242

# Religiousness and mental health: a review Religiosidade e saúde mental: uma revisão

# Alexander Moreira-Almeida,<sup>1,2,3,4</sup> Francisco Lotufo Neto,<sup>1</sup> Harold G Koenig<sup>3,4</sup>

#### Abstract

**Objective:** The relationship between religiosity and mental health has been a perennial source of controversy. This paper reviews the scientific evidence available for the relationship between religion and mental health. **Method:** The authors present the main studies and conclusions of a larger systematic review of 850 studies on the religion-mental health relationship published during the 20<sup>th</sup> Century identified through several databases. The present paper also includes an update on the papers published since 2000, including researches performed in Brazil and a brief historical and methodological background. **Discussion:** The majority of well-conducted studies found that higher levels of religious involvement are positively associated with indicators of psychological well-being (life satisfaction, happiness, positive affect, and higher morale) and with less depression, suicidal thoughts and behavior, drug/alcohol use/abuse. Usually the positive impact of religious involvement on mental health is more robust among people under stressful circumstances (the elderly, and those with disability and medical illness). Theoretical pathways of the religiousness-mental health connection and clinical implications of these findings are also discussed. **Conclusions:** There is evidence that religious involvement is usually associated with better mental health. We need to improve our understanding of the mediating factors of this association and its use in clinical practice.

Keywords: Mental health; Religion; Religion and Medicine; Religion and Psychology; Spirituality

#### Resumo

**Objetivo:** A relação entre religiosidade e saúde mental tem sido uma perene fonte de controvérsias. O presente artigo revisa a evidência científica disponível sobre a relação entre religião e saúde mental. **Método:** Os autores apresentam os principais estudos e as conclusões de uma revisão sistemática abrangente dos estudos sobre a relação religião-saúde mental. Utilizando-se de várias bases de dados, a revisão identificou 850 artigos publicados ao longo do século XX. O presente artigo também inclui uma breve contextualização histórica e metodológica, além de uma atualização com artigos publicados após 2000 e a descrição de pesquisas conduzidas no Brasil. **Discussão:** A ampla maioria dos estudos de boa qualidade encontrou que maiores níveis de envolvimento religioso estão associados positivamente a indicadores de bem estar psicológico (satisfação com a vida, felicidade, afeto positivo e moral mais elevado) e a menos depressão, pensamentos e comportamentos suicidas, uso/abuso de álcool/drogas. Habitualmente, o impacto positivo do envolvimento religioso na saúde mental é mais intenso entre pessoas sob estresse (idosos, e aqueles com deficiências e doenças clínicas). Mecanismos teóricos da conexão religiosidade-saúde mental e as implicações clínicas destes achados são discutidos. **Conclusões:** Há evidência suficiente disponível para se afirmar que o envolvimento religioso habitualmente está associado a melhor saúde mental. Atualmente, duas áreas necessitam de maior investimento: compreensão dos fatores mediadores desta associação e a aplicação deste conhecimento na pratica clínica.

Descritores: Saúde Mental; Religião; Religião e Medicina; Religião e Psicologia; Espiritualidade

<sup>1</sup> Center for the Study of Religious and Spiritual Problems (NEPER), Department of Psychiatry, Universidade de São Paulo (USP), São Paulo (SP), Brazil

<sup>4</sup> Geriatric Research, Education, and Clinical Center, VA Medical Center, Durham, North Carolina

Center for the Study of Religious and Spiritual Problems (NEPER), Department of Psychiatry, Universidade de São Paulo (USP), São Paulo (SP), Brazil

Financing: Post-Doctoral fellowship provided by Hospital João Evangelista (HOJE) Conflicts of Interest: None Submitted: 9 January 2006 Accepted: 15 March 2006

## Correspondence

Alexander Moreira-Almeida 2748 Campus Walk Ave. Apt.18b 27705 – Durham – NC Phone: (919) 309-1405 E-mail: alexma@usp.br

<sup>&</sup>lt;sup>2</sup> João Evangelista Hospital, São Paulo (SP), Brazil

<sup>&</sup>lt;sup>3</sup> Department of Psychiatry and Behavioral Sciences, Duke University Medical Center, Durham, North Carolina

#### Introduction

Although some scholars had predicted that religiosity would tend to disappear or sharply decrease throughout the 20<sup>th</sup> Century<sup>1-2</sup> that has not been the case, especially in the American Continent. According to a 2005 US poll,<sup>3</sup> 88% of Americans in the United States describe themselves as religious and/or spiritual, and only 7% said that spirituality is not important at all in their daily life. In the Brazilian 2000 Census,<sup>4</sup> only 7% declared themselves as religiousless. Even this 7% probably included many people with some expression of spirituality but not related to an organized religion. However, despite the large importance of religion and spirituality for the population, until recently, religion and spirituality were not included in the training curriculum of the mental health professionals and were set aside in clinical practice.

In the last two decades, things begun to change. Literally, thousands of papers have been published on the relationship of religion and health in the medical and psychological academic literature. Indeed, many medical schools have integrated spirituality into the curriculum. In the US, 84 out of 126 accredited medical schools are offering courses on spirituality in medicine.<sup>5</sup>

However, if we understand prejudice as a "preconceived opinion" or an "opinion formed without just grounds or before sufficient knowledge",<sup>6</sup> we can see that the field studying the relationship between religion and health is undoubtedly full of prejudice. In that case, the prejudice may be for or against religion. The field has seen extremes between naive acceptances of all claims that "religion is good" to a radical skepticism that rejects even good scientific evidence.

In studying the relationship of spirituality with health, it is not necessary to assume any position about the ontological reality of God or the spiritual realm. We can test whether measures of religious beliefs or behaviors are associated with health outcomes, regardless if we believe in the beliefs under investigation.<sup>7-10</sup>

The definitions of religiosity and spirituality have been a perennial source of controversy. According to Betson & Ventis, as early as 1912 the psychologist James Leuba detected 48 distinct definitions of religion.<sup>11</sup> We will adopt the definitions given by Koenig et al.<sup>12</sup>

1) Religion: is an organized system of beliefs, practices, rituals, and symbols designed to facilitate closeness to the sacred or transcendent (God, higher power, or ultimate truth/reality).

2) Spirituality: is the personal quest for understanding answers to the ultimate questions about life, about meaning, and about relationship with the sacred or transcendent, which may (or may not) lead to or arise from the development of religious rituals and the formation of a community.

