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Translation and validation of an Italian language version of the Religious Beliefs and Mental Illness Stigma Scale (I-RBMIS).

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Brief autobiographical paragraph

Dr Luca Pingani is Lecturer of Recovery and Psychiatric Rehabilitation at the University of Modena and Reggio Emilia and Course Program Manager of the Degree Course in Psychiatric Rehabilitation (University of Modena and Reggio Emilia - Italy). He is Research and Training Program Manager at the Department of Mental Health of the Local Health Agency of Reggio Emilia (Italy).

He discussed his doctoral dissertation in Clinical and Experimental Medicine (University of Modena and Reggio Emilia) and attended two post graduate courses in statistical analysis applied to clinical questions and systematic reviews.

The main topics of his research work are psychiatric rehabilitation, stigma and validation of psychometric questionnaires.

- 1 Translation and validation of an Italian language version of the Religious
- 2 Beliefs and Mental Illness Stigma Scale (I-RBMIS).

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Abstract

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Introduction. The aim of this study is to validate the Italian version of the Religious Beliefs and Mental Illness Stigma Scale (I-RBMIS): a self-report measure of religious beliefs which may contribute to stigma for mental disorders, presenting original theoretical constructs, with satisfactory psychometric properties and already used in several studies.

Methods. Scale validation included: linguistic validation; pilot test for understandability; face validity; factor analysis as test of dimensionality; Kaiser-Meyer-Olkin test to evaluate sample sampling adequacy; internal consistency was assessed using Cronbach's alpha; scale validity was assessed through concurrent criterion validity using as gold standard the Italian version of Attribution Questionnaire 27 and Mental Health Knowledge Schedule.

Results. 311 people agreed to participate in the study. Face validity showed that 13 items 33 out of 16 were completely understandable while only three items (4, 9 and 13) highlighted 34 small lexical concerns. The average compilation time was under 4 minutes. Bartlett's test 35 for sphericity was statistically significant ($X^2 = 1497.54$; df = 120; p < 0.001). Cronbach's 36 alpha values were acceptable for both the entire questionnaire (0.80) and for the 37 Morality/Sin subscale (0.73), whereas it was slightly below the standard cut-off for the 38 Spiritually-Oriented Causes/Treatments (0.68). Scale validity showed a positive correlation 39 between I-RBMIS and AQ-27-I, and a negative correlation between I-RBMIS and MAKS-I. 40

Discussion: I-RBMIS demonstrated good psychometric properties to assess stigmatizing
 religious beliefs toward mental illness in general population.

Key words: spiritual stigma, social stigma, surveys and questionnaires, psychometric
validation.

Introduction

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Gordon Allport (Allport 1954) argued that connection between religion and 47 prejudice is paradoxical: religion "makes prejudice and it unmakes prejudice...Some people 48 say the only cure for prejudice is more religion; some say the only cure is to abolish 49 religion" (p. 444). One way to understand this paradox is to examine how one's religious 50 beliefs relate to the type of prejudice in question (e.g., racism or heterosexism), 51 specifically how one's religious beliefs relate to target groups (Laythe et al. 2002). Given 52 that most modern religious groups normally condemn racism (Batson et al. 1993), 53 religious beliefs are likely to correlate negatively with racial prejudice; heterosexism, 54 however, may be related positively with religious beliefs given how many mainstream 55 religions view homosexuality negatively, or at least ambivalently (Laythe et al. 2001; 56 Rowatt and Franklin 2004). Persons with mental illness are another stigmatized group that 57 typically experiences various forms of prejudice and discrimination from various sources, 58 sometimes including their religious communities (Pargament 1997). Why would some 59 religious communities, normally considered a source of social support for the various 60 61 stresses of life, instead contribute to the stresses of persons with mental illness by making them feel devalued, marginalized, or otherwise excluded? 62

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64 Religion and Prejudice toward Persons with Mental Illness

Religious beliefs about mental health are diverse (H. G. Koenig 1998) and the connection between them is not well-studied. Some religious denominations may view mental health concerns within the context of taking care of one's overall health and be open to adherents seeking treatment from mental health professionals. However, other denominations may reject this idea and stigmatize mental health concerns and treatmentoptions.

