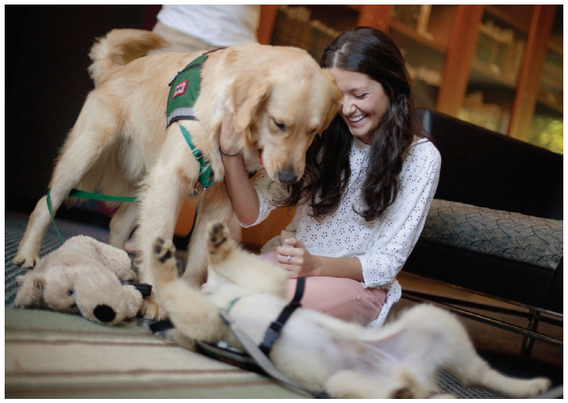


AP Photo

Furry friends relieve stress Some schools bring cuddly critters on campus to help students relax and lower disruptive stress levels. In one study, exam-stressed college students who interacted with therapy dogs felt less stressed 10 hours later (Ward-Griffin et al., 2018).

And then there are the mystics who seek to use the mind's power to enable Novocain-free cavity repair. Their aim: transcend dental medication.

meditation is enough to improve concentration and decision making (Hafenbrack et al., 2014; Rahl et al., 2017).

Nevertheless, some researchers caution that mindfulness is overhyped (Britton, 2019; Van Dam et al., 2018). For some people, mindfulness meditation produces self-absorption or even adverse effects (Britton, 2019; Van Dam et al., 2018; Vonk & Visser, 2021). Moreover, say critics, meditation's stress relief is mirrored by mere solitude, which can similarly relax us and reduce stress (Nguyen et al., 2018). Even so, meditation's positive results make us wonder: What's going on in the brain as we practice mindfulness? Correlational and experimental studies offer three explanations. Mindfulness

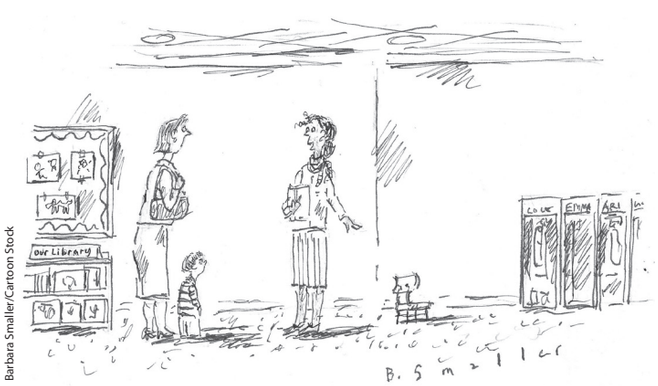
- ***strengthens connections among brain regions.*** The affected regions are those associated with focusing our attention, processing what we see and hear, and being reflective and aware (Berkovich-Ohana et al., 2014; Ives-Deliperi et al., 2011; Kilpatrick et al., 2011).
- ***activates brain regions associated with emotion regulation*** (Davidson et al., 2003; Way et al., 2010). When labeling emotions, mindful people show less activation in the amygdala, a brain region associated with fear, and more activation in the prefrontal cortex, which aids emotion regulation (Creswell et al., 2007; Gotink et al., 2016).
- ***calms brain activation in emotional situations.*** This lower activation was clear in one study in which participants watched two movies—one sad, one neutral. Those in the control group, who were not trained in mindfulness, showed strong brain activation differences when watching the two movies. Those who had received mindfulness training showed little change in brain response to the two movies (Farb et al., 2010). Emotionally unpleasant images also trigger weaker electrical brain responses in mindful people than in their less mindful counterparts (Brown et al., 2013). A mindful brain is strong, reflective, and calm.

Faith Communities and Health

LOQ 40-9 What is the *faith factor*, and what are some possible explanations for the link between faith and health?