This paper reviews the scientific evidence available for the relationship between religion and mental health. It is largely based on the Handbook of Religion and Health published by one of the authors in 2001.<sup>12</sup> Discussing more than 1200 studies published during the 20<sup>th</sup> century, this Handbook is the most comprehensive and systematic review ever accomplished in this field. The authors tried in order to find out all research during the last century that examined the relationship between a religious variable and some health outcome. They utilized several on-line data bases (Medline, PsycLit, SocLit, CINAHL, Curent Contents, HealthStar, Cancerlit) and previously published and unpublished reviews of the literature to find the research papers. By retrieving

articles using the search terms "religion", "religiosity", "religiousness", "spiritual", "spirituality" and examining their reference lists until no more articles could be found, the authors identified 850 studies on the religion-mental health relationship. The original source reviews each study in detail;<sup>12</sup> because of space limitations, the present article summarizes the main findings on mental health from the Handbook with an update on the papers published since 2000 and an addition of some research performed in Brazil (retrieved using SciELO and Lilacs, besides contact with Brazilian researchers in the field).

#### Historical background

The idea that religion and psychiatry have always been in conflict is still very prevalent. Today, most people believe that in the medieval ages most mental disorders were considered as witchcraft or demonic possession. After all, one of the foundational myths of psychiatry is that brave and enlightened psychiatrists liberated mankind from these religious superstition.<sup>13-14</sup> Many well-known psychiatric textbooks have taught that the Middle Ages were the Dark Ages, when the focus was on insanity as demonology, when people did not consider natural causes to mental disorders and the insane were tortured or burned at the stake. However, that point of view is far away from the truth. Natural causes to mental disorders were proposed and largely accepted during that period and the emphasis on demonology and witch-hunting occurred after the Middle Ages.<sup>15</sup> In the middle of nineteenth century, proselytizing scientists and secularizing psychiatrists created the myth of psychiatry's victory over demonology and other myths about the "dark middle ages" such as the "flat Earth", celebrating the scientific and humanitarian innovation that had rescued mankind from the superstitious models of Christian jurisdiction.<sup>14,16</sup> However, Vandermeersch states that medical psychiatry's birth at the time of Pinel did not conflict with religion.13 "The alleged opposition between enlightened medicine and obscurantist theology as well as between the humanitarian physician and the cruel churchman are myths" (p. 354).

In fact, the history of religion and the care of people suffering from mental disorders have many points in common. In Western civilization, religious organizations provided some of the first and best care to the mentally ill. Since the beginning of the Middle Ages up to the past century, religious orders built and maintained a large amount of hospitals. The establishment of large hospitals as an act of charity is a Christian idea. The first hospital designed specifically to care for the mentally ill was established in Spain in 1409 under the guidance of priests. Religious groups have founded or supported many psychiatric hospitals in the US and Brazil.<sup>12,17</sup> However, the care provided to the mentally ill by the Church was not always compassionate. The Inquisition killed many mentally ill people under the accusation of being witches during the first two centuries of the Renaissance period in Western Europe.<sup>12,15</sup>

At the end of the 19<sup>th</sup> century the psychiatric community raised negative attitudes toward religion, which became prominent during the 20<sup>th</sup> century. In line with some antireligious intellectuals who considered religiosity a primitive and negative social or intellectual state, many physicians such as J.-M. Charcot and Henry Maudsley developed critiques and attempted to pathologize religious experiences.<sup>14,18</sup> Sigmund Freud adopted a strong anti-religious stance that had a large influence in the medical and psychological community. In Future of an Illusion (1927),<sup>2</sup> he proposed the irrational and neurotic influences of religion on the human psyche. In 1930,<sup>2</sup> Freud wrote that religion results in "depressing the value of life and distorting the picture of the real world in a delusional manner - which presupposes an intimidation of intelligence". Although there were some psychiatrists with a positive view of religiosity, the most well-known example being Carl G. Jung,<sup>19</sup> the negative appraisal was prevalent. As late as the 1980s, the psychologist Albert Ellis,<sup>20-21</sup> the founder of Rational-Emotive Therapy who had a large influence over cognitive-behavioral psychotherapy, stated that religiosity "is in many respects equivalent to irrational thinking and emotional disturbance", so "the elegant therapeutic solution to emotional problems is to be quite unreligious (...) the less religious they (people) are, the more emotionally healthy they will tend to be" (p. 637).20

However, almost all statements about the impact of religiosity/ spirituality in mental health were not based on empirical research, but mainly on clinical experience and personal opinions. One factor that may have contributed to this negative attitude is what Lukoff et al. noted as the "religiosity gap" between mental health professionals and patients.<sup>22</sup> Psychiatrists and psychologists tend to be less religious than the general population, and do not receive adequate training to deal with religious questions in clinical practice. So, they usually have difficulties in understanding and empathizing with patients' religious beliefs and behavior. If the main source of psychiatrists' contact with religious experiences is through the report of their patients, naturally, those are biased sources. Although psychiatric patients many times use religious coping in a healthy way,<sup>12,23-24</sup> they also may express a depressive, psychotic or anxious point of view of their religions.<sup>25</sup> Those perspectives, farther than not reflecting in a fairly way the religious experiences of the general population, were seen as confirmations of the pathological nature of religiosity. Only in the last two decades have rigorous scientific research been done and published in mainstream medical and psychological journals. David B. Larson, Jeffrey S. Levin and Harold G. Koenig were some of the pioneers who opened a new stage for scientific investigation of religion/spirituality in the medical field.<sup>26</sup> They have conducted a series of studies looking at the relationship between religious involvement and mental health in mature adults, either living in the community or hospitalized with medical illness. Since then, many other researchers have produced a large body of research that has usually, but not always, shown a positive association between religious involvement and mental health. Currently, there is a trend favoring a rapprochement of religion and psychiatry to help mental health professionals develop skills to understand better the religious factors influencing health and to provide a more compassionate and comprehensive mental health care.<sup>27-28</sup>

Evidence of the impact of religiosity on mental health A large part of the research involving religion and health did not have religion as the focus of the study. Because of that, frequently, the measurement of religiosity involved only a single question, often simply religious denomination. However, the religious affiliation tells us little about what is religiosity and how important it is in someone's life. On account of that, studies using only a subject's religious affiliation have provided, with few exceptions, many inconsistent and contradictory findings.<sup>12,29</sup> The strongest and most consistent results have not been found between different religious denominations, but by comparing different degrees of religious involvement (from a non-religious to a deeply religious person). Church attendance, i.e. how often someone attends religious meetings, is one of the most widely used questions to investigate the level of religious involvement. Other questions are non-organizational religiosity (time spent in private religious activities such as prayer, meditation, and reading religious texts) and subjective religiosity (the importance of the religion in someone's life). However, caution is necessary in interpreting the relationship between private religious practices and health in cross-sectional studies. People may pray more while they are sick or under stressful situations. Turning to religion when sick may result in a spurious positive association between religiousness and poor health. Conversely, a poor health status could decrease the capacity to attend a religious meeting, in that way creating another bias on the association between religiousness and health. Finally, a very important dimension of religiosity is *religious* commitment, which reflects the influence that religious beliefs have on a person's decisions and lifestyle. According to the Harvard psychologist Gordon Allport<sup>30</sup> a persons' religious orientation may be intrinsic and/or extrinsic:

*"Extrinsic Orientation:* Persons with this orientation are disposed to use religion for their own ends (...) (religion) is held because it serves other, more ultimate interests. (...) may find religion useful in a variety of ways – to provide security and solace, sociability and distraction, status and self-justification. The embraced creed is lightly held or else selectively shaped to fit more primary needs.