Specifically, regarding mental health stigma, Peteet (Peteet 2019) describes four 71 ways in which one's religious beliefs can reinforce stigmatizing attitudes: fundamentalist 72 misattribution of psychopathology and traditional ways of 73 thinking, tribalism, understanding. If individuals live their religious beliefs in a *fundamentalist* way, they might 74 consider solutions to their difficulties only from a single perspective (e.g., increased 75 76 engagement with sacred scripture or religious rituals) without considering other possibilities for help or support, such as counseling or medication; at best, they may 77 consider these latter possibilities useless, and at worst even harmful (Dowd & Nielson 78 79 2006). *Tribalism* can be associated with stigma when an individual, who lives in a hermetic social context (like some forms of congregations or religious movements), is expelled 80 because he is considered dangerous to the group itself because of his/her psychic distress 81 (Barnes & Meyer 2012; Breland-Noble et al. 2015). Other sources of stigma are 82 misattribution and association of psychopathological symptoms with elements of the 83 religious *tradition*, such as interpreting suffering as divine punishment toward oneself or 84 one's parents, or as demonic possession (Kovess-Masfety et al. 2018; Rosmarin et al. 85 2018; Ventriglio et al. 2018). These four different contexts may cause serious 86 consequences for people with mental health problems and for people who live with them: 87 lack of trust in health services, over-reliance on non-scientific treatments or rituals, the 88 prohibition to ask for help to health professionals or to specialized facilities, poor 89 adherence to therapeutic recommendations and obstacles in getting in touch with self-help 90 groups or peer-worker groups (Ayvaci 2016; Wamser et al. 2011). 91

Despite the potential for stigma, numerous studies have shown a positive 92 association between religiosity and mental health (Dein, 2018; Hackney & Sanders 2003). 93 For example, religious beliefs often are associated with greater hope, increased sense of 94 meaning in life, higher self-esteem, optimism and life satisfaction (Koenig 2009; Koenig et 95 al. 2012). Religiosity also is associated with lower rates of suicide and a lower intake of 96 drugs and alcohol (Cook et al. 1997; Van Praag 2009). Finally, several studies also 97 highlight how religiosity / spirituality predict lower levels of depression or faster remission 98 of depression (Koenig 2012). 99

To address the paradoxical connection between religious beliefs and mental illness 100 stigma, the American Psychiatric Association Foundation and the Mental Health and Faith 101 102 Community Partnership Steering Committee have jointly published a book entitled "Mental Health - A Guide for Faith Leaders" (American Psychiatric Association Foundation 2016). 103 This partnership was created to encourage a dialogue between mental health 104 professionals and religious leaders: the former have had the chance to share and discuss 105 concepts such as stress, psychological problems, mental disorders and their evidence 106 based treatments while the latter have offered significant reflections on the role of religion 107 and spirituality in the lives of believers and the possibilities that they can offer as support 108 in a therapeutic-rehabilitation program (American Psychiatric Association Foundation 109 2016). 110

Dialogues between mental health professionals and religious leaders are important, but it is also useful to develop psychometric tools that can quantitatively define the presence of scientifically-inaccurate or potentially stigmatizing beliefs about mental illness based on religion in the general population. In this way, it will be possible to study the

dynamics of stigmatization in religious contexts and to undertake further targeted actions
 for reducing its negative effects (Zoppei & Lasalvia 2011).

To the best of our knowledge, there is no psychometric questionnaire in Italian that 117 can evaluate religious beliefs about mental illness. There is at least one published measure 118 of these beliefs in English - the Religious Beliefs and Mental Illness Stigma Scale 119 (Wesselmann and Graziano 2010). Thus, we decided to adapt this questionnaire in an 120 Italian version for three key reasons. First, the original measure presents interesting 121 122 theoretical constructs which we consider extendable to the Italian cultural context. The questionnaire assesses two constructs of potentially stigmatizing religious beliefs about 123 mental illness: "Morality/Sin", which measures beliefs that mental illnesses are associated 124 125 with sinful behavior or moral laxity, and "Spiritually-Oriented Causes/Treatments," which measures beliefs that encourage people to focus on religious practices and rituals (e.g., 126 increased prayer and scripture reading, pastoral counseling, and exorcisms) for coping 127 with mental illness and to avoid secular treatment options. Second, we decided to adapt 128 this measure because its original psychometric properties provided satisfactory results in 129 terms of Cronbach's alpha (Factor 1: 0.88, Factor 2: 0.72) and all the items defining the 130 two factors have a factor loading greater than 0.40 (Wesselmann & Graziano 2010). 131 Third, the constructs assessed by the questionnaire have been studied subsequent 132 published research (Flannelly 2017; Mannarini et al. 2018; Wesselmann et al. 2015; 133 Yelderman 2018). 134

