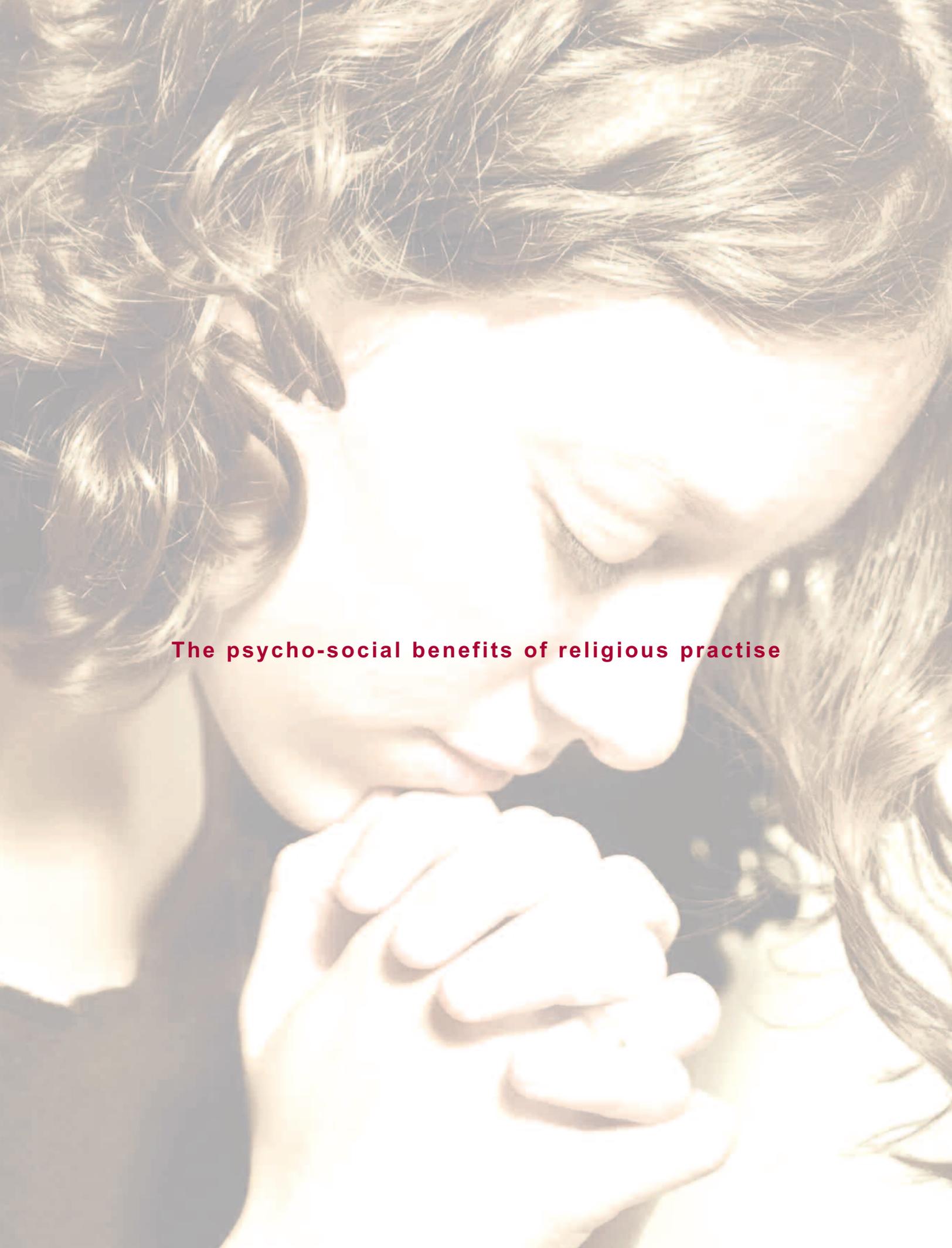


## **The psycho-social benefits of religious practise**



**By Professor Patricia Casey**

Forewords by  
**Archbishop Diarmuid Martin**  
**Bishop Ken Good**



**The psycho-social benefits of religious practise**

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## Foreword

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### Archbishop Diarmuid Martin



From the nineteenth century onwards there have been currents of thought, especially in Western culture, which felt that interest in religion and its impact on society would inevitably wane and in time be reduced exclusively to the private reflection of fewer and fewer individuals. Religion as a factor in shaping science and society would become irrelevant.

In recent years, we have witnessed the growth of a different cultural current, one which recognises – but is unsure of how to deal with – the fact that ‘religion has not gone away but has rather exploded in a new ways on the international horizon’. This second current tries to understand why this has happened. It recognises that society must engage religiously motivated persons. Indeed it may even profitably use religious motivation to foster certain social aims, such as the fight for international debt-relief or against HIV/AIDS or climate change. The problem is that a scientific culture that has become increasingly secularised and positivistic finds it hard – and perhaps even a little distasteful – to have to deal with why people turn to religion and has often no philosophical framework within which to do so.

Both of these currents are inadequate. A society which refuses to address religion ignores the fundamental fact that the human person not just has spiritual needs but is a person of spirit. The second one fundamentally tries to utilise religion or to tame it rather than engage with religion as a reality. We can see many seminars on “Religion and...”, but fewer on “Religion is...” full stop.

Much of the traditional debate around the relationship between religion and science was carried out in the framework of philosophical reflection. Professor Casey’s reflection is placed very clearly in the realm of the empirical research into how religious belief can enhance wellbeing. She looks at the contribution of religion to wellbeing of ‘religion’ in itself and not as a means towards another goal.

It is work of this kind which I believe will contribute to what Pope Benedict called a necessary “self-critique of modernity” and especially of the attitude of modernity to religion. For such a self-critique of modernity to function, Pope Benedict says, it needs to be accompanied also by “a self critique of Christianity, which must constantly renew its self-understanding setting out from its roots”.

That self critique must drive Christians to understand the nature of redemption. Many philosophic systems have proposed models of redemption for humanity purely from the outside, through the creation of a favourable economic environment. Such visions or ideologies are always insufficient. In the long term humans and humanity are redeemed not by science, but by love. Christian faith opens the individual to unconditional love. For the psycho-social benefits of religion to flourish, practitioners must be open to religion for what it is and believers must live their faith for what it is, faith in a God who is unconditional love.

I congratulate Professor Casey on her own research and for drawing the attention of colleagues to what could well be a very fruitful future area of research for the good of all.

**+DIARMUID MARTIN**  
*Archbishop of Dublin*

## Foreword

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### The Right Rev Ken Good



I welcome the findings in this Report as a valuable contribution to a more holistic understanding of mental health and psychological wellbeing.

In 1999 The Royal College of Psychiatrists set up a Spirituality and Psychiatry Special Interest Group to explore the need for psychiatry to demonstrate a greater interest in the whole person: mind, body and spirit. This Group advocates to College members a more integrative approach to mental health, especially for those patients for whom the spiritual aspect of their life is important to them.

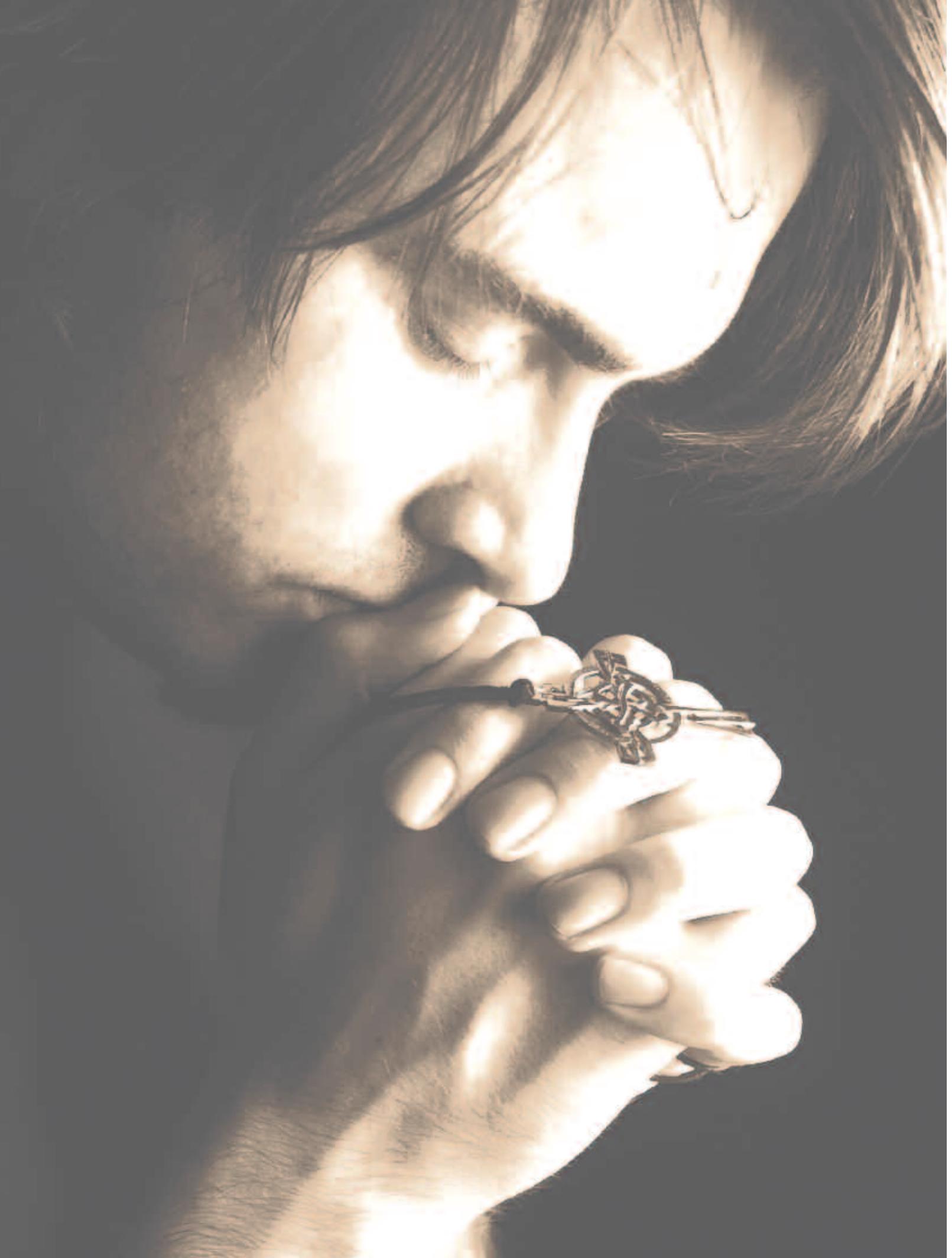
The data which Professor Patricia Casey has gathered in this research not only confirms the value of the Special Interest Group's approach, but also reveals that there is still work to be done in encouraging a significant number of psychiatrists to adopt a more holistic approach to their work and to accept the positive therapeutic value of including the spiritual aspect of life in the treatment of more of their patients.

