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Evolution of spirituality and religiousness in chronic schizophrenia or schizo-affective disorders: a 3-years follow-up study

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Abstract
Purpose Spirituality and religiousness have been shown to be highly prevalent in patients with schizophrenia. Religion can help instil a positive sense of self, decrease the impact of symptoms and provide social contacts. Religion may also be a source of suffering. In this context, this research explores whether religion remains stable over time.
Methods From an initial cohort of 115 out-patients, 80% completed the 3-years follow-up assessment. In order to study the evolution over time, a hierarchical cluster analysis using average linkage was performed on factorial scores at baseline and follow-up and their differences. A sensitivity analysis was secondarily performed to check if the outcome was influenced by other factors such as changes in mental states using mixed models.
Results Religion was stable over time for 63% patients; positive changes occurred for 20% (i.e., significant increase of religion as a resource or a transformation of negative religion to a positive one) and negative changes for 17% (i.e., decrease of religion as a resource or a transformation of positive religion to a negative one). Change in spirituality and/or religiousness was not associated with social or clinical status, but with reduced subjective quality of life and self-esteem; even after controlling for the influence of age, gender, quality of life and clinical factors at baseline.
Conclusions In this context of patients with chronic schizophrenia, religion appeared to be labile. Qualitative analyses showed that those changes expressed the struggles of patients and suggest that religious issues need to be discussed in clinical settings.

Keywords Schizophrenia · Spirituality · Religiousness · Longitudinal study

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Introduction

Schizophrenia is often a chronic, disabling condition, associated with impairments in multiple domains of functioning [2]. Research on religion involving patients with schizophrenia has mainly focused on religious delusion, thus linking religion and psychopathology in this disorder [16]. However, in recent years, some studies have shown that religion is salient in the lives of many people suffering from psychosis and widely used to cope with the illness [3–5]. In a cross-sectional study on spirituality and religiousness in schizophrenia, we pointed out that religion was central in their life for nearly half the patients (45%). Moreover, the salience of positive religious coping was associated with fewer symptoms, improved social functioning, reduced substance misuse, reduced suicide attempt rate and increased treatment adherence. Inverse relationships were elicited for negative religious coping [14].

Religion has not yet been considered in its longitudinal evolution over the course of schizophrenia. In other

populations, longitudinal studies pointed out that religiosity increases when people must cope with stressful events [18]. This trend has been demonstrated in individuals coping with schizophrenia [27], depression [26], HIV [8] and recovery from substance misuse [22]. In an epidemiological study, changes in social religiosity were associated with increased risk of psychiatric disorder in a general population [13].

Longitudinal data providing insight into the pervasiveness of spirituality and religiousness over time in psychosis are still missing. Up to now and to our knowledge, two studies have investigated the evolution of religion in psychosis. In a study aiming to validate a religiosity measure for individuals with schizophrenia, it was demonstrated that psychotic symptoms in acute phase influence religiosity [24]. In a research focused on religious meaning-making of psychosis, positive religious coping (the prevalence of benevolent religious reappraisals) and negative religious coping (punishing God reappraisals and reappraisals of God's power) did not change over a 1-year follow-up [20]. In a 2-years follow-up study on the same paradigm with medically ill elderly hospitalized patients, the salience positive religious coping increased over time, and for more than half of patients who displayed some negative religious coping features, it was a transient phenomena. Only chronic negative religious coping was associated with greater risk for deterioration of mental and physical health [19].

In this study, religion is defined in a broad sense which includes both spirituality (concerned with the transcendent, addressing the ultimate questions about life's meaning) and religiousness (specific behavioral, social, doctrinal and denominational characteristics). We retained a modern version of spirituality which is restricted to the sacred area and which suits to the multicultural users of a psychiatric public service [10]. Given the cross-sectional design of our previous study, the design did not allow us to address the persistence of religion/spirituality in patients. Is religion stable or labile over time? Is the evolution of religion associated with significant clinical changes over time? To focus on these questions, a second interview with our patients yielded a longitudinal assessment of spirituality and religiousness, as well as clinical outcomes. We hypothesized that for these individuals, who have suffered from chronic psychiatric disorders for years, religion would remain stable over time.

