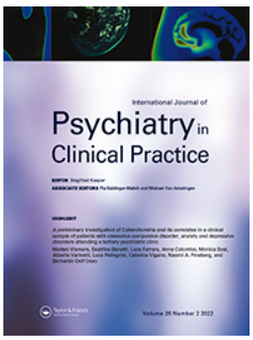

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ORIGINAL ARTICLE

Part of the solution yet part of the problem: factors of schizophrenia stigma in mental health professionals

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ABSTRACT

Background: Stigma is highly prejudicial to persons with schizophrenia, their families, the society and the health care system. Mental health professionals (MHP) are considered to be one of the main sources of schizophrenia stigma.

Objectives: The aim of the study was to identify individual and contextual factors associated with stigma in MHP in its three dimensions (stereotypes, prejudices, discrimination, Fiske, 1998).

Methods: An online survey was conducted with specific measures of MHP stigma (stereotypes, prejudices and discrimination). Four categories of potential associated factors were also measured: sociodemographic characteristics, contextual characteristics (e.g., Work setting), individual characteristics (e.g., Profession, Recovery-oriented practices) and theoretical beliefs (e.g., Biological beliefs, Perceived similarities, Continuum *versus* Categorical beliefs).

Results: Responses of 357 MHP were analysed. Factors that were the most strongly associated with MHP stigma were Perceived similarities, Categorical beliefs, Biological beliefs, Recovery-oriented practice and Work setting (independent practice). Conversely, Gender, Specific trainings in stigma or recovery and Cognitive aetiology beliefs showed no association with any of MHP stigma dimension. Remaining factors show associations with a weak effect size.

Conclusions: The survey results suggest that MHP stigma is more influenced by individual factors such as theoretical beliefs and recovery-oriented practices than contextual factors. These original results provide perspectives for reducing stigma in mental health practices.

KEY POINTS

- Mental health professionals (MHP) considering they share similarities with persons with schizophrenia or believing that schizophrenia is not a discrete social category but rather the extreme on a continuum between 'normal' and 'pathologic' reported less stigmatisation.
- MHP holding higher professional utility beliefs and using recovery-oriented practice reported fewer stereotypes, prejudice and discrimination.
- Other factors such as age, academic level, contact frequency, familiarity and multidisciplinary practice show associations with a weak effect size.

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Stigmatisation; mental health professional; schizophrenia

Introduction

Stigmatisation in mental illness

Symptoms, self-esteem, empowerment, quality of life, seeking and adhering to mental health care suicidality … all these indicators are negatively affected by stigma (Corrigan et al., 2014; Gerlinger et al., 2013; Lysaker et al., 2008, 2009; Sharaf et al., 2012). Public stigma (i.e., including the cognitive, affective and behavioural reactions of those who stigmatise, Bos et al., 2013) also adversely impacts employment, income, public views about the allocation of social benefits and healthcare costs (Sharac et al., 2010). More knowledge is needed about stigmatisation and its causes in order to be able to successfully fight discrimination and promote diversity (Angermeyer & Dietrich, 2006).

Since the pioneering work in sociology, stigmatisation has been conceptualised according to three dimensions (for a precise description of the dimensions see Thornicroft et al., 2007; Fiske 1998): (i) *stereotypes* (i.e., beliefs about a social group such as dangerousness, poor prognosis, incompetency/unpredictability or blame Angermeyer & Dietrich, 2006), (ii) *prejudices* (i.e., affective components such as fear or empathy), and (iii) *discrimination* (i.e., behavioural reactions such as avoidance or flight, Corrigan & Penn, 1999). A review of qualitative studies reported that the health care system (including mental health professionals [MHP]) is one of the major sources of stigmatisation identified by persons with schizophrenia (Mestdagh & Hansen, 2014). Despite its importance, stigma in MHP has received little attention in comparison with stigma in the general population. Furthermore, the

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available data are international and no study to date has been conducted in French MHP. This may be of interest given that the recovery movement and psychosocial rehabilitation began later in France than in most of Europe and North America.

