# Religious Beliefs in Schizophrenia: Their Relevance for Adherence to Treatment

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The study examined how religious beliefs and practices impact upon medication and illness representations in chronic schizophrenia. One hundred three stabilized patients were included in Geneva's outpatient public psychiatric facility in Switzerland. Interviews were conducted to investigate spiritual and religious beliefs and religious practices and religious coping. Medication adherence was assessed through questions to patients and to their psychiatrists and by a systematic blood drug monitoring. Thirty-two percent of patients were partially or totally nonadherent to oral medication. Fifty-eight percent of patients were Christians, 2% Jewish, 3% Muslim, 4% Buddhist, 14% belonged to various minority or syncretic religious movements, and 19% had no religious affiliation. Two thirds of the total sample considered spirituality as very important or even essential in everyday life. Fifty-seven percent of patients had a representation of their illness directly influenced by their spiritual beliefs (positively in 31% and negatively in 26%). Religious representations of illness were prominent in nonadherent patients. Thirty-one percent of nonadherent patients and 27% of partially adherent patients underlined an incompatibility or contradiction between their religion and taking medication, versus 8% of adherent patients. Religion and spirituality contribute to shaping representations of disease and attitudes toward medical treatment in patients with schizophrenia. This dimension should be on the agenda of psychiatrists working with patients with schizophrenia.

*Key words:* schizophrenia/religion/spirituality/treatment adherence

# Introduction

Despite overwhelming evidence that antipsychotic medication is effective in the acute and maintenance treatment of schizophrenia, a significant proportion of patients do not take their medication and thus present an increased risk of relapse. Medication nonadherence among outpatients with schizophrenia ranges between 50% and 60% during the first year following discharge from hospital, depending upon exclusion or inclusion of patients who refused or dropped out of treatment. Moreover, various definitions and assessments of adherence were used in these studies. Adherence to (or compliance with) a medication regimen is generally defined as the extent to which patients take medications as prescribed by their health care providers. The word "adherence" is preferred by many health care providers because "compliance" suggests that the patient is passively following the doctor's orders and that the treatment plan is not based on a therapeutic alliance or contract established between the patient and the physician. Both terms may be imperfect and uninformative descriptions of medication-taking behavior. <sup>2,3</sup> Nonadherent patients are at increased risk of relapse and hospitalization compared with adherent ones; medication switches and augmentation strategies are also more frequently used among the first category. 4,5 Relapse due to nonadherence has negative consequences both for the patient (by lowering quality of life and treatment outcome) and the society (by increasing the costs).<sup>6</sup>

During the last few years, there has been a growing interest for the problem of adherence to treatment, as shown by numerous articles on the topic. In a new category of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition*, enumerating the clinical factors that must hold one's attention, therapeutic nonadherence is mentioned.

Several studies have defined factors that are associated with adherence to medication. Among these factors, insight, attitudes toward medication, symptoms, and drug side effects are especially relevant. 8,9,10

The relationship between spirituality and adherence to treatment has been studied among patients with severe chronic physical disorders, <sup>11</sup> cancer, <sup>12</sup> and terminal diseases. <sup>13</sup> In psychiatry, this relationship was investigated for mood disorders <sup>14</sup> and drug addiction. <sup>15</sup> These

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studies indicate that being religious increases patients' satisfaction and adherence to treatment. The positive impact of spirituality on adherence to treatment is explained by an improved quality of life, a better social support, and more positive representations of the illness by believers.