*Intrinsic Orientation:* Persons with this orientation find their master motive in religion. Other needs, strong as they may be, are regarded as of less ultimate significance, and they are, so far as possible, brought in harmony with the religious beliefs and prescriptions. Having embraced a creed the individual endeavors to internalize it and follow it fully." (p. 434)

Usually, the intrinsic orientation is associated with healthier personality and mental status, while the extrinsic orientation is associated with the opposite. Extrinsic religiosity is associated with dogmatism, prejudice, fear of death, and anxiety, it "does a good job of measuring the sort of religion that gives religion a bad name" (p. 416).<sup>31</sup> This very important and consistent finding totally contradicts Ellis (1988) who argued that one way that religiosity "sabotaged" mental health was a lack of "self-interest (...) rather than be primarily self-interested, devout deity-oriented religionists put their hypothesized god(s) first and themselves second – or last." (p. 27-8). It is exactly this behavior that has been most consistently associated with better mental health.

Although the research on religion and mental health involves many others outcomes (e.g.: psychosis, personality, marital satisfaction and stability, anxiety, delinquency), we will focus on the four that have been more thoroughly investigated and, because of that, have the strongest findings: one indicator of positive mental health (psychological wellbeing); and three indicators of mental disorder (depression, suicide, and drug abuse).

#### 1. Psychological well-being

Several recent studies have used measures of spirituality, mainly spiritual well-being, and they usually have found positive correlations with psychological well-being and other indicators of positive mental health. However, the instruments used in some of these studies, like SWBS<sup>32</sup> and FACIT-Sp<sup>33</sup> are

strongly contaminated by measures of mental health and wellbeing, therefore it is not surprising that results were associated with positive health outcomes.<sup>34</sup> Because of this tautology, we avoided considering studies with these measures in our review.

Out of 100 studies that examined the association between religious practices and behavior and indicators of psychological well-being (life satisfaction, happiness, positive affect, and higher morale). 79 reported at least one significant positive correlation between these variables.<sup>12</sup> Only one study, which had a small and non-random sample of college students, found a negative correlation.<sup>35</sup> While the correlations are usually modest, they often equaled or exceeded those between wellbeing and other psychosocial variables like social support. marital status, or income. This positive association has been consistently similar in samples from different countries, involving a diversity of religions, races and ages.<sup>10</sup> Although most studies are cross-sectional, 10 out of 12 longitudinal studies replicated this positive association.<sup>36-46</sup> Most of these studies showed an association between religiosity and wellbeing even after controlling for age, gender and socioeconomic status. Some studies have shown that the positive impact of religious involvement on well-being is more robust among the elderly, disabled, and medically ill people.<sup>36,42,47</sup> This probably means that the buffering effects of religious involvement on well-being may be higher for those under stressful circumstances. In a recent research study with 233 British residents from retirement housing,48 spiritual beliefs were a significant predictor of psychological well-being even after controlling for marital status, age, education, health problems and gender. Spiritual beliefs also had a positive effect on psychological well-being buffering the impact of frailty. In another study, religiosity was one of the most important factors associated with psychological well-being in a sample of 188 Canadian older adults following spousal loss, even after adjusting for social support, negative life events, health status and demographic variables.49

With some exceptions, most studies have also found a positive association between religiosity and other factors associated with well-being such as optimism and hope (12 out of 14 studies), self-esteem (16 out of 29 studies, but only one with a negative association), sense of meaning and purpose in life (15 out of 16 studies), internal locus of control, social support (19 out of 20) and being married or having higher marital satisfaction (35) out of 38). As will be discussed later, these may be some of the mediating factors between religiousness and well-being.<sup>50</sup> In a high-quality research study involving a US national sample of 1126 non-institutionalized older people, the feeling of closeness with God was related to optimism after controlling for sociodemographic variables. This optimism, in turn, had a strong influence on their self-rated health status.<sup>51</sup> In sum, following Levin & Chatters we can state that "the existing research has shown that religious involvement, variously assessed, has protective effects with respect to a wide range of well-beingrelated outcomes" (p. 507).52

#### 2. Depression

A recent systematic review with meta-analysis summarized the results of 147 independent investigations involving a total of 98,975 subjects on the association between religiousness and depressive symptoms.<sup>53</sup> The authors found that religiousness is modestly but robustly associated with lower level of depressive symptoms (effect size -0.096). The size of this association, although modest, is similar to that found between gender and depressive symptoms (about .10). The association between religiousness and depression did not vary among the different age, gender or ethnic groups. However, the studies used several types of religious measures and included people under various levels of stress. Therefore, performing the analysis of all these studies together may have decreased the strength of the association that might exist in more specific situations. Corroborating this hypothesis, the review showed that the association between religiousness and depressive symptoms is higher for people under severe life stress (r = -.152) than for people with minimal life stress (r = -.071). The association was also stronger for samples having a moderate (r = .-151) instead of a minimal level of depression (r = -.078) (p = .007). However, this last difference was not considered as statistically significant according to the stringent criterion adopted by the authors (p < .0035). These findings are in line with those described above for well-being, the protective effect of religiousness appearing to be stronger for people under psychosocial stress.

Koenig et al. conducted the only prospective study investigating the impact of religiousness on the course of depressive disorders.<sup>54</sup> They found out that among 87 depressed senior adults hospitalized for medical illness, intrinsic religious motivation was associated with faster remission from depression in a median follow-up time of 47 weeks. For every 10-point increase in intrinsic religiosity scores (score range 10-50), there was a 70% increase in speed of remission after controlling for functional status, social support, and family psychiatric history. Among patients whose physical disability did not improve during the one year follow-up (that means a poor response to medical treatment), the speed of remission from depression increased by 106% for every 10-point increase on the scale of intrinsic religiosity.

The same meta-analysis discussed above<sup>53</sup> showed that the association between religiousness and depressive symptoms differed across the type of religiousness measured. Two specific measures of religiousness had a positive association with high frequency of depressive symptoms: extrinsic religious orientation (r = .155) and negative religious coping (r = .136). On the other hand, intrinsic religious orientation was associated with low levels of depression (r = .175).