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Methods

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140 *Questionnaire Description*

RBMIS is a self-administered psychometric questionnaire for assessing participants 141 religious beliefs about mental illness (Wesselmann et al. 2015; Wesselmann & Graziano 142 2010). The original 16 items of the RBMIS were on a 9-point rating scale, asking 143 participants to indicate the degree to which they agreed with each statement (from 1: 144 "Strongly Disagree" to 9: "Strongly Agree"). Two belief factors emerged: Morality/Sin 145 (sum of items 1, 2, 3, 5, 6, 8, 9) and Spiritually-Oriented Causes/Treatments (sum of 146 items 4, 7, 10, 11, 12, 13, 14, 15, 16). The measure is scored such that higher scores 147 indicate a person's greater endorsement of potentially stigmatizing religious beliefs 148 towards mental illness. 149

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151 *Measure translation*

The translation of the original version of RBMI was a three-step process. Three 152 native Italian speakers, bilingual in English, independently translated the original 153 questionnaire into Italian: based on the three translations, a unique Italian version was 154 created with the approval of all translators. In the second step, the pooled version was 155 back translated into English by a professional translator not involved in the previous step. 156 From the comparison between the back-translation and the first Italian translation, an 157 initial draft of the Italian questionnaire, for pilot testing, was produced. To evaluate 158 understandability, the draft version was administered to 20 undergraduate students who 159 were in their third year of training for a bachelor's degree in Psychiatric Rehabilitation at 160

the University of Modena and Reggio Emilia. During the administration, each item was read aloud and each student answered the following questions: "Is the statement clearly stated?", "Could the statement be worded more clearly?" and "Is it difficult to identify the right answer for that statement?". The authors (LP, SF, and GM) discussed participants' responses and subsequently revised the items for the beta version to be used in the general population. The beta version is available upon request to the corresponding author.

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169 *Sample recruitment*

The beta version of the I-RBMIS was administered by one of the authors (SG) to 170 individuals in the general population, specifically in the capital cities of the Modena and 171 Reggio Emilia provinces. The author recruited participants in public places, such as 172 shopping centers, squares, markets, recreational clubs, stadiums, post offices, cinema, 173 etc. No stratification was applied in the recruitment. The inclusion criteria were: (a) being 174 18 years of age or more; (b) to provide an informed consent to take part to the study. 175 Clark and Watson (1995) suggested that an adequate sample size for questionnaire 176 validation should be no less than 300 respondents while Comrey and Lee (1992) proposed 177 a graded scale of sample size: 100 respondents = poor; 200 = fair; 300 = good; 500 = 178 very good; \geq 1000 = excellent. We administered the Italian version of RBMIS to 400 179 people expecting a response rate around 75%: 311 (77.75% - largely satisfying the 180 minimum sample size required) agreed to participate in the study. All the research 181 participants were informed about the objectives and procedure of the study 182 and signed the informed consent prior to data collection. 183

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185 <u>Statistical Analysis</u>

Descriptive statistics were computed for each I-RBMIS item and for all collected 186 socio-demographic variables. Questionnaire feasibility was evaluated by calculating the 187 average completion time by the first 20 people who completed the guestionnaire. As a test 188 of dimensionality, exploratory factor analysis was used (Principle Axis Factoring) with 189 Promax rotation, indicating a predefined number of factors equal to that identified in the 190 original version (morality/sin and spiritually-oriented causes/treatments belief factors) to 191 192 verify the exact correspondence of factors in two different cultural context: items with a factor loading of 0.40 or greater were retained in the composite scores (Comrey & Lee, 193 1992). The Kaiser-Meyer-Olkin (KMO) test was used to test sampling adequacy: <0.49 is 194 195 considered unacceptable, from 0.50 to 0.59 miserable, from 0.60 to 0.69 mediocre, from 0.70 to 0.79 middling, from 0.80 to 0.89 meritorious and from 0.90 to 1.00 marvelous 196 (Kaiser 1974). Bartlett's test for sphericity was used to check redundancy between items 197 considering p < 0.05 as a significant value (Snedecor & Cochran 1989). 198

