

Meta-analyses examine effect of religion and spirituality on patients' mental, physical and social wellbeing

Analyses of all published studies on the topic – which included more than 44 000 patients – shed new light on the associations of religion and spirituality with cancer patients' mental, social, and physical wellbeing (Jim et al, 2015; Salsman et al, 2015; Sherman et al, 2015). The analyses indicate that religion and spirituality have significant associations with patients' health, but there was wide variability among studies regarding how different dimensions of religion and spirituality relate to different aspects of health.

In the first analysis, investigators focused on physical health. Patients reporting greater overall religiousness and

spirituality also reported better physical health, greater ability to perform their usual daily tasks, and fewer physical symptoms of cancer and treatment.

'These relationships were particularly strong in patients who experienced greater emotional aspects of religion and spirituality, including a sense of meaning and purpose in life as well as a connection to a source larger than oneself,' said lead author Dr Heather Jim, of the Moffitt Cancer Center in Tampa.

Dr Jim noted that patients who reported greater cognitive aspects of religion and spirituality, such as the ability to integrate the cancer into their religious or spiritual

beliefs, also reported better physical health; however, physical health was not related to behavioural aspects of religion and spirituality, such as church attendance, prayer or meditation.

The second analysis examined patients' mental health. The team discovered that the emotional aspects of religion and spirituality were more strongly associated with positive mental health than behavioural or cognitive aspects of religion and spirituality. 'Spiritual wellbeing was, unsurprisingly, associated with less anxiety, depression or distress,' said lead author Dr John Salsman. 'Also, greater levels of spiritual distress and a sense of



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disconnectedness with God or a religious community was associated with greater psychological distress or poorer emotional wellbeing.'

The third analysis pertained to social health, or patients' capacity to retain social roles and relationships in the face of illness. Religion and spirituality, as well as each of its dimensions, had modest but reliable links with social health.

Future research should focus on how relationships between religious or spiritual involvement and health change over time, and whether support services designed to enhance particular aspects of religion and spirituality in interested patients might help improve their wellbeing.

Jim HSL, Pustejovsky J, Park CL et al (2015) Religion, spirituality, and physical health in cancer patients: a meta-analysis. *Cancer* (doi: 10.1002/cncr.29353)

Salsman JM, Pustejovsky JE, Jim HSL et al (2015) A meta-analytic approach to examining the correlation between religion/spirituality and mental health in cancer. *Cancer* (doi: 10.1002/cncr.29350)

Sherman AC, Merluzzi TV, Pustejovsky JE et al (2015) A meta-analytic review of religious or spiritual involvement and social health among cancer patients. *Cancer* (doi: 10.1002/cncr.29352)

Non-invasive detection of malignant melanoma

A new non-invasive technique has been developed which can accurately detect malignant melanoma without a biopsy (Lancaster et al, 2015).

During the study, 55 patients with atypical moles agreed to have their skin monitored by researchers at Pisa University Hospital using a laser Doppler system.

The laser Doppler was used to record the complex interactions taking place in the minute blood vessels beneath their suspicious mole for around 30 minutes. The fluctuations in recorded signals were then analysed using methods developed by physicists at Lancaster University.

The patients then went on to have their moles biopsied

and the results were compared with the information obtained – non-invasively – using the laser Doppler scan.

The laser Doppler signal correctly identified 100% of the patients with malignant skin.

Professor Aneta Stefanovska of Lancaster University said: 'We used our knowledge of blood flow dynamics to pick up on markers which were consistently different in the blood vessels supplying malignant moles and those beneath normal skin.'

She continued: 'Combining the new dynamical biomarkers we created a test which, based on the number of subjects tested to date, has 100% sensitivity and 90.9% specificity, which means that

melanoma is identified in all cases where it is present, and ruled out in 90.9% of cases where it is not.'

Professor Marco Rossi of Pisa University said: 'The current diagnostic tools of examination by doctors followed by biopsy inevitably leads to many unnecessary invasive excisions.'

He went on to conclude: 'This simple, accurate, in vivo distinction between malignant melanoma and atypical moles may lead to a substantial reduction in the number of biopsies currently undertaken.'

