Physical Activity and Physical and Mental Well-Being in Church Settings

See also Arredondo et al., p. 1109.

Arredondo et al. are to be commended for their design, implementation, and evaluation of a successful faith-based physical activity promotion intervention (p. 1109). The intervention itself was well designed and comprehensive, addressing individual, interpersonal, organizational, and environmental levels. Moreover, the evaluation advanced beyond existing faith-based exercise promotion literature by considering a longer follow-up of 12 months, by using not only self-report but also accelerometer-based measures of physical activity, and by examining Latino churches. Furthermore, the size of the effects of the intervention on exercise and body mass index (BMI; defined as weight in kilograms divided by the square of height in meters) were not insubstantial. Estimates were that the intervention, over 12 months, increased moderate-to-vigorous physical activity by 22 minutes per week (measured by accelerometers, or 40 minutes per week according to self-report) and that it decreased BMI by 0.5 points.

In this editorial, I would like to briefly discuss various types of religion-health research, the associations between religious participation and exercise, the potential power of faith-based interventions, questions concerning the mechanisms of Arredondo et al.'s *Fe en Acción* intervention, and issues concerning promoting both physical and psychological and spiritual well-being.

EMPIRICAL RELIGION-HEALTH RESEARCH

Much of the empirical religion-health research falls into two broad categories. On the one hand, there is a very large literature on associations between religious participation (often religious service attendance) and health outcomes.^{1,2} On the other hand, there is a somewhat smaller but now quite substantial literature on religiously based interventions, as well as partnerships between religious institutions and medical and public health organizations.1-4

With regard to the former, a large body of research has emerged suggesting that religious participation is strongly associated with numerous health and well-being outcomes. Large, well-designed longitudinal research studies have indicated that religious service attendance is associated with greater longevity, less depression, less suicide, less smoking, less substance abuse, better cancer and cardiovascular disease survival, less divorce, greater social support, greater meaning and purpose in life, greater life satisfaction, more charitable giving, more volunteering, and greater civic engagement.^{1,2} It is interesting that absent from this otherwise impressive list is BMI. In their review in the Handbook of Religion and Health, Koenig et al.¹ in fact reported that there are more studies suggesting religion or spirituality is associated with

greater weight than there are studies suggesting that it is associated with less weight.

RELIGIOUS SERVICES, EXERCISE, DIET, AND WEIGHT

Two major determinants of BMI are, of course, (1) diet quality and (2) exercise. Research on religious service attendance and diet quality is likewise ambiguous with a number of studies suggesting poorer diet quality for those attending religious services.¹ With regard to exercise, although some of the strongest studies¹ suggest a positive effect of religious service attendance on promoting greater exercise, the effect may vary by religious group. There is, for example, crosssectional evidence that, for Jewish populations, those who are more religious are less likely to exercise.1 In any case, these mixed associations between religious service attendance and BMI, diet quality, and exercise may help explain why it is that religious service attendance is strongly associated with better cardiovascular disease survival but only, at best, weakly associated with incidence of cardiovascular disease itself.5

Certainly it is possible to imagine mechanisms for the

effect of service attendance on exercise in both directions. On the one hand, teachings about the body being a gift from God, or a temple wherein God dwells,¹ might encourage healthpromoting behaviors such as exercise. Social support from religious communities might also promote exercise. On the other hand, teachings that the highest good is spiritual rather than physical might be thought to discourage exercise. Moreover, service attendance or other religious obligations and commitments may make it more difficult to find time to exercise.¹

CHURCH-BASED INTERVENTIONS AND RESEARCH

The study by Arredondo et al. sought not to evaluate the effects of service attendance itself on exercise but rather examined whether it was possible to develop a program to increase exercise in a church-based setting. The literature on church-based interventions and on partnerships between public health institutions and religious institutions has grown considerably in the past decade.¹⁻⁴ Partnerships and interventions have included smoking cessation and diet promotion interventions (some of which have been evaluated in randomized trials), vaccination programs,

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cancer screening, breast-feeding promotion, rights advocacy, faith-based organizations providing medical care, and partnerships to address issues related to HIV/AIDS.¹⁻⁴ Although ideological tensions are sometimes present in such partnerships, there are important examples of these tensions being successfully navigated, even when tensions seem irreconcilable.^{2,3}

As was the case with the exercise intervention described in Arredondo et al., religious communities often provide important resources that make partnerships effective including spaces to meet, regular gatherings with large numbers, a community with relationships of trust, and a shared spiritual and moral message. Given the complementary strengths of religious communities and medical and public health organizations, there is tremendous potential for collaboration.