Internal consistency was assessed using Cronbach's alpha (an alpha coefficient of 199 0.70 or greater was considered acceptable; Nunnally 1978). Scale validity was assessed 200 through concurrent criterion validity using Italian versions of two guestionnaires that are 201 considered gold standard stigma measures: the Attribution Questionnaire 27 (AQ-27-I; 202 Corrigan et al. 2002; Corrigan 2000; Pingani et al. 2012; Pingani et al. 2016) and the 203 Mental Health Knowledge Schedule (MAKS-I; Evans-Lacko et al. 2010; Pingani et al. 204 2019). AQ-27-I, a 27-brief statement questionnaire, evaluates in the presence of 205 stigmatizing stereotypes, attitudes, and behaviors toward mental illness among the 206 general population: higher scores indicate higher levels of stigma toward mental illness. 207 MAKS-I is a self-administered 12-item questionnaire assessing participants' knowledge 208

about mental health: a higher score indicates a greater knowledge of scientificallyaccurate information concerning mental health and illness. To verify the I-RBMIS's validity, one would expect a negative correlation between the I-RBMIS total score and the MAKS-I, as well as a positive correlation with the AQ-27-I.

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Results

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- 216 *Face validity and understandability*

The students in the pilot sample were on average 24.93 years old (SD = 3.54), 217 mainly female (N = 13; 65%). All but three items were considered clear and 218 understandable by the entire sample. Item 4 ("People suffering from mental illness are not 219 going to their places of worship enough") was found to be not clear by 3 respondents 220 (15%) because the Italian translation of "places of worship" may not be understandable by 221 everyone. Four respondents (20%) asked the researcher to better specify the meaning of 222 "demons" of item 9 ("Demons are not responsible for causing the symptoms of mental 223 illness") and 1 respondent (5%) was not aware of the meaning of "original sin" described 224 in item 13 ("Mental illnesses are a result of Original Sin"). 225

226

227 Sample characteristics and rating scale scores

The mean age of the validation sample was 33.01 years (minimum = 18; maximum = 82; SD = \pm 15.14). Of the 311 respondents 38.59% (*N* = 120) were male. The sociodemographic characteristics of the sample and the mean total score obtained at the three

231	questionnaires (I-RBMIS,	MAKS-I and	d AQ-27-I)	are	described	in	Table	1	while	the
232	descriptive statistics for ea	ch item are d	lescribed in [·]	Table	e 2.					

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Insert tables 1 and 2 about here

235

236 *Psychometric properties*

The average completion time was 239 seconds (just under 4 minutes) with a standard deviation of \pm 47 seconds.

The exploratory factor analysis results are described in Table 3: all the items defining the two factors (Morality/Sin and Spiritually-Oriented Causes/Treatments belief factors) had a factor loading \geq 0.40, replicating the original loadings for the English version.

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Insert table 3 about here

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The sampling adequacy can be considered "meritorious" (0.82) and the Bartlett's test for sphericity is statistically significant ($X^2 = 1497.54$; df = 120; p < 0.001). Cronbach's alpha values are acceptable for the entire questionnaire (0.80) and for the Morality/Sin subscale (0.73) while it is slightly below the cut-off for the Spiritually-Oriented Causes/Treatments (0.68).