Lancaster G, Stefanovska A, Pesce M et al (2015) Dynamic markers based on blood perfusion fluctuations for selecting skin melanocytic lesions for biopsy. *Sci Rep* 5: 12825 (doi: 10.1038/srep12825)

Cholinesterase inhibitors cause significant weight loss in patients with dementia

Cholinesterase inhibitors could result in harmful weight loss in patients with dementia, according to new research from the USA (Sheffrin et al, 2015).

The study evaluated patients aged 65 years or older diagnosed with dementia who received a new prescription for

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a cholinesterase inhibitor or other new chronic medication. After a year of use nearly a third (29%) of patients on the inhibitors experienced significant weight loss.

Dr Meera Sheffrin, Geriatric Fellow from the San Francisco VA Medical Center, San Francisco, commented: 'The overall context in which these medications are prescribed is important. Cholinesterase inhibitors are prescribed in part because there are not many effective treatments for dementia, and they are seen as a treatment that may help slightly, but will probably not hurt. However, there are possible harms associated with these medications: nausea, vomiting, diarrhoea, bradycardia – and now weight loss.

Dr Sheffrin emphasized: 'Doctors and patients should consider all these risks deciding whether to start a cholinesterase

inhibitor. We should consider monitoring for weight loss if these medications are prescribed, and consider stopping them if significant weight loss occurs.'

Commenting on the findings, James Pickett, Head of Research at Alzheimer's Society, said: 'Cholinesterase inhibitors are helpful to thousands of people with Alzheimer's disease. Treatments for Alzheimer's are extremely limited however, and we desperately need more effective drugs.

He added: 'Unexplained weight loss can be serious so it is important that this kind of research is done in order that doctors can be vigilant regarding the potential causes.'

Sheffrin M, Miao Y, Boscardin WJ, Steinman MA (2015) Weight loss associated with cholinesterase inhibitors in individuals with dementia in a national healthcare system. *J Am Geriatr Soc* 63(8): 1512–18 (doi: 10.1111/jgs.13511)

Beta blockers may prolong survival in women with ovarian cancer

Retrospective analysis of records of 1425 women treated for ovarian cancer has shown that use of non-selective beta-blockers in women with epithelial ovarian cancer was associated with longer overall survival (doi: 10.1002/cncr.29392).

Risk of prostate cancer doubled in black men

Black men in England are at double the lifetime risk of being diagnosed with, and dying from, prostate cancer compared with white men in England, while Asian men have around half the lifetime risk of being diagnosed with, and dying from, prostate cancer compared with white men in England (doi: 10.1186/s12916-015-0405-5).

Assessing the burden and prognosis of cryptogenic stroke

A population-based study among patients with a first transient ischaemic attack or ischaemic stroke compared cryptogenic events vs other causative subtypes and found that the clinical burden of cryptogenic transient ischaemic attack and stroke is substantial (doi: 10.1016/S1474-4422(15)00132-5).

Use of oral contraceptives moderates outcomes in patients with inflammatory arthritis

A German study has evaluated the association between exposure to oral contraceptives and clinical outcomes in early arthritis (Albrecht et al, 2015).

The study involved 273 women with early inflammatory arthritis, aged 18 to 60 years, who were enrolled in an early arthritis cohort and had no exposure to hormone replacement. Associations between oral contraceptive exposure and disease activity, treatment and patient-reported outcomes were studied over 2 years, using linear mixed models adjusted

for age, body mass index, parity, smoking and education.

After adjustment, current/past oral contraceptive use was associated with better treatment and outcome scores at 12 months (all $P < 0.05$) compared to never use.

Inflammatory markers were not associated with oral contraceptive use. Glucocorticoids were used by a higher percentage of women who had never used oral contraceptives than by current/past users ($P = 0.08$), especially patients with impaired function.

For past as well as current use, oral contraceptives seem to moderate patient-reported outcomes in inflammatory arthritis. The protective effects may be induced via central nervous pathways rather than through the suppression of peripheral inflammation.

Albrecht K, Callhoff J, Buttgerit F, Straub RH, Westhoff G, Psych D, Zink A (2015) The association between the use of oral contraceptives and patient-reported outcomes in an early arthritis cohort. *Arthritis Care Res (Hoboken)* (doi: 10.1002/acr.2266)