There is a growing amount of literature suggesting that religion and spirituality may provide positive coping to patients with schizophrenia. However, no study, as far as we know, discusses the implications of spirituality on adherence to treatment among schizophrenic patients. even if spirituality and religious practices are salient in their lives. 18,19 From this perspective, religion, in the sense of its broad definition including both spirituality (concerned with the transcendent, addressing the ultimate questions about life's meaning) and religiousness (specific behavioral, social, and doctrinal characteristics), can be helpful for patients whose social life and personal identity have been impaired by the course of the disease. 18 Religion can also have a negative impact on the outcome of mental disorders, particularly when it replaces or delays medical treatment. Some patients may refuse medical care, especially psychiatric care, because of their religious beliefs. Influenced by spiritual leaders, some people may consider spiritual recovery exclusively, to the detriment of medical treatment. 16,20

This study is part of a research project addressing spirituality and religion in outpatients presenting with schizophrenia that focuses on patients' coping and clinicians' attitudes. <sup>21</sup> Our objective is to explore the impact of spirituality on adherence to treatment among outpatients with psychotic disorders. Practical therapeutic implications are discussed. This research was undertaken with the hypotheses that (1) the more the patients are religiously involved (practices, support from religious community), the more adherent they are and (2) treatment adherence is related to representation patients have of their disease and treatment, influenced by their religious convictions.

#### Methods

Study Design and Procedure

Patients meeting the *International Statistical Classification of Diseases*, 10th Revision criteria for a diagnosis of schizophrenia or other nonaffective disorders, aged between 18 and 65 years, all treated in Geneva's public psychiatric outpatient facility, were included. Patients were excluded if their clinical condition prevented them from participating in the interviews. Interviews took place between May 2003 and June 2004.

The study was approved by the ethics committee of the University Hospitals of Geneva. Subjects received detailed information about the study and gave their written consent. Clinicians in charge of the patients were pro-

vided with information about the research. They proposed the study to all eligible patients in their practice. Two of the authors (Mohr, Borras) met the 106 included patients for audiotaped interviews. At that point, 3 patients withdrew from the study.

# Clinical Measures and Spiritual Assessment

Demographic and clinical data were collected from medical records. Quality of life was self-rated by means of a visual, analog scale. Current symptoms were assessed using the Positive and Negative Syndrome Scale (PANSS)<sup>22</sup> and the Clinical Global Impression.<sup>23</sup> Psychosocial adaptation was evaluated with axis V of the *Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition.*<sup>7</sup>

On the basis of several instruments available in English, that is, the "Multidimensional Measurement of Religiousness/Spirituality for Use in Health Research,"24 the "Religious Coping Index," <sup>25</sup> and a questionnaire on spiritual and religious adjustment to life events, <sup>26</sup> we developed an ad hoc semistructured interview. Our instrument explores, through 20 questions, the religious history of patients, their beliefs, religious activities, importance of religion in their lives, and health care among other topics. In addition to this semistructured interview, the salience of religiousness (ie, the frequency of religious activities and the subjective importance of religion in daily life), religious coping and synergy with psychiatric care were quantified by a visual analog scale with 5 anchored points. The total duration of the interview was about 45 minutes. The interview was pretested with a sample of 10 patients. It demonstrated good acceptability, reliability, and construct validity. Responses obtained by the interviewer of the sample of 88 patients were compared with 15 additional interviews conducted by a second author (Borras) in order to check for interviewer bias. The comparison of the 2 sets yielded equivalent distributions and patterns of answers.<sup>27</sup> Two of the authors (Borras and Mohr) analyzed independently the content of patients' account concerning spiritual views of illness, medication, and supportive therapy. When divergent categorization occurred, the content was reviewed to reach a consensus. Positive spiritual visions of the illness were that the illness belongs to God's plan, the illness opens the mind to spirituality, and the spiritual acceptance of the illness. Negative spiritual visions were a demonic attribution to the illness or a punishment for patient's sins. Spiritual positive visions of medication were medication as a God's gift, medication recommended by a spiritual counselor, and spiritual acceptation of the need of medication. Spiritual negative visions of medication were the search of spiritual healing in place of psychiatric care, experiencing medication as hindering spiritual life, spiritual delusion leading the person to deny illness, and need for treatment. Spiritual positive visions of supportive therapy were that doctors are God's gift, doctors are

counsellors, therapy recommended by a spiritual counsellor, and spiritual acceptation of the need of therapy. Spiritual negative visions of supportive therapy were the search of spiritual healing in place of psychiatric care; denigration of doctors' skills, while nonspiritual; spiritual delusion leading the person to deny illness; and need for treatment.