Regarding the scale concurrent validity (Table 4), a statistically significant positive correlation emerged between AQ-27-I and I-RBMIS Total score (r = 0.26; p < 0.001), I-RBMIS Morality/Sin (r = 0.32; p < 0.001) and I-RBMIS Spiritually - Oriented

Causes/Treatments (r = 0.14; p = 0.02). Specifically, higher endorsement of the two 253 religious belief factors (whether separately or combined together) relate to higher 254 endorsements of common secular stigmatizing beliefs about persons with mental illness 255 (as indexed by an established measure that has already been validated in its Italian 256 version). Additionally, the MAKS-I negatively correlates with I-RBMIS Total score (r = -257 0.11; p = 0.04) and I-RBMIS Morality/Sin (r = -0.12; p = 0.03). These statistically 258 significant correlations indicate that a greater knowledge of scientifically-accurate 259 information about mental health and illness is related to lower endorsements of beliefs 260 about mental illness as a result of sin or moral laxity, as well as lower endorsements of 261 beliefs focused on spiritually-oriented causes/treatments for mental illness. 262

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Insert table 4 about here

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Discussion

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The aim of the study was to translate and validate in Italian language the Religious 268 Beliefs and Mental Illness Stigma Scale (I-RBMIS) through face validity analysis, 269 dimensionality factorial analysis, internal consistency analysis and scale validity analysis. 270 Face validity showed that 13 items out of 16 were completely understandable while only 271 three items (4, 9 and 13) highlighted small lexical problems without questioning the 272 meaning of the statements. The average compilation time was less than 4 minutes 273 (238.75 seconds) indicating a quick understanding of the items and a good adaptation to 274 use the evaluation system (9-point likert scale). 275

The original English questionnaire consists of two different factors (Wesselmann et 276 al. 2015; Wesselmann & Graziano 2010): Morality/Sin and Spiritually-Oriented 277 Causes/Treatments. The factorial analysis conducted on the Italian questionnaire 278 replicated the patterns of item loadings found in published studies using the English 279 version (Wesselmann et al. 2015; Wesselmann & Graziano 2010). We believe that these 280 results are important as they demonstrate that future researchers could conduct cross-281 cultural studies on these beliefs and how they relate to other measures of mental illness 282 stigma (Evans-Lacko et al. 2012; Mascayano et al. 2015). Further, the Cronbach alpha 283 values suggest generally acceptable internal consistency, both for the two subscales and 284 for an overall composite. These consistency levels are similar to those found in the English 285 version. 286

In particular, thanks to the initial validation of this questionnaire, it will be possible 287 to investigate how potentially stigmatizing religious beliefs about mental illness can be 288 grafted onto stigmatization processes already present in literature (L. Pingani et al. 2016; 289 Luca Pingani et al. 2012, 2016, 2019), such as the "Responsibility model" and 290 "Dangerousness model" concerning public stigma for mental disorders. These two models 291 are composed of cognitive (stereotypes), emotional (attitude) and behavioral parts. Future 292 research can assess how these religious beliefs influence on these three established 293 components. 294

Finally, the construct validity of the instrument was demonstrated by correlations between the I-RBMIS and two other stigma-related measures that have already been translated into Italian and validated: the AQ-27-I and the MAKS-I. Specifically, potentially stigmatizing religious beliefs were related positively to secular stigmatizing beliefs In this case, therefore, as the knowledge of mental illness increases, there is a reduction of

stigmatizing religious beliefs toward mental illness (Evans-Lacko et al. 2010; Evans-Lacko et al. 2013). Despite the limitations illustrated, we believe that the current psychometric evidence provides support for using the Italian version of the RBMIS in research.

Of course, measurement validation is an ongoing process and there can always be 303 future measurement development to address limitations. The present study has the 304 several limitations. First, we used a convenience sample which is unlikely to be 305 representative of the whole Italian general population. Second, we administered the 306 307 questionnaires within two provinces and therefore our data cannot fully represent the cultural diversity (in particular traditions) that characterizes the Italian population. Third, 308 the mean age of the sample is decidedly lower than that of Italian population (33.01 vs 309 310 44.40) (Istituto Nazionale di Statistica 2019). Fourth, the percentage of males of the sample (38.59%) is decidedly lower than in the general Italian population (48.37%) 311 (Istituto Nazionale di Statistica 2019). Fifth, our pilot sample used to check face validity 312 and understandability was a convenience sample composed by of university students: due 313 to their educational level their comprehension of the questionnaire may not fully 314 correspond to that of the general population. Sixth, since this study protocol did not have 315 a test-retest analysis we are unable to determine the temporal stability of responses. 316 Seventh, the correlation between MAKS-I and the two subscales of I-RBMIS albeit 317 statistically significant, are weak. Lastly, this study used exploratory factor analysis on the 318 data, which is a descriptive approach rather than a confirmatory/inferential approach. 319 However, given this study focused on translating a questionnaire into a different cultural 320 and linguistic context, we therefore decided to use the exploratory factor analysis to check 321 the possibility of maintaining the original two factors construct using a predefined number 322 of factors. Future validation studies can use these data to conduct a priori power analyses 323