With the rise of modern medicine, spiritual approaches to coping with and understanding distress have received less attention than they might have done on the part of health professionals, perhaps with the exception of psycho-oncology and the nursing of terminally ill patients. So there is food for thought in this report for all those engaged in the provision of health services, not least those who may tend towards a more sceptical and even prejudiced position against the value of religious belief or spiritual disciplines.

I have every hope that the motto of The Royal College of Psychiatrists, 'Let Wisdom Guide' will ensure that this research is given a fair hearing.

**THE RIGHT REV KEN GOOD**

*Bishop of Derry and Raphoe*



## THE PSYCHO-SOCIAL BENEFITS OF RELIGIOUS PRACTISE

### Executive summary

The positive link between religious practise and personal and societal well-being is of increasing interest to researchers. This link is increasingly being reported by the media. For example, the cover story of the *Time* magazine issue of February 23, 2009 was entitled, 'How faith can heal'.

The growing body of evidence testifying to a correlative, or even a causative relationship between religious practise and well-being has led to a re-evaluation on the part of some

psychiatrists of the proper role of religion in patient care. For example, it is increasingly argued that if a patient is religious this should be taken into

account by his or her psychiatrist and it should be seen as a potentially positive force in his or her life that has a role to play in the healing

process. At the very least, it is contrary to the evidence not to take it into account, and it is worse to simply dismiss it.

*If religion is practised by a large number of people across a population, then its benefits will accrue to society as a whole.*

But if religious practise has strong personal benefits, then it obviously has societal benefits as well. If religion is practised by a large number of people across a population, then its benefits will accrue to society as a whole.

This is an important message at a time when religion is often criticised as a socially divisive force which is mainly repressive and authoritarian in its effects. Religion can be this, especially when it is imposed. But when it is accepted and lived out voluntarily, the contrary is much more likely to be the case. This message deserves to be more widely known.

The following is a summary of the ways in which religious practise can benefit individual believers and society. The summary will touch on only a representative sample of the studies listed in this report.

### **Religious practise reduces the risk of suicide**

In one study, 584 suicide victims and 4,279 deaths from natural causes were compared. After adjusting for age, sex, race, marital status and frequency of social contact, the odds of never having participated in religious activities was significantly greater among the suicide victims. In other words, religious practise reduces the chances of a person committing suicide.

### **Religious practise reduces the risk of depression**

A large Canadian study involving 70,000 adults found that those who attended Church services regularly had fewer depressive symptoms than average. Interestingly, those who described themselves as ‘spiritual’, rather than ‘religious’, had more depressive symptoms. Both effects were true regardless of age, sex and other variables.

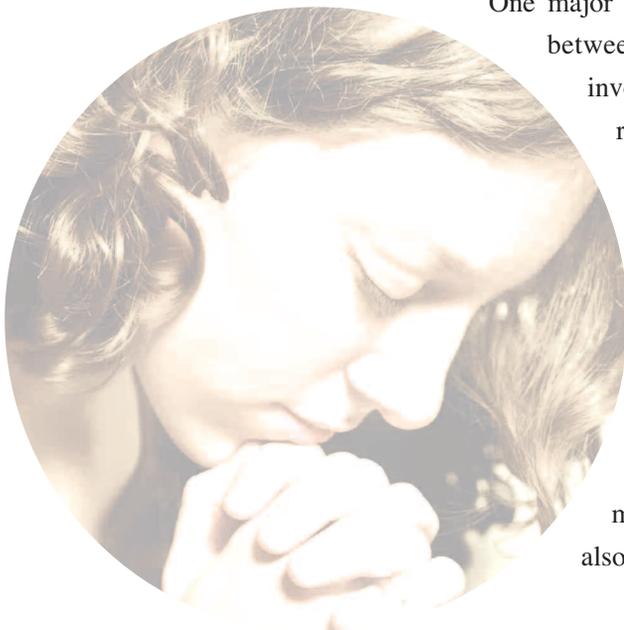
### **Religious practise helps cope with bereavement effects**

One recent study examined 135 relatives and close friends of those who died in a palliative care centre at one, nine and 14 months after a bereavement. People with no spiritual beliefs did not resolve their grief over the period of the study, those with strong beliefs did so progressively, and those with low levels of belief showed no change for the first nine months, but they began to resolve their grief after that point.

### **Religious practise, risk-taking and sexual behaviour among teenagers**

One major study involving over 2,000 young people aged between 11-18 showed church attendance and involvement in a church-based youth group reduced risk-taking behaviours such as smoking, alcohol use, marijuana use, truancy and depression, even when controlling for confounders such as socio-economic status and self-esteem.

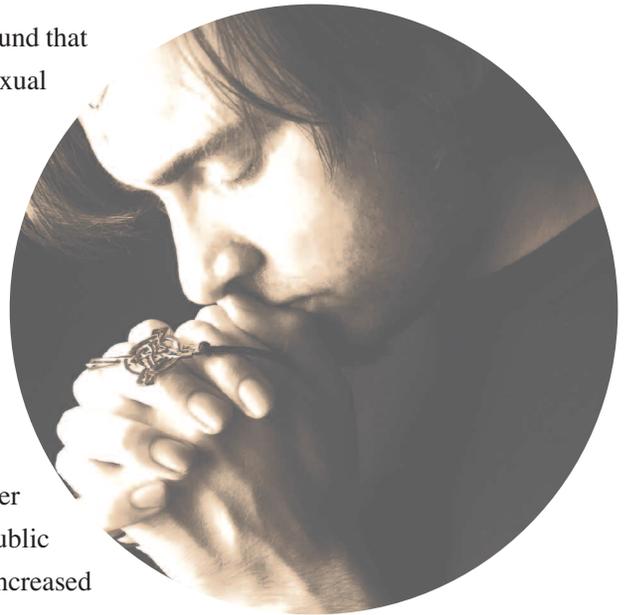
Regarding sexual activity, church attendance and youth involvement reduced sexual activity. Furthermore, the risk-taking behaviour that often occurs in early adulthood was less marked in the religious cohort. Self-esteem was also higher among those attending church.



A survey of 1,100 American adults aged over 18 found that those who were religious had a lower number of sexual partners than those who were not.

### **Religious practise adds to life expectancy**

A meta-analysis of all studies relating to religious involvement and longevity was carried out in the year 2000. A total of 126,000 people were involved. It found that active religious involvement increased the chances of living longer than the average by 29%, and participation in public religious practises, such as church attendance, increased the chance of living longer by 43%.



### **Marriage and religious practise**

The greatest amount of marital stability is found among couples who practise the same religion. Marriages in which neither spouse is religious are the least stable. Marriages between couples who practise different religions, or where one is religious and the other is not, fall in between these two poles.

Marital stability among religious believers is explained partly by religious injunctions against divorce, but it also may be explained by the fact that religious believers attach less importance to personal autonomy and more importance to commitment.

### **Prayer and patient recovery**

A number of studies have been conducted to test the effect of prayer on patient recovery. These have compared groups of patients who were being prayed for, but didn't know it, and another group who were not being prayed for. None of the patients knew they were part of these studies.

Measures such as mortality, duration of fever and length of stay in hospital were shorter in the prayer group than in the non-prayer group.

However, these studies are not conclusive. They only indicate that there may be some positive effect from prayer because other studies, for example involving cardiac patients, have shown no effect.

## **The Psycho-social Benefits of Religion**

**BY PROFESSOR PATRICIA CASEY**

### **Introduction**

Governments are interested in people's wellbeing and the factors that make for contentment and good citizenship. Understandably, economic factors are among the variables that are likely to be relevant. Others, however, have also been examined, such as housing, transportation, urbanisation and education. But one that is little talked about, but that has exercised economists and others in recent years, is the extent to which religious beliefs and practise impact on wellbeing and happiness. For example, in March 2008, a new study was highlighted by the BBC on its website with the headline: "Religion 'linked to a happy life'."

The study in question was from the Paris School of Economics and it was written by Professor Andrew Clark and Dr. Orsolya Lelkes. They presented the results at the Royal Economic Society conference in March 2008<sup>i</sup>, hence the BBC report.

Using data from a representative sample of twenty-two European countries (almost thirty thousand individuals), this study found that those who were religious had higher 'life satisfaction' than those who were not, and that this was maintained even when variables such as age, employment status, and marital status were controlled. Both church-going and prayer had a statistically significant positive impact in life satisfactions, although the magnitude of the contribution was higher for regular churchgoing than for prayer. Moreover, experiencing unemployment and marital breakdown had a less negative impact on churchgoers and those who prayed in comparison to the non-religious group, and there was little evidence that these effects arose because of turning to religion during adversity. This 'buffering' or 'softening' effect of religion against economic and other (i.e., marital) adversity was also found in other studies.

A second similar report was issued by The Whitehall Wellbeing Working Group. This was established by the British Department of the Environment so as to move beyond economics into other areas when setting goals for policy. One of the authors of the report from this group, Paul Dolan, Professor of Economics at Tanaka Business School, Imperial College, London, found that, among other things, religious beliefs and engagement in religious practise influence happiness, that this effect did not have denominational barriers, and that religious beliefs seem to modify the impact of low income on happiness, for the better.