#### Adherence to Treatment

Clinical interviews of both patients and their clinicians were used to assess adherence to treatment in the last 1-year time period. For all patients, standard drug blood monitoring was obtained within a month prior to this interview to confirm the level of adherence reported by the patient and his clinician and then to assess the data. An interval of 12 hours was respected between the last time medication was taken and the blood test. On the basis of this assessment, patients taking an oral medication were rated according to Coldham's classification.<sup>28</sup>

- 1. Nonadherence: Dropped out of medical treatment (without good reason) and/or took their medication erratically (eg, stopped for months at a time) or not all.
- 2. Partial adherence: Taking medication irregularly (skipped doses but never longer than a few weeks at a time in the 1-year time period) or not the complete prescription.
- 3. Good adherence: Rarely or never missed doses of medication.
- 4. Depot medication: Patients receiving a treatment by injection. This treatment was administered by caregivers of the outpatients' facilities, leading to an indisputable adherence to treatment. The reasons that conduct patients to receive such treatment are usually due to a previous history of nonadherence to treatment, provoking relapse with potential risk of autoor heteroaggressiveness.

In our analyses, good adherent patients have been compared with the 3 other patients (nonadherent, partially adherent, and injected patients).

#### Statistical Analysis

Data were analyzed using the Statistical Package for the Social Sciences, version 11. Distribution-free univariate statistics were used for comparison of the variable distributions between groups (chi-square, Wilcoxon rank test, and Kruskal-Wallis test). Logistic regression analysis with forward Wald criteria for selection of variables was used for comparison of good adherent patients versus other patients (nonadherent, partially adherent, and injected patients).

### Results

Table 1 presents the clinical and sociodemographic characteristics of the patients included. Eighty-three percent

of the patients were on oral antipsychotic medication and 17% were on depot antipsychotic medication. In the subsample of patients treated orally, 32% were nonadherent to medication (16 totally nonadherent and 11 partially adherent).

The clinicians tended to overestimate adherence to treatment for 65% of patients who were found to be non-adherent through therapeutic monitoring.

Sixty-six percent of patients were treated with an atypical antipsychotic (At) only, 5% with a typical antipsychotic (T), and 28% with an association (At-At, T-At, T-T).

Patients on atypical antipsychotic medication and those on monotherapy were more adherent than patients on classical antipsychotics and on antipsychotic association, respectively. Sociodemographic and clinical factors significantly associated with good adherence (vs nonadherence, partial adherence, and injection) were daily activities, lower substance abuse, comorbid disorders (alcohol dependence and cannabis abuse), less positive symptoms, and a greater rate of symptomatic and functional remission.

The relationships between religious involvement (beliefs and practices) and adherence to treatment for patients are presented in table 2. Eighty-one percent of patients subscribed to an official religious affiliation: 58% were Christian (38% Catholic, 7% Evangelist, 12% Protestant, 1% Orthodox), 2% Jewish, 3% Muslim, 4% Buddhist, 14% declared belonging to various minority or syncretic religious movements, and 19% had no religious affiliation. More than two thirds of patients reported regular private religious practices (prayer, meditation, reading religious material, worship, etc) and one third reported regular religious practices in the community (attending church services, prayer, meditation, worship, or reading religious material with others). Religion played an important role in the daily lives of about three fourths of patients and in coping with difficulties for more than half of them. Adherent patients had more group religious practices (at least once a month) than nonadherent patients. The last category seemed to have very little contact with a religious community. Moreover, more adherent patients (34%) stressed the importance of the community's support for them compared with nonadherent patients.

