Chapter 2 The Psychology of Spirituality and Religion in Healthcare (5000 words)**.**

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Abstract

This chapter explores psychological aspects of spirituality. After an introduction to the psychology of spirituality and religion, the evolutionary psychological basis of transcendent belief is explored. A novel model is proposed based on the idea that 'believing' was advantageous and led to the inevitable development of spirituality within the human species across the globe. The essential elements of this model are believing as knowledge transmission, believing as motivation and spiritual and religious beliefs as the basis for community. These factors are in turn examined in relation to their benefits in health care today.

Keywords: psychology of spirituality and religion, evolutionary psychology, ……

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Introduction

Spirituality and religion have been shown to have health benefits. In fact, the relationship between spirituality/religion and health and well-being has become a growing area of interest (Chiu et al., 2004, Hill and Pargament, 2008, Paloutzian and Park, 2014). A positive relationship has been established between spirituality and well-being in the general population (Van Cappellen et al., 2016), in patients with chronic illness (Visser et al., 2010, Clayton-Jones and Haglund, 2016), mental health problems (Unterrainer et al., 2014), aging (Koenig, 2015) and in palliative care (Sinclair et al., 2006). Research in health psychology has established that, regardless of whether a transcendent element is included, belief and search for meaning are salubrious aspects in health and illness (Ogden, 2012), moreover there are signs that a spiritual or religious element may be particularly supportive also in occupational stress management and avoiding burnout (Kumar and Kumar, 2014, Martin, 2016).

How spirituality and religiosity lead to those health benefits can be explained in more than one way. Of course, those experiencing the benefits of such beliefs will highlight the transcendental element. For instance, when a person prays for recovery from an illness, he or she may believe that God heard the prayer and brought about the cure. Or, someone may believe to have received a sacred sign to maintain health by treating the body like a temple and thereby received a divine health blessing. Or, an individual with mental health problems may benefit from psychotherapy which explores previous lives and discovers the cause of the problems in an earlier reincarnation. In contrast, a medic, nurse or psychologist is expected to provide explanations within their fields of professional expertise, which requires a secular understanding.

A psychological approach on the impact of spirituality or religion does not require belief in actual transcendent, supernatural or divine intervention, but instead emphasises how normal psychological processes mediate between spiritual or religious beliefs and health and well-being. A Dutch psychologist, who completed his PhD dissertation on his use of reincarnation therapy with people suffering from phobias (Cladder, 1986), was asked on television whether he believed in reincarnation, to which he answered ‘that does not matter, as long as it works’. It was important that the participants in the study believed that through regression to an earlier reincarnation they could address their mental health problems. Without believing in its transcendental foundation the therapy could not work. Like psychologists, health care

workers must be respectful of such beliefs, to ensure that the benefits occur, even if the mechanisms as understood by health care workers is entirely different from what the patient/client believes. The effective handling of this duality is an essential aspect of health care (see Figure 1).

Keeping this in mind, we can now embark on the main mission of this chapter. After a brief introduction to the psychology of spirituality and religion, the chapter will outline:

- a novel model for the evolution of spirituality and religion as central aspects in human psychological functioning;
- an overview of health benefits of spirituality and religion based on elements put forward in the evolutionary model;

Implications for practice will be discussed specifically in three discussion and application sections.

Psychology of spirituality and religion

Psychology used to be seen as intrinsically incompatible with spirituality and religion. Psychology's efforts to uncover the mysteries of all things human based on empirical evidence were considered a threat to religion and spirituality. While early psychological theorists such as William James and Carl Jung have contributed insightful and positive insights on spiritual and religious matters (Miner and Dowson, 2016), indeed throughout the 20th century, psychology as a field has been more concerned with observable behaviours, and measurable cognitive and emotional phenomena. Even the contribution of humanistic psychology, which advocated focussing on self-development, meaning in life, hope, free will, and empathy (Rogers, 1961, Maslow et al., 1970), was considered contrary to a religious or spiritual perspective on life. The emphasis on individualism and the centrality of the 'self' have sometimes led to accusations of psychology as a dangerous 'cult of self-worship' (Vitz, 1977).

But things have changed. The loosening grip of Christian religious dogma on Western society has facilitated the emergence of a spirituality that not only shares common ground but vividly relates to psychology, in particular to the humanistic aspects listed above. Moreover, enlightened religious leadership has generated a climate in which psychology is no longer

frowned upon in many churches. At the same time, psychology has evolved to the acceptance of spirituality and religion as fields of scholarly interest. Social psychology, clinical psychology, personality theory, evolutionary psychology, and even cognitive neuroscience have each contributed to this (Paloutzian and Park, 2014). Interestingly, for a while the study of parapsychology which focussed on extra-sensory perception, telekinesis, telepathy, clairvoyance, and other paranormal claims, opened the door for the study of spiritual experiences as part of controlled psychic experiments and case studies (Rhine, 1949, Tenhaeff, 1966). However, robust empirical support remained elusive (Boerenkamp, 1988) and this effort has all but been abandoned in academic institutions. Perhaps most importantly, the new movement of positive psychology (Seligman and Csikszentmihalyi, 2000) which focusses on all that can contribute to optimal human functioning has ensured that the integrated study of psychology and spirituality remained on the agenda. Popular psychological themes, such as mindfulness (Langer and Moldoveanu, 2000) and stress-management techniques, meditation and yoga, contain spiritual elements.