If economists have an interest in religion and wellbeing, then mental health professionals ought to have an even greater concern with it. Yet they have traditionally been sceptical and even hostile towards the personal and social benefits of religion, perceiving it as guilt-inducing and dependency-promoting (See 'Criticisms' page 33). Freud, for example, felt that belief in God

was a projection of our need for security and for a father figure. He believed that religious belief was a sign of weakness and indicative of ‘neurosis.’ Others contended that belief in God sprang from fear of death and the annihilation that this brings. Many have been concerned only with religious activities and have considered these as indicative of instability. It is therefore not surprising that religious matters are rarely inquired into during psychiatric/psychological type interviewing, even as points of information. For example, assessing the role of social supports through religious networks, or whether people personally derive emotional comfort from their religious practises, is seldom explored. While taboos concerning sex, childhood abuse and suicide have long been relegated to history, religion now occupies the position as the ‘last taboo’ in psychiatry, a fact that has been bemoaned by a former president of the Royal College of Psychiatrists.<sup>iii</sup> However this negativity from psychiatrists appears to be changing, at least if a recent paper published in the American Journal of Psychiatry is to be believed.<sup>iv</sup> While psychiatrists by and large still remain far less sanguine about the benefits of religion, some are beginning to admit of the possibility that religious concepts such as sin, grace, forgiveness should, where appropriate, be incorporated into therapy with benefit even when delivered by non-religious therapists and these techniques are currently being examined.<sup>v</sup> It would appear that some of the old prejudices, if they can be so-called, are beginning to soften.

However, it remains the case that psychiatrists are considerably less likely to be religious than their patients, with over 71% of psychiatric patients professing religious beliefs, compared with 54% of psychiatrists who took part in a Canadian study. Despite the fact that 71% of their patients professed religious beliefs only 50% stated that they often/always included this aspect of the patient’s life in the assessment, and an even smaller proportion of patients (17%) said that enquiry was made about this.<sup>vi</sup> There is no comparable research on this issue from Ireland. This scepticism or prejudice was also apparent in academia, with a paucity of scientific papers addressing matters of religion and mental health. An analysis of the religious content of four major psychiatric journals between 1978 and 1982<sup>vii</sup> found that of 2348 papers examined, only 59 included a quantifiable religious variable, while between 1991 and 1995, this had fallen to 32 papers out of 2,766<sup>viii</sup>.

Some scientists have also been sceptical if not actually prejudiced, and one, widely known for his interest in religion, regards religious belief as a delusion<sup>ix</sup> and is on record as saying that giving children a religious upbringing is a form of (mental) child abuse, while Michael Persinger, a neuroscientist, describes religion as a “cognitive virus” and an “artefact of the brain.”

Before commencing this paper, I conducted a simple exercise to establish a ball-park figure for the number of papers now being published in relation to religion and mental health in view of

*Experiencing unemployment and marital breakdown had a less negative impact on churchgoers and those who prayed in comparison to the non-religious group.*

the findings of the studies mentioned above.<sup>vii, viii</sup> I selected the Pubmed database, which allows access to the US National Library of Medicine and the National Institutes of Health, the most prestigious in international medical circles. It provides abstracts on all scientific papers that are published in peer reviewed journals. Using the search words “religion mental health” and limiting the search to the period between January 1st 1993 and 31st December 1999, there were listings for 142 papers (excluding letters but including only those that had abstracts summarising the paper at the beginning). Repeating this for the same period from 2000 to 2006 there were 363 such papers, representing more than a two-and-a-half-fold increase. For the single year 2007 there were 80 such entries. Even more intriguing is that virtually all were positive with regard to the benefits of religion on the variables of interest, and these benefits were observed in areas as diverse as depression, coping with cancer or schizophrenia, suicide, women coping with midlife, prisoners dealing with imprisonment, and so on. So it would appear that there is a growing interest again, among academics, in the association between religion and mental health/ill-health.

This current paper is not fully comprehensive due to the large number of scientific publications in this area, so where available, systematic reviews, which synthesise the current state of knowledge, will be described in the relevant sections. Topics such as the role of religion in long-term survival from physical illness or in coping with cancer, HIV/AIDS, cardiac disease, etc., will not be discussed, due to limitations in space, although I recognise that there is a large body of research addressing these areas.

*More than two-thirds of the 126 medical schools in the US run modules on religion and healing, up from three in 1992.*

### **History**

Scientific interest in the effects of religious belief on physical and mental illness seems to have been spawned by the work of George Comstock, an epidemiologist at John’s Hopkins Medical School. In 1972 he published a paper examining the link between mortality and church attendance in the general population. Now, more than two-thirds of the 126 medical schools in the US run modules on religion and healing, up from three in 1992, and the first textbook of religion and health was published in 2001,<sup>s</sup> with a second edition due in 2011.

A further boost has been given to this trend by a report to the United Nations in 2005<sup>xi</sup> entitled “Spirituality, Religion and Social Health” by The Round Table, an international forum that is based on the recognition of the importance of the religious and spiritual dimension, in the WHO/Europe document “Health for All.” Its aim is to bring “the universal spiritual and religious dimension in health to areas of the United Nations agenda and if possible to international public policy.” This concluded that the WHO definition of health should be modified so as to recognise that religious and spiritual practises are inherent to individual and collective health. It also recommended that “because prayer and other religious and spiritual practises in different parts of the world are so common a response to illness, researchers and health experts have a responsibility to investigate it.”

## Measuring religiousness and type of religiousness

The first issue in investigating religion and its relationship to various health measures is how religiousness (also termed religiosity in some studies) should be measured. Several approaches will be outlined below.

Intrinsic vs extrinsic orientation: In the 1950s, Gordon Allport,<sup>xii</sup> a psychologist at Harvard University and one of the pioneers in the study of the psychology of religion, identified two forms of religious orientation. The first, termed intrinsic orientation, recognises that religious practise is directed toward God and internalises the ethics and practises of religion as a guide to living. Alternatively, those who assume an extrinsic religious orientation profess religious beliefs so as to appear respectable, or to gain social advancement, or because it is conventional. Such people do not internalise or incorporate religious values as a code of conduct.

Allport found that those of intrinsic orientation were psychologically healthier than the extrinsic group, who felt burdened by anxiety, guilt and worry. And he believed that the extrinsic orientation was more harmful to the individual than professing no religious beliefs at all. The intrinsic/extrinsic distinction continues to be widely used in research, as does the research instrument developed by Allport, the Religious Orientation Scale.<sup>xiii</sup>

Dimensional approaches: Besides the intrinsic/extrinsic divisions, other dimensions have also been identified. Glock and Stark<sup>xiv</sup> used a famous classification describing five dimensions of religious commitment:

- the doctrinal (the beliefs of the particular religion);
- the intellectual (knowledge about one's religion);
- the ethical-consequential (behaviour influenced by church teachings);
- the ritualistic (religious practises), later divided into private activities and public rituals;
- the experiential (feelings of closeness to God etc).

There are now a multitude of scales to measure religiousness and the reader is referred to Keonig, McCullough and Larson<sup>x</sup> (chapter 33) for a detailed examination of these.

Between them these measures cover 10 dimensions:

- Religious beliefs
- Religious affiliation (including denomination)
- Organisational religiosity
- Non-organisational religiosity
- Subjective religiosity
- Religious commitment
- Religious quest
- Religious well-being
- Religious coping
- Religious history

## Other religious practises

In addition, other scales have recently been developed to evaluate spirituality, and while some of these overlap with the dimensions mentioned above, others are so broad as to encapsulate every human experience within the concept of “spiritual.”

## Is the link between religion and mental health real?

In studies of religion and health, the standard approach has been to measure health and at the same time measure religiousness, using appropriate scales so as to convert statements about these into numbers that will allow statistical calculations. Since some of the studies are cross-sectional (i.e. taken at one point in time), it is not possible to state definitively whether religiousness causes mental wellbeing or vice versa. For example, a study examining the relationship between depression and religion might find that higher levels of depression were associated with lower levels of religiousness and vice versa, and three explanations for this relationship are possible:

**The secondary model:** One is that those who are depressed spend less time engaged in religious activity due to lack of interest, poor concentration, etc., so that the connection is the result of the symptoms of depression rather than anything inherent in religion itself.

**The confounder model:** An alternative model might be that other independent variables, such as childhood neglect, which is associated with both a risk of later depression and low church attendance, is leading to false associations (in this example childhood neglect would be termed a confounder since it is associated with both variables of interest).

**The causal model:** A third explanation is that those who are religious are less likely to develop depressive symptoms. Furthermore, this might be due either to 1) some inherent benefit from such a belief system or 2) the benefits that are mediated by lifestyle factors associated with religiousness. Putative candidates for such factors include low alcohol consumption, more ready access to social supports (through church related activities), better self-esteem, and so on.

*Studies show an association between volunteerism and religious involvement/beliefs.*

So, studies of the relationship between religion and any variable of interest, be it depression, longevity, crime, etc., must be designed so as to take account of confounder variables, and the measures of religiousness must be taken in such a way that they will exclude the possibility that these outcomes resulted from pre-existing conditions and the measuring instruments themselves must be well designed. In other words, the studies must be longitudinal, that is, conducted over an extended period of time, and with multiple measures included. Recent studies have been carried out with this degree of rigour and most of the studies referred to in this paper use this high quality methodology.

## **Religion or spirituality: which is more beneficial?**

Many today claim to be spiritual rather than religious. This trend has been developing since the 1970s, a period of significant religious, social and cultural change throughout the Western world. While the term “spiritual” has various connotations, such as a general belief in a force or power outside of oneself, the ability to feel at one with nature, and so on, in research, it is often defined as engagement in intentional and disciplined spiritual practises or beliefs that are independent of a church or of organised religion. These include acceptance of a higher power (that might or might not include God), or participation in regular practises such as attendance at yoga classes, regular meditation, and so on.