Stigma in MHP

In a recent literature review focussed on schizophrenia stigma in MHP (Valery & Prouteau, 2020), we reported that schizophrenia is one of the most stigmatised mental illnesses (i.e., beliefs of dangerousness, incompetency, poor prognosis and desire for social distance). In comparison with other social groups (general population, relatives, other professionals and persons with schizophrenia themselves), MHP consistently report fewer dangerousness beliefs towards schizophrenia and more positive beliefs regarding pharmacological treatment. Nevertheless, results are less consistent regarding prognosis beliefs and desire for social distance. As experts in mental illness, it may be surprising that MHP hold stereotypes about persons they accompany frequently. A review recently discussed this association between familiarity and stigmatisation (Corrigan & Nieweglowski, 2019). The authors proposed a U-shaped relationship between familiarity and stigma 'that includes the expected inverse distribution (greater familiarity leads to less public stigma) and a provocative, positive relationship (familiarity in some groups leads to worse public stigma)'. (Corrigan & Nieweglowski, 2019, p. 40). MHP were included in this provocative positive relationship.

Results of the specific review also showed that many factors may influence schizophrenia stigma in MHP (Valery & Prouteau, 2020). We classified these factors in four dimensions: sociodemographic information, professional contextual characteristics, professional individual characteristics and theoretical beliefs. Regarding sociodemographic information, age and academic level have been inconsistently associated with stigma, and no firm conclusions regarding the nature of their influence can be drawn. Among contextual professional characteristics, work context has been clearly associated with stigma. Indeed, MHP working in community settings with outpatients report less stigma than those working in acute psychiatric services with inpatients. Among individual professional characteristics, type of mental health profession and length of practice are inconsistently related to stigma. Finally, among theoretical beliefs, biological aetiological beliefs about schizophrenia lead to more stereotyped beliefs (for another recent review, see Larkings & Brown, 2018).

Some of these inconsistencies in previous studies may stem from methodological heterogeneity regarding the targeted stigma dimension (stereotype, prejudice or discrimination). Moreover, questions remain about the relative importance of factors associated with stigmatisation in MHP, as previous studies usually included only one or two variables. In addition, some potentially associated factors have never been included in previous studies, despite their relevance. For example, familiarity, i.e., having a relative concerned about schizophrenia or having been concerned about schizophrenia oneself, can lead to less stigma in the general population (Corrigan & Nieweglowski, 2019).

Moreover, factors related to professional utility beliefs such as personal accomplishment have been related to avoidant attitudes (a construct close to stereotype and prejudice) towards severe mental illness in MHP (Zaninotto et al., 2018). Given the recent changes in psychiatry policies that foster recovery orientation within mental health practices (Bird et al., 2014), other relevant factors may be MHP' theoretical orientation (i.e., psychoanalysis, cognitivo-behaviourism, neuropsychology, systemic) and the importance attached to the recovery philosophy. Also, available data are international, and no study to date has been conducted in French MHPs. This may be of interest given that the recovery movement and psychosocial rehabilitation came to France later than to most of Europe and North America.

Additionally, other theoretical beliefs, related to the vision of schizophrenia and mental illness in general may have an impact on MHP stigma. For example, controversies raised by mental health classifications such as the DSM (Read et al., 2013) oppose a categorical vision (schizophrenia as a discrete category which differs from the general population) and a continuum vision (schizophrenia conceived rather as the extreme on a continuum between 'normal' and 'pathologic' functioning). Some recent findings obtained in the general population showed that continuum beliefs and perceived similarities between a person from the general population and one with schizophrenia are associated with less stigma (Violeau et al., 2020). In the same line, social psychology studies conducted in the general population showed that an incremental vision of schizophrenia (i.e., seeing schizophrenia as malleable and likely to get better) is associated with less stigma (Read et al., 2006; Ryazanov & Christenfeld, 2018).

Aims

The aim of the study was to identify predictors of schizophrenia stigma in MHP. This study is the first focussing on MHPs' stigma of schizophrenia according to the three dimensions of the stigma model (stereotype, prejudice and discrimination) and including four levels of potential predictors: socio-demographic characteristics, professional contextual characteristics, professional individual characteristics and theoretical beliefs.

Methods

Procedure

The STIGMAPRO Survey was conducted between November 2019 and January 2020 in France. We designed an online study using Limesurvey® free software. Cookies were used to prevent multiple participation. To protect participants' anonymity, several parameters were blocked and not registered by Limesurvey® (IP address, date and time when completing the survey). Participants' responses were collected without any time constraint. Participants could not save their responses so that they could complete the questionnaire later. MHP were recruited on social networks or by professional directory and were invited to complete a survey about their opinions regarding schizophrenia. Inclusion criteria were: (1) to be a MHP (such as psychiatrists, psychologists, nurses, occupational therapists, mental healthcare assistants and professional peer helpers), (2) to work or have worked with adults with schizophrenia. Professionals with no specific training in mental health such as social workers, general practitioners, speech therapists, specialised educators, healthcare managers and secretaries were excluded.