In addition to these developments, the establishment in 1976 of the Society for the Psychology of Religion and Spirituality (Division 36) of the APA (American Psychological Association) more or less galvanised the topic as a discrete area (Reuder, 1999). This spawned several journals, handbooks and ground breaking publications to harness the progress in this area. This does not mean that a coherent area with well-established questions and answers has been established yet. Even at the level of defining religion and spirituality there is considerable disagreement (Paloutzian and Park, 2014). Often the distinction has been between spirituality as encompassing more individual interpretations of soul, spirit or the supernatural, in contrast with religiosity which is generally defined as a communal interpretation and practice of divine beliefs (Zinnbauer et al., 1997). However, most conceptualisations have met with considerable disagreement within the field. So much so, that authoritative recent texts suggest a pragmatic perspective which avoids artificial distinctions (Hill et al., 2000) and highlights the commonalities between religion and spirituality (Falb and Pargament, 2014). This approach is also taken in this chapter. In essence organised religion and spirituality are understood to share *belief in* and *search for significant meaning* in transcendent, value based, and sacred aspects of existence, and the actions motivated by it (Coyle, 2002). It is beyond the scope of this chapter to present a more detailed overview of the state of affairs (see for this (Paloutzian and Park, 2014) but it is not hard to imagine the complexities. For one thing, the diversity of religion and spirituality

across the world, and a psychology that is mainly fuelled by Western thinking generate obstacles and compatibility issues. Nevertheless, how religion and spirituality may have evolved to be present all over the world, is worth addressing in more detail, particularly because of its universal significance it relates to issues of health and well-being.

Psychological perspectives on the development of religion and spirituality

There are several psychological perspectives on the development of transcendent experience. Cultural psychology, like anthropological perspectives, would take a historical view which emphasises how culture, society and religion interact and have developed over time (Tarakeshwar et al., 2003). The development of religion is often related to morality and ethics and their impact on culture and society (Heine, 2015). In contrast, personality theorists have looked at the individual side, with theorists advocating positions on either side of the nature<>nurture debate. Saddling both sides of the debate, one of the most influential psychologists of the 21st century, Gordon Allport, suggested that religiosity is the result of natural maturation of personality in the individual (Allport, 1950). A similar position has been taken by developmental psychologists who have proposed stage theories of religiosity (Fowler and Levin, 1984).

Whether spiritual experiences are desirable or not has first and foremost been addressed by clinical psychologists, who have both identified it as a sign of mental health and mental illness (Fallot, 2001). Likewise social psychologists have studied worrying developments in spiritual communities and cults as well as the role of pro-social interactions in religious communities (Spilka et al., 2003). An interesting critical cognitive perspective is based on the consideration that we are prone to misattribute cause in transcendent, superstitious, or religious fashion whenever we encounter an association between events that we fail to understand in mechanistic ways (Galen, 2017). If we don't understand why something happens, it must be of a transcendent nature. Boerenkamp's study of clairvoyants showed that they had developed this tendency in extremum (Boerenkamp, 1988).

The study of the development of religious thought (Spilka and McIntosh, 1997), prompted cognitive neuroscientists to look for specific parts of the brain involved in the processing of transcendent experiences (McNamara, 2009) and consider whether our brain is hardwired for religion (Fingelkurts and Fingelkurts, 2009). Although we must be very cautious in interpreting these findings (van Elk and Zwaan, 2017), this led to many considering a

preparedness or adaptation for spirituality and religion in the brain. Perhaps evolutionary psychologists have come closest to providing an understanding of this. While most perspectives in the field address the functionality (does it serve a purpose and what is that purpose?) of psychological mechanisms and processes, evolutionary psychology takes a step further and seeks to understand humans from the perspective of how we have evolved through adapting to our environments. This process of adaptation has been affected by natural and reproductive selection. Humans with adaptive traits that made them more successful in surviving and reproducing will have produced more surviving offspring than those without those traits. Thus the genetic basis for such traits would have become more common with successive generations (Gaulin and McBurney, 2001, Buss, 1999, Tooby and Cosmides, 1990). Evolutionary psychologists often relate their theories to the time when humans lived as hunter gatherers (up to 20,000 years ago) when life was harsh and survival pressure immense. They hypothesise that many psychological features of our species have been shaped in this period and hence that to understand the development of religion and spirituality we need to go back to this era.

Perceiving religion and spirituality through this lens has met with some trepidation. Buss's (2015) seminal handbook only devotes one page to it! Yet two interesting perspectives have been expressed. One is that religion and spirituality are by-products of selection for other adaptive aspects of the human survival and reproduction apparatus, such as our propensity to seek attachment (Kirkpatrick, 2005, Kirkpatrick, 2006). Attachment is an adaptive process that benefits children of all mammals by providing protection, nearness to sustenance, support and learning. While normally aimed at caregivers, it is hypothesised that religion is the result of projecting this on a deity (Flannelly, 2017). Others have argued that religion and spirituality have a myriad of survival and reproductive advantages through shared and coordinated social life, and may be a complex adaptation in its own right (Sosis, 2009, Sosis and Alcorta, 2003).

A novel evolutionary model of spirituality and religion

Building on these evolutionary principles, other perspectives can be hypothesised. Forgive the audacity, but there is scope for a novel perspective, which hinges on the ability to make assumptions, believe in these, and respond to them. Core to this perspective is the fact that our executive functions and working memory are limited in size (Baddeley, 1994) and

therefore that we cut corners in our cognitive appraisal of event (Fiske, 2000). We simplify and make assumptions, based on limited evidence. This helps us avoid lengthy inner deliberations in situations where fast decision making and well-coordinated action is required. This cognitive tendency is an essential aspect of how not only humans, but many organisms on the planet, survive. The understanding of *believing as an adaptation*, or an instinct (Bering, 2012), is not entirely new, and how it pertains also to transcendent beliefs is only a small step. We act on beliefs about many aspects of the world that are either not verified or not verifiable. For our hunter-gatherer ancestors much of the understanding of the world was hard to verify, regardless of whether it pertained to the natural or supernatural realm. In fact, differences between beliefs in natural and transcendent understanding may have been much less pronounced than they are today. Without the vast scientific understanding of our world, our hunter-gatherer would have been just as easily swayed by supernatural beliefs.