Some recent studies have examined whether being spiritual or religious confer different psychological benefits. A recently-published longitudinal study of two hundred Californians born during the 1920s<sup>v</sup> demonstrated both differences and similarities between those two groups. Differences included evidence that spiritual seekers were more likely to be focused on personal growth and creative activities and more likely to be involved in civic activism in areas such as the environment, civil rights, and anti-war concerns. The religious group, on the other hand, were found to be more focused on inter-personal and community relations and activities. Notwithstanding the focus on personal fulfilment on the part of the spiritual group, there was no evidence that this generated pathological self-absorption, and the groups were similar on measures of social functioning. In this study, the path to spiritual seeking in late adulthood seemed to have been stimulated by the experience of personal turmoil and emotional difficulty in earlier times. The main areas of difference between the spiritual and religious groups lay in attitudes to such social/moral issues as feminism and homosexuality.

Another study<sup>vi</sup> examined in greater depth the aspects of generativity (concern for the welfare of future generations), and found that there were differences between those who were spiritual and those who described themselves as religious. The cohort were born in the 1920s and interviewed intensively over more than 70 years. By the time the interviews were complete data was available on only 183 subjects. While there was overlap between these two dimensions, the religious group expressed generativity in terms of altruism and givingness and the spiritual group focused on self-expanding aspects of generativity such as the need to outlive the self and leave a permanent legacy, the continuing impact on others and creativity. While this does not necessarily mean that spiritual people are lacking in social beneficence, there are concerns that at least some forms of “spirituality” which are privatised, ad hoc and undisciplined contribute to the diminution in social capital and in volunteerism.<sup>vii</sup> Indeed, studies show an association between volunteerism and religious involvement/beliefs, although, due to the complex motivations behind volunteering, not all primarily altruistic, there is evidence<sup>viii</sup> that a number of other factors are also involved, including educational status, stage in life cycle, and so forth.

A 2004 Canadian study,<sup>ix</sup> arguably the largest of its kind, examined over seventy thousand adults as part of a multi-wave longitudinal study. Its aim was to identify the relationship between spiritual or religious self-perception and religious worship to depressive symptoms. Background confounders that might cloud the picture were controlled and these included socio-economic,

demographic (e.g., age), and health variables. Those who attended church more frequently had significantly fewer depressive symptoms, while those who stated that spiritual or religious values were important to them, or perceived themselves to be spiritual or religious, but who were not involved in religious institutions, had higher levels of depressive symptoms. Clearly the relationship between spirituality and religiousness is complex, but the findings suggest that formal involvement in worship carries benefits that are not obviously evident amongst those with more diffuse attitudes (such as merely perceiving or stating themselves to be spiritual or religious). This area needs further study in order to elucidate more fully the mechanisms by which actual worship and self-perception of spirituality and religiousness relate to depressive symptoms.

A recent study in Britain<sup>xx</sup> compared six ethnic populations (including Irish), and arrived at complex results. While there was no difference in the prevalence of common mental disorders between those who were spiritual/religious and those who were not, when the groups were split into those who professed to being religious and those who professed to being spiritual, the latter group was found to have a greater likelihood of mental disorder than those with a formal religious belief system but also than those with no religious belief whatsoever. It must be remembered, however, that this was a cross-sectional study, so does not inform on how religiousness influenced mental health, i.e., whether cause or effect. Among Canadian adolescents,<sup>xxi</sup> religiousness (defined as church attendance), as opposed to spirituality (defined as personal belief in God or a higher power), was associated with a greater positive impact on psycho-social adjustment.

So, in general, it seems that participation in religious activities, as distinct from the more nebulous 'spirituality,' has a greater benefit on psychological and social adjustment.

### **Risk-taking behaviour, sexual activity and adolescents**

The role of religious practise in young people's lives has received attention in the international scientific literature, mostly in the United States, where over half (56%) describe their faith as important in their lives, and where a similar proportion attend a church service each week.<sup>xxii</sup> Against that background, a number of recent studies have examined risk-taking behaviours and religion in teenagers.

One such study<sup>xxiii</sup> in 2006, involving 6,578 adolescents between 13 and 18 years old, assessed the contribution of religiousness and spirituality to a wide range of psycho-social indicators. The primary analysis found that religiousness was a more salient influence than spirituality on overall psycho-social adjustment and demonstrated that this was most likely mediated by being part of a community rather than by church attendance per se. However, religiousness was uniquely associated with lower levels of risk-taking behaviours even when community involvement was taken in account. So, religiousness appears to confer benefits in adjustment over and above spirituality that may be related to membership of a 'community,' especially in lower levels of risk taking behaviour.

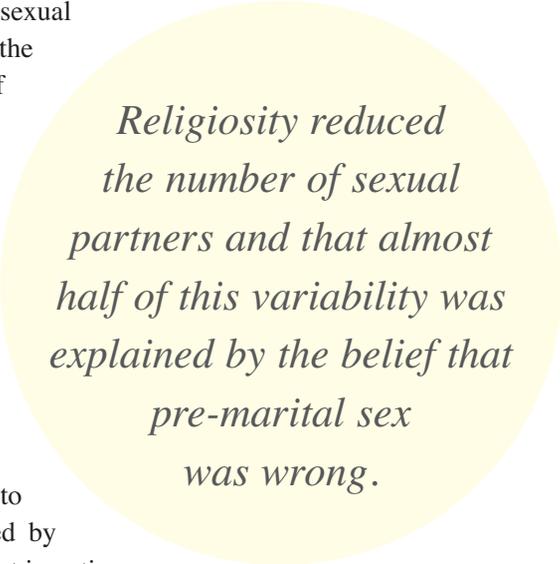
Another study<sup>xxiii</sup> expanded our understanding of this further by specifically focusing on these behaviours in a national random sample of over 2,000 teenagers (aged 11-18). In each interview, a young person and his or her parent were present. The investigators found that the perceived importance of religion, church attendance and involvement in a church-based youth group reduced risk-taking behaviours such as smoking, alcohol use, marijuana use, truancy and depression, even when controlling for confounders such as socio-economic status and self-esteem. Regarding sexual activity, church attendance and youth group involvement reduced sexual activity, while perceived importance of religion had no impact. Furthermore, the increase in risk-taking behaviour that normally occurs into early adulthood was less marked in the religious cohort. Turning to self-esteem, the results showed that the impact of low self-esteem in determining behaviours such as truancy was reduced by the presence of religiousness.

Similar findings were replicated by a recent research publication<sup>xxiv</sup> on the role of religiousness and adolescent sexual behaviour. This study of young Americans, the National Longitudinal Survey of Youth, first interviewed when they were between 12 and 17 years old, found that family religiosity reduced adolescent sexual activity, and that this was due in part to close parental monitoring, positive peer networks and engaging their adolescents in family activities.

Evidence of the long term effect of religiousness on sexual behaviour was provided by a study<sup>xxv</sup> examining the association between religiousness and number of sexual partners in never-married American adults over the age of 18. Interviewing over 1,100 adults, it found that religiosity reduced the number of sexual partners and that almost half of this variability was explained by the belief that pre-marital sex was wrong.

The question of how religious involvement influences these behaviours is as yet not fully answered but several possibilities present themselves. Is it that more socially involved youth are drawn to religious participation or that the activities organised by church groups reduce the time available for engagement in anti-social activities? To what extent is the internalisation of religious teachings responsible, or is it that the boundaries set by religious participation overrides the pressures faced by young people? The impact of social bonding and of the norms set by the youth leaders might also have an impact on behaviour. Finally, the interaction between religiously committed parents and their children may be a feature that helps reinforce risk-averse behaviours.

What these studies of adolescents demonstrate is that there should be an openness toward exploring the involvement of church groups in helping young people navigate the pressures of modern society.



*Religiosity reduced the number of sexual partners and that almost half of this variability was explained by the belief that pre-marital sex was wrong.*

## Delinquency, crime and religious practise

Since Hirschi and Stark's seminal 1969 paper, "Hellfire and Delinquency,"<sup>xxvi</sup> there has been considerable interest in establishing whether religion has a positive, negative or neutral effect on the prevalence of delinquency within society. This study found no association between levels of religious commitment and delinquent behaviour, although subsequent attempts to reproduce these results failed, with some investigators reporting a positive association (religion increases delinquency) and others a negative one (religion decreases delinquency).

In order to clarify this issue, a systematic review (SR) of the scientific literature to date<sup>xxvii</sup> was undertaken in 2000. This method is very different to the more traditional narrative review. The latter relies on the expertise of the reviewer to gather the studies on the topic, to evaluate their strengths and weaknesses and to integrate the findings into a composite and, hopefully, objective summary of the state of the research at that particular time. They are written as a narrative and so provide an overview of the topic of interest. Not surprisingly, these narrative reviews are subject to selection bias. Since the mid-1980s they have been replaced, although not exclusively, by SRs as superior in comprehensiveness and, arguably, freedom from bias. They firstly require minimum criteria before any study is considered for inclusion and after a detailed literature search those studies not meeting these minimum criteria are excluded. Among the common criteria is a requirement that the papers were published in peer reviewed journals, the sample sizes were of sufficient magnitude to allow for robust statistical analysis, and that overall they were methodologically sound. Sometimes the outcome measures are subject to statistical analysis so that the effect size of whatever attribute is being investigated can be calculated. The ultimate aim is to allow for a research-based consensus on a particular topic to be arrived at. If there are too few suitable scientific studies published in the area, then this type of analysis is not possible.

*It is generally believed that religion discourages crime, especially serious crime such as homicide.*

The 2000 systematic review of the scientific literature on religion and delinquency demonstrated that in general juvenile delinquency and religious variables are inversely related; in other words, as religious beliefs increase, delinquency decreases but there was no universal agreement on this across studies. However, those studies considered the most methodologically robust identified an inverse relationship between the two variables (i.e., higher religiousness scores reduced delinquency).