According to the objectives of the study (i.e., identifying associated factors) and feasibility, a convenience sample strategy was preferred to a representative sample. Our target sample size was 316 participants. We attempted to recruit up to 347 individuals, assuming a maximum of 10% of extreme data. We used the software program G*Power to conduct a power analysis. Our goal was to obtain 0.80 power to detect a weak effect size of $f^2 = 0.07$ at the standard 0.05 alpha error probability (Linear multiple regression: Fixed model, 20 predictors).

After informed consent was obtained, participants completed a 20-min questionnaire targeting stigmatisation and potential associated factors. The order of administration of the scales and the items within each scale were randomised thanks to the survey software. Finally, participants were asked to answer socio-demographic questions. This study was conducted in accordance with French bioethics laws (Jardé Law, 9 May 2017) involving research on human beings and has been performed in accordance with the ethical standards laid down in the 1964 Declaration of Helsinki and its later amendments.

Measures

Stigmatisation

Existing stigmatisation measures for MHP show several limitations (i.e., lack of exhaustive measure, lack of specific measure of MHP representations, lack of measure based on a validated stigmatisation model). Owing to these limitations, we developed the STIGMAPRO scale as a specific measure of MHP stigmatisation. To maximise the scale validity, all items were drawn from tools used in previous studies, and internal consistencies were systematically checked. In addition, the scale was designed in accordance with the three dimensions of the stigma model (Corrigan & Penn, 1999; Fiske, 1998). For each dimension, items were drawn from previous studies investigating stigmatisation in MHP (for a review, see Valery & Prouteau, 2020). The STIGMAPRO scale thus contains three subscales:

- Stereotype subscale: exploring beliefs of dangerousness (three items, based on Grausgruber et al. (2007) and Van Dorn et al. (2005)), pessimism (three items based on Jorm et al. (1999)), blame/responsibility (four items based on a previous study conducted by the research team) and incompetence (three items based on Magliano et al. (2004) and Stuber et al. (2014)) in persons with schizophrenia (total: 13 items). Sentences were sometimes slightly modified if necessary for the sake of clarity in French. Each item was rated on a 7-point Likert scale (from 1: totally false to 7: totally true). The mean total score (addition of each item score/number of items) ranged from 1 to 7, higher scores indicating more agreement with stereotypical beliefs. The internal consistency was found to be satisfactory, with McDonald's $\omega = 0.8$.
- Prejudice subscale: exploring feelings of compassion, serenity, anxiety and fear regarding persons with schizophrenia (four items, inspired from Harmon-Jones et al. (2016)). Each item was rated on a 7-point scale (1: Not at all, 2: Slightly, 3: A little, 4: Moderately, 5: Quite a bit, 6: A lot, 7: Extremely). The mean score ranged from 1 to 7, higher scores indicating more agreement with prejudice. The internal consistency was found to be satisfactory, with McDonald's $\omega = 0.66$.
- Discrimination subscale: exploring intended discrimination with desire for social distance (two items drawn from Social distance scale Link et al., 1997). Each item was rated on a 7-point Likert scale (from 1: totally disagree to 7: totally agree). The mean score ranged from 1 to 7, higher scores indicating the participant showed less desire for social distance. The internal consistency was found to be satisfactory, with Spearman's rho = 0.66.

Associated factors

Potential predictors were not chosen in an exploratory way but were drawn from a previous systematic review of the international literature (Valery & Prouteau, 2020) and were organised on four levels: (i) sociodemographic characteristics, (ii) contextual professional characteristics (e.g., multidisciplinary team), (iii) individual professional characteristics (e.g., years of practice, utility beliefs, recovery-oriented practice) and (iv) theoretical beliefs, representing beliefs held by professionals on schizophrenia (e.g., theoretical orientation).

Sociodemographic information. At the end of the survey, participants had to report socio-demographic information such as age, gender, academic level and familiarity, i.e., if they knew anyone with schizophrenia in their neighbourhood, family, friends and colleagues.