Methods

Study design

One hundred and fifteen subjects diagnosed with schizophrenia or schizo-affective disorder, all followed in Geneva's four public psychiatric outpatient facilities, were included in the initial study [14]. Patients from this cohort were asked to participate in the present follow-up study, 92 subjects were followed successfully. The reasons for attrition were refusal (18 patients); unattainable (4 patients) or deceased (1 patient). Data collection took place from May 2006 to June 2007, 3 years (±3 months) after the initial investigation. The study was approved by the ethics committee of the University Hospital of Geneva. Patients participated in the study only after receiving detailed information about the study and signing a written consent document.

Measures

During the follow-up interviews, the same clinicians (SM and LB) reassessed spirituality and religiousness, symptoms and psychosocial adaptation (Positive and Negative Syndrome Scale [9], Clinical Global Impression [17], Global Assessment of Functioning [2]). A rater blind to the religious measures collected additional measures on psychosocial adaptation (Questionnaire of Social Functioning [29]), subjective quality of life (WHOQOL-BREF [28]), self-esteem (Self-Esteem Rating Scale [11]), adherence to treatment (Medication Adherence Rating Scale [25]) and the length of hospitalizations. The MINI [23] was administered to screen for current or past history of formally diagnosable psychiatric disorders and substance misuse.

Patients' spirituality and religiousness were assessed according to our semi-structured interview at baseline and follow-up [15]. This interview was designed to explore patients' spiritual and religious history, beliefs, activities and the salience of religion in their lives. A principal component analysis elicited four factors in the religious construct: Factor 1, the "subjective factor" (subjective importance of religion in day-to-day life, attributing meaning to life and the illness, coping with the illness, gaining control and gaining comfort); Factor 2, the "collective factor" (frequencies of religious activities with other people and support from the religious community); Factor 3, the "synergy with psychiatric treatment" (antagonism between religion, medication and consultations with a psychiatrist) and Factor 4, the ease with which patients could speak to a psychiatrist about religion. The four factors explained 71% of the variance (40, 15, 9, and 7%, respectively).

In addition to this quantitative estimate, a qualitative content analysis of all interview transcripts was conducted independently by three authors. This analysis made it possible to group patients at the psychological level into three categories: positive, negative and no religious coping with existential and symptomatic issues. Inter-rater reliability was high at baseline (kappa = 0.86, SM and LB), as

well as at follow-up (kappa = 0.76, SM and IR). At baseline, the two clinicians had also assessed the subjective importance of religion for the patient in terms of its centrality [7], with high inter-rater reliability (Kendall's tau *b* rank correlation 0.78, two tailed, $p < 0.001$). Both quantitative analysis (Factor 1 and Factor 2) and qualitative analysis (positive, negative and no religious coping) of spirituality and religiousness were used to create a typology of spirituality and religiousness.

Data analysis

Data were analyzed with SPSS version 15 (2007). Distribution-free univariate statistics were used for comparisons of the variable distributions between groups (chi-square, Wilcoxon rank test, Kruskal–Wallis test). A sensitivity analysis was secondarily performed to check if the outcome was influenced by other factors such as changes in mental states. To provide unbiased estimates in the presence of missing values, to be able to use all available data, and to relax the assumption of conditional independence in the responses of the same person, a mixed model has been done with individual random intercepts and slopes, and fitted with full maximum likelihood estimation [21]. Potential predictors were included as fixed factors, and changes in scales measuring severity of psychopathology were included as time-varying predictors. Those analyses were conducted with Stata 10.

