *Archives of Internal Medicine, 165*(8), 854–857.
Roozen, D. A. (2010). 2010 national survey of congregations. Retrieved from http://faithcommunitiestoday.org/sites/faithcommunitiestoday.org/files/2010FrequenciesV1.pdf.
Ruiz, A. L., & Acevedo, G. A. (2014). True believers? Religion, physiology, and perceived body weight in Texas. *Journal of Religion and Health, 54*(4), 1221–1237.
Tonstad, S., Stewart, K., Oda, K., Batech, M., Herring, R. P., & Fraser, G. E. (2013). Vegetarian diets and incidence of diabetes in the Adventist Health Study-2. *Nutrition, Metabolism and Cardiovascular Diseases, 23*(4), 292–299.
World Health Organization (2015). Noncommunicable diseases: Fact sheet. Retrieved from http://www.who.int/mediacentre/factsheets/fs355/en/.
Yeary, K. H. H., Jo, C., Simpson, P., Gossett, J. M., Johnson, G. S., McCabe-Sellers, B. J., et al. (2009). Religion and body weight in an underserved population. *Race, Gender & Class, 16*(3/4), 82–98.
Yeary, K. H. C. K., Klos, L. A., & Linnan, L. (2012). The examination of process evaluation use in church-based health interventions a systematic review. *Health Promotion Practice, 13*(4), 524–534.
Yoon, P. W., Bastian, B., Anderson, R. N., Collins, J. L., & Jaffe, H. W. (2014). Potentially preventable deaths from the five leading causes of death—United States, 2008–2010. *Morbidity and Mortality Weekly Report, 63*(17), 369–374.