Let's take a leap back in time. Twenty thousand years ago or longer our species roamed the planet in small groups, families, extended families, tribes. These groups were nomadic and lived from hunting and gathering whatever was edible (fruit, nuts, mushrooms, etc.). Life was uncertain and the knowledge base for survival contained many uncertainties, such as what to eat to remain healthy in the long term, how to prevent and treat illness and injuries, how to predict death or recovery, etc. Very often our ancestors would have 'believed' rather than known things for sure. Believing was beneficial, regardless of whether transcendent aspects were included. There are three pervasive reasons to assume this: (a) believing is essential for sharing of vital information; (b) believing is a motivating factor with drive-like qualities; (c) believing in the same things generate community.

So firstly, it was *beneficial to 'believe' information provided by trusted sources*. Where to find food, what to eat and what to avoid, the imminence of danger, whether to fight or flee, etc. To make up our minds, we needed to observe and believe others. Humans are not unique in this. Most animals are extremely responsive to the behaviours and signals of con-specifics as warnings or indications of opportunities. In addition, in humans essential knowledge to survive was transmitted verbally from generation to generation by elders. Their wisdom would have been unfathomable to a new generation and therefore they would have had to believe the elders' judgement. Transcendent, spiritual wisdom or religious beliefs would have been transmitted in the same way. Perhaps this kind of knowledge which could neither be confirmed nor falsified may have been transmitted with particular conviction.

This brings us to the second benefit, which is the *motivational aspect of beliefs.* If you believe in something you are more likely to succeed. Henry Ford's famous quote "Whether you think you can, or you think you can't--you're right" epitomises this. Believing has drive-like properties that trigger motivation and thus activate the brain and the sympathetic nervous system to facilitate more effective responses and action patterns to succeed in achieving a wide variety of goals (Mogenson et al., 1980). Believing in a positive outcome will have motivated our ancestors in their daily efforts to find sustenance and protect themselves. It will have motivated them to devote energy to developing better shelters, weaponry, food preparation, and medicine. In this sense, the quality to have strong beliefs may have been a survival benefit and the inheritable element of it may have become more abundant with each generation. Some authors have argued that the motivational impact of transcendent beliefs may be particularly salient (Jones, 2009) and will have served as overarching motivating factors leading to extraordinary achievements.

Thirdly, *shared beliefs generate community*. Trust in others and what they tell us or promise to do is an essential element in the system of reciprocity in each community. Believing in the same perceptions of the world and ourselves is also a great uniting factor. Beliefs most likely to unite people are the kinds that transcended what could be observed or easily established. Typically the most enduring of such beliefs would be those that can neither be confirmed nor falsified by empirical evidence. Once refuted a belief becomes meaningless, and the same is the case for a belief that is confirmed to be objectively true. It loses its power and the special bond between believers evaporates. Hence, beliefs that retain a degree of mystery, such as those from the realm of the supernatural, religious or spiritual could well be more effective at connecting communities than most other factors. It is possible that in our evolutionary past, shared transcendent beliefs generated a special bond between tribes. With many tribes based on extended families, lack of reproductive opportunities and inbreeding were problematic. Shared transcendent beliefs would have created ties between different tribes that would have facilitated intermarriage and avoidance of inbreeding and therefore stronger offspring.

In sum, it is argued that the motivational and knowledge transmission advantages of 'believing' in general, may have been adaptive in our hunter gatherer ancestors, but also that beliefs in the spiritual world may well have precipitated the formation of more intimate ties between non-kin groups, which may have led to higher reproductive success for those groups.

A specific feature that would have made most forms of religion and spirituality attractive in our hunter-gatherer past, and still does, is the offering of a *transcendent meaning to life*, which may have the overarching motivating impact suggested in the above. Other important selling points of religion were the idea of an *afterlife*, which provides an answer to the most essential fear humans have. Believing that your spirit lives on after you die and you would be reunited with your loved ones in a heavenly afterlife with all suffering gone, must be mood enhancing for most people, and may have significantly reduced the inevitable suffering in what must have been difficult lives. While the functionality and benefits of each of these aspects is clear, we should perhaps stop short of trying to attribute the qualities of evolutionary adaptations to it.

Another word of caution also needs to be inserted here. The complexity of human behaviour and the varying and changing circumstances in which we live and have lived is such that it is very hard to establish whether spiritual and religious behaviours as an adaption would on balance outweigh the possible maladaptive aspects and risk factors. Bulbalia (p. 655) mentions several negative aspects of religion that require consideration, such as 'misperceiving reality as phantom infested, frequent prostrations before icons, the sacrifice of livestock, repetitive terrifying or painful rituals, investment in costly objects and architecture, celibacy, religious violence and non-reciprocal altruism, to name a few' (Bulbulia, 2004). We may also question whether religion and spirituality as unifying factors, compensate for their divisive potential, often leading to conflict and war. Talking of war, we might consider whether religious warfare was more effective than non-religious warfare and provided more benefits for the survival and reproductive fitness of those engaging in it and their progeny. Would plundering, pillaging and rape have been more effective under the banner of spreading a religion? Also, many religions have periods of fasting included in their yearly calendar. Evolutionary psychologists would be asking whether on balance fasting had survival and reproductive benefits or disadvantages. Of course, addressing these multifaceted questions is beyond the remit of this chapter, but it is important to appreciate the complexity of the issue of adaptiveness and health benefits and that we have to be cautious in our approach. Nonetheless, with the case for spirituality and religion as adaptations presented, it is worth establishing how survival advantages in our evolutionary past translate into benefits for health and wellness today.

Health benefits of spirituality and religion

The health benefits of belief and transcendent belief

The study of health beliefs is an important area in health psychology (Ogden, 2012). Health and health care are complex, rife with ambiguity and contradictory information, while our information processing abilities have great limitations. Few people would contest the existence of transmittable illnesses, viruses or bacteria, the complex workings of the different systems in our bodies, or the importance of medical interventions. But just like we argued for our hunter-gatherer ancestors, it is a matter of trusting experts rather than that we can verify any of this ourselves. In many ways, believing in physical and health science requires the same leap of faith as believing in spirituality or religion.