Turning specifically to adult crime, it is generally believed that religion discourages crime, especially serious crime such as homicide, a topic has been the subject of research for over a century. Some doubt has been cast on the supposition that religion reduces crime in recent decades with studies describing its impact as neutral to playing a large role in its reduction. Some researchers suggest that this latter effect occurs not only at an individual level but also at a societal level, which means that whether the data is derived from official statistics or by means

of face-to-face interviews, the results are similar. Others argue that certain aspects of religion are conducive to violence. Citing religious hatred, intolerance, and ethnic cleansing as examples, it is argued by Kimball<sup>xxviii</sup> that beliefs claiming to be based on absolute truths and that present life as a cosmic battle between good and evil or perhaps God and the Devil, are conducive to interpersonal violence, especially when they are dominant in that society or sub-cultural group.

Interestingly, Durkheim, the doyen of social integration theory, demonstrated in his powerful work *Suicide*<sup>xxix</sup> that religion, through its role as an agent of social cohesion, was a potent force in preventing suicide. However, he took a contrasting view with regard to the relationship of religion to crime, believing that a passionate commitment to religion encouraged homicide, especially when it was linked to a group rather than being a personal exercise. He described homicide as an act “inseparable from passion.”

This view has also been substantiated in a recently published study<sup>xxx</sup> that examined the homicide rates in 18 prosperous countries. It demonstrated that homicide rates were higher in those nations which were most religious and that secular nations had both lower homicide rates and fewer social problems more generally. However, this has been criticized by others<sup>xxxi</sup> for failing to discuss the higher rates of other crimes such as burglary, narcotic consumption, etc., and deaths from other social illness, for example. In addition, the fact that the analysis considered religion as monolithic rather than allowing for the possibility that certain types of religious fervour were more associated with homicide than others has been subject to criticism. The type of statistical analysis carried out was also criticised since it was bivariate (correlating one variable with another i.e. homicide rates with religiousness) and so ignored the role of confounders that might also influence homicide rates. In these instances multivariate analyses are performed. A final weakness is that a more appropriate comparison rather than between America present and Europe present would have been between America past and present and Europe past and present so as to capture the potential influence of changes in religiousness on homicide rates over time.

Accordingly, Jensen and his team examined the theories of Kimball and of Durkheim set out above using data from the World Values Survey conducted between 1990-93 and 1995-97, which measured several dimensions of religion in 54 nations that included intensity of belief, Dualism (God versus Devil), and malevolence (good versus evil). The authors described these variables as indicating “passionate dualism.” The investigators postulated that the latter would be associated with higher rates of homicide and lower rates of suicide while those of a more benign nature, including belief in God (and less so in the devil), the importance of religion in life and attendance at church services would be less clearly associated with lethal violence. Data on suicide and homicide was obtained from the WHO database although it is arguable that the data for each country should have been examined by continent since the magnitude of the contribution of the various factors determining homicide in, say Asia, might be very different from those operating in Europe.

In the statistical analysis the investigators controlled for other variables that might influence the relationship between religion and violence such as poverty. Political variables such as recent

civil war, being a multi-cultural society, having a new form of Government, etc., were also examined, since these too might be associated with lethal violence. The results showed that even after allowing for the poverty-related variables, the positive relationship between passionate dualism and homicide remained, while the relationship between benevolent religious variables and homicide was negative, that is, where the type of religiosity was benevolent there was less murder.

The homicide rates in the secular nations were similar to the rates in the nations with benevolent religious beliefs, and both were lower than the rates in nations expressing passionate dualism. In other words, certain types of religious fervour were associated with high homicide rates, while more benevolent forms, as well as secularism, showed the converse relationship. Analysing the political variables, the benevolent variable continued to be associated with lower homicide rates while the malevolent religious measures were associated with higher homicide rate. Overall however, the political variables contributed to 75% of the variance in homicide rates in the nations studied.

In summary, these results show that the more malevolent forms of religious beliefs e.g. religious fanaticism are linked to higher homicide rates while collective beliefs of a benevolent type are associated with lower homicide rates, similar to those found in secular countries. However, the contribution to homicide rates appears to be greater from political measures than from the religious variables and was not due to spurious associations with poverty. The definitive answer as to whether religiousness and homicide are associated and if so in what way can only be answered by measuring trends in each over time, that is, whether the homicide rates rise or fall as levels of religiousness and secularism alter when confounder are controlled. No such studies have been carried out. Neither are there any studies of homicide rates among those who practise religion and those who do not and such studies would be methodologically very difficult to design.

*Religion deters crime through the intensification of group-level morality, tantamount to a moral domino effect.*

Moving from homicide and focusing on serious crime more generally (e.g. robbery and rape as well as homicide) a meta-analysis was carried out of the 60 leading studies in an attempt to arrive at a synthesis on whether religion and crime are linked. In total, these studies involved hundreds of thousands of subjects with some involving over 30,000 subjects.<sup>xxxii</sup> This meta-analysis found that religion exerted a significant deterrent effect on crime\* and this appeared to increase over time, with a greater impact noticed in more recent studies. Moreover, the greater the salience of religion in the community in which the study was conducted, the greater the deterrent effect of religion on crime.

Various mechanisms by which religion might reduce crime were discussed in this meta-analysis, and these include the following:

\* Effect size  $r = -0.12$ , range -1 to +1.

- The Hell-fire hypothesis promotes pro-social behaviour because of the threat of supernatural sanction but also the reward for normative behaviour.
- Religious institutions instil normative beliefs and foster involvement and bonding with the wider society (the moral community hypothesis).
- Rational choice theory states that religious individuals self-impose sanctions on themselves for deviant behaviour so avoid shame, guilt, etc.
- Social selection theory states that religious individuals select as friends those who have similar values and so reinforce each others pro-social behaviour.
- Related to this is reference group theory which states that individuals compare and control their own behaviour with respect to their wider reference group and as the group becomes more religiously centred, religion deters crime through the intensification of group-level morality, tantamount to a moral domino effect.

### **Suicidal behaviour**

The influence of religion on suicide rates has been speculated upon since the seminal work of Durkheim<sup>xxxix</sup> comparing suicide rates between Catholic and Protestant countries in Europe. More recent studies have focused on secular and religious nations and have found the former to have higher suicide rates than those measured as religious.<sup>xxxiii, xxxiv</sup> Of course, this may be a false finding, perhaps stemming from under-reporting of suicide (due to fear of stigma) in religious countries. Alternatively the finding may be scientifically robust and the extent of consonance among the nations studied suggests that the finding is valid. The mechanism by which national religiousness reduces suicide has also been the subject of scientific inquiry, with some suggesting that it stems from the intolerance of suicide that is part of all major religions, but others suggesting that it may be due to the social cohesion that emanates from religion, as suggested by Durkheim. Finally, the role of social networks and supports associated with active religious participation may also contribute.

Two broad approaches to answering questions concerning the links between religiousness and suicide present themselves. The first is the ecological or population study in which suicide rates in given countries or geographical areas are calculated and correlated with measures of religious practise or affiliation. This data is available usually through government statistics and the data sets are large since they are collected in national registers such as census and death registers.

The second approach is to assess individuals using personal interviews and questionnaires and to explore the relationship between their suicide-related behaviours and their religiousness. These are called observation studies. Both population and observational approaches require complex statistical analysis.

Population (ecological) studies: A fascinating study that incorporated both an ecological and an observational approach examined suicide and religious practise data from 19 European countries.<sup>xxxiii</sup> The investigators also conducted individual interviews involving over 28,000

people for the observational arm. For the ecological part, the findings showed that for women, suicide rates were lower in highly religiously affiliated countries as compared to those that were less religiously affiliated, and that this was determined by intolerance of suicide. Religious observance levels were also of importance, but less so than affiliation. For the observational arm, the moral injunction against suicide was protective for both men and women, and for men, exposure to a religious environment was also a buffer against suicide. Thus, men and women seem to respond differently to the religious ethos of society. These findings, especially those concerning the role of a religious culture for men, suggest that the protection afforded by religion to men occurs not necessarily because of dogma reaching individuals but by a process akin to osmosis; and this echoes the view of Durkheim, articulated a century earlier, when he wrote, “if religion protects man against the desire for self-destruction, it is not that it preaches the respect for his own person to him *sui generis*; but because it is a society... The details of dogma and rites are secondary.” So, according to this view, religion provides a common set of values to guide the members of that society even in the absence of strict adherence at a personal level.

*The moral  
injunction against  
suicide was protective  
for both men and  
women*

A global perspective on suicide was provided by an analysis of figures from the WHO databank on suicide.<sup>xxxiv</sup> Even allowing for possible under-reporting of suicide, the authors found that when countries were grouped according to their predominant faith (i.e., Buddhist, Christian, etc.), the results showed that countries that were atheist had by far the highest rates overall, while Muslim countries had the lowest.

For females the differences were much less than for men when grouped by broad faith category. As already suggested in an earlier study, mentioned above,<sup>xxxiii</sup> men are especially sensitive to the cultural religious ethos in relation to suicidal behaviour.

Observational studies: Examining the results of more direct observational studies in relation to suicidal behaviour requires sensitivity and patience, because of the understandable feelings of the relatives left to grieve for those dying by suicide. Notwithstanding these reservations, some such studies have been published and one investigation<sup>xxxv</sup> compared religious participation among older people dying by suicide and by natural causes in the US. In it, 584 suicide victims and 4,279 deaths from natural causes were compared. After adjusting for age, sex, race, marital status and frequency of social contact, the odds of never having participated in religious activities was significantly greater among the suicide victims. The authors raise the question as to what is the intrinsic factor associated with religion that provides protecting against suicide. Since those dying by suicide cannot be studied directly, proxy measures have been obtained from those engaging in deliberate self-harm or harbouring suicidal ideation.