best suited for confirmatory approaches and further investigate the factor structure. Regardless of these limitations, we believe the I-RBMIS provides an exciting research tool for future exploration on understanding the complex connection between religious beliefs and mental health issues.

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Compliance with Ethical Standards

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331 *Conflict of interest*

The authors have no financial interest in the subject matter or materials discussed in this manuscript. The authors declare that there is no conflict of interest regarding the publication of this article. The permission to translate and validate the Religious Beliefs and Mental Illness Stigma Scale was received from EDW.

336

337 Compliance with Ethical Standards

According to the Internal Review Board, the ethical approval for this study was not necessary because it did not involve cases nor patients: the questionnaires used were administered to general population and do not produce diagnosis nor allow the definition of psychopathological conditions. Detailed information on the study was given to each participant and consent was asked also for processing of personal data. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and

345	institutional committees on human experimentation and with the Helsinki
346	Declaration of 1975, as revised in 2008.
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348	Data Availability
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350	All data used for this study are available upon request by the corresponding author.
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	Mean	SD	Minimum	Maximum			
Age	33.01	±15.14	18	82			
I-RBMIS Total score	27.66	±12.55	16	101			
I-RBMIS Morality/Sin	14.17	±7.21	9	58			
I-RBMIS Spiritually - Oriented	12.40		7	40			
Causes/Treatments	13.49	±7.33	/	43			
MAKS-I Total score	20.78	±2.43	10	29			
AQ-27-I	102.08	±25.40	49	172			
		N	ġ,	6			
Sex							
Male	12	20	38.	.59			
Female	19	91	61.41				
Civil status							
Unmarried	20	08	66.88				
Married	8	9	28.	.61			
Separated / Divorced	1	.0	3.	22			
Widow / Widower	4	4	1.29				
Citizenship							
EU	30	03	97.	.43			
non-EU	8	8	2.	57			
Highest level of education							
Primary school diploma	-	2	0.0	65			
Middle school diploma	2	.4	7.	72			
High school graduation	19	91	61.41				
Bachelor's degree	9	01	29.26				
Religious affiliation							
Christian	2	16	69.4	15%			
Agnostic	3	9	12.5	54%			
Atheist	5	6	18.0)1%			

Table 1. Socio-demographic characteristics of the sample and rating scalesscores.

I-RBMIS: Italian version of the Religious Beliefs and Mental Illness Stigma Scale MAKS-I: Italian version of Mental Health Knowledge Schedule AQ-27-I: Italian version of Attribution Questionnaire 27 EU: European Union