And what we believe matters. In health care believing in success of a treatment has been identified as an important additional factor in the potential effectiveness of a treatment. Even without an established working ingredient in an intervention, expectations of a positive impact (the placebo effect) have often been shown to have been effective (Beauregard, 2007, Bensing and Verheul, 2010, Boozang, 2002, Enck et al., 2008, Wager and Atlas, 2015). This principle also applies to spiritual or religious beliefs that are in alignment with the impact of a treatment. The belief in sacred support or that God cures, can be equivalent or perhaps superior to the trust in a doctor or the intervention itself. In fact, the belief in transcendent or divine support, if it is firm, has the advantage that it is not subject to fluctuations in confidence in specific doctors or treatments, nor does it need recalibration when a treatment fails and a new one is initiated. Continued belief in spiritual support will give a patient hope and peace of mind, which will reduce stress levels and thus have health benefits (Koenig, 2015, Koenig, 2012).

[BOX IN]

Implications for health care practice I:

Only by acknowledging and respecting religious beliefs and spiritual perspectives of patients can we ensure that they will activate these beliefs in support of the health issues they are facing. These beliefs may be essential for them. Coyle suggests that health care workers need to show respect, but also familiarise themselves with the spirituality of the people in their care (Coyle, 2002). What transcendent beliefs health care workers themselves have is subordinate. Their role is to ensure that medical and

psychological factors in health, illness and health care are well enough understood by patients, but also that patients are supported in activating their own positive beliefs, including religious or spiritual ones, in relation to healing and recovery. Consideration of matters of trust is crucial, because psychological research has demonstrated convincingly that trust is easily broken, and hard to re-establish (Kosfeld, 2007).

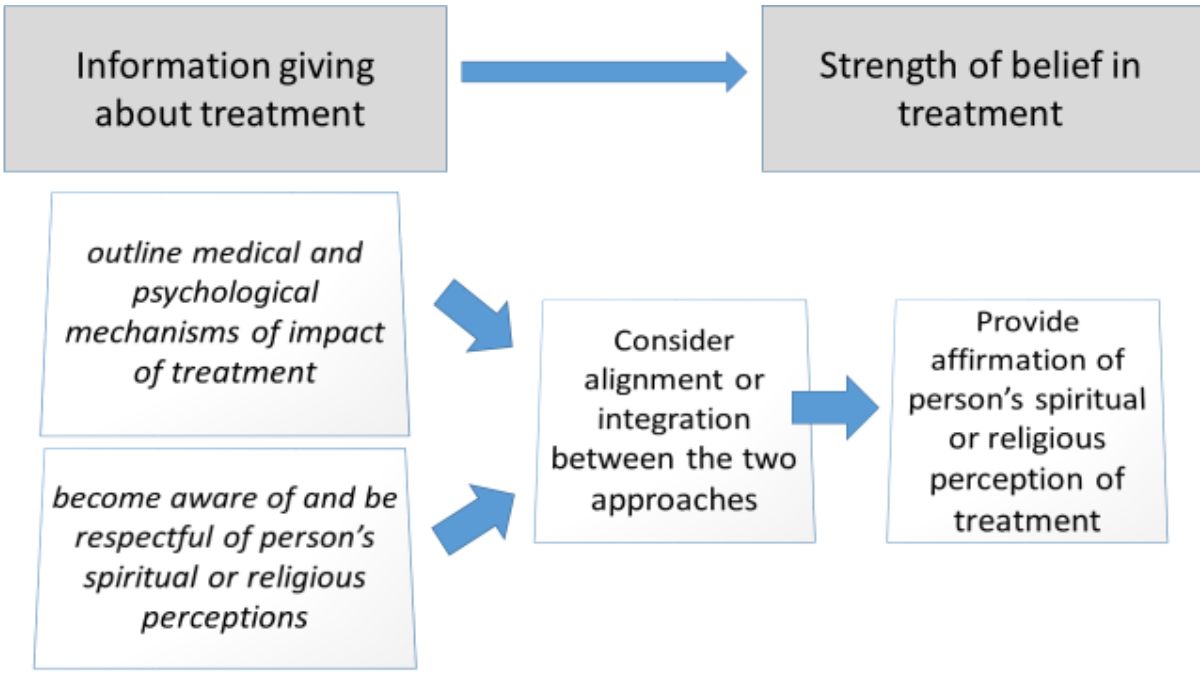

Figure 1: Recommended approach to integrating patient's spiritual or religious perspectives in optimising treatment impact

As a health care worker it is essential to pay attention to this process. Often transcendent or religious beliefs can be aligned with the perceived medical and/or psychological mechanisms, but sometimes such beliefs may interfere. The understanding of HIV-AIDS internationally is a good example of where spiritual and medical explanations of the illness clash with devastating effect for the motivation to adhere to treatment and refrain from unprotected sex.

[BOX OUT]

The health benefit of a meaningful life

Both the search for and an achieved sense of meaning in one's life is part of an overall motivational mechanism. We are 'driven' to look for and find meaning in life in work, love, raising children, making a difference in other people's lives, etc. Many psychologists consider this an essential function and some don't shy away from advocating that a spiritual approach to the meaning of life is essential to an overarching motivational theory (Emmons, 1999). Meaning in life has been associated with higher levels of mental health and well-being (Zika and Chamberlain, 1992), a buffer against stress (Park and Baumeister, 2017) and as a mediator between religiousness and psychological health (Steger and Frazier, 2005).