In order to study the evolution over time, a hierarchical cluster analysis using average linkage was performed on factorial scores of Subjective Factor (Factor 1) and Collective Factor (Factor 2) at baseline and follow-up and their differences. Due to the sample size and in order to disentangle religion from clinical outcome, Factor 3 (antagonism with psychiatric treatment) and Factor 4 (easiness to speak about religion with psychiatrist) were not taken into account in this analysis. After cutting the dendrogram at the forth node, we obtained four clusters: a stable group with low levels on Factors 1 and 2; a stable group with middle to high level on Factor 1 and low level on Factor 2; a stable group with middle to high levels on Factors 1 and 2; an unstable group with increased or decreased salience on Factor 1 and/or Factor 2.

Taken into account both quantitative analyses and qualitative contents, we constructed a typology which is presented in Fig. 1. This typology classified into six different groups, according to three criteria: (1) the positive or negative role of religion at the psychological level (i.e., religion provides a positive sense of self in terms of hope, comfort, joy, etc., versus religion as a source of suffering); (2) the low versus middle to high salience of the Subjective Factor 1 (i.e., religion does not play an important role in daily life and is not used to cope with the illness versus religion being important to essential in daily life and in coping with the illness) and (3) the salience of the Collective Factor 2 (i.e., patients take part in community religious practices at least once a month or not).

For Groups 1, 2 and 3, religion was positive at the psychological level. For Group 1, religion was positive at the psychological level, but it was of little importance in daily life, was not used to cope with the illness (low subjective salience), and was not practiced within a community (no religious community). For example, a 45-year-old man with paranoid schizophrenia reported: "I am a catholic. I haven't gone to church since I was a teenager because I am not interested. I believe in God; this gives me hope for an afterlife. I don't think about it in my daily life or to help me". For Group 2, religion was positive at the psychological level, important to essential in daily life and in coping with the illness, but was not regularly practiced within a community. For example, a 48-year-old woman with paranoid schizophrenia reported: "I definitely trust Jesus-Christ. Without Him I would be like a vegetable, unable to do anything." For Group 3, religion was positive at the psychological level, important to essential in daily life and in coping with the illness, and involved regular religious practices within a community. For example, a 47-year-old man with schizo-affective disorder reported "I read the Bible every day. It's important for me that Christ plays the central role in my life. My trust in God helps me trust people. I belong to a small church; we know and support each other".

For the Groups 4, 5 and 6, religion was negative for the self, i.e., religion was a source of suffering. For Group 4, religion was negative at the psychological level, but it was of little importance in daily life, was not used to cope with the illness, and was not regularly practiced within a community. For example, a 43-year-old man with undifferentiated schizophrenia reported "I suffer too much to believe in God anymore. Earth is the kingdom of evil instead. My spiritual life is very poor. I depend on medication to help me." For Group 5, religion was negative at the psychological level; religion was important to essential in daily life and was amplifying symptoms, without involving regular religious practices within a community. For example, a 43-year-old man with schizo-affective disorder reported "God is essential and always present in my life. Sometimes, I am very happy as I believe I am God. Sometimes, I am very sad as I realize that this is not the reality." For Group 6, religion was negative at the psychological level; it was important to essential in daily life; it was amplifying symptoms; and it was regularly practiced within a community. In our cohort, no patients belonged to this group. Patients were classified according to this typology at baseline and follow-up in order to describe the evolution of religion over time.

