

## Review of church attendance versus meditation on general wellbeing and mental health

*Purpose:* To compare the findings of non-secular meditation to Christian church attendance in physically healthy subjects to determine their effect on wellbeing and mental health.

*Methods:* We reviewed studies from 1966 to the present in peer-reviewed medical literature which evaluated meditation and church attendance in physically healthy populations.

*Results:* This study included 37 articles meeting the inclusion criteria. This study showed that several types of meditation practices, and church attendance of a variety of denominations, provided improved general wellbeing and mental health among physically healthy subject populations. Although both techniques were evaluated mostly in Americans, and over a wide age range including youth and adult populations, meditation appeared to be studied more in Asians while church attendance was appraised more in older individuals and African Americans.

*Conclusion:* This study suggests that church attendance may be considered potentially by medical personnel as a recommendation to patients needing enhanced mental health and/or wellbeing.

### Results

Of the 37 articles reviewed for this paper 16 of 16 meditation studies showed generally positive effects, and 18 of 21 church attendance papers evidenced wellbeing. Three church attendance papers demonstrated equivocal results and no papers showed general negative influences on wellbeing.

*General wellbeing – Church attendance* - In the United States, MacIrvine and associates noted in 303 adults attending a conservative Christian church that activities associated with church attendance (drawing encouragement from other church members, reading Scripture, prayer, praise, service, sharing faith and proper view of assured acceptance by God through faith), were associated generally with greater personal wellbeing (MacIrvine et al. 2013). Varon & Riley studied 445 youth and found that frequent maternal participation in religious services was associated with healthy functioning and wellbeing in this sample of young adolescents (Varon & Riley 1999). Lawler-Row & Elliott looked at variables of church membership and frequency related to health measures and found in 425 older adults that spiritual wellbeing and prayer contributed to improved psychological wellbeing and subjective wellbeing (Lawler-Row & Elliot 2009). Koenig & Vaillant evaluated 456 inner city men regarding the previously explored relationship between church attendance and physical health and showed a correlation between church attendance and improved wellbeing as well as improved subjective ratings of health (Koenig & Vaillant 2009). Levin & Chatters assessed three national probability surveys (Myth and Reality of Aging, N=2797; Quality of American Life, N=1209; and Americans' Changing Lives, N=1669) exploring the impact of religious involvement on health status and psychological wellbeing and found that there were notably positive effects of organizational religiosity in all three samples (Levin & Chatters 1998). In African Americans, McMahon and coworkers noted in 200 adolescents that their wellbeing, in addition to mental health, was positively affected by having a role model, school-belonging, community involvement and church attendance (McMahon et al. 2004). Walls & Zarit studied 98 elderly adults and found that their perception of support from the church was associated with a greater sense of wellbeing (Walls & Zarit 1991). Outside of the United States, Leondari & Gialamas evaluated 363 adults in Greece about their religiosity (defined for this study as church attendance, frequency of prayer and the importance of *religion* to a person) and found a positive association with psychological wellbeing (Leondari & Gialamas 1999).

*General wellbeing – Meditation* - In the United States, Neff & Germer showed in two studies (n=21;n=52, which included a control group) that mindfulness-based meditation and acceptance-based psychotherapy in adults enhanced self-compassion, mindfulness and wellbeing (Neff & Germer 2013). Hanley and coworkers evaluated 118 meditation practitioners for prevalence and frequency of mindful reappraisal (changing emotional response) of stressors as well as measures of wellbeing and distress and mindful reappraisal frequency contributed to greater wellbeing (Hanley et al. 2014). Internationally, Schoormans & Nyklíček surveyed 55 subjects (35 practiced mindfulness meditation and 20 transcendental meditation) in the Netherlands and found that improved self-reported mindfulness (a technique of meditation in which distracting thoughts and feelings are observed non-judgmentally) and psychological wellbeing may be improved with meditation frequency (Schoormans & Nyklíček 2011). In the United Kingdom, Bowden and associates explored 31 subjects using Brain Wave Vibration (BWV), a meditation involving rhythmic movements of the head, neck and body with related yoga-style exercises, and to isolate the rhythmic effects. The BWV group had

improved global sleep, wellbeing and fewer illness symptom (Bowden et al. 2014). Krygier and coworkers studied 36 participants in Australia; those who participated in Vipassana meditation training (in which mindfulness of breathing, thoughts, feelings and actions are used to gain insight in the nature of reality) showed significantly increased wellbeing (Krygier et al. 2013). Again in Australia, Vipassana training was evaluated in 172 participants by Szekeres & Wertheim, and correlations were found between Vipassana, reduced stress and improved wellbeing (Szekeres & Wertheim 2015).