There is evidence to suggest that significant health scares lead people to reconsider their perspectives on the meaning of life or may add or emphasise a more spiritual or religious aspect to it (Phelps et al., 2009). What gives meaning to life differs for each individual and often changes throughout the lifespan. Younger adults tend to 'search' for meaning, while older adults more often identified a 'presence' of meaning. Meaning in life was associated with higher well-being (Krause, 2007), but more prominently in older adults (Steger et al., 2009). Aging itself may also play an important role in this, but since many life-threatening diseases are most likely to affect us later in life, these tendencies may well amplify each other

The great advantage of a spiritual or religious perspective on the meaning of life is that it can be maintained even when social, individual or occupational circumstances which give meaning are diminished. In particular when people end up in hospital for a considerable period of time, the emerging crisis (Moos and Schaefer, 1984, de Vries and Timmins, 2017) is likely to be exacerbated because all sorts of meaning-giving activities fall by the way side. Achievement through work, being part of a community, excelling in sport or other activities will be out of the question and thus life ceases to provide the same sense of self-worth and meaning once in a hospital bed. It should not surprise us that people become more spiritual or religious under those circumstances. In this sense it can be a compensatory mechanism.

[BOX IN]

Implications for health care practice II: *gaging the meaning of life in patients*

What gives meaning to your life?

If you want to identify a person's answer to this question it may be useful to ask about all three aspects. You may want to start with yourself ……..		
Individual or self-related	**Family, community, society related**	**Spiritual or religious aspect**

Figure 3: Three domains of meaning in life

[BOX OUT]

Reduction of human suffering and fear of death

As there is evidence for higher quality of life in those engaging in spirituality or religion when affected by chronic illness, such as cancer (Visser et al., 2010), there is also the suggestion that those engaging in spirituality may become more effective at coping with human suffering (Karekla and Constantinou, 2010). The calming and balancing effect of being connected to transcendental elements is one factor. The other is that acts of meditation or prayer may reduce pain, anxiety, fear and stress and increase wellness (Goyal et al., 2014). People engaged with spirituality have lower risk of suicidality (Edwards and Holden, 2001).

A strong appeal of most religions is that they include elements that reduce suffering or perceived levels of suffering. Jesus's intense suffering is an essential aspect of Christianity and emphasises that most of our own suffering is insignificant in comparison. This may help in pain management. Any form of sanctification or transcendental experience of childbirth might also have such an impact (Hall and Taylor, 2004). Spiritual aspects of relaxation exercises and meditation are bound to add to the impact of such techniques to reduce stress and cope effectively with pain and discomfort. Belief in an afterlife, is most helpful when death approaches us or a loved one. This is why spirituality is often so central in palliative care (Sinclair et al., 2006).

Much of our suffering is of a mental nature. Specifically inner conflict about important self-related matters can make us feel bad about ourselves (Aronson, 1969). When being made to think one is wrong, immoral, bad, stupid, hypocritical etc. this is bound to affect us most. Spiritual or religious inner conflicts may be involved in this. It disrupts our peace of mind and sometimes generates a degree of heartache more intense than physical pain. It expresses

itself in guilt, shame, embarrassment, regret, remorse or self-directed anger and motivates efforts to continue looking for a resolution, until solace has been found. And while values, beliefs or faith may be part of the inner conflict, spiritual or religious answers can also be helpful to reduce the inner turmoil.

[BOX IN]

Implications for health care practice III: *Spiritual response to cognitive dissonance*

Cognitive dissonance theory (Aronson, 1969, Cooper, 2007, Festinger, 1957) suggests that we are motivated to seek and maintain internal consistency in our thinking and find inconsistency or dissonance uncomfortable. Dissonance between our behaviour and important standards we hold ourselves to can be the source of intense suffering, notably if the harm done by the behaviour cannot be undone. Sometimes the person is unable to resolve the dissonance and experiences prolonged mental anguish. It is in these cases that a spiritual or religious approach may provide solace. Let us consider the following scenarios:

Matt (23) is in hospital with several non-life threatening injuries following a traffic accident in which he was the driver. His girlfriend died in the accident. He had been drinking. As his physical state improves, his mental state deteriorates. He says that he wished he was dead.

Fatima (56) is overweight and suffering from diabetes. She has come to the realisation that her illness is the result of lack of physical activity and an unhealthy diet. She is ashamed and does not want to see her family.

Jane (85) is on life support and reflecting on her life. She is talking about an abortion she had a long time ago and how subsequently she could not conceive and remained childless. She says that she still regrets this and does not know how to make peace with herself.

Can you think of spiritual solutions that would assist Matt, Fatima and Jane to come to terms with what happened and reduce the mental pain they are experiencing?

[BOX OUT]

Health benefits of spiritual and religious social support

We are social animals (Aronson, 2004). This is reflected also in how transcendent beliefs are experienced and the strength of the community bond often generated by religion and spirituality. While the survival and reproductive advantages have already been outlined in the above, the direct health benefits of social and spiritual support still require some comment. Perhaps most obviously, church membership tends to imply support from the church community whenever a member is unwell. This support has been shown to be beneficial in a variety of contexts (Nooney and Woodrum, 2002). This makes sense, because it is well documented that social support in general has many health benefits (Cooper and Quick, 2017) especially for the endocrine, cardiovascular and immune system (Uchino et al., 1996) with many studies indicating that social support and inclusion moderate a negative impact of stress on health (Thoits, 2010) and mental health (Wang et al., 2014).

Churches and spiritual organisations also engage actively in providing health care and support. This relationship may have its origin in shamanistic health care duties in hunter-gatherer societies (Winkelman, 2004), and is evidently still playing a dominant role in health care today. Think of all the hospitals run by religious orders and organisations like the Red Cross. While the times of specific hospitals for specific religious grouping has gone, a religious ethos often still shines through underneath a secular veneer. However, the ethnic and religious diversity within the patient populations in most hospitals in Europe and the US have led to individualised spiritual support. One can request a visit from clergy of a variety of backgrounds, according to one's expressed preference. This practice is particularly prevalent before life-threatening operations and in end of life care. While the impact of such supports are notoriously difficult to establish, the evidence is not overly favourable (Candy et al., 2012). The fit between the person and the preferred spiritual support may be crucial in this respect. Research on music as a pre-operative or pain-reduction intervention showed that self-selected music was most effective (Nilsson, 2008). It may well be the same for spiritual support. This is an argument to suggest that health care workers' may need to become more familiar with the different kinds of spiritual perspectives generally encountered in practice in order to provide optimal support (Coyle, 2002).