An obvious starting point is to examine those who require in-patient treatment for depression since suicidal ideation/plans are likely to be prominent in this group. One study explored the relationship between suicidal behaviour and religion among 370 in-patients receiving treatment

for depression.<sup>xxxvi</sup> Those who were religiously unaffiliated had more lifetime suicide attempts, more relatives who died by suicide, fewer moral objections to suicide, less family contact, higher levels of aggression and impulsivity, and fewer stated reasons for living. These differences were identified in spite of similar levels of depression, hopelessness and life events before the onset of the current depressive episode. Further analysis of the data found that the protection against suicidal behaviour conferred by religious affiliation was mediated by moral objections to suicide. A further additional finding concerned innate levels of aggression, which were lower in the religiously affiliated group, although the investigators were unable to explore the mechanism by which religious commitment and lower levels of aggression were connected, a issue worthy of further examination since innate aggression might have a role in the genesis of suicidal behaviour. The authors suggest that psychiatrists ought to pay more attention to patients' religious beliefs, particularly in the context of suicidal acts.

Further support for the role of moral objections to suicide comes from the study of Irish psychiatrist Prof. Kevin Malone<sup>xxxvii</sup> who showed that among depressed psychiatric in-patients, those who had not made suicide attempts expressed greater feelings of family responsibility, more moral objections to suicide, greater fear of death and of social disapproval as well as greater survival and day to day coping skills. These differences were present in spite of similar severity of depression and of stressful events.

## **Depression**

Depression is one of the most common psychiatric disorders, carrying with it a huge personal and social burden,<sup>xxxviii</sup> and as it is characterized by symptoms relating to hope and meaning, it is not surprising that much of the focus of the role of religion on mental illness has been honed on this.

A large number of studies have examined the relationship between religion and depressive illness and between religion and depressive symptoms and a few will be described here.

Observational studies: A large Canadian study,<sup>xix</sup> referred to above, examined religious practise by interviewing over 70,000 adults over the age of 15, as part of the Canadian National population Health Survey (Wave 11 1996-1997). It found that those who attended Church services regularly had fewer depressive symptoms while those who stated themselves to be spiritual, as distinct from religious, had more; and this was true after controlled for confounding variables such as age, sex and health status.

Several recent studies show that public religious involvement and intrinsic religious motivation is inversely related to the incidence of depressive symptoms, i.e., public religious expression such as church attendance is associated with lower rates of depression among the elderly, most prominently amongst Roman Catholics, when examined in several European studies.<sup>xxxix</sup>

An interesting study among those diagnosed with depressive illness<sup>xl</sup> found that the severity of depression was lower in those expressing religious beliefs but was unrelated to religious behaviour. The moderating effect of religious beliefs was through lowering a sense of hopelessness.

Meta-analysis: It is often claimed by those exposed to stress in their lives that they derive strength from their beliefs at such times, or indeed, that they return to the practise of their religion spurred by such traumas. These general trends are borne out by a 2003 meta-analysis<sup>xii</sup> involving 150 studies. The results indicated that those who were experiencing depression due to life stressors derived particular benefit from religious beliefs/practises. More detailed analysis of the measures of religiousness found that intrinsically orientated religiousness was associated with less severe depression while extrinsically motivated orientation (blaming God, avoidance of problems through religious activities) was related to a higher frequency of symptoms, thus supporting the views of Allport reported more than half a century ago (see p. 3). In terms of risk, some<sup>xiii</sup> have calculated that lack of organised religious involvement was associated with a 20-60% increase in the odds of suffering major depression at some point in life.

## **Bereavement**

It seems likely that belief in an afterlife might facilitate acceptance of death and resolution of grief more easily when compared to the absence of such beliefs. There is some evidence to support this view, although quality research on this aspect of religiousness is scarce and further investigations are clearly required.

One recent study<sup>xiii</sup> examined 135 relatives and close friends of those who died in a palliative care centre at one, nine and 14 months after a bereavement, using standardised measures of grief.

People with no spiritual beliefs did not resolve their grief over the period of the study, those with strong beliefs did so progressively, and those with low levels of belief showed no change for the first nine months, but they did begin to resolve their grief after that point. These findings held true even when confounders were controlled.

*People with no spiritual beliefs did not resolve their grief over the period of the study.*

Examining the relationship between bereavement and increasing religious involvement, a longitudinal study covering a four-year period measured changes in grief, depression and religious beliefs in 103 widows and identified some very interesting features.<sup>xiv</sup> Widows were more likely to exhibit an increase in their religious/spiritual beliefs over time as compared to non-widowed control groups. In tandem with this, grief decreased in the religious/spiritual group but did not influence levels of depression (low mood, tearfulness, sadness). Not surprisingly, those who were personally insecure were most likely to benefit from the increasing salience of their beliefs.

Another recent study<sup>xv</sup> involved a 13-month follow-up of 175 bereaved family caregivers of patients with cancer. Using measures of depressive illness it found that those with high religiousness scores were significantly less likely to develop depressive illness, and this remained true even when confounders such as baseline depression score, age, burden of care giving, and so on, were controlled for.

The myriad of papers on this subject can be confusing and perplexing, and in 2007, a systematic review attempted to draw together the results.<sup>xlvi</sup> In this particular review, the final sample was over 5,700, and 94% of studies examined found some benefit; but the groups studied and the outcome measures were too diverse to draw definitive conclusions at this point, and further research was recommended. So, while on the surface there seemed to be benefits from religious beliefs in terms of coping with bereavement, the flaws in the studies were large and did not allow for definitive conclusions.

## **Psychosis**

Most investigators are agreed that psychotic illnesses such as schizophrenia, psychotic or “endogenous” depression and bipolar disorder (manic-depression) are largely determined biologically and that environmental factors such as religious beliefs have little impact on their occurrence - although it might be argued that in so far as substances such as alcohol, cannabis and amphetamines are involved, religiousness might have an impact due to its role in modifying risk-taking behaviours. However, since the prevalence of these illnesses in the general population is relatively low compared to depressive illness or anxiety disorders, it is more difficult to demonstrate whether there is any causal effect of religion, one way or the other, on the genesis of these conditions.

That said, there has been a growth of interest in the role of religion in helping people cope with serious psychiatric illness and in the impact of religious beliefs in treatment adherence. Arguably, some very devout people might believe that God alone can control their illness and therefore refuse treatment, relying instead on prayer and other such religious activities. A study from New Zealand<sup>xlvii</sup> involving 79 people with stable bipolar disorder found that most had religious or spiritual beliefs and most (over 80%) regularly practised their religion. Further, most saw a link between their religious beliefs and the management of their illness. Religious coping (see below) was frequently used, and almost a quarter found that their own religious beliefs and practises put them in conflict with an illness model and with treatment advice.

Whilst there is now recognition that many of those with mental illnesses have strong religious beliefs and that they derive support from these beliefs, studies show a disparity between the extent of their beliefs and those of their psychiatrists. A recent study<sup>xlviii</sup> found that a majority of out-patients at a psychiatric clinic considered religion to be an important part of their lives yet only one third had raised this with their clinicians. In addition, half of the clinicians had an inaccurate perception of their patients’ religious involvement, and were unaware that a minority of patients regarded their treatment as incompatible with their religious beliefs. A further study<sup>xlix</sup> of 115 psychiatric out-patients with schizophrenia assessed religious coping and found that 71% of subjects reported religion as instilling hope and purpose in their lives. Larger numbers also reported benefits relating to social integration, risk of suicide attempts, substance abuse and number of psychotic symptoms than reported the opposite. Only in the area of treatment adherence did religion have equally positive and negative influences, with 16% reporting that their religious beliefs were concordant with the recommended treatment and 15% reporting the opposite. The authors point to the clinical significance of religion in clinical

practise and opine that it is neither strictly a personal nor a cultural matter and that it should be sensitively integrated into the psycho-social dimension of management. While many of these studies have been conducted in North America, similar opinions<sup>i</sup>, <sup>ii</sup>, <sup>iii</sup> have been reiterated recently in Britain.

## Religion and Longevity

Many studies have shown an association between longevity and religious beliefs. As in many areas of investigation, the reality is that individual studies are of varying quality and often those with negative findings remain unpublished. This scientific uncertainty lends itself to a meta-analysis. A meta-analysis of all studies, both published and unpublished, relating to religious involvement and longevity was carried out in 2000<sup>iii</sup>. Forty-two studies were included, involving some 126,000 subjects. Active religious involvement increased the chance of living longer by some 29%, and participation in public religious practises, such as church attendance, increased the chance of living longer by 43%.

A recently published study <sup>iv</sup> (not included in the above meta-analysis) of over 92,000 women, aged 50-74, were recruited as part of the Women's Health Initiative (sponsored by the National Institutes of Health) to examine the role of biological and lifestyle factors on the risk of various physical illnesses. The present study examined the role of religious practise on mortality and on the onset of physical illness. Information on social supports, life events, previous medical and psychiatric history was also gathered using various research questionnaires and along with lifestyle habits, these were controlled for in the data analysis since these confounders have the potential to cloud the results. Three questions on religion were also included – religious affiliation, frequency of church attendance and comfort/strength derived from same. Follow-up after 7 years identified those who had died from all causes or specifically from cardiac disease. The religious variables were associated with 10-20% reduction in all cause mortality but not with a reduction in cardiac mortality or on the onset of cardiac disease.

*Active religious involvement increased the chance of living longer by some 29%.*

A further study found that for women, the benefits of attending religious services were stronger than not smoking, and for men more beneficial than exercising regularly. Interestingly, the explanation for these benefits did not stem from the fact that those who were religious were in better physical health in the first instance, since this, and a number of other confounders (social, health and economic)<sup>v</sup> were controlled for in the data analysis.

A recent longitudinal study from Israel showed that community wealth and religious affiliation<sup>vi</sup> had a positive influence on longevity, while another more recent study<sup>vii</sup> found that among Americans, religious attendance imparts a seven year benefit on longevity when compared to non-attendance. Similar results were obtained in a 2004 study<sup>viii</sup> of a national sample in the

United States, which found that over a seven-and-a-half year follow-up period there was a 30-35% reduction in mortality and that 20-30% of this may be explained by positive health behaviours among church attendees.

## **Marriage**

It is hardly surprising that marital satisfaction and regular religious practise are positively associated since almost all religions are pro-marriage. However, the relationship between them is complex. The greatest stability among married couples is found in those who are homogamous for religious affiliation – i.e., both partners have the same religious affiliation. The least stability is in couples where one is religiously affiliated and the other is not, with inter-faith marriages lying in the middle<sup>lx</sup> Conversion in one of the partners leads to the same stability as is present in religiously homogamous couples. Marriages in which neither partner is religious are the least stable.