Although the evidence is strongly consistent in establishing the religiousness-depression relationship, the majority of the studies was cross sectional in nature and was performed among US residents, a population with a high religiosity level. However, research conducted in other countries has found equivalent results. Two Brazilian studies used a screening questionnaire for common mental disorders (depression, anxiety and somatization disorders) in two different religious populations. Lotufo Neto,<sup>55</sup> in a sample of 207 religious ministers, found that intrinsic religiosity was associated with better mental health. In the other investigation, a random sample of 115 spiritist mediums had lower scores of psychiatric symptoms than samples from the general population.<sup>56</sup>

The first European longitudinal study on this topic was published recently.<sup>57</sup> A 6-year follow-up study was conducted in the Netherlands (where rates of church membership are substantially lower than those in the US: 51% vs. 77%) with a nationally representative random sample of 1,840 senior adults (aged 55 to 85). Frequent church attendance was associated with lower depressive symptoms during the follow-up, and the association persisted after adjusting for demographic variables, physical health, social support and alcohol use.

Because the last two variables themselves could be influenced by religiousness, the results are even stronger. Supporting previous studies, the difference in depression scores between regular church attenders and non-frequent church attenders was larger for those with higher functional limitations.

Psychotherapies, mainly cognitive-behavioral therapy, accommodated to include patients' religious beliefs and practices, have been successfully used in the treatment of depression and anxiety. These approaches have shown to be at least as effective as the secular psychotherapies in metaanalysis,<sup>58</sup> and in some studies they were associated with faster improvement of the symptoms among religious patients.<sup>59-60</sup> It is worth noting that one clinical trial found that cognitive behavioral therapy adapted to the religious values of the patient can be efficiently implemented by non-religious therapists.<sup>61</sup>

#### 3. Drug abuse

More than 80% of the 120 identified studies published prior to 2000 investigating religiousness and alcohol/drug use/abuse found a clear inverse correlation between these variables. Most of the studies were conducted among adolescents, when drug use usually starts, but research amidst adult populations also demonstrated similar findings. The greater the person's religious involvement is, the lower the rates of alcohol/drug use/abuse are.<sup>12</sup>

A recent and well-done study in the US with a sample of 2,616 adult twins investigated the relationship involving several dimensions of religiousness with lifetime prevalence of psychiatric and substance abuse disorders. Although several dimensions of religiosity were usually associated with lower prevalence of major depression, anxiety disorders and antisocial behavior (with the exception of panic disorder that was mildly associated with general religiosity), the strongest association was between almost all the religious dimensions and lower prevalence rates of nicotine, alcohol and drug abuse or dependence.<sup>62</sup>

In a Brazilian study involving 2,287 students in a large metropolitan area, religious factors were strongly associated with lower drug use during the month prior to the interview, even after controlling for the relevant socio-demographic and educational variables. Students who did not receive a religious education in childhood underwent a higher use of ecstasy (OR 4.2) and abuse of medicines (OR 3.15) compared to students who had a highly religious education. The lack of religious affiliation was associated with higher cocaine (OR 2.9) use and medicines (OR 2.2) abuse.<sup>63</sup> Another Brazilian study involving a representative sample of 2,410 students in a medium-sized city found that, after adjusting for confounding variables, the absence of religious practices was associated with a 30% higher drug use (odds ratio 1.31) in comparison to students with religious practices.<sup>64</sup> Finally, a qualitative study investigated the protective factors against drug use among adolescent residents in very poor and violent areas of Sao Paulo. Religiousness was the second most important protective factor, after having a structured family. Family structure was, in turn, associated with family religiousness. The study found that 81% of the non-users practiced a religion; amongst users, only 13% did so.65

#### 4. Suicide

Besides the psychological impact of religious belief in life after death, the association above mentioned, of religious involvement with lower levels of depression and drug use (two main factors presented in the large majority of suicide cases), gives good reasons for a negative relationship between religiousness and suicidal behaviors. Unfortunately, the impact of religiousness on suicidal behaviors did not receive enough attention within the medical and psychological literature. Although suicidal behaviors are strongly disapproved of by most religions, mainly in Western ones, and the long standing tradition in sociology, starting with the classic work of Durkheim, most of the medical and psychological investigations on suicide don't take into account religious factors appropriately.<sup>66</sup>

Similar to other areas in the religion-health research field, most early studies investigated the impact of denominational affiliation rather than religious involvement. The findings from these early studies were usually inconsistent; whereas, the most robust results have emerged from the examination of the effects of religious involvement in suicide. In a review, 84% of the 68 studies identified through 2000 found lower rates of suicide or more objections to suicide among the more religious subjects.<sup>12</sup> These studies basically present two different approaches: aggregate (ecological) or individual data. The first type correlates data on religious involvement of entire populations (e.g.: production of religious literature or rates of church membership) and compares the suicide rates between different populations. Most of these studies found that the level of religious involvement in a given area is inversely proportional to that area's suicide rate. The second type of study correlates the individual religious involvement rates with suicide deaths, attempts or ideation. Below, we discuss some recent studies not included in Koenig et al's.<sup>12</sup> review.

In a US sample of 584 suicides and 4,279 natural deaths among subjects aged 50 and older, the suicide rate among people who did not attend religious activities was 4 times higher (OR 4.34) than those who had high participation, after adjusting for sex, race, marital status, age and frequency of social contact.67 Of the 27,738 deaths of young men aged 15-34 years from 1991 to 1995 in the state of Utah (USA), the relative risk of suicide among subjects with low religious commitment ranged from 3.28 to 7.64 being people with high religious commitment the parameter (risk = 1).<sup>68</sup> Besides being associated with lower suicide rates, religious involvement has also been associated with more negative attitudes toward suicide and less suicide attempts, even in clinical samples. One recent study involving 371 depressed inpatients found that those with no religious affiliation, despite having the same level of depression, had more lifetime suicide attempts (66.2% vs. 48.3%), perceived less reasons for living and had fewer moral objections to suicide than religiously affiliated patients.<sup>69</sup> In a nationally representative US sample of 16,306 adolescents, private - but not public - religiosity was associated with lower probability of having had suicidal thoughts or having attempted suicide.<sup>70</sup> Similar results were found among 420 adolescents in Turkey. The group that received religious education reported less suicide ideation and lower acceptance of suicide, but were more accepting and sympathetic to a suicidal close friend than the secular ones.<sup>71</sup> Finally, the use of religious or spiritual beliefs as a source of support and comfort was associated with less suicidal ideation among 835 African-American senior residents of public housings, after controlling for social and medical variables.<sup>72</sup> The level of religiousness also has been found to be inversely associated with the acceptance of euthanasia and physician-assisted suicide in the general population in Britain,<sup>73</sup> among the elderly in the US,<sup>74</sup>

physicians in Australia<sup>75</sup> and cancer patients in a palliative care service in the US.<sup>76</sup> Non-religious Belgian general practitioners were three times more frequently involved than the religious physicians in deaths resulting from administration of (lethal) drugs with the explicit intention of hastening the end of life of the patient without his/her explicit request.<sup>77</sup>

#### How religion could influence mental health

Although hundreds of studies report relationships between religious involvement and mental health, they rarely investigated the potential mediators of this relationship. Several mechanisms have been proposed to explain the influence of religion on human health.