The combined impact of social and spiritual support is most evident where organisations with a faith based foundation have set up patient support groups for specific conditions. A review of the literature shows that such programmes tend to be aimed at primary prevention, general health, cardiovascular health or cancer and may lead to significant reductions in blood pressure, cholesterol, weight, and illness symptoms.(DeHaven et al., 2004). In addition wide

spread initiatives such as Alcoholics Anonymous, which incorporates a spiritual aspect, have been demonstrated to be effective (Humphreys et al., 2014). Even web based spiritual supports for patient groups are potentially helpful (Pierce et al., 2008). Some religious and spiritual organisations use their health and mental support efforts to recruit people for their organisation. The Scientology Church is an example of this. Other organisations tend to avoid this ethical issue, by being as all-inclusive as possible and avoiding proselytizing as part of their health care activities. As a result, the religious or spiritual identity of the support activities may remain implicit.

Conclusion

This chapter has provided an understanding of the development of religiosity and spirituality rooted in evolutionary psychology. A novel model has been proposed which suggests that believing in information that was not or could not be verified, was an essential adaptation for our hunter-gatherer ancestors. It had benefits for the transfer of information, motivation, and providing a bond within communities. Transcendent beliefs may have been particularly attractive as they added meaning to life, reduced suffering and often provided a way of reducing fear of death. Strong transcendental beliefs may also have superseded kinship as a binding factor between individuals which will have promoted social interaction beyond the family. This will have reduced the impact of inbreeding; a very important adaptation. The core adaptive factors mentioned here, also play a role in how psychological mechanisms mediate between religion/spirituality and health benefits. This has important implications for health care. Health care workers might consider reminding patients of how they see meaning in life, how to integrate transcendent perceptions in treatment understanding, and how to assist patients in using spiritual perspective to reduce mental distress.

References

ALLPORT, G. W. 1950. *The individual and his religion: a psychological interpretation,* Oxford, UK, Macmillan.

ARONSON, E. 1969. The theory of cognitive dissonance: A current perspective. *Advances in experimental social psychology,* 4**,** 1-34.

ARONSON, E. 2004. *The social animal 9th Ed.,* New York, Worth.

BADDELEY, A. 1994. The magical number seven: Still magic after all these years?

BEAUREGARD, M. 2007. Mind does really matter: Evidence from neuroimaging studies of emotional self-regulation, psychotherapy, and placebo effect. *Progress in neurobiology,* 81**,** 218-236.

BENSING, J. M. & VERHEUL, W. 2010. The silent healer: the role of communication in placebo effects. *Patient education and counseling,* 80**,** 293-299.

BERING, J. 2012. *The belief instinct: The psychology of souls, destiny, and the meaning of life,* New York, NY, Norton & Company.
BOERENKAMP, H. C. 1988. *Helderziendheid Bekeken,* Haarlem, Netherlands, De Toorts.
BOOZANG, K. M. 2002. Therapeutic Placebo: The Case for Patient Deception, The. *Fla. L. Rev.,* 54**,** 687.
BULBULIA, J. 2004. The cognitive and evolutionary psychology of religion. *Biology and philosophy,* 19**,** 655-686.
BUSS, D. M. 1999. *Evolutionary psychology: The new science of the mind,* Boston, Allyn & Bacon.
CANDY, B., JONES, L., VARAGUNAM, M., SPECK, P., TOOKMAN, A. & KING, M. 2012. Spiritual and religious interventions for well-being of adults in the terminal phase of disease. *Cochrane Database of Systematic Reviews*.
CHIU, L., EMBLEN, J. D., VAN HOFWEGEN, L., SAWATZKY, R. & MEYERHOFF, H. 2004. An integrative review of the concept of spirituality in the health sciences. *Western journal of nursing research,* 26**,** 405-428.
CLADDER, J. M. 1986. Past-life therapy with difficult phobics. *The Journal of Regression Therapy, I,(2),* 81-85.
CLAYTON-JONES, D. & HAGLUND, K. 2016. The role of spirituality and religiosity in persons living with sickle cell disease: a review of the literature. *Journal of Holistic Nursing,* 34**,** 351-360.
COOPER, C. L. & QUICK, J. C. 2017. *The Handbook of Stress and Health: A Guide to Research and Practice,* John Wiley & Sons.
COOPER, J. 2007. *Cognitive dissonance: 50 years of a classic theory.* , London, Sage.
COYLE, J. 2002. Spirituality and health: towards a framework for exploring the relationship between spirituality and health. *Journal of advanced nursing,* 37**,** 589-597.
DE VRIES, J. & TIMMINS, F. 2017. *Understanding Psychology for Nursing Students,* London, Sage.
DEHAVEN, M. J., HUNTER, I. B., WILDER, L., WALTON, J. W. & BERRY, J. 2004. Health programs in faith-based organizations: are they effective? *American Journal of Public Health,* 94**,** 1030-1036.
EDWARDS, M. J. & HOLDEN, R. R. 2001. Coping, meaning in life, and suicidal manifestations: Examining gender differences. *Journal of Clinical Psychology,* 57**,** 1517-1534.
EMMONS, R. A. 1999. *The psychology of ultimate concerns: Motivation and spirituality in personality,* Guilford Press.
ENCK, P., BENEDETTI, F. & SCHEDLOWSKI, M. 2008. New insights into the placebo and nocebo responses. *Neuron,* 59**,** 195-206.
FALB, M. D. & PARGAMENT, K. I. 2014. Religion, spirituality, and positive psychology: Strengthening well-being. *Perspectives on the intersection of multiculturalism and positive psychology.* Springer.
FALLOT, R. D. 2001. Spirituality and religion in psychiatric rehabilitation and recovery from mental illness. *International Review of Psychiatry,* 13**,** 110-116.
FESTINGER, L. 1957. *A theory of cognitive dissonance,* Stanford CA, Stanford university press.
FINGELKURTS, A. A. & FINGELKURTS, A. A. 2009. Is our brain hardwired to produce God, or is our brain hardwired to perceive God? A systematic review on the role of the brain in mediating religious experience. *Cognitive Processing,* 10**,** 293-326.
FISKE, S. T. 2000. Stereotyping, prejudice, and discrimination at the seam between the centuries: Evolution, culture, mind, and brain. *European Journal of Social Psychology,* 30**,** 299-322.