*Mental health – Church attendance* - In the United States, Maselko and coworkers investigated 918 adults and found religious service attendance was associated with 30% lower odds of depression (Maselko et al. 2009). Law & Sbarra showed in a longitudinal study of 791 older adults that consistent or inconsistent church attendance was found to have a protective effect against the emergence of mood problems including depression compared to those who did not attend services (Law & Sbarra 2009). Assari demonstrated in 6082 adults that frequency of church attendance had a positive association with mental health and life satisfaction (Assari 2013). Mitchell & Weatherly evaluated 3046 older adults and found that reduced health status and functional ability combined with limited participation in church activities resulted in poorer self-rated mental health and more depressive symptoms (Mitchell & Weatherly 2000). The authors concluded mental health and depression were influenced by health status and church participation. Norton and coworkers studied 2989 older adults and discovered people who attended church weekly (or more) often times had a significantly lower risk for major depression (Norton et al. 2008). Attending church more than weekly was a significant protectant from depressive symptoms. Reyes-Ortiz and coworkers evaluated 2759 older Mexican Americans and found church attendance was beneficial for maintaining cognitive function and moderated the impact of clinically relevant depressive symptoms on subsequent cognitive function (Reyes-Ortiz et al 2008). In African Americans, Gonnerman and colleagues found in 105 Protestants that church attendance was associated with decreased likelihood of depression and loneliness (Gonnerman et al. 2008). Ellison noted in 2956 southern American church attendees that church attendance was beneficial for depressive symptoms for Caucasians, but not for African Americans. However, frequency of prayer/Bible study was positively associated with depressive symptoms for both ethnicities. The author speculated that this association existed because private devotion may be a coping mechanism (Ellison 1995). Dailey & Stewart showed in 102 pregnant African-American women that church attendance, religiosity, and spirituality had an inverse relationship with depression, anxiety, and stress as measured with the Spiritual Perspective Scale (Dailey & Stewart 2007). Sternthal and associates utilized data from a probability sample of Chicago-based adults and in 3103 adults found benefits of religious involvement may vary across different ethnicities (Sternthal et al. 2012). Religiously involved African Americans and Hispanics did not experience better mental health than Caucasians. Church attendance was inversely related to depressive symptoms, anxiety symptoms and major depressive disorder in Caucasians and religious saliency was associated with worse mental health in Hispanics (although not for the other two groups). Van Olphen and colleagues evaluated 679 African-American women and found social support received from church members (within the church) mediated the positive relationship between church attendance and specific indicators of health (Van Olphen et al. 2003). Internationally, Abbotts and colleagues showed in 2586 Scottish children that church attendance was associated with mental health benefits for Catholics, but a disadvantage for attendees of the Church of Scotland (Abbotts et al. 2004). The author hypothesized that families who attended the Catholic Church generally sent their children to Catholic school. However, families who attended the Church of Scotland likely sent their children to secular schools which led to increased bullying, less support, and decreased wellbeing for the protestant children. Braam and associates evaluated 1840 older Dutch adults in a prospective, longitudinal study and found that church attendance reduced stress and depression symptoms (Braam et al. 2004).

*Mental health – Meditation* - Fortney and colleagues assessed 30 American primary care clinicians and noted that an abbreviated mindfulness meditation intervention reduced indicators of job burnout, depression, anxiety and job stress compared with the pre-intervention survey (Fortney et al. 2014). Devo and coworkers evaluated 7 American college students and found that, though this pilot study could not provide conclusive evidence, mindfulness based meditation appeared beneficial to wellbeing, while decreasing rumination and depressive symptoms (Devo et al. 1990). Internationally, Yang and associates noted in a controlled study of 242 Taiwanese junior college students that meditation helped subjects adapt to life induced stress (Yang et al. 2009). Yoo & Lee evaluated 50 children in Korea finding significant evidence that Maum meditation had positive effects on self-esteem and school adjustment of children in the early stage of primary school, suggesting mental health promotion (Yoo & Lee 2013). Menezes and coworkers showed in a controlled study

of 100 Brazilians that focused meditation improved self-rated reports of anxiety and improved attention (Menezes et al. 2013). Foureur and colleagues evaluated 40 nurses in Australia and noted, following a meditation course, improvements in general health, sense of coherence/orientation to life and stress (Foureur et al. 2013). Manocha and associates studied 343 Australians who had practiced long-term mental silence-orientated meditation, in a controlled study compared to non-meditators, and found that they experienced better functional health, especially mental health, compared to the general population (Manocha et al. 2012). Manocha and coworkers evaluated 178 Australian full-time workers by a controlled study and observed mental silence-orientated meditation was a safe and effective strategy for dealing with work stress and depressive feelings (Manocha et al. 2011). Shaku and colleagues evaluated in a controlled fashion 198 Japanese monk trainees by questionnaire and found that Zen instruction, including inward-attention meditation practices, improved the quality of life and general mental health of trainees (Shaka et al. 2013). Yunesian and associates studied 80 participants in a 12-week meditation course in Iran and discovered Transcendental meditation may improve mental health in young adults especially in the areas of somatisation (a tendency to experience and communicate psychological distress in the form of somatic symptoms and to seek medical help) and anxiety, and this effect seemed to be independent of age, sex and marital status (Yunesian et al. 2008).