A wealth of studies—more than 2000 in the twenty-first century's first two decades alone—has revealed a curious correlation called the *faith factor* (Oman & Syme, 2018; VanderWeele, 2018). Religiously active people (especially in more religious cultures) tend to live longer than those not religiously active (Ebert et al., 2020). One such study compared the death rates for 3900 people living in two Israeli communities. The first contained 11 religiously orthodox collective settlements; the second contained 11 matched, nonreligious collective settlements (Kark et al., 1996). Over a 16-year period, "belonging to a religious collective was associated with a strong protective effect" not explained by age or economic differences. In every age group, religious community members were about half as likely to have died as were their nonreligious counterparts. This difference is roughly comparable to the gender difference in mortality. Another study followed 74,534 U.S. nurses over 20 years. When controlling for various health risk factors, those who attended religious services more than weekly were a third less likely to have died than were nonattenders, and were much less likely to have died by suicide (Li et al., 2016; VanderWeele et al., 2016). In U.S. obituaries, mention of a religious affiliation predicted 7.5 years of additional life compared with no religious affiliation (Wallace et al., 2018).

How should we interpret such findings, recalling that researchers cannot randomly assign people to be religiously engaged or not? Correlations are not cause-effect statements, and they leave many factors uncontrolled (Sloan, 2005; Sloan & Bagiella, 2002; Sloan et al., 1999, 2000). Here is another possible interpretation:



Barbara Smaller/Cartoon Stock

"We don't have a time-out chair in our Classroom Community. That's our mindfulness chair."


AlisaNata/Shutterstock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Sura Nualpradid/Shutterstock


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Women are more religiously active than men, and women outlive men. Might religious involvement merely reflect this gender-longevity link?

Apparently not. One 8-year National Institutes of Health study followed 92,395 women, ages 50 to 79. After controlling for many factors, researchers found that women attending religious services at least weekly experienced an approximately 20 percent reduced risk of death during the study period (Schnall et al., 2010). Moreover, the association between religious involvement and life expectancy is also found among men (Benjamins et al., 2010; McCullough et al., 2000; McCullough & Laurenceau, 2005). A 28-year study that followed 5286 Californians found that, after controlling for age, gender, ethnicity, and education, frequent religious attenders were 36 percent less likely to have died in any year (**FIGURE 40.4**). In another 8-year controlled study of more than 20,000 people (Hummer et al., 1999), this effect translated into a life expectancy of 83 years for those frequently attending religious services and 75 years for nonattenders.

Research points to three possible explanations for the religiosity-longevity correlation (**FIGURE 40.5**):

- ***Healthy behaviors*** Religion promotes self-control (DeWall et al., 2014; McCullough & Willoughby, 2009). This helps explain why religiously active people tend to smoke and drink much less and to have healthier lifestyles (Islam & Johnson, 2003; Koenig & Vaillant, 2009; Masters & Hooker, 2013; Park, 2007). In one large U.S. Gallup survey, 15 percent of the very religious were smokers, as were 28 percent of the nonreligious (Newport et al., 2010). But such lifestyle differences are not great enough to explain the dramatically reduced mortality in the Israeli religious settlements. In U.S. studies, too, about 75 percent of the longevity difference remained when researchers controlled for unhealthy behaviors, such as inactivity and smoking (Musick et al., 1999).
- ***Social support*** To belong to a faith community is to participate in a support network. Religiously active people are often there for one another when misfortune strikes.