FLANNELLY, K. J. 2017. Belief in God as an Attachment Figure and Mental Health. *Religious Beliefs, Evolutionary Psychiatry, and Mental Health in America.* Springer Cham.
FOWLER, J. W. & LEVIN, R. W. 1984. Stages of faith the psychology of human development and the quest for meaning. *International Journal for Philosophy of Religion 15 (1):89-92.,* 15**,** 89-92.
GALEN, L. 2017. Overlapping Mental Magisteria: Implications of Experimental Psychology for a Theory of Religious Belief as Misattribution. *Method & Theory in the Study of Religion,* 29**,** 221-267.
GAULIN, S. J. & MCBURNEY, D. H. 2001. *Psychology: An evolutionary approach,* Upper Saddle River, NJ, Prentice Hall.
GOYAL, M., SINGH, S., SIBINGA, E. M., GOULD, N. F., ROWLAND-SEYMOUR, A., SHARMA, R., BERGER, Z., SLEICHER, D., MARON, D. D. & SHIHAB, H. M. 2014. Meditation programs for psychological stress and well-being: a systematic review and meta-analysis. *JAMA internal medicine,* 174**,** 357-368.
HALL, J. & TAYLOR, M. 2004. Birth and spirituality. *Normal childbirth: Evidence and debate***,** 41-56.
HEINE, S. J. 2015. *Cultural Psychology: Third International Student Edition,* WW Norton & Company.
HILL, P. C. & PARGAMENT, K. I. 2008. Advances in the conceptualization and measurement of religion and spirituality: Implications for physical and mental health research.
HILL, P. C., PARGAMENT, K. I., HOOD, R. W., MCCULLOUGH, M. E., SWYERS, J. P., LARSON, D. B. & ZINNBAUER, B. J. 2000. Conceptualizing religion and spirituality: Points of commonality, points of departure. *Journal for the Theory of Social Behaviour,* 30**,** 27.
HUMPHREYS, K., BLODGETT, J. C. & WAGNER, T. H. 2014. Estimating the Efficacy of Alcoholics Anonymous without Self-Selection Bias: An Instrumental Variables Re-Analysis of Randomized Clinical Trials. *Alcoholism: Clinical and Experimental Research,* 38**,** 2688-2694.
JONES, W. E. 2009. The goods and the motivation of believing. *Epistemic Value***,** 139-62.
KAREKLA, M. & CONSTANTINOU, M. 2010. Religious coping and cancer: Proposing an acceptance and commitment therapy approach. *Cognitive and Behavioral Practice,* 17**,** 371-381.
KIRKPATRICK, L. A. 2005. *Attachment, evolution, and the psychology of religion,* New York, NY, Guilford Press.
KIRKPATRICK, L. A. 2006. Religion is not an adaptation. *Where men and god meet: How brain and evolutionary studies alter our understanding of religion,* 1**,** 159-179.
KOENIG, H. G. 2012. Religion, spirituality, and health: the research and clinical implications. *ISRN psychiatry,* 2012**,** 33.
KOENIG, H. G. 2015. Religion, spirituality, and health: a review and update. *Advances in mind-body medicine,* 29**,** 19-26.
KOSFELD, M. 2007. Trust in the brain. *EMBO reports,* 8**,** S44-S47.
KRAUSE, N. 2007. Longitudinal study of social support and meaning in life. *Psychology and aging,* 22**,** 456.
KUMAR, V. & KUMAR, S. 2014. Workplace spirituality as a moderator in relation between stress and health: An exploratory empirical assessment. *International Review of Psychiatry,* 26**,** 344-351.
LANGER, E. J. & MOLDOVEANU, M. 2000. The construct of mindfulness. *Journal of social issues,* 56**,** 1-9.