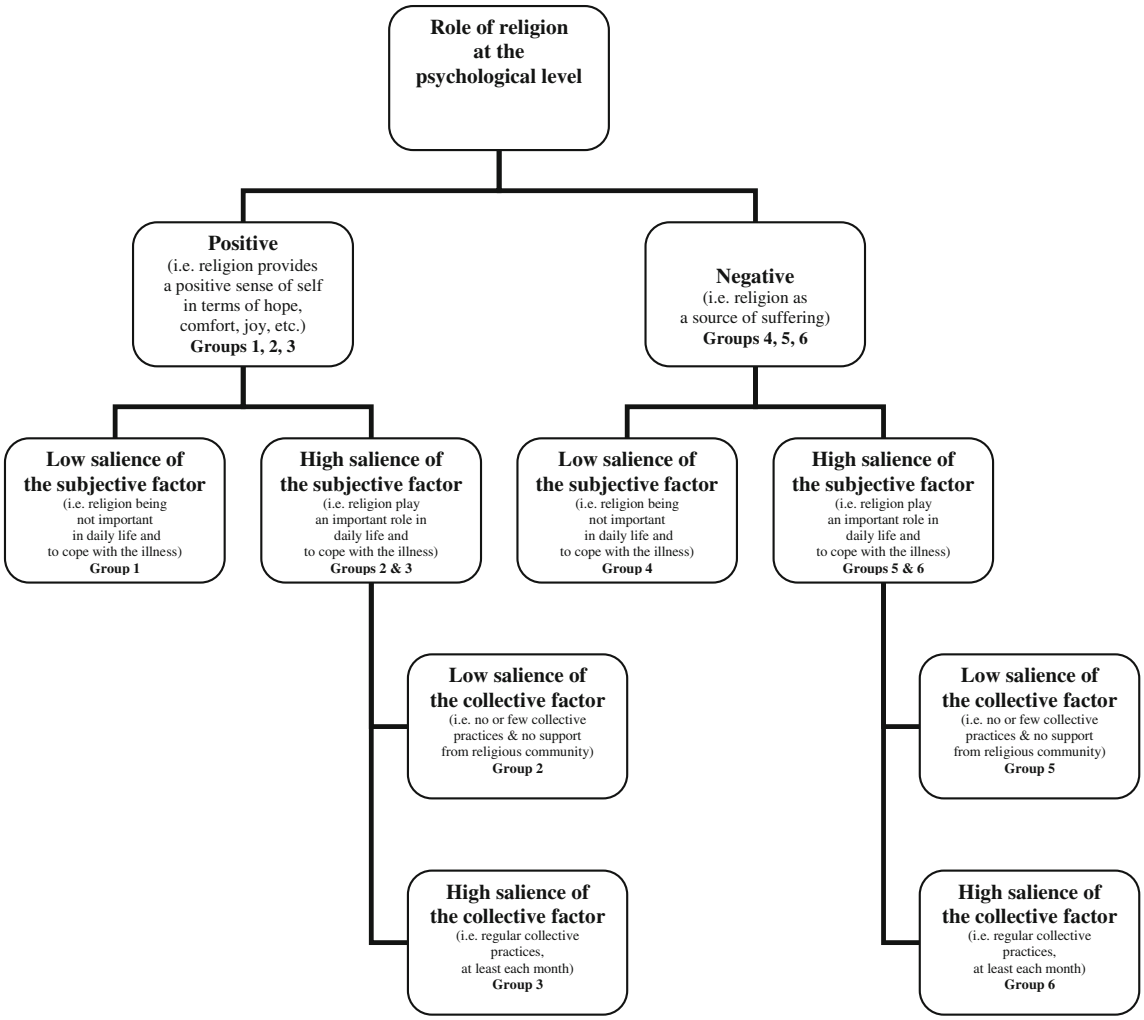

Fig. 1 Quantitative and qualitative criteria for classification of religion

Results

Table 1 summarizes the sample's demographic and clinical characteristics at follow-up. As the cohort is constituted with patients under treatment for chronic schizophrenia or schizo-affective disorder for numerous years, the clinical characteristics were rather stable during the 3-years period. Indeed, the symptoms levels at inclusion were moderately correlated with symptoms at the outcome (correlations ranged from 0.50 to 0.61, p 0.000), as well as the Global Assessment of Functioning Score (correlation 0.51, p 0.000). No significant changes were observed between the inclusion and the outcome for symptoms levels. The levels of occupational and working activities stayed stable, with only 7% of the sample studying or working on a regular job. Among patients with a suicidal attempts history, six committed a new one. The proportion of patients misusing substances (alcohol and street drugs) stayed stable (from 22 to 20%). The proportion of history of suicide attempts stayed stable (50%), yet, during follow up, six patients again committed a suicide attempt.