Patients were divided into 3 groups according to their religious involvement:

- Group 1: no religious affiliation or religion considered as unimportant in their lives.
- Group 2: presence of a religious affiliation, religion considered as important in their lives, no religious group practices.
- Group 3: presence of a religious affiliation, religion considered as important in their lives, religious practices in groups (at least once a month).

Table 1. Clinical and Sociodemographic Characteristics of the 103 Outpatients (%)

	Nonadherence	Partial Adherence	Depot Medication	Good Adherence	Total
N	16	11	17	59	103
		Gender*			
Men	87	45	88	64	70
Women	13	55	12	36	30
		Ethnicity			
White European	75	55	76	85	79
Arabian	6	27	12	3	7
African	0	9	12	7	7
Asian	19	9	0	5	7
Mean age (SD)*	31 (9)	41 (8) Marital status	40 (10)	39 (10)	38 (10)
Married	6	0	12	8	8
Living alone	31	73	41	46	46
Without remunerated work*	63	73	94	90	84
Vocational training*	56	73 Daily activities*	18	47	47
None	37	55	41	17	28
Occupational	44	27	59	71	59
Remunerated work or regular study	19	18	0	12	13
Psychosocial adaptation: mean GAS <sup>a</sup> (SD)	57 (14)	54 (10)	52 (11)	58 (14)	56 (14)
		Diagnosis			
Schizophrenia	94	64	71	81	80
Paranoid	82	45	65	59	62
Hebephrenic	6	0	0	8	6
Undifferentiated	6	19	6	14	12
Schizoaffective disorder	6	36	22	17	18
Psychotic disorder not otherwise specified	0	0	6	2	2
Current comorbidity of substance abuse*	50	36	35	15	26
Length of illness (y): mean (SD)	11 (10)	16 (11) Hospitalizations	17 (11)	15 (11)	14 (11)
Median number	4	5	13	6	5
Median duration (mo)	2.4	3.6 Symptoms: PANSS <sup>b</sup>	5.4	5.3	5.1
Positive symptoms, mean (SD)*	14 (7)	17 (4)	17 (8)	13 (6)	14 (6)
Negative symptoms, mean (SD)	13 (7)	14 (8)	15 (9)	13 (7)	13 (7)
General symptoms, mean (SD)	26 (10)	30 (14)	29 (16)	24 (8)	26 (11)
Total score, mean (SD)	53 (20)	62 (25)	60 (31)	50 (17)	53 (21)
Symptomatic remission <sup>c</sup>	14	18	6	31	23
Symptomatic and functional remission* <sup>d</sup>	0	0	0	17	10

<sup>&</sup>lt;sup>a</sup>Global Assessment Score (GAS), possible scores range from 1 to 100, with higher scores indicating better functioning.

Adherent patients belonged significantly more often to group 3 than nonadherent patients. Nonadherent patients made up most of group 2.

Religion was not only associated with adherence but also with clinical characteristics. Indeed, the more religion was important in patients' lives, the less patients were substance abusers (group 3: 10% vs group 2: 30% vs group 1: 47%;  $\chi^2 = 8.01$ , df 2, P < .02) and the more they were in symptomatic remission (group 3: 39% vs group 2: 12% vs group 1: 27%;  $\chi^2 = 6.88$ , df 2, P < .03). Religion was not associated with sociodemographic characteristics.

<sup>&</sup>lt;sup>b</sup>Positive and Negative Syndrome Scale (PANSS), possible scores range from 7 to 49 for positive and negative symptoms, from 16 to 112 for general symptoms, and from 30 to 210 for total score, with higher scores indicating severity of symptoms.

<sup>&</sup>lt;sup>c</sup>Criteria of symptomatic remission. <sup>46</sup>

<sup>&</sup>lt;sup>d</sup>Criteria of symptomatic and functional remission.<sup>47</sup>

<sup>\*</sup>Differences between groups according to adherence to treatment at a 2-tailed P level < .05.