Some of the effects of religion on marital stability come from the explicit injunctions against divorce contained in most denominations but indirect pathways are also influential. For example, the attitudes to cohabitation prior to marriage and the attitudes to childbearing are also important factors, since low fertility and pre-marital cohabitation have been shown to reduce the stability of subsequent marriage<sup>lx</sup>. Analysis of the National Survey of Family Growth (NSFG) in the United States has shown how these play out in different religious and non-religious groups. For example, Mormons and Evangelical Christians are least likely to cohabit, while those who are unaffiliated to any church are the most likely to do so. Economic theorists have postulated that the former have incentives to avoid the fragility of cohabitation since they have higher fertility rates, and so will want to create the family form with the greatest stability in which to raise their children.<sup>lxi</sup>

Studies have generally overlooked the role that religiousness has on paternal involvement in their children's lives but a recent investigation<sup>lxii</sup> found that among resident fathers religious affiliation and attendance was positively associated with one-on-one activities, family meals and youth activities. In addition, there was a positive link with civic engagement. On the other hand, there was no evidence that this association was simply mediated by being innately conventional.

The research base on the relationship between religion and sexual/emotional satisfaction in marriage is also limited yet there is evidence<sup>lxiii</sup> that those with no religious affiliation are less likely to report being very satisfied with sex (either physically or emotionally), while emotional satisfaction and sexual pleasure were higher for regular attendees when confounders were controlled.

This runs deeply counter to the widely held notion that religious believers are less likely to be sexually fulfilled because of their 'repressive' attitudes towards sex. But it must be borne in mind that they are likely to be having sex in a committed relationship as so are less likely to feel emotionally exploited as can happen with casual sex.

## **Faith healers**

Faith healers use prayer and other religious techniques to treat disease. A sizeable number of people (up to 20%) turn to them during illness - although this figure is derived from American studies, and so may not be applicable to the Irish population. There is no consistent scientific evidence that faith healers influence the psychological well-being of those who visit them, despite anecdotal accounts of benefit. This does not necessarily mean that they are of no assistance, but simply that this is as yet unproven due to the paucity of studies.

## **Remote prayer and illness recovery**

Praying for others (intercessory prayer) is a common practise, especially during times of illness. In some countries prayer, not just by family and friends, but also by medial and allied professionals such as nurses and social workers, is common. However, medical practise must be informed by evidence, and in light of this there has been an increasing focus on the evidence base for benefits, or otherwise, from prayer as an intervention for those who are ill.

A number of fascinating studies have involved randomising those with physical illnesses to remote intercessory prayer and to none. One such study was carried out in Israel in 2001<sup>lxiv</sup> with over 2,000 patients hospitalised with bloodstream infections entering this study. Patients, unaware that they were participating in the study, were randomly allocated to being prayed for or to no such intervention. All were treated with the usual antibiotic regime but those directly involved in their treatment were blind to which group they were allocated. Measures such as mortality, duration of fever and length of stay in hospital were shorter in the prayer group than in the controls, and this was true even when the prayer continued many years after hospitalisation. On the other hand, other studies have failed to demonstrate an effect, most notably the 2006 study<sup>lxv</sup> involving over 1,000 cardiac bypass patients. Randomly assigned to 14 sessions of intercessory prayer, there was no difference in outcome between those receiving, and not receiving, prayer and those who stated they were certain of receiving prayers had a higher rate of complications.

Two meta-analyses examined the role of prayer in illness. The first was conducted by the prestigious Cochrane Review Group,<sup>lxvi</sup> and involved ten studies with over 7,600 subjects. There was a mixture of those who were aware and those who were unaware of being recipients of prayer. This meta-analysis failed to find an effect from prayer (whether personal, focused, committed or organised) on clinical outcomes or complications overall. However, one study from among those selected found that where there was a high risk of death, prayer had a positive effect. Another, conducted on women undergoing IVF treatment, identified higher implantation rates in those belonging to the prayer compared to the usual care group.

The second meta-analysis<sup>lxvii</sup> examined 17 studies that met the criteria for inclusion. Of these, seven favoured the prayer intervention, five showed a trend in favour, and five showed no

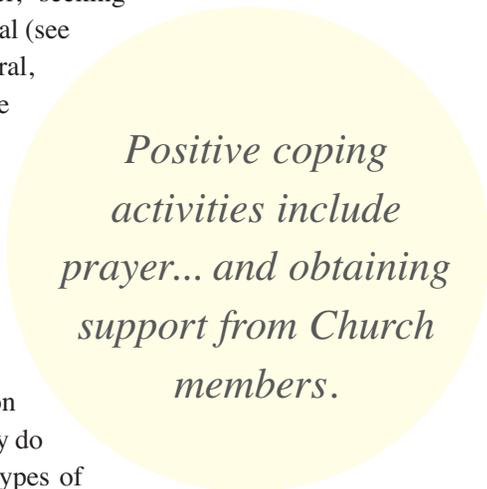
effects. The authors found an overall small but significant effect size and concluded that the results are unlikely to support either side in this debate but that the best available evidence favours the proponents.

### **Religious Coping**

Most of the foregoing deals with the role of religion in causing or modifying certain illnesses and behaviours. It is now important to address the part played by religion in coping with the problems that arise in the lives of people. For example, does believing that God is protecting you assist in coping with physical illness? Does prayer help you feel less distressed when faced with an inter-personal problem? The frequency of religious coping was clearly demonstrated in people's reactions to the 9/11 attacks, when up to 75% of those interviewed reported that they had turned to religion to help them cope.

Religious coping activities refer to the specific use of religious practises to help deal with stressful events. Positive coping activities include prayer, seeking comfort from one's religious beliefs through cognitive appraisal (see below) and obtaining support from Church members. In general, moderate levels of religious coping have been shown to be beneficial<sup>lxviii</sup> whilst those with lower or higher levels are less able to adjust and experience more distress.

While the association between high levels of religious coping and distress might seem surprising, two possible explanations are raised. The first is that those who are most distressed in the context of stressful events are most likely to turn to religion; the other is that those who rely excessively on less adaptive religious coping (see deferential style below) may do so at the expense of other coping strategies. Dysfunctional types of religious coping, such as an ill person seeing their situation as a punishment from God or questioning God's love for them, have higher rates of depression associated with physical illness.<sup>lxix</sup>



*Positive coping activities include prayer... and obtaining support from Church members.*

Kenneth Pargament, Professor of Psychology at Bowling Green State University in Ohio, has identified three styles of religious coping.<sup>lxx</sup> In the collaborative style, the individual takes joint responsibility with God for problem-solving. On the other hand, the self-directing style derives from the person's belief that God has given them agency over their lives and that this results in the individual taking complete responsibility for finding solutions to problems. Finally, the deferring style passes the responsibility completely to God while passively waiting for solutions. Those using the first approach have been found to experience lower levels of depressed mood under conditions of high stress than the latter two. Although not regarded as an effective coping style generally, the deferring approach has been shown to be helpful when the person has little control over the circumstances/outcome of the stressor, and handing responsibility over to a Loving Being may enhance feelings of empowerment.

As well as considering specific religious coping styles in approaching life's problems, it is relevant also to consider how these problems might be interpreted by those of a religious persuasion so as to reduce their negative impact. This is termed 'cognitive appraisal.' Religion may allow people to attach a 'purpose,' or meaning, to their suffering, rather than simply feeling hopeless or helpless. Most religions do not always see life's problems, even those that are grave, as destructive, and may view negative events as having a higher value from which they can learn, e.g., having made a mistake in life they can learn from it for the future, (although this is obviously not a uniquely religious attitude). Others believe that difficult though their problems may be, there are those are much less well off, or they may regard suffering as making them more compassionate and understanding of the troubles of others. Some draw strength from their specific belief in the love of Christ who Himself suffered and understands their needs during the present difficulties. Religiously determined cognitive appraisals are presently being developed for use even in secular therapeutic settings.

According to a recent meta-analysis,<sup>lxxi</sup> positive religious coping is more common than spiritual struggles (negative coping), and is associated not just with less distress but also with lower levels of depression and anxiety than the latter, a view that has been reinforced by studies carried out in an economic context, mentioned at the beginning of this paper.<sup>1</sup>

*Religion may allow people to attach a 'purpose,' or meaning, to their suffering, rather than simply feeling hopeless or helpless.*

### **Mind/body connections**

A question that begs to be answered is how religious beliefs and activities lead to these positive benefits on health. As mentioned earlier, some of these might be due to the lifestyle that religious people generally follow, such as a tendency toward moderation in habits. The possibility that the support from like-minded friends that church-related activities facilitate is responsible has also been considered but, while this has intuitive appeal, many studies do not support this theory, and suggest that other factors may be at play. For some areas, such as suicide, crime and marriage, the impact may derive from the injunctions that organised religion places on behaviour in these areas.

However, attention has also been increasingly focused on putative physiological and neuropsychological changes induced by regular religious practise.

### **Biological measures**

A 2001 study in the prestigious British Medical Journal<sup>lxxii</sup> found that in healthy subjects, reciting a yoga mantra or the rosary led to a reduction in respiratory rate, an increase in cardiovascular rhythms and increased sensitivity to blood pressure changes, effects that have been shown to be

important prognostic indicators in heart disease. The authors concluded that these prayers may be regarded as “health” as well as religious practises.

Another candidate for consideration is interleukin 6 (IL -6), a substance associated with the body’s immune or internal defence system – high levels indicate dysfunction. A study of over 500 older adults in a community sample<sup>lxxiii</sup> examined mortality rates while controlling for possible explanatory factors such as age, sex, chronic illness, health behaviours, depression, social supports and physical mobility. Over a 6 year period the mortality rate in those who attended church, as compared to those who did not, was 78% lower. It identified low IL-6 as the possible mediating factor, and in so doing replicated the findings of another study. Thus this may be the biological mechanism through which church attendance impacts on health<sup>lxxiv</sup>.