Eighty percent of the initial sample participated in the follow-up study. Attrition was independent of demographic and clinical characteristics at intake. It was also independent of all the religious variables (denomination, Factors 1–4), except the absence of religious coping. Indeed, patients without religious coping strategies were less likely to participate in the follow-up than patients with religious coping (either positive or negative) (41 vs. 16%; $X^2 = 8.25$, $df = 2, p < 0.05$). For seven patients, the motive of refusal was that they were not interested in the topic, thus showing that no change had occurred since the last interview when they had stated that spirituality and religiousness were of little or no importance in their lives. Consequently, it is

Table 1 Demographic and clinical characteristics of the 92 outpatients with nonaffective psychotic illnesses followed in a 3-year outcome study of spirituality and religiousness in Schizophrenia

	N	%
Gender		
Male	61	66
Female	31	34
Ethnicity		
White European	72	78
Arab	6	6.5
African	8	9
Asian	6	6.5
Marital status		
Single	67	73
Married	9	10
Separated or divorced	16	17
Living		
Alone	45	49
With family	26	28
In supportive housing	21	23
Without remunerated work	85	92
Clinical global impression scale		
Slightly ill	22	24
Moderately ill	37	40
Severely ill	33	36
Diagnosis		
Schizophrenia	70	76
Paranoid schizophrenia	62	67
Disorganized schizophrenia	2	2
Indifferentiated schizophrenia	6	7
Schizoaffective disorder	22	24
Current comorbidity		
Substance misuse	18	20
Nicotine dependency	52	57
History of suicide attempt	46	50
Subjective quality of life rating		
Unhappy	15	16
In-between	31	34
Happy	46	50
	Mean	SD
Number of hospitalizations	11	13
Total duration of hospitalizations (months)	9	20
Age (years)	42	10
Duration of illness (years)	19	11
Psychosocial adaptation: Global Assessment of Functioning Score[a]	52	10
Social Functioning Qestionnaire (QFS)[b]		
Frequencies of activities	27	5
Satisfaction with activities	30	4
Positive and Negative Syndrome Scale Score[c]		
Positive symptoms	14	5
Negative symptoms	13	7
General symptoms	25	6
Total score	52	14
Self-esteem (SERS)[d]		
Positive self-esteem factor	41	11
Negative self-esteem factor	−29	12
Quality of Life (WhoQoL-Bref)[e]		
Physical	62	16
Psychological	60	18
Social	55	22
Environment	63	15
Medication adherence (MARS)[f]		
Medication adherence behavior	3.2	1.2
Subjects'attitude to taking medication	2.5	1.2
Negative side effects and attitudes to psychotropic medication	1.1	0.8

[a] Global Assessment of Functioning. Possible scores range from 1 to 100, with higher scores indicating better functioning

[b] Frequencies and satisfaction of activities. Possible scores range from 8 to 40, with higher scores indicating better functioning

[c] Positive and Negative Syndrome Scale. 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 more severe symptoms

[d] Self-esteem Rating Scale. Possible scores range from 10 to 70 for positive self-esteem factor, with higher scores indicating higher positive self-esteem. Possible scores range from −10 to −70 for negative self-esteem factor, with lower score indicating higher negative self-esteem

[e] Quality of Life Scores. Possible scores range from 0 to 100, with higher scores indicating better quality of life

[f] Medication Adherence Rating Scale. Possible scores range from 0 to 4 for medication adherence behavior and subjects' attitude with higher scores indicating higher adherence. Possible scores range from 0 to 2 for negative side effects and attitudes

highly probable that their evolution of religion would be characterized by stable low salience of Subjective and Collective Factors.

At baseline, the majority of the patients were Christian (63%); 10% came from other traditional religions (Judaism, Islam and Buddhism), 12% from minority religious movements, and 15% had no religious affiliation. One-third of patients participated in religious activities with other people at least once a month, 14% occasionally and 52% never. One-third of patients felt that their religious communities supported them. Fifty-five percent reported daily individual religious practices, 11% weekly, 13% occasionally, and 21% never. Nearly half of the patients (46%) reported that religion was the most important element in their lives. 74% of the total patient sample rated religion as important to essential in day-to-day life, 68% in giving

meaning to their lives, 61% in giving meaning to their illness, 65% in helping them cope with their illness, 59% in helping them gain control of their illness, and 68% in giving them comfort. Some patients perceived an antagonism between their religion and medication (11%) or supportive therapy (12%). Most patients (83%) felt comfortable talking about religion with psychiatrists.