**Table 2.** Religious Involvement (Beliefs, Practices) and Adherence to Treatment (n = 103 Patients, %)

		Nonadherence	Partial Adherence	Depot Medication	Good Adherence	Total
Gro	N ups according	16 to the importance	11	17	59	103
Little importance	ups according	19	0	12	19	16
Subjective importance	57	56	82	82	41	54
Subjective and collective importance	31	25	18	6	41	30

<sup>\*</sup>Differences between groups according to adherence to treatment:  $\chi^2 = 13.71$ , df 6, 2-tailed P level < .04.

When taking in account sociodemographic variables, clinical characteristics, and religion associated with adherence in a logistic regression analysis with stepwise selection of variables to predict adherence, the only predictors of good adherence were less positive symptoms (odds ratio = .91, 95% confidence interval .84–.98) and absence of substance abuse (odds ratio = 4.0 for substance abuse, 95% confidence interval 1.5–10.6) (model  $\chi^2 = 16.04$ , df 2, P.000,  $R^2 = 20\%$ ).

Table 3 presents the relationship between spiritual visions of illness and medication and their relationship to adherence to treatment, according to content analysis of patients' accounts. Fifty-seven percent of patients had a representation of their illness directly influenced by their spiritual beliefs.

For 31% of the subjects, religion gave meaning to their illness with the help of positive religious contents: "I think my illness is a test sent by God to put me on the right path" (28-year-old man, paranoid schizophrenia), "My illness is part of God's plan and I accept it with humility" (48-year-old woman, paranoid schizophrenia), or "Illness is a gift from God in order to help me to grow in spiritual life" (51-year-old man, paranoid schizophrenia). For 26% of the patients, religion gave meaning to their illness with negative religious contents: "My illness is a punishment sent by God for my sins" (30-year-old man, paranoid schizophrenia), "My illness is a possession of a demon that forces me to mutilate myself" (26-yearold man, paranoid schizophrenia), or "My illness is the work of the Devil" (39-year-old woman, paranoid schizophrenia).

The rest of the sample (43%) seemed to stick to the medical model of illness and spoke in terms of fragility and genetic vulnerability without having their spiritual beliefs intervening in their image of the disease.

In the group of adherent patients, medical representations of illness were more prominent than spiritual or religious representations. This ratio was reversed for nonadherent patients: in this group, religious representations of illness were prominent.

Thirty-one percent of nonadherent patients and 27% of partially adherent patients underlined an incompatibility or contradiction between their religion and taking med-

ication, versus only 8% of adherent patients: "My illness is an ordeal sent by God, medication is not a part of God's plan and I will not take it" (26-year-old man, paranoid schizophrenia), "We are creations of God, only God can control our thinking, not doctors nor medication" (23-year-old man, paranoid schizophrenia). However, for some patients, religion gave meaning to medication with the help of positive religious contents: "Medication is a gift of God to doctors to treat mankind" (47-year-old man, schizoaffective disorder).

Thirty-one percent of nonadherent patients underlined contradiction or incompatibility between their spiritual convictions and supportive psychotherapy, contrary to 10% of adherent and 9% of partially adherent patients: "During the consultation, my therapist encourages me to think more about myself and to say no to others, but this is not what the Church teaches" (45-year-old woman, paranoid schizophrenia).

For a third of patients, spiritual vision of illness and spiritual vision of medication were bounded, more often negative in nonadherent patients and positive in adherent patients. For 24% of patients, a spiritual vision of illness does not imply a spiritual vision of medication: "My illness is a God's punishment for my sins. God and medication are 2 different things. Medication helps me to overcome my illness" (27-year-old woman, paranoid schizophrenia). Inversely, for 12% of patients, a natural vision of illness was associated with a spiritual vision of medication: "I am spiritual in my soul, my illness has nothing to do with spirituality, it is something apart from it, medication hindered me to grow in my spiritual life" (44-year-old man, paranoid schizophrenia).