**Table 1: The influence of church attendance and meditation on general wellbeing**

Ref	Country	Population	Conclusions
<b>CHURCH ATTENDANCE</b>			
28	USA	303 adults	Religious adherence may promote a sense of WB in those who profess Christian faith.
17	USA	445 youth	Maternal participation in religious services was associated with healthy functioning and WB.
29	USA	425 older adults	Spiritual WB and prayer contributed to the prediction of psychological and subjective WB.
30	USA	456 inner city men	Church attendance may have more direct effects on health subjective ratings.
31	USA	5675 adults	There were positive effects of organizational religiosity on psychological WB.
32	USA	200 AA youth	WB and MH was positively affected by church attendance.
33	USA	98 elderly AAs	Perception of support from church was associated with a greater sense of WB.
34	Greece	363 adults	Religiosity had a positive association with psychological WB.
<b>MEDITATION</b>			
25	USA	73 adults	Meditation and acceptance-based psychotherapy in adults enhanced self-compassion, mindfulness and WB.
35	USA	118 adults	Meditation frequency contributed to greater WB.
36	Netherlands	55 adults	Meditation frequency may be more influential on self-reported mindfulness and psychological WB.
37	UK	31 adults	The meditation group had improved global sleep, WB and fewer illness symptoms.
38	Australia	36 adults	Meditation group showed significantly increased WB.
39	Australia	172 adults	Meditation was related to reduced stress and improved WB.

WB=wellbeing; MH=mental health; AA=African Americans

**Table 2: The influence of church attendance and meditation on mental health**

Ref	Country	Population	Conclusions
<b>CHURCH ATTENDANCE</b>			
40	USA	918 adults	Religious service attendance was associated with lower odds of depression.
23	USA	791 older adults	Church attendance had a protective effect against depression.
19	USA	6082 adults	Frequency of church attendance had a positive association with MH and life satisfaction.
41	USA	3046 older adults	Limited church activities resulted in poorer self-rated MH and more depressive symptoms.
42	USA	2989 older adults	Those who attended church weekly (or more) had a significantly lower risk for major depression.
43	USA	2759 older Mexican Americans	Church attendance was beneficial to cognitive function and reduced depressive symptoms.

24	USA	105 AAs	Church attendance was associated with decreased likelihood of depression and loneliness.
15	USA	2956 southern church attendees	Church attendance was beneficial for depressive symptoms for Caucasians, but not for AAs.
16	USA	102 pregnant AAs	Church attendance, religiosity and spirituality reduced depression, anxiety and stress.
44	USA	3103 adults	Church attendance was inversely related to depressive symptoms, anxiety symptoms and major depressive disorder in Caucasians, but religious saliency was associated with worse mental health in Hispanics.
45	USA	679 AA women	Social support from the church was correlated to improved health.
14	Scotland	2586 youth	Church attendance was associated with MH benefits for Catholics, but a disadvantage for attendees of the Church of Scotland.
22	Netherlands	1840 older adults	Church attendance reduced stress and depression symptoms.
<b>MEDITATION</b>			
4	USA	30 primary care clinicians	Meditation reduced indicators of job burnout, depression, anxiety and job stress.
9	USA	7 college students	Meditation appeared beneficial to WB, while decreasing rumination and depressive symptoms.
6	Taiwan	242 college students	Meditation helped subjects adapt to life induced stress.
10	Korea	50 youth	Meditation had positive effects on self-esteem and school adjustment of children in the early stage of primary school.
12	Brazil	100 adults	Meditation improved self-rated reports of anxiety and improved attention.
26	Australia	40 adult nurses	Meditation improved general health, sense of coherence/orientation to life and stress.
11	Australia	343 meditation practitioners	Meditation promoted better functional health, especially MH, compared to the general population.
5	Australia	178 workers	Meditation was a safe and effective strategy for dealing with work stress and depressive feelings.
27	Japan	198 Monk Trainees	Meditation improved the quality of life and general MH.
46	Iran	80 adults	Meditation improved MH especially in the areas of somatisation and anxiety.

WB=wellbeing; MH=mental health; AA=African Americans

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