Table 2 summarizes the evolution of religion over time. Religion was stable in terms of positive or negative religious coping and salience for 63% of patients over time.

For 95% of patients for whom religion was positive at baseline, religion was still positive at follow-up. However, the salience of religion changed significantly for one-third of patients, either increasing or decreasing. For 11 patients, the positive subjective dimension of religion and/or the collective one increased with time. For seven patients, they started again their previous practices in their community, while they felt better (see example 1 in Appendix). Three patients began to lean on private spirituality to cope with voices or demoralization.

For 11 patients, the positive subjective dimension of religion and/or the collective one decreased with time. Four patients gave up religious practices in community due to positive symptoms (paranoid ideations against religious community), negative symptoms (social withdrawal), moving away of the religious community, and reorientation of the whole life. Seven patients stopped to lean on private spirituality to cope with symptoms, either as they considered it as not helping or that they lose their faith. (see example 2 in Appendix).

For 77% of the 13 patients for whom religion was negative at baseline, religion was still negative at follow-up. For a patient, religion was a source of a growing conflict with his spouse of a different religious background. For four patients, the negative subjective dimension of religion decreased over time. Indeed, three patients displayed delusions with religious content at baseline, they were no more deluded at follow-up, but they avoided actively religion by fear a psychotic relapse. A patient lost his faith of a cruel God.

For 8% of patients, positive and negative religion reversed. Indeed, four patients displayed delusions with religious content at follow-up. (see example 3 in Appendix). Inversely, negative religion converted into positive religion for three people, as a resolution of spiritual or religious struggles. (see example 4 in Appendix).

In summary, religion was stable for 63% of the population. Positive changes occurred for 20% of patients (i.e., increase of the salience of religion when it is a resource or a transformation of negative religion to a positive one) and negative changes for 17% (i.e., decrease of the salience of religion when it is a resource or a transformation of positive religion to a negative one).

The pattern of the evolution of religion (stable, positive change and negative change) was independent of demographic and clinical characteristics at intake. It was also independent of religion at intake, as measured by the centrality, the Subjective Factor (1), the Collective Factor (2), the Synergy with treatment Factor (3), the Easiness to talk about religion with psychiatrist (Factor 4), and of the religious affiliation.

No significant results were found concerning the influence of clinical factors on the evolution of religion over time. Age and gender were included as fixed covariates, and symptoms levels (PANSS, GAF, CGI) and the quality of life were included as time-dependant covariates.

There were also no differences at 3-years outcome for social functioning (GAS and QFS frequencies score),

Table 2 Evolution of religion: polarities and salience $n = 92$, outpatients with nonaffective psychotic illness

		Outcome					
		Positive			Negative		
		Groups					
		1	2	3	4	5	6
Baseline							
Religion positive at the individual level							
Group 1	Subjective factor marginal	8	3	–	–	–	–
Group 2	Subjective factor important to essential	7	20	8	1	2	–
Group 3	Subjective and collective factors important	1	3	25	–	1	–
Religion negative at the individual level							
Group 4	Subjective factor marginal	–	–	–	–	1	–
Group 5	Subjective factor important	–	2	–	4	5	–
Group 6	Subjective and collective factors important	–	1	–	–	–	–
Total (%)		17	32	36	5	0	0

Table 3 Subjective 3-years outcome measures according to the evolution of religion among 92 outpatients with nonaffective psychotic illness