Other candidates for study include stress hormones such as cortisol, and it is postulated that activities which lower stress levels have beneficial hormonal effects and also reduce blood pressure and heart rate. However, these studies are still in their infancy.

Turning to neuropsychological mechanisms, recent studies have examined brain activity during mystical experiences. Using functional Magnetic Resonance Imaging (fMRI, a type of brain scan that can identify changes during activity) and EEG (electroencephalogram – a tracing of brain activity in different states of consciousness), 15 Carmelite nuns were scanned while they recalled and relived both their most mystical experience and their most intense state of union with another human (the latter was to test for the effect of emotion).<sup>lxxv, lxxvi</sup> They were also scanned in their normal restful state. Contrary to popular opinion, there was no specific location in the brain that was affected by their mystical recollections, challenging the idea of a “God spot” as previously suggested by some who argued against the transcendent nature of religious activities; rather, the results indicated changes in different regions of the brain that involved emotional feelings, visual and motor imagery, self-identity, body representation and spiritual perception. The authors accept that this does not in any way confirm the existence of God or of a mystical power; however, the complexity of the brain findings confirms that the spiritual experiences of these nuns identified changes in areas of the brain over and above those simply related to emotionally intense experiences, as proponents of the “God spot” had suggested.

Radiological techniques were also used in a recent study published in the scientific journal *Pain* showing that belief in God can lead to a significant reduction in the intensity of pain experienced in response to pain-inducing stimuli. The subjects were twelve practising Roman Catholic volunteers and a similar number of avowed agnostics and atheists, all between the ages of 19 and 33. All had similar pain thresholds at the outset and were free from any illnesses that might influence pain perception. They were asked to contemplate, alternately, two paintings: a seventeenth-century Sassoferrato Madonna, and a da Vinci’s secular painting *A Lady with an Ermine*. The latter was chosen as a not dissimilar looking woman to the Madonna - this was to reduce bias.

The volunteers were shown the images, serially, for 30 seconds before and during the administration 20 electric shocks left hand and the subjects rated the intensity of the pain they experienced. In addition the areas of the brain that were activated during this <sup>lxxvii</sup> exercise were

studied using functional magnetic resonance imaging, a method that assists in identifying the brain sites involved in various activities.

The scientists were postulating that the religious painting would help the religious subjects re-interpret the meaning of pain, enabling them to detach emotionally from it and that this would be visible in areas of the brain concerned with emotional regulation while no such effect would be seen in the non-religious subjects or when viewing The Lady painting. And this is exactly what happened. More specifically, the religious group experienced an average of 12% less pain and this was specific only to Catholics viewing the religious image and not to any other combination.

A number of possible explanations for this were considered such as being distracted by the pleasant image or resulting from this, being primed to ignore the pain. Ultimately the authors concluded that the most plausible explanation was that the subjects did indeed re-evaluate their negative emotions connected with the pain experience and that this was visible in the right frontal cortex of the brain, the area known to influence emotional regulation.

Like the other studies mentioned above, this does not help us determine whether or not God exists but it does demonstrate that, for some, religious activity has health benefits and that mind body connections are capable of being studied scientifically.

## **Criticism**

The most vocal and trenchant critic of the developments with regard to religion and medicine is Richard Sloan, Professor of Psychiatry at the University of Columbia. Writing in the *Lancet*,<sup>lxxviii</sup> he argues, “when doctors depart from areas of established expertise to promote a non-medical agenda, they abuse their position as professionals,” and he likens attempts to link religious/spiritual activities to health as akin to “the now discredited research suggesting that different ethnic groups show differing levels of moral probity, intelligence, or other measures of social worth.”

He rightly points out that an over-emphasis on the connection between health and religion might induce feelings of guilt in a patient who might connect their illness with having insufficient faith. He also points out that some studies are methodologically flawed and that they fail to control for confounding variables, leading to spurious findings of associations between religion and health.

While he does somewhat nuance his opinion and concedes that a thorough understanding of the person’s faith may have benefits in terms of critical decisions that the patient may have to make, for example, end of life interventions, he ultimately regards concern about religious and spiritual matters as analogous to the physician’s concern about the link between poverty and health, or about marriage and health, issues about which the individual can do very little and that are private and so protected from interference.

However, it is perfectly consistent with holistic medical practise to be open to the evidence that

religious practise is associated with certain psycho-social benefits, a view reiterated by the General Medical Council in Britain (see Guidelines below).

### **Negative effects of religion on mental health**

While most studies emphasise the positive impact of religion on mental health, the possibility of the alternative, at least for some people, cannot be ignored. It is possible that those who are dysfunctionally religious may attribute personal and emotional symptoms to the wrath of God, for perceived misdemeanours or sins. Others may view illness as 'God's will,' presumably brought about to bring the patient closer to Him through suffering, and instead of taking appropriate action to seek relief, submit to passive acceptance of their illness. Furthermore, certain religious groups may prohibit specific life-saving interventions such as blood transfusions, while others may be stigmatised by their illnesses or symptoms and defer seeking help.

Religious beliefs might also detract from problem-solving skills, as those with major psycho-social problems might be tempted to defer to higher powers exclusively, rather than identify solutions to those personal and inter-personal matters that can realistically be resolved. Finally, an over-emphasis on rules and injunctions could ultimately lead to excessive rigidity and pathological guilt at peccadilloes, and this at the expense of autonomy. However, in recent decades the general tendency on the part of the psychiatric profession has been to focus more on the negative aspects of extreme religiousness and on ignoring the beneficial effects of religion in general.

In extreme situations, such as among some cult members, religious belief may ultimately be associated with apocalyptic views, even culminating in suicide. A well-known example of this was the mass suicide of members of the Branch Davidian cult in Waco. However, it is highly likely that followers of most major religions would regard such cults as eccentric and extremist, attracting a disproportionate number of those with pre-existing major mental illness.

In the presence of prominent religious delusions in those who are psychotic, families may break up due to the extreme zeal often generated by these delusions. For example, some believe that unless the family subscribes to the person's religious beliefs, they will be damned, and may try to save them by engaging in excessive prayer, exorcisms, and so forth. A psychotically depressed person may believe that he will be punished in hell for minor transgressions, that he is inhabited by the devil or that the day of judgement is approaching. A man who made a very violent suicide attempt by self-crucifixion and carried the Bible as a constant companion, reading from it each day was diagnosed with a psychotic depression. After recovery he commented, "I must have been very sick because I don't believe in God. I'm an atheist."

In spite of the possibilities outlined above, the author of a recent review paper on depression, religion and spirituality<sup>lxxix</sup> was only able to identify one paper that scientifically demonstrated that those with religious commitment were more likely to suffer with depressive symptoms.<sup>lxxx</sup>

The possibility of religious zeal cannot be ignored when doctors or other healthcare workers blame the patient, either directly or by implication, for their illness, attributing it to moral transgression rather than to biological or psychological causes. Such practises are unacceptable.

## **Guidelines**

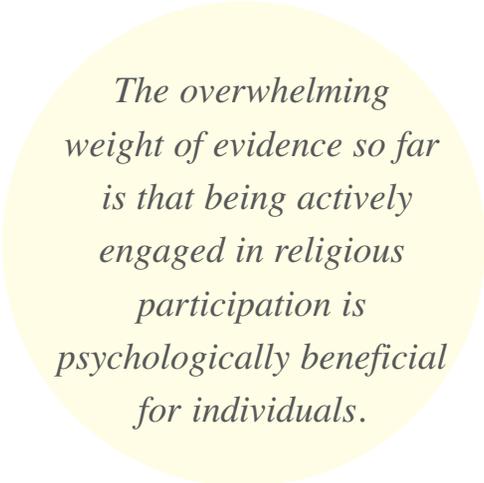
Notwithstanding the absence of any evidence that doctors misuse their positions and unduly intrude upon patients' religious or spiritual beliefs or morally castigate them for their illnesses, guidelines have nevertheless been published by several bodies, including the American Psychiatric Association (APA),<sup>lxxxii</sup> as a pro-active attempt to forestall any such possibility. Important also is the British General Medical Council guidance<sup>lxxxiii</sup> to all doctors on 'Personal Beliefs and Medical Practise.' It states, "for some patients, acknowledging their beliefs or religious practises may be an important aspect of a holistic approach to their care. Discussing personal beliefs may, when approached sensitively, help you to work in partnership with patients to address their particular treatment needs."

## Conclusions

There has been a substantial increase in the volume of scientific research focused on the role of religious beliefs and practises in the areas of mental health and social science. The overwhelming weight of evidence so far is that being actively engaged in religious participation is psychologically beneficial for individuals, and also carries a range of social benefits relating to everything from marital stability to crime and to suicide. This seems to be not simply due to the lifestyle associated with being religious, and seems to accrue from benefits over and above those stemming from diet, sobriety and social supports.

While there are social benefits from religious practise in relation to crime and marital stability and there is some support for the view that having religious beliefs reduces the risk of some forms mental illness, there is no evidence that it reduces the risk of more serious mental illnesses such as severe depression, bipolar disorder or schizophrenia. There is also evidence that it has a beneficial impact on suicidal behaviour. The benefits of religion on mental health appear to be through its role in buffering against the negative effects of life stressors, thereby increasing resilience and in assisting those with pre-existing mental health problems cope with adversity.

This paper is not suggesting that religious beliefs can or should be ‘prescribed’ like a medicine – this would be unconscionable and impossible. However, in a society which often sees few benefits deriving from organised religion, it may stimulate a reappraisal, especially among those who still adhere to core religious beliefs but without engaging in the rigors of regular public practise. Finally, this paper demonstrates that scientific methods can be applied to examining the social and personal ramifications of religious beliefs, practises and rituals in this life. Regrettably, the impact of religious beliefs and practises on the next life is beyond the scope of this particular document!



*The overwhelming weight of evidence so far is that being actively engaged in religious participation is psychologically beneficial for individuals.*

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