Contextual professional characteristics. Participants had to report their main work setting (inpatient setting, psychological consultation centre, independent practice or other), the frequency of their contact with person with schizophrenia (more than one/day, more than one/week, more than one/month, no longer any contact), and if they worked in a multidisciplinary team.

Individual professional characteristics. To assess recovery-oriented practice, we developed the Recovery-Oriented Practice scale (McDonald's $\omega = 0.84$), with six items drawn from a recovery model and guidelines (Bird et al., 2014), targeting practices involving: hopeful language, information about care and rights, collaboration with families/caregivers, community inclusion, connection with peers (see online Annexe for a complete description of items). Each item was rated on a 7-point frequency scale (from 1: never to 7: systematically), higher scores indicating more frequent use of recovery-oriented practices. Three items assessed participants' beliefs regarding their own professional utility in their work (McDonald's $\omega = 0.84$; Lebowitz & Ahn, 2014), higher scores indicating strong beliefs in one's own professionals utility. Two items drawn from a work arduousness scale assessed ethical conflict (Spearman's rho = 0.74; Laberon & Lagabrielle, 2013), higher scores indicating strong ethical conflict in practice. Finally, participants were asked their profession, number of years of practice, and whether they had received specific information regarding concepts of stigma or recovery during their initial or further training.

Theoretical beliefs. A 6-item Aetiological beliefs scale (McDonald's $\omega = 0.79$) assessed beliefs regarding schizophrenia aetiology (i.e., biological, psychological and environmental) on the basis of previous studies (Ahn et al., 2009). This scale allowed us to calculate the percentage of points awarded to biological items among the total points awarded on this scale by the participant. The greater the share of biological beliefs, the more schizophrenia is seen as a biological pathology to the detriment of other types of factors. Considering evolution in the conceptualisation of schizophrenia as a neurodevelopmental disorder, three additional items assessed beliefs regarding the importance of cognitive impairment in schizophrenia (Cognitive beliefs scale, McDonald's $\omega = 0.62$), higher scores indicating strong cognitive vision on schizophrenia. Similarity, Categorical and Continuum items were also included (Violeau et al., 2020). The Similarity scale (two items, Spearman's rho = 0.81) assessed participants' beliefs regarding their shared similarities or common points with persons with schizophrenia, higher scores indicated higher views of similarity with persons with schizophrenia. Categorical (two items, Spearman's rho = 0.50) and Continuum (two items, Spearman's rho = 0.38) scales assessed beliefs regarding schizophrenia as a discrete social category, or as a continuum between normal and schizophrenia, respectively. The incremental beliefs of schizophrenia scale (two

items, Spearman's rho = 0.37) assessed beliefs that schizophrenia is malleable and can change with effort (Dweck et al., 1995).

Analyses

R software version 3.5.1 was used to perform the analysis. As recommended by Revelle and Zinbarg (2009), total omega was preferred to Cronbach's alpha to assess internal consistency. Four models of multiple linear regression were used to identify the best predictors of stigmatisation among (i) theoretical beliefs, (ii) individual professional characteristics, (iii) contextual professional characteristics and (iv) sociodemographic information. Effect sizes were computed and interpreted according to Fritz et al. (2012).

Regarding desire for social distance score (i.e., intended discrimination), multiple linear regression was not applicable because of the heteroscedasticity of residuals, in all models, assessed with the non-constant variance score test ($p < 0.001$). Nonparametric analyses were thus applied: Spearman's rho, Mann–Whitney U test and Kruskal–Wallis tests were used to find relevant variables associated with desire for social distance.

Results

Sample

A total number of 1012 participants clicked on the survey link, and 482 completed it entirely. Finally, 357 participants met the inclusion criteria (see Tables 1 and 2 for their detailed characteristics).

Predictors of stereotype score

Multiple regression results with STIGMAPRO scale stereotype (stereotyped beliefs) score as criterion are displayed in Table 3. Among socio-demographic characteristics, age, academic level and familiarity were significant predictors of stereotype score. A greater age was associated with a higher stereotype score. On the contrary, greater academic level and familiarity were associated with a lower stereotype score. For all these predictors, effect sizes were weak. Among contextual professional characteristics, work setting was the only significant predictor, with a medium effect