3-years outcome	Stability of religion ($n = 58$)		Positive evolution of religion ($n = 18$)		Negative evolution of religion ($n = 16$)		p value*
	Mean (SD)	Median	Mean (SD)	Median	Mean (SD)	Median	
Subjective Quality of Life Rating	6 (2)	8	5 (2)	5	6 (2)	8	<0.05
Quality of Life (WhoQoL-Bref)							
Physical	66 (15)	68	58 (19)	57	57 (15)	57	0.13
Psychological	64 (16)	67	51 (18)	58	51 (16)	54	<0.05
Social	62 (20)	67	49 (17)	50	49 (16)	50	<0.01
Environment	67 (13)	69	63 (14)	59	56 (14)	59	<0.05
Social Functioning Questionnaire (QFS)							
Frequencies of activities	28 (5)	29	28 (3)	28	26 (4)	28	0.48
Satisfaction with activities	31 (4)	31	30 (4)	30	29 (2)	30	<0.05
Self-esteem (SERS)							
Positive self-esteem factor	42 (11)	41	36 (10)	37	42 (9)	40	0.13
Negative self-esteem factor	−26 (10)	−25	−35 (13)	−35	−35 (11)	−34	<0.01

* p value represents statistical significance between the "stability of religion", "positive evolution of religion" and "negative evolution of religion" groups using Kruskal–Wallis test. No statistical significant values for positive evolution of religion versus "negative evolution of religion" groups using Wilcoxon Rank test

symptoms levels (PANSS, CGI), adherence with medication (MARS), substance misuse and suicidal attempts. However, significant differences were observed for subjective outcomes measures (subjective quality of life, satisfaction with social functioning, self-esteem). Table 3 presents the subjective outcome measures at 3-years according to the evolution of religion. Those differences were not accounted by the type of religious change (negative or positive), but by the presence or absence of religious changes. Indeed, compared to changers, patients for whom religion was stable over time were much satisfied with their life and social activities.

Discussion

Contrary to our hypothesis of a stability of religion among patients with chronic schizophrenia or schizo-affective disorders, our data pointed out significant changes for 37% of patients. Even when taking into account patients who declined to participate to follow-up while being not spiritual, nor religious; this proportion still concerned a third of the cohort. Interestingly, these changes were also independent of changes in clinical state. Various motives of changes were elicited in the qualitative analysis. Some motives were directly linked with symptoms of schizophrenia. Impairment of social relationships altered the ability of some patients to join the religious community for worship services and other collective activities. With duration of illness, discouragement could be extended to faith. Other patients searched to be cured by religion.

For some patients, an increase of spirituality and religiousness was only transient, whereas, for others, it brought a turning point in their life toward a long-lasting investment of the spiritual dimension. At times, delusions and/or hallucinations may have been inter-wined with spirituality and religiousness. Disentangling religion from positive psychotic symptoms being not an easy task, this could lead some patients either to fear religion or to live period of healthy spirituality and religiosity with period of turmoil with delusions and/or hallucinations with religious content.

A second contra-intuitive result lies in the fact that positive changes in religion did not lead to a better psychological and clinical outcome and that negative changes did not lead to a worse one. In fact, changes in religion—positive and negative ones—were markers of psychological suffering (i.e., lower subjective quality of life, lower self-esteem, lower satisfaction with social activities) despite of similar clinical and functional status. Studies are still lacking for comparisons to our results. In psychology of religion, the association between religion and happiness, and the stages of evolution of religion may help us to understand those results. Indeed, a robust association between religion and raised levels of happiness has been elicited, which may involve psychological process such as meaning of life, hope and forgiveness [12]. Spirituality plays a key role in the process of psychological recovery from schizophrenia [5]. In the stages of psychological recovery, four key processes were elicited: finding hope, re-establishment of identity, finding meaning in like and taking responsibility of recovery [1].

However, the maturation of faith has been conceptualized as evolving by stages, each change including struggles and suffering [6].

This study has some limits. Results were obtained in Geneva, i.e., a multi-cultural city of Switzerland and are thus characterized by specific social and religious contexts. Our results must also be appraised in function of the population studied, i.e., stabilized patients who had been receiving treatment for psychotic disorders for almost 20 years. In such a situation, our findings point out the key role of religion for psychological quality of life in our population. Instead of a crystallized factor, it appears to be a component of patients' lives which may change over time depending on individual life experiences.