#### 1. Healthy behaviors and lifestyle

Several illnesses are related to behavior and lifestyle. The way we eat, drink, drive our automobile, have sex, smoke, use drugs, follow medical prescriptions, exam ourselves for prevention have important influences in our health.

Most religions prescribe or prohibit behaviors that may impact health.<sup>78</sup> The biblical teachings, 3000 years ago, about diet, ways to handle food, cleaning and purity, circumcision, sexual behavior were important for preventing disease.

Today other illnesses are more relevant. Prescriptions about keeping a day of rest, the body as a sacred temple, monogamous sex, moderation on eating and drinking, peaceful relationships are doctrines that might be also helpful for contemporary health problems (related to stress, competition, individualism, narcissism, anger, shame etc.).

A good clinical example trying to apply those teachings was the research of Thoresen et al. who successfully tried to modify Type A behavior in coronary patients through a program that included spiritual practices.<sup>79</sup>

Certain religious practices are responsible for health hazards and risks. Visits to a holy shrine on specific times can enhance the risk of accidents. Prohibition of vaccines, medication or blood transfusion, endogamous marriages, violence against unbelievers, handling of poisonous snakes, the way dead bodies are handled are other examples of behaviors that can bring health problems.

#### 1. Social support

Belonging to a group brings psychosocial support that can promote health. Religion might provide social cohesion, the sense of belonging to a caring group, continuity in relationships with friends and family and other support groups.

Social support can influence health by facilitating adherence to health promotion programs, offering fellowship in times of stress, suffering and sorrow, diminishing the impact of anxiety and other emotions and anomie.

Social support, although important, is not the only mechanism by which religion influences health. Religion still has beneficial effects even when social support is a controlled variable.<sup>40</sup>

#### 2. Belief systems, cognitive framework

Beliefs and cognitive processes influence how people deal with stress, suffering and life problems.

Religious beliefs can provide support through the following ways: enhancing acceptance, endurance and resilience.<sup>80</sup> They generate peace, self confidence, purpose, forgiveness to the individual's own failures, self giving and positive self image. On the other hand, they can bring guilt, doubts, anxiety and

depression through an enhanced self-criticism.81-82

*Locus of control* is an expression that arises from the social learning theory and tries to understand why people deal in different ways even when facing the same problem. Why some actively act and others stay in despondency. An internal *locus of control* is usually associated with well-being, and an external one with depression and anxiety. A religious belief can favor an internal *locus of control* with impact on mental health.<sup>83-84</sup>

Many patients use religion to cope with medical and nonmedical problems. The study of religious coping, which can be positive or negative, has emerged as a promising research field. Positive religious coping has been associated with good health outcomes, and negative religious coping with the opposite. Religious patients tend to use more positive than negative religious coping. Positive religious coping involves behaviors such as: trying to find a lesson from God in the stressing event, doing what one can do and leave the rest in God's hands, seeking support from clergy/church members, thinking about how one's life is part of a larger spiritual force. looking to religion for assistance to find a new direction for living when the old one may no longer be viable, and attempting to provide spiritual support and comfort to others. Negative religious coping includes passive waiting for God to control the situation, redefining the stressor as a punishment from God or as an act of the devil and, questioning God's love.24,85-86

#### 3. Religious practices

Public and private religious practices can help to maintain mental health and prevent mental diseases. They help to cope with anxiety, fears, frustration, anger, anomie, inferiority feelings, despondency and isolation.<sup>87-88</sup>

The most commonly studied religious practice is meditation.<sup>89</sup> It has been reported that it can produce changes in personality, reduce tension and anxiety, diminish selfblame, stabilize emotional ups and downs, and improve selfknowledge. Improvement in panic attacks, generalized anxiety disorder, depression, insomnia, drug use, stress, chronic pain and other health problems have been reported. Follow-up studies have documented the effectiveness of these technique.<sup>90-91</sup> Other religious practices (such as personal prayer, confession, forgiveness, exorcism, liturgy, blessings and altered states of consciousness); may also be effective, but more studies are necessary.

#### 4. Spiritual direction

Described as a special relationship between two human beings to help the development of the spiritual self. Its aims are to develop a relationship with God, to find meaning in life, and to promote personal growth.<sup>92</sup> Several religious and psychological techniques may be used, and great similarities with psychotherapy can be found, as the same themes are discussed.<sup>93</sup>

#### 5. Idiom to express stress

In times of stress and social disorganization certain religious rituals by means of techniques that elicit altered states of consciousness, can produce catharsis, dissociative states and a special milieu to express problems and suffering.<sup>94</sup>

#### 6. Multifactorial explanation

Religion is a multidimensional phenomenon and no single fact can explain its actions and consequences. The combination

of beliefs, behaviors and environment promoted by the religious involvement probably act altogether to determine the religious effects on health.<sup>78,95</sup> However, empirical studies have had limited success in accounting the psychosocial mechanisms described above for the health-promoting effects of the religious involvement. The explanation of the mechanisms by which religion affects health has been an intellectually and methodologically challenging enterprise.<sup>96</sup>

### Clinical implications

The importance of the relationship between religion and mental health is recognized in theory. Patients do have spiritual needs that should be identified and addressed, but psychiatrists and other mental health professionals do not feel comfortable tackling these issues. Adequate training is necessary to integrate spirituality into clinical practice. The professional should have in-depth knowledge of the cultural and religion environment where his/her work is being done.

In the presence of psychopathology, religion may be part of it, contributing to the symptoms (obsessions or delusions for example). Sometimes, religion may become rigid and inflexible, and be associated with magical thinking and resistance. It may be helpful to integrate the patient into society, or motivate him/her to seek treatment (promoting guilt that motivates treatment in a pedophilic for instance). It may hinder treatment if it forbids psychotherapy or the use of medication. In Brazil, where religious change is occurring rapidly, poverty and lack of education might make people vulnerable to spiritual abuse.

Pruyser<sup>97</sup> and Malony<sup>98</sup> described the elements of a functional theology, present in all religions, which may promote good mental health. They are: awareness of God, acceptance of the grace and love of God, repentance and social responsibility, faith and trust, involvement in organized religion, fellowship, ethic, and tolerance and openness to the experiences of others.