Table 2. Frequencies and percentage related to the answers given to each item

	1 St Dis	rongly agree		2		3		4		5		6		7		8	9 Si A	trongly gree
	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%	N	%
Item 1 Compared to a minister / pastor, a counselor / therapist would be much better at helping a person suffering from a mental illness. $*\Delta$	164	52.73	52	16.72	43	13.83	22	7.07	19	6.11	2	0.64	2	0.64	4	1.29	3	0.96
Item 2 God's healing is all a person suffering from a mental illness needs—nothing else should be relied on.	224	72.03	37	11.90	23	7.40	11	3.54	12	3.86	1	0.32	2	0.64	0	0.00	1	0.32
Item 3 Persons suffering from mental illness are being tormented by the Devil.	244	78.46	35	11.25	9	2.89	5	1.61	8	2.57	3	0.96	3	0.96	2	0.64	2	0.64
Item 4 People suffering from mental illness are not going to their place of worship enough.	238	76.53	35	11.25	12	3.86	7	2.25	10	3.22	5	1.61	1	0.32	0	0.00	3	0.96
Item 5 It is superstitious to believe a person suffering from mental illness is possessed by demons. Δ	193	62.06	32	10.29	21	6.75	7	2.25	8	2.57	5	1.61	7	2.25	4	1.29	34	10.93
Item 6 Mental illnesses should be healed by having people pray over the afflicted person.	176	56.59	62	19.94	23	7.40	14	4.50	20	6.43	7	2.25	4	1.29	1	0.32	4	1.29
ltem 7 A person's relationship with God has nothing to do with their suffering from a mental illness. Δ	275	88.42	23	7.40	4	1.29	2	0.64	5	1.61	1	0.32	0	0.00	0	0.00	1	0.32
Item 8 Prayer is not the only way to fix a mental illness. \varDelta	256	82.32	28	9.00	11	3.54	4	1.29	7	2.25	1	0.32	2	0.64	0	0.00	2	0.64
Item 9 Demons are not responsible for causing the symptoms of mental illness. * Δ	214	68.81	36	11.58	13	4.18	2	0.64	9	2.89	8	2.57	1	0.32	6	1.93	22	7.07
Item 10 Mental illnesses result from an immoral or sinful lifestyle.	231	74.28	38	12.22	12	3.86	9	2.89	10	3.22	7	2.25	3	0.96	1	0.32	0	0.00
Item 11 A person suffer from mental illnesses because they are not sorry for their sins.	267	84.57	28	9.97	4 9	2.89	2	0.96	3	0.96	2 4	1.29	2	0.52	0	0.00	0	0.00
Item 13 Mental illnesses are a result of Original Sin. Item 14 Moral weakness is the main cause of mental illness.	269 178	86.50 57.23	26 37	8.36 11.90	4 14	1.29 4.50	4 8	1.29 2.57	3 25	0.96 8.04	0 24	0.00 7.72	1 17	0.32 5.47	0 6	0.00 1.93	4 2	1.29 0.64
Item 15 A person suffering from mental illness is not relying on their faith like they should.	221	71.06	38	12.22	22	7.07	10	3.22	6	1.93	10	3.22	3	0.96	0	0.00	1	0.32
Item 16 People have mental illnesses because someone else sinned against them.	242	77.81	17	5.47	13	4.18	7	2.25	15	4.82	4	1.29	11	3.54	1	0.32	1	0.32
* Reverse score in the Italian version																		

 Δ Reverse score in English version

	Morality/Sin	Spiritually-Oriented Causes/Treatments
Item 1 *	-0.37	0.48
Item 2	-0.27	0.55
Item 3	-0.16	0.61
Item 4	0.53	0.08
Item 5 *	-0.40	0.42
Item 6	-0.14	0.63
Item 7	0.46	0.25
Item 8	-0.23	0.66
Item 9 *	-0.20	0.42
Item 10	0.76	0.53
Item 11	0.63	0.27
Item 12	0.67	0.54
Item 13	0.40	-0.10
Item 14	0.49	0.38
Item 15	0.56	0.23
Item 16	0.48	0.25
* Reverse score in Italian v	ersion	

Table 3. Factor loading of the two factors: Morality/Sin and Spiritually-OrientedCauses/Treatments

	I-RBMIS Morality/Sin	I-RBMIS Spiritually - Oriented Causes/ Treatments	MAKS-I Total score	AQ-27-I
I-RBMIS Total score	r = 0.86 p < 0.001	r = 0.87 p < 0.001	r = -0.11 p = 0.04	r = 0.26 p < 0.001
I-RBMIS Morality/Sin		r = 0.50 <i>p</i> < 0.001	r = -0.12 p = 0.03	r = 0.32 p < 0.001
I-RBMIS Spiritually - Oriented Causes/ Treatments			r = -0.07 <i>p</i> = 0.22	r = 0.26 <i>p</i> < 0.001
MAKS-I Total score				r = -0.16 p = 0.004
AQ-27-I				

Table 4. Correlations between the Italian versions of the Religious Beliefs andMental Illness Stigma Scale, the Attribution Questionnaire 27 and the MentalHealth Knowledge Schedule's score

I-RBMIS: Italian version of the Religious Beliefs and Mental Illness Stigma Scale MAKS-I: Italian version of Mental Health Knowledge Schedule AQ-27-I: Italian version of Attribution Questionnaire 27