For clinical practice, those results emphasize the need for the clinician to integrate the spiritual and religious dimension in the care of people with schizophrenia. Evaluation of spiritual needs of patients appears to be useful, on a regular basis as it does not appear to be an everlasting trait of the patient. In the course of religious coping among elderly ill, three possible outcomes were found for religious struggles: the persistence of the religious struggle with its destructive force, the fading away of religious coping, and the transformation of the sacred toward a growing faith with its positive resources [19]. In a similar way, our analyses show that religion, as a positive resource, may be lost or refund. Religion, as a source of suffering, may vanish, evolve to become a resource or undermine the whole life.

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Appendix: examples of religious changes

Example 1: increase in positive religious coping

For a 33-year-old woman with paranoid schizophrenia, she began to meet a pastor in order to cope with auditory hallucinations and paranoid delusions. Indeed, her interest in religious matters was born as she tried to make sense of her positive psychotic symptoms. At baseline, she reported a spiritual quest, but she did not belong to a religious community: "Since I am ill, I wonder if God exists. I think my illness is a punishment from God, so it does not seem like such a great injustice". She also used spiritual coping strategies to relieve the distress associated with her symptoms. She believed that her voices came from a malevolent neighbor and she prayed for strength and protection". At 3-year, she reported stronger religious coping strategies and support from a religious community. "I wondered if my voices were demons. I went to see a pastor for exorcism. He told me that it was an illness. I see him each week, and meeting him releases my fears. I have found a positive image of God as someone who is loving, not judgmental."

Example 2: decrease in positive religious coping

A 23-year-old man with paranoid schizophrenia rejected his previous spiritual outlook on life in favor of a more mundane one. He had used religion as a means of coping with delusions and hallucinations for several years. At baseline, he had reported that Buddhism was the center of his life and that he planned to become a monk. Meditation helped him consider his voices and delusions as symptoms of an illness and thus not to be feared. Three years later, he reported that he had renounced becoming a monk, in accordance with his Buddhist master. He had had very rough times after giving up his reason to live. He relapsed with street drugs, attempted suicide, and was hospitalized for several months with severe psychotic symptoms. Finally, he found new purposes in his life (living independently and working) and joined a reinsertion program. He reported: "I have learned a lot from Buddhism; it is a part of my identity; it belongs to me, but nowadays I don't practice meditation anymore. It's being in relationships with other people that give meaning to my life".

Example 3: a shift from positive to negative religious coping

As an example of shifts between positive religion and delusions with religious content over time, a 32-year-old man with schizo-affective disorder reported at baseline that religion had sustained him when he lost his wife and his job. His psychotic illness began with manic symptoms. He said, "I was drinking alcohol and smoking cannabis. I prayed to God to heal me and, once, as I was praying with friends, I felt that I was Jesus-Christ and that I had healing powers. After that, there was a lot of confusion, and I was hospitalized for the first time. But, from this experience of feeling that I was Jesus-Christ, I continue to feel that I am a respectable person, whatever I have lost. And God gives me the strength to fight against sadness and the desire to die". However, at the 3-year follow-up, he had abandoned his previous religious practices and religious community. He also reported that he had dropped out of his psychiatric treatment under a delusion of influence with religious content: "It wasn't me who decided to stop seeing the psychiatrist and stop taking the medication; it was God. God entered into me and took control of my life, for the good and the bad." He denied his illness.

Example 4: a shift from negative to positive religious coping

As an example of this transformation, a 45-year-old man with paranoid schizophrenia had reported at baseline that he had greatly suffered after being rejected by his religious community. "What happened to me was very hard. The spirit group cannot tolerate the fact that I smoke cannabis. I tried to quit several time, but I failed. I have lost all my friends. I have lost the meaning in my life. I no longer believe in spiritism." Three years later, he reported that he had spent a few months at the hospital after a suicide attempt. During his stay, he regularly met with the chaplain, and then he joined a Christian community. He said, "Now, when I feel very deep sorrow, I read the Bible, and I find consolation in Jesus-Christ".

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