During assessment, the psychiatrist should be able to determine if religion in the life of his patient is important, has a special meaning, is active or inactive, involves values in accordance to his main tradition, is useful or harmful, and promotes autonomy, personal growth, good self-image and interpersonal relationships.<sup>88,99</sup> Koenig's<sup>100</sup> recommendations go beyond listening and respect, appropriate referral, and support of spiritual needs. A brief spiritual history is necessary to become familiar to the patients religious beliefs as they relate to decisions about medical care, understanding the role religion plays in coping with illness or causing stress, and identifying spiritual needs that may require assistance.

Four basic areas should be remembered when taking a spiritual history:  $^{100}\,$ 

1) Does the patient use religion or spirituality to help cope with illness or is it a source of stress, and how?

2) Is the patient a member of a supportive spiritual community?

3) Does the patient have any troubling spiritual question or concerns?

4) Does the patient have any spiritual beliefs that might influence medical care?

#### Conclusions

Ideas about the relationship between religiousness and mental health have changed over the past few centuries. During much of the 20<sup>th</sup> century, mental health professionals tended to deny the religious aspects of human life and often considered this dimension as either old-fashioned or pathological, predicting that it would disappear as mankind matured and developed. However, hundreds of epidemiological studies performed during the last decades have shown a different picture. Religiousness remains an important aspect of human life and it usually has a positive association with good mental health. Even though most studies have been conducted in the United States in Christian populations, in the last few years several of the main findings have been replicated in samples from different countries and religions. Two lines of investigation that need to be expanded are cross-cultural studies and application of these findings to clinical practice in different areas of the world.

Considering that religiousness is frequent and has associations with mental health, it should be considered in research and clinical practice. The clinician who truly wishes to consider the bio-psycho-social aspects of a patient needs to assess, understand, and respect his/her religious beliefs, like any other psychosocial dimension. Increasing our knowledge of the religious aspect of human beings will increase our capacity to honor our duty as mental health providers and/or scientists in relieving suffering and helping people to live more fulfilling lives.

#### Acknowledgments

We thank Ivonne Wallace for valuable help with the English editing of the manuscript. Alexander Moreira-Almeida was supported by a grant from the HOJE – Hospital João Evangelista.

#### References

- Leuba JH. The belief in God and immortality: a psychological, anthropological and statistical study. Boston: Sherman, Frenc & Co.; 1916.
- Freud S. Future of an illusion. In: Strachey J, ed. and trans. Standard edition of the complete psychological works of Sigmund Freud. London: Hogarth Press; 1962.
- 3. In search of the piritual. Newsweek. 2005;146(9/10):46-65.
- 4. IBGE, Instituto Brasileiro de Geografia e Estatística. Censo Demográfico; Brasil 2000. [citado 25 jul 2005]. Disponível em: http://www.ibge.gov.br.
- 5. Fortin AH 6th, Barnett KG. Medical school curricula in spirituality and medicine. *JAMA*. 2004;291(23):2883.
- Webster's Comprehensive Dictionary of the English Language, Encyclopedic Edition. London: Trident Press International; 1996.
- Levin JS. How religion influences morbidity and health: reflections on natural history, salutogenesis and host resistance. Soc Sci Med. 1996;43(5):849-64.
- Almeida AM, Lotufo Neto F. Metodologia para o estudo de estados alterados de consciência [Methodology for the study of altered states of consciousness]. *Rev Psiquiatr Clin.* 2003;30(1):21-8. [cited in 2005 Jul 25]. Available from: http://www.hcnet.usp.br/ipq/revista/vol30/n1/pdf/21.pdf.
- 9. Miller WR, Thoresen CE. Spirituality, religion, and health. An emerging research field. *Am Psychol*. 2003;58(1):24-35.
- Levin J, Chatters LM, Taylor RJ. Religion, health and medicine in African Americans: implications for physicians. J Natl Med Assoc. 2005;97(2):237-49.
- 11. Batson CD, Ventis WL. The religious experience. New York: Oxford University Press; 1982.
- Koenig HG, McCullough M, Larson DB. Handbook of religion and health: a century of research reviewed. New York: Oxford University Press; 2001.
- Vandermeersch P. The victory of psychiatry over demonology: the origin of the nineteenth-century myth. *Hist Psychiatry*. 1991;2(8):351-63.
- 14. Hayward R. Demonology, neurology, and medicine in Edwardian Britain. *Bull Hist Med.* 2004;78(1):37-58.
- 15. Kroll J. A reappraisal of psychiatry in the middle ages. Arch Gen Psychiatry. 1973;29(2):276-83.