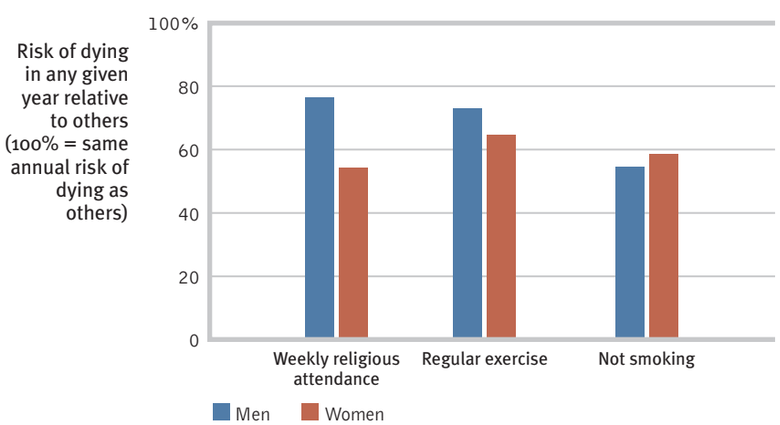
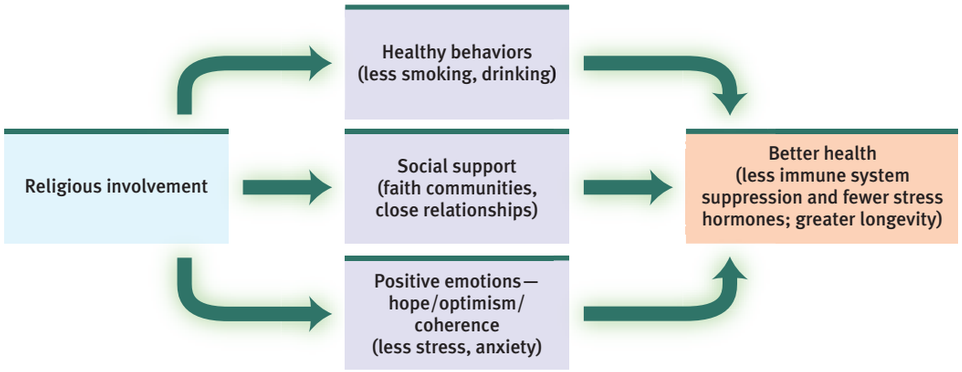


FIGURE 40.4
Predictors of longer life Researchers found that among adult participants, religious attendance, regular exercise, and not smoking all predicted a lowered risk of death in any given year (Oman et al., 2002; Strawbridge, 1999; Strawbridge et al., 1997). Women attending weekly religious services, for example, were only 54 percent as likely to die in a typical study year as were nonattenders.

FIGURE 40.5
Possible explanations for the correlation between religious involvement and health/longevity



In the 20-year nurses study, for example, religious people's social support was the best predictor of their good health. Moreover, religion encourages marriage, another predictor (when happy) of health and longevity (Bookwala & Gaugler, 2020).

- ***Positive emotions*** Even after controlling for social support, unhealthy behaviors, gender, and preexisting health problems, studies have found that religiously engaged people tend to live longer (Chida et al., 2009). Researchers speculate that religiously active people may benefit from a stable, coherent worldview, a sense of hope for the long-term future, feelings of ultimate acceptance, and the relaxed meditation of prayer or other religious observances. The religiously active have had healthier immune functioning, fewer hospital admissions, and, for people with AIDS, fewer stress hormones and longer survival (Ironson et al., 2002; Koenig & Larson, 1998; Lutgendorf et al., 2004).

ASK YOURSELF

What strategies have you used to cope with stress in your life? How well have they worked? What other strategies could you try?

RETRIEVAL PRACTICE

RP-3 What are some of the tactics we can use to successfully manage the stress we cannot avoid?

ANSWERS IN APPENDIX E

MODULE **40** **REVIEW** Health and Coping

LEARNING OBJECTIVES

Test Yourself Answer these repeated Learning Objective Questions on your own (before "showing" the answers here, or checking the answers in Appendix D) to improve your retention of the concepts (McDaniel et al., 2009, 2015).

- **LOQ 40-1** In what two ways do people try to alleviate stress?
- **LOQ 40-2** How does a perceived lack of control affect health?
- **LOQ 40-3** Why is self-control important, and can our self-control be depleted?
- **LOQ 40-4** How does an optimistic outlook affect health and longevity?
- **LOQ 40-5** How does controlling our feelings affect our well-being and health?
- **LOQ 40-6** How does social support promote good health?
- **LOQ 40-7** How effective is aerobic exercise as a way to manage stress and improve well-being?
- **LOQ 40-8** In what ways might relaxation and meditation influence stress and health?
- **LOQ 40-9** What is the *faith factor*, and what are some possible explanations for the link between faith and health?