Table 1. Participants' characteristics

	Total	Nurses	Psychiatrists	Psychologists	Others
N	357	147	74	78	58
	100%	41%	21%	22%	16%
Sociodemographic characteristics					
Age in years: mean (sd)	38.4 (11.6)	39 (10.8)	43 (12.8)	34.1 (9.76)	36.6 (11.8)
Gender					
Man	95 (27%)	31 (21%)	38 (51%)	14 (18%)	12 (21%)
Woman	262 (73%)	116 (79%)	36 (49%)	64 (82%)	46 (79%)
Academic level					
>5	81 (23%)	0 (0%)	72 (97%)	9 (12%)	0 (0%)
5	85 (24%)	11 (7%)	1 (1%)	69 (88%)	4 (7%)
3	155 (43%)	117 (80%)	0 (0%)	0 (0%)	38 (66%)
<3	36 (10%)	19 (13%)	1 (1%)	0 (0%)	16 (28%)
Familiarity (yes)	114 (32%)	42 (29%)	26 (35%)	29 (37%)	17 (29%)
Contextual professional characteristics					
Work setting					
Full-time hospitalisation service	92 (25%)	45 (31%)	21 (28%)	8 (01%)	18 (31%)
Community mental health centre	52 (15%)	17 (12%)	14 (19%)	18 (23%)	3 (5%)
Independent practice	47 (13%)	23 (16%)	11 (15%)	11 (14%)	2 (3%)
Others	166 (46%)	62 (42%)	28 (38%)	41 (53%)	35 (60%)
Contact frequency:					
>1/d	204 (57%)	99 (67%)	46 (62%)	19 (24%)	40 (69%)
>1/week	70 (20%)	20 (14%)	17 (23%)	25 (32%)	8 (14%)
<1/week	24 (7%)	4 (3%)	4 (5%)	13 (17%)	3 (5%)
No longer	59 (17%)	24 (16%)	7 (9%)	24 (31%)	7 (12%)
Multidisciplinary team					
Yes	305 (85%)	119 (81%)	64 (86%)	66 (85%)	56 (97%)
Individual professional characteristics					
Recovered-oriented practice: mean (sd)	5.67 (0.9)	5.48(1)	5.88 (0.80)	5.71 (1)	5.81 (0.86)
Professional utility belief: mean(sd)	5.56 (1.1)	5.61(1)	5.72 (0.9)	5.27 (1.4)	5.62 (1)
Ethical conflict: mean (sd)	1.92 (1.3)	2.17(1.4)	1.91 (1.3)	1.38 (0.83)	2 (1.4)
Years of practice: mean (sd)	12.1 (10.3)	13.6(9.8)	14.7 (11.7)	8.53 (8.7)	9.7 (9.9)
Recovery-trained (yes)	264 (74%)	104(71%)	58 (78%)	57 (73%)	45 (78%)
Stigma-trained (yes)	247 (69%)	94(64%)	51 (69%)	58 (74%)	44 (76%)
Theoretical believes					
Theoretical orientation of participant					
CBT[a]	77 (22%)	29 (20%)	14 (19%)	27 (35%)	7 (12%)
Psychoanalysts	45 (13%)	17 (12%)	8 (11%)	13 (17%)	7 (12%)
Humanists	49 (14%)	24 (16%)	7 (9%)	7 (9%)	11 (19%)
Others	130 (36%)	39 (27%)	37 (50%)	29 (37%)	25 (43%)
Do not know	56 (16%)	38 (25%)	8 (11%)	2 (3%)	8 (14%)
Biological aetiological beliefs: mean (sd)	45.7 (14)	42.6 (12.2)	54.4 (13.8)	47 (14.3)	40.8 (13.4)
Cognitive beliefs: mean (sd)	4.63 (1.3)	4.32 (1.2)	5.14 (1.2)	4.67 (1.3)	4.71 (1.1)
Continuum beliefs: mean (sd)	2.52 (1.5)	2.27 (1.4)	2.18 (1.2)	3.25 (1.68)	2.59 (1.43)
Categorical beliefs: mean (sd)	3.01 (1.5)	3.08 (1.6)	3.01 (1.6)	2.87 (1.4)	3.04 (1.6)
Incremental beliefs: mean (sd)	5.91 (0.9)	5.86 (0.9)	6.09 (0.83)	5.8 (1)	5.94 (0.9)
Similarity: mean (sd)	3.80 (1.83)	3.53 (1.9)	3.55 (1.8)	4.42 (1.7)	3.95 (1.8)

[a]CBT: cognitive behavioural therapy. Other