- Glick S. Debunking The Flat Earth Myth: Historians and scientists have exonerated the medieval church from teaching that the earth was flat. Science & Theology News [cited 2005 Jul 12]. Available from: http://www.stnews.org/Commentary-1068.htm.
- 17. Moreira-Almeida A, Almeida AAS, Lotufo Neto F. Spiritist views of mental disorders in Brazil. *Transcult Psychiatry*. 2005;42(4):570-95.
- Moreira-Almeida A, Silva de Almeida AA, Neto FL. History of spiritist madness in Brazil. *Hist Psychiatry*. 2005;16(61 Pt1):5-25.
- 19. Jung CG. Modern man in search of soul. New York: Harcourt Brace Jovanovich; 1933.
- Ellis A. Psychotherapy and atheistic values: a response to A. E. Bergin's "Psychotherapy and religious values." *J Consult Clin Psychol.* 1980;48(5):635-9.
- 21. Ellis A. Is religiosity pathological? Free Inq. 1988;18(2):27-32.
- Lukoff D, Lu F, Turner R. Toward a more culturally sensitive DSM-IV: psychoreligious and psychospiritual problems. *J Nerv Ment Dis*. 1992;180(11):673-82.
- Koenig HG, Cohen HJ, Blazer DG, Pieper C, Meador KG, Shelp F, Goli V, Di asquale B. Religious coping and depression among elderly, hospitalized medically ill men. Am J Psychiatry. 1992;149(12):1693-700.
- 24. Tepper L, Rogers SA, Coleman EM, Malony HN. The prevalence of religious coping among persons with persistent mental illness. *Psychiatr Serv.* 2001;52(5):660-5.
- 25. Nucci MG, Dalgalarrondo P. Ocular self-mutilation: report of six cases of enucleation. *Rev Bras Psiquiatr*. 2000;22(2):80-6.
- Swanson A. Remembering a fellow 'wild cowboy': a conversation with Jeff Levin. Science & Theology News. March 1, 2003. [cited 2005 Jun 22] Available from: http://www.stnews.org/ News-1349.htm
- Larson DB, Lu FG, Swyers JP. Model curriculum for psychiatric residency training programs: religion and spirituality in clinical practice, a course outline. Rockville, Maryland: National Institute for Healthcare Research; 1997.
- Puchalski CM, Larson DB. Developing curricula in spirituality and medicine. Acad Med. 1998;73(9):970-4.
- Flannelly KJ, Ellison CJ, Strock AL. Methodologic issues in research on religion and health. South Med J. 2004;97(12):1231-41.
- Allport GW, Ross JM. Personal religious orientation and prejudice. J Pers Soc Psychol. 1967;5(4):432-43.
- Donahue MJ. Intrinsic and Extrinsic Religiousness: review and metaanalysis. J Pers Soc Psychol. 1985;48(2):400-19.
- Paloutzian RF, Ellison CW. Loneliness, Spiritual well-being and quality of life. In: Peplau LA, Perlman D, eds. *Loniless: a sourcebook of current theory, research and therapy*. New York: Wiley; 1982. p. 224-37.
- Brady MJ, Peterman AH, Fitchett G, Mo M, Cella D. A case for including spirituality in quality of life measurement in oncology. *Psychooncology*. 1999;8(5):417-28.
- 34. Moreira-Almeida A, Koenig HG. Retaining the meaning of the words religiousness and spirituality. Soc Sci Med. In press 2006.
- 35. Maranell GM. Responses to Religion. Lawrence: University Press of Kansas; 1974.
- 36. Blazer DG, Palmore E. Religion and aging in a longitudinal panel. *Gerontologist.* 1976;16(1):82-5.
- Farakhan A, Lubin B, O'Connor WA. Life satisfaction and depression among retired black persons. *Psychol Rep.* 1984;55(2):452-4.
- Graney MJ. Happiness and social participation in aging. J Gerontol. 1975;30(6):701-6.
- Kass JD, Friedman R, Leserman J, Zuttermeister PC, Benson H. Health outcomes and a new index of spiritual experience. J Sci Study Religion. 1991;30(2):203-11.
- Levin JS, Markides KS, Ray LA. Religious attendance and psychological well being in Mexican Americans: a panel analysis of three-generations data. *Gerontologist.* 1996;36(4):454-63.
- Maton KI. Patterns and psychological correlates of material support within a religious setting: the bidirectional support hypothesis. *Am J Comm Psychol.* 1987;15:185-208.
- 42. Musick MA. Religion and subjective health among black and white elders. *J Health Soc Behav.* 1996;37(3):221-37.
- Ringdal GI, Gotestam KG, Kaasa S, Kvinnslaud S, Ringdal K. Prognostic factors and survival in a heterogeneous sample of cancer patients. *Br J Cancer*. 1995;73(12):1594-9.

- 44. Ringdal G. Religiosity, quality of life and survival in cancer patients. *Soc Ind Res.* 1996;38:193-211.
- Tix AP, Frazier PA. The use of religious coping during stressful life events: main effects, moderation, and medication. *J Consult Clin Psychol.* 1997;66(22):411-22.
- 46. Willits FK, Crider DM. Religion and wellbeing: men and women in the middle years. *Rev Relig Res.* 1998;29:281-94.
- 47. Koenig HG, Kvale JN, Ferrel C. Religion and wellbeing in later life. *Gerontologist.* 1988;28(1):18-28.
- Kirby SE, Coleman PG, Daley D. Spirituality and well-being in frail and nonfrail older adults. J Gerontol B Psychol Sci Soc Sci. 2004;59(3):P123-9.
- 49. Fry PS. The unique contribution of key existential factors to the prediction of psychological wellbeing of older adults following spousal loss. *Gerontologist*. 2001;41(1):69-81.
- Salsman JM, Brown TL, Brechting EH, Carlson CR. The link between religion and spirituality and psychological adjustment: the mediating role of optimism and social support. *Pers Soc Psychol Bull*. 2005;31(4):522-35
- Krause N. Church-based social support and health in old age: exploring variations by race. J Gerontol B Psychol Sci Soc Sci. 2002;57(6):S332-47.
- Levin JS, Chatters LM. Religion, health, and psychological wellbeing in older adults: findings from three national surveys. *J Aging Health*. 1998;10(4):504-31.
- 53. Smith TB, McCullough ME, Poll J. Religiousness and depression: evidence for a main effect and the moderating influence of stressful life events. *Psychol Bull*. 2003;129(4):614-36.
- Koenig HG, George LK, Peterson BL. Religiosity and remission of depression in medically ill older patients. *Am J Psychiatry*. 1998;155(4):536-42.
- 55. Lotufo Neto F. Psiquiatria e religião: a prevalência de transtornos mentais entre ministros religiosos [Psychiatry and religion: the prevalence of mental disorders among clergy]. [tese livre-docência]. São Paulo: Faculdade de Medicina, Universidade de São Paulo; 1997. [citado 23 jul 2005]. Disponível em: http:// www.hojenet.org/htm/profissional arquivos.htm.
- 56. Almeida AM. Fenomenologia das experiências mediúnicas, perfil e psicopatologia de médiuns espíritas. [Phenomelogy of Mediumistic Experiences, Profile and Psychopathology of Spiritist Mediums]. [tese]. São Paulo: Faculdade de Medicina, Universidade de São Paulo; 2004. [citado 24 jul 2005]. Disponível em: http:// www.hojenet.org/htm/profissional\_arquivos.htm.
- Braam AW, Hein E, Deeg DJ, Twisk JW, Beekman AT, Van Tilburg W. Religious involvement and 6-year course of depressive symptoms in older Dutch citizens: results from the Longitudinal Aging Study Amsterdam. J Aging Health. 2004;16(4):467-89.
- McCullough ME. Research on Religion-Accomodative Counseling: review and meta-analysis. J Counseling Psychol. 1999;46:92-8.
- 59. Azhar MZ, Varma SL. Religious psychotherapy in depressive patients. *Psychother Psychosom*. 1995;63(3-4):165-8.
- Razali SM, Hasanah CI, Aminah K, Subramaniam M. Religious sociocultural psychotherapy in patients with anxiety and depression. *Aust N Z J Psychiatry*. 1998;32(6):867-72.
- Propst LR, Ostrom R, Watkins P, Dean T, Mashburn D. Comparative efficacy of religious and nonreligious cognitive-behavioral therapy for the treatment of clinical depression in religious individuals. J Consult Clin Psychol. 1992;60(1):94-103.
- Kendler KS, Liu XQ, Gardner CO, McCullough ME, Larson D, Prescott CA. Dimensions of religiosity and their relationship to lifetime psychiatric and substance use disorders. *Am J Psychiatry*. 2003;160(3):496-503.
- Dalgalarrondo P, Soldera MA, Correa Filho HR, Silva CA. Religion and drug use by adolescents. *Rev Bras Psiquiatr*. 2004;26(2):82-90.
- Tavares BF, Beria JU, Lima MS. Factors associated with drug use among adolescent students in southern Brazil. *Rev Saude Publica*. 2004;38(6):787-96.
- Sanchez ZV, Oliveira LG, Nappo SA. Fatores protetores de adolescentes contra o uso de drogas com ênfase na religiosidade [Protective factors from adolescents against drug use emphasizing the role of religiosity]. *Cienc Saude Coletiva*. 2004;9(1):43-55.