MECHANISMS

One question of interest regarding the exercise intervention in Arredondo et al. concerns what the mechanisms might be for increasing exercise and lowering BMI. As noted in their article, the intervention included individual, interpersonal, organizational, and environmental aspects. The intervention included teachings on health, physical activity class offerings,

personal calls and motivational interviewing, and efforts to improve the physical environment. Although it may have been the conjunction of all of these aspects that led to the success of the intervention, we might also be interested in whether some components of the intervention were perhaps more important than others, especially if those could be more easily implemented in other settings. The preliminary analyses in Arredondo et al. suggested that the classes may have been more strongly associated with improvements in physical activity than was the motivational interviewing. Arredondo et al. noted the difficulty in assessing the effects of the environmentallevel changes. One potentially important aspect that was mentioned, but not evaluated, by Arredondo et al. was social support. It would be of interest to examine the extent to which it was the classes, or the companionship, that was more strongly associated with increased exercise

INSTRUMENTALIZING RELIGION?

Of course, neither physical activity nor physical health is the primary focus of the major religious traditions. Instead, communion with God, or living life as God intended, are often central in the primary ends of religious practice.^{1,2,6} There have thus been concerns expressed about the empirical religion–health literature that it is somehow attempting to instrumentalize religion for the purposes of health while in fact neglecting religion's own goals and internal goods, or that it is replacing the true meaning of faith with a selfinterested individualism that enlists faith to simply get what one wants.^{2,6}

PHYSICAL AND SPIRITUAL WELL-BEING

Although such concerns need to be taken seriously, it is also the case that many religious traditions speak about the unity of the body and the soul, and that what affects one affects the other.^{1,2} Moreover, teachings about the body being a gift from God or a temple wherein God dwells1 suggest that, although physical health may not be the primary end of religious life, it certainly also is not to be excluded and ignored. Moreover, neglect of the body and physical health may have detrimental implications for one's religious and spiritual life. In the context of leadership and service within religious communities, such neglect may further lead to burn-out. To address such concerns, the US Methodist Church implemented an extensive wellbeing program for clergy, which appears to have considerably

improved the life and practice of clergy.⁷ The faith-based exercise intervention of Arredondo et al. may be seen as another type of intervention to improve physical and, perhaps indirectly, spiritual well-being. A challenge in such intervention and program design is to promote physical and mental health while not neglecting, and perhaps also adequately integrating, the promotion of spiritual well-being and the principal ends of religion, as well. *AJPH*

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REFERENCES

1. Koenig HG, King DE, Carson VB. Handbook of Religion and Health. 2nd ed. New York, NY: Oxford University Press; 2012.

 VanderWeele TJ. Religion and health: a synthesis. In: Peteet JR, Balboni MJ, eds. Spirituality and Religion Within the Culture of Medicine: From Evidence to Practice. New York, NY: Oxford University Press; 2017.

3. Idler EL. Religion as a Social Determinant of Public Health. New York, NY: Oxford University Press; 2014.

4. Campbell MK, Hudson MA, Resnicow K, et al. Church-based health promotion interventions: evidence and lessons learned. *Annu Rev Public Health.* 2007;28: 213–234.

5. Li S, Stamfer M, Williams DR, VanderWeele TJ. Association of religious service attendance with mortality among women. *JAMA Intern Med.* 2016;176: 777–785.

6. Bishop JP. Biopsychosociospiritual medicine and other political schemes. *Christ Bioeth.* 2009;15(3):254–276.

7. Dobson ML. Health as a Virtue: Thomas Aquinas and the Practice of Habits of Health. Eugene, OR: Pickwick Publications, Wipf and Stock Publishers; 2014.