Spirituality was discussed by the psychiatrists with only 36% of patients, although more than two thirds of patients felt at ease with this topic.

# Discussion

The study highlighted that more than half of the patients had representations of their illness and treatment directly influenced by their religious convictions, positively in 31% (test sent by God to put them on the right path, a gift from God or of God's plan) and negatively in

**Table 3.** Spiritual Visions of Illness and Treatment and Adherence to Treatment (n = 103 patients, %)

	Noncompliant	Partially Compliant	Depot Medication	Good Adherence	Total
N	16	11	17	59	103
		Spiritual vision of illa	ness		
Negative	31	45	18	24	26
Positive	38	45	41	24	31
No role*	31	9	41	53	43
		Spiritual vision of medi	cation		
Negative*	31	27	0	8	13
Positive	13	27	35	37	32
No role	56	45	65	54	55
		Spiritual vision of supporti	ve therapy		
Negative*	31	9	0	10	12
Positive	19	27	29	36	31
No role	50	64	71	54	57
Not at ease to speak			, -		
about religion with	44	27	18	15	21
psychiatrist					
1 2	Spiritual vi	sion of illness and spiritua	l vision of medication*		
No spiritual vision Spiritual vision of	25	0	29	39	31
illness, no spiritual					
vision of medication	31	45	35	15	24
Spiritual vision of	51	13	33	10	2.
illness, positive					
spiritual view of					
medication	13	18	24	29	24
No spiritual vision					
of illness, positive					
spiritual view of					
medication	0	9	12	8	8
Spiritual vision of					
illness, negative					
spiritual view of					
medication	25	27	0	3	9
No spiritual vision					
of illness, negative					
spiritual view of		^		_	
medication	6	0	0	5	4

<sup>\*</sup>Differences between groups according to compliance at a 2-tailed P level < .05.

26% (punishment of God, a demon, the devil, or possession). Moreover, there was a strong association between representations of illness and treatment, directly influenced for most of them by their spiritual beliefs, and nonadherence to treatment. Thirty-one percent of nonadherent patients underlined an incompatibility between their religious convictions and medication and supportive therapy, versus 8% of adherent patients. This result was confounded when performing multivariate analyses. This may be due to sample size, as numerous factors influence adherence to treatment. Indeed, content analysis of our data gave some evidence that religion was one of those factors. Through discussion with the patients, we could observe that medical treatment or recommended behavior encouraged by the psychiatrist may enter into conflict with certain teachings of various religious groups. Certain religious groups are prone to spiritual healing exclusively. Taking care of oneself, learning to say no, and to aspire toward self-accomplishment may enter into conflict with certain religious teachings. These teachings often encourage service to others and the community and the subordination of one's personal needs. Suffering and benevolence may be perceived as salutary.

To our knowledge, there is no research yet bearing on treatment adherence versus religion and spirituality on patients with schizophrenia. A study by Logan and Romans<sup>14</sup> among bipolar patients also underlined that religious beliefs often conflict with illness paradigms used by mental health professionals and could negatively impact on adherence to treatment. Indeed, 37% of bipolar patients saw a link between their religious beliefs and their illness and 32% spoke about difficulties because of incompatibility between their faith and the treatment proposed by the caregivers. An example of incompatibility was the intervention of a spiritual

leader against medical treatment, advocating spiritual healing as the sole intervention. <sup>14</sup> Results confirm our hypothesis that religious involvement may be positively associated with medication adherence. More precisely, involvement in a religious community seems to be crucial. Whether this effect is specific (positive influence of spirituality on adherence) or nonspecific (positive influence of social support in general) remains to be studied.