- Almeida AM, Lotufo Neto F. Religiao e comportamento suicida [Religion and suicide behavior]. In: Meleiro AM, Teng CT, Wang YP, eds. Suicídio: Estudos Fundamentais. São Paulo: Segmento Farma; 2004. p. 53-60.
- 67. Nisbet PA, Duberstein PR, Conwell Y, Seidlitz L. The effect of participation in religious activities on suicide versus natural death in adults 50 and older. *J Nerv Ment Dis.* 2000;188(8):543-6.
- Hilton SC, Fellingham GW, Lyon JL. Suicide rates and religious commitment in young adult males in Utah. *Am J Epidemiol*. 2002;155(5):413-9.
- Dervic K, Oquendo MA, Grunebaum MF, Ellis S, Burke AK, Mann JJ. Religious affiliation and suicide attempt. *Am J Psychiatry*. 2004;161(12):2303-8.
- Nonnemaker JM, McNeely CA, Blum RW. Public and private domains of religiosity and adolescent health risk behaviors: Evidence from the National Longitudinal Study of Adolescent Health. Soc Sci Med. 2003;57(11):2049-54.
- 71. Eskin M. The effects of religious versus secular education on suicide ideation and suicidal attitudes in adolescents in Turkey. Soc *Psychiatry Psychiatr Epidemiol*. 2004;39(7):536-42.
- Cook JM, Pearson JL, Thompson R, Black BS, Rabins PV. Suicidality in older African Americans: findings from the EPOCH study. *Am J Geriatr Psychiatry*. 2002;10(4):437-46.
- O'Neill C, Feenan D, Hughes C, McAlister DA. Physician and family assisted suicide: results from a study of public attitudes in Britain. Soc Sci Med. 2003;57(4):721-31.
- Seidlitz L, Duberstein PR, Cox C, Conwell Y. Attitudes of older people toward suicide and assisted suicide: an analysis of Gallup Poll findings. *J Am Geriatr Soc.* 1995;43(9):993-8.
- Douglas CD, Kerridge IH, Rainbird KJ, McPhee JR, Hancock L, Spigelman AD. The intention to hasten death: a survey of attitudes and practices of surgeons in Australia. *Med J Aust*. 2001;175(10):511-5
- O'Mahony S, Goulet J, Kornblith A, Abbatiello G, Clarke B, Kless-Siegel S, Breitbart W, Payne R. Desire for hastened death, cancer pain and depression: report of a longitudinal observational study. J Pain Symptom Manage. 2005;29(5):446-57.
- Bilsen J, Stichele RV, Mortier F, Bernheim J, Deliens L. The incidence and characteristics of end-of-life decisions by GPs in Belgium. *Fam Pract.* 2004;21(3):282-9.
- 78. Jarvis GK, Northcott HC. Religion and differences in morbidity and mortality. Soc Sci Med. 1987;25(7):813-24.
- 79. Thorensen CE, Friedman M, Powell LH, Gill JJ, Ulmer D. Altering the type A behavior pattern in post- infarction patients. *J Cardiopulmonary Rehab.* 1985;5:258-66.
- Argyle M, Beit-Hallahmi. The social psychology of religion. London: Routledge & Kegan Paul; 1975.
- Bowers MK. Psychotherapy of religious conflict. In: Pattison EM, ed. Clinical Psychiatry and Religion. Boston: Little Brown; 1969. p. 233-42.
- Moberg DO. The development of social indicators of spiritual wellbeing for quality life research. In: Moberg DO, ed. *Spiritual wellbeing: sociological perspectives*. Washington DC: University Press of America; 1979. p. 1-14.
- 83. Levin JS, Schiller PL. Is there a religious factor in health? *J Religion Health*. 1987;26:9-35.
- Pargament KI, Kennell J, Hathaway W, Grevengoed N, Newman J, Jones W. Religion and the problem-solving process: three styles of coping. J Sci Study Religion. 1988;27:90-104.
- Pargament KI, Koenig HG, Tarakeshwar N, Hahn J. Religious struggle as a predictor of mortality among medically ill elderly patients: a 2year longitudinal study. *Arch Intern Med.* 2001;161(15):1881-5.
- Pargament KI, Koenig HG, Tarakeshwar N, Hahn J. Religious coping methods as predictors of psychological, physical and spiritual outcomes among medically ill elderly patients: a two-year longitudinal study. J Health Psychol. 2004;9(6):713-30.
- 87. Scheff TJ. Catharsis in healing ritual and drama. Berkeley, CA: University of California Press; 1979.
- Schumaker JF, ed. Religion and Mental Health. New York: Oxford University Press; 1992.
- 89. Benson H. The relaxation response. New York: Morrow; 1975.
- 90. Shapiro DH. Examining the context and content of meditation: a

challenge for psychology in the areas of stress management, psychotherapy and religious values. *J Human Psychol*. 1994;34(4):101-35.

- 91. Alexander CN, Robinson P, Rainforth M. Treatment and preventing alcohol, nicotine, and drug abuse through transcendental meditation: a review and statistical meta-analysis. *Alcohol Treat Quarterly*. 1994;11:13-87.
- 92. Julian R. The practice of psychotherapy and spiritual direction. *J Religion Health.* 1992;31(4):309-15.
- Ganje-Fling MA, Mccarthy PR. A comparative analysis of spiritual direction and psychotherapy. J Psychol Theology. 1991;19:103-17.
- 94. Mariz CL. Pentecostalismo e a luta contra a pobreza no Brasil. In: Futiérrez BF, Campos IS, eds. Na força do espírito - Os pentecostais na América Latina: Um desafio às igrejas históricas. São Paulo: Pendão Real; 1996.
- 95. Schiller PL, Levin JS. Is there a religious factor in health care utilization? A review. Soc Sci Med. 1988;27(12):1369-79.
- George LK, Ellison CG, Larson DB. Exploring the relationships between religious involvement and health. *Psychol Inquiry*. 2002;13:190-200.
- 97. Pruyser PW. The minister as diagnostician. New York: Scribners; 1976.
- 98. Malony HN. The clinical assessment of optimal religious functioning. *Rev Religious Res.* 1988;30:3-15.
- Malony HN. The uses of religious assessment in counseling. In: Brown LB, ed. *Religion, Personality, and Mental Health*. New York: Springer-Verlag; 1994.
- 100. Koenig HG. Espiritualidade no Cuidado com o Paciente. São Paulo: Editora FE; 2005.