MARTIN, R. V. 2016. *Spirituality in Law Enforcement: An Exploration of Possible Correlations of Spirituality to Burnout and Job Satisfaction for Police Officers.* Regent University.
MASLOW, A. H., FRAGER, R., FADIMAN, J., MCREYNOLDS, C. & COX, R. 1970. *Motivation and personality,* Harper & Row New York.
MCNAMARA, P. 2009. *The neuroscience of religious experience,* New York, NY, Cambridge University Press.
MINER, M. & DOWSON, M. 2016. Spirituality: Perspectives from Psychology. *Spirituality across Disciplines: Research and Practice:*. Springer.
MOGENSON, G. J., JONES, D. L. & YIM, C. Y. 1980. From motivation to action: functional interface between the limbic system and the motor system. *Progress in neurobiology,* 14**,** 69-97.
MOOS, R. H. & SCHAEFER, J. A. 1984. The crisis of physical illness. *Coping with physical illness.* Springer.
NILSSON, U. 2008. The anxiety-and pain-reducing effects of music interventions: a systematic review. *AORN journal,* 87**,** 780-807.
NOONEY, J. & WOODRUM, E. 2002. Religious Coping and Church-Based Social Support as Predictors of Mental Health Outcomes: Testing a Conceptual Model. *Journal for the Scientific Study of Religion,* 41**,** 359-368.
OGDEN, J. 2012. *Health psychology,* McGraw-Hill Education (UK).
PALOUTZIAN, R. F. & PARK, C. L. 2014. *Handbook of the psychology of religion and spirituality,* New York, NY, Guilford Publications.
PARK, J. & BAUMEISTER, R. F. 2017. Meaning in life and adjustment to daily stressors. *The Journal of Positive Psychology,* 12**,** 333-341.
PHELPS, A. C., MACIEJEWSKI, P. K., NILSSON, M. & ET AL. 2009. Religious coping and use of intensive life-prolonging care near death in patients with advanced cancer. *JAMA,* 301**,** 1140-1147.
PIERCE, L. L., STEINER, V., HAVENS, H. & TORMOEHLEN, K. 2008. Spirituality expressed by caregivers of stroke survivors. *Western journal of nursing research,* 30**,** 606-619.
REUDER, M. E. 1999. A history of Division 36 (Psychology of Religion). *Unification through division: Histories of the divisions of the American Psychological Association,* 4**,** 91-108.
RHINE, J. 1949. The relation between parapsychology and general psychology. *Journal of Parapsychology,* 13**,** 215-24.
ROGERS, C. R. 1961. The place of the person in the new world of the behavioral sciences. *Journal of Counseling & Development,* 39**,** 442-451.
SELIGMAN, M. E. & CSIKSZENTMIHALYI, M. 2000. *Positive psychology: An introduction,* American Psychological Association.
SINCLAIR, S., PEREIRA, J. & RAFFIN, S. 2006. A thematic review of the spirituality literature within palliative care. *Journal of palliative medicine,* 9**,** 464-479.
SOSIS, R. 2009. The adaptationist-byproduct debate on the evolution of religion: Five misunderstandings of the adaptationist program. *Journal of Cognition and Culture,* 9**,** 315-332.
SOSIS, R. & ALCORTA, C. 2003. Signaling, solidarity, and the sacred: The evolution of religious behavior. *Evolutionary anthropology: issues, news, and reviews,* 12**,** 264-274.
SPILKA, B., HOOD, R. W., HUNSBERGER, B. & GORSUCH, R. 2003. *The psychology of religion: An empirical approach, 3rd ed,* New York, NY, Guilford Press.

SPILKA, B. E. & MCINTOSH, D. N. 1997. *The psychology of religion: Theoretical approaches,* Boulder, CO, Westview Press.
STEGER, M. F. & FRAZIER, P. 2005. Meaning in life: One link in the chain from religiousness to well-being. *Journal of Counseling Psychology,* 52**,** 574.
STEGER, M. F., OISHI, S. & KASHDAN, T. B. 2009. Meaning in life across the life span: Levels and correlates of meaning in life from emerging adulthood to older adulthood. *The Journal of Positive Psychology,* 4**,** 43-52.
TARAKESHWAR, N., STANTON, J. & PARGAMENT, K. I. 2003. Religion: An overlooked dimension in cross-cultural psychology. *Journal of Cross-Cultural Psychology,* 34**,** 377-394.
TENHAEFF, W. 1966. Some aspects of parapsychological research in the Netherlands. *International journal of neuropsychiatry,* 2**,** 408.
THOITS, P. A. 2010. Stress and health: Major findings and policy implications. *Journal of health and social behavior,* 51**,** S41-S53.
TOOBY, J. & COSMIDES, L. 1990. The past explains the present: Emotional adaptations and the structure of ancestral environments. *Ethology and sociobiology,* 11**,** 375-424.
UCHINO, B. N., CACIOPPO, J. T. & KIECOLT-GLASER, J. K. 1996. The relationship between social support and physiological processes: a review with emphasis on underlying mechanisms and implications for health. *Psychological bulletin,* 119**,** 488.
UNTERRAINER, H.-F., LEWIS, A. J. & FINK, A. 2014. Religious/spiritual well-being, personality and mental health: a review of results and conceptual issues. *Journal of religion and health,* 53**,** 382-392.
VAN CAPPELLEN, P., TOTH-GAUTHIER, M., SAROGLOU, V. & FREDRICKSON, B. L. 2016. Religion and well-being: The mediating role of positive emotions. *Journal of Happiness studies,* 17**,** 485-505.
VAN ELK, M. & ZWAAN, R. 2017. Predictive processing and situation models: constructing and reconstructing religious experience. *Religion, Brain & Behavior,* 7**,** 85-87.
VISSER, A., GARSSEN, B. & VINGERHOETS, A. 2010. Spirituality and well-being in cancer patients: a review. *Psycho-Oncology,* 19**,** 565-572.
VITZ, P. C. 1977. *Pychology as religion: the cult of self worship,* Grand Rapids, USA, William b. Eerdmans Publishing Co.
WAGER, T. D. & ATLAS, L. Y. 2015. The neuroscience of placebo effects: connecting context, learning and health. *Nature Reviews Neuroscience,* 16**,** 403-418.
WANG, X., CAI, L., QIAN, J. & PENG, J. 2014. Social support moderates stress effects on depression. *International journal of mental health systems,* 8**,** 41.
WINKELMAN, M. 2004. Shamanism. *Encyclopedia of Medical Anthropology.* Springer.
ZIKA, S. & CHAMBERLAIN, K. 1992. On the relation between meaning in life and psychological well-being. *British journal of psychology,* 83**,** 133-145.
ZINNBAUER, B. J., PARGAMENT, K. I., COLE, B., RYE, M. S., BUTTER, E. M., BELAVICH, T. G., HIPP, K. M., SCOTT, A. B. & KADAR, J. L. 1997. Religion and spirituality: Unfuzzying the fuzzy. *Journal for the scientific study of religion***,** 549-564.