In accordance with the literature, we found that predictive factors of nonadherence were male, <sup>29,30</sup> young age, <sup>29,31</sup> lack of activities, <sup>29,32</sup> poor socioeconomic conditions (not welfare), <sup>29,32</sup> absence of professional training, <sup>32</sup> typical antipsychotic prescriptions, <sup>33</sup> combination treatment, defined by the intake of several antipsychotics, <sup>34,35</sup> addictive comorbidity (substance abuse, alcoholism, and cannabis use), <sup>29</sup> and higher scores on the PANSS. <sup>9</sup> Living alone and bad housing conditions were not associated with nonadherence, contrary to what other authors have observed. <sup>36,37</sup> A possible explanation for this lack of association in the present study is that our sample benefits of intensive social support include adequate living conditions. As other authors, <sup>38</sup> we found no association between onset of illness, number of hospitalizations, and adherence to treatment.

Adherent patients had more group religious practices (at least once a month). These patients also stress the importance of community support. Nonadherent patients seemed to have little contact with the community, possibly because of social impairment, inappropriate affects, and little motivation to cope with the active world. Some nonadherent patients explained that their faith community had rejected them when they became ill. Others could find their help and support but lost contact because of their lack of motivation. Reaffiliation to one's religious community could thus be a therapeutic goal with these patients. The hypothesis of an adverse impact of religion upon adherence to medication could be valid in respect with cultic religious movements.<sup>39</sup> No such phenomenon was evidenced in our context.

Spirituality as resource of finding meaning and hope in suffering has clearly been identified as a key component of the process of psychological recovery.<sup>27</sup> The importance of religion for patients is a poorly known phenomenon by the clinicians, even if spirituality needs to be integrated into patients' care. 21 Our study confirms that religion and spirituality are important for a majority of patients suffering from schizophrenia. Eighty-one percent of them subscribed to a religious affiliation and 58% were Christians. However, qualitative data from interviews indicate that more than half of the sample believed in combinations of faiths. This is in accordance with the contemporary religious syncretism in western societies<sup>40</sup> and even more so in a multiethnic and multicultural city like Geneva. In fact, following a study of Campiche<sup>4</sup> evaluating the affiliation of the general Swiss population. the percentage of religious affiliations are comparable, but most of the population belongs to traditional Swiss Christian churches, whereas in the study, patients were more likely to mention Pentecostal churches, non-Christian religions, minority religions movements, or double religious affiliation.<sup>21</sup>

Through these impressive results, we underline that religion affects the self and may improve recovery by instilling hope, purpose, and meaning in life but also affects the adherence to treatment. This dimension was discussed by the caregivers with a quarter of patients only, although two thirds of subjects felt at ease in discussing it. Professionals underestimate the importance of this issue. Possible explanations are the low rates of religious affiliation of psychiatrists, 42,43 a lack of knowledge of religions, 42,44 and a tendency to pathologize many thoughts and behaviors in reference to spirituality among patients. Some rivalry between health professionals regarding management of moral suffering could also be involved.

This study has several limitations. Firstly, due to our small sample size, multivariate analyses may be considered as exploratory. Thus, the lack of association between adherence to treatment and illness' representations influenced by spiritual convictions may represent false negative findings. Secondly, there might be a response bias as patients could be reluctant to announce themselves as nonadherent to medication. On the other hand, blood monitoring was systematically performed, this being an objective manner for documenting adherence. Another interesting specificity of the study is that it was performed in a varied and multiconfessional setting (eg, the international city of Geneva, Switzerland).

#### Conclusion

Adherence to treatment has been recognized as a problem in serious mental disorders including schizophrenia, although the understanding of the causes for nonadherence is incomplete. Our results about the importance of the religious dimension and its potential impact on treatment adherence should be considered in the clinical management of patients with schizophrenia. In order to increase adherence, clinicians should aim at building a shared representation of illness with patients, spirituality being an important component of such representations for most individuals with schizophrenia. Also, an in-depth review of the way patients incorporate their psychotropic medication into their worldview should be performed. It could help to identify conflicts potentially leading to nonadherence, thus providing ways of negotiating a common conception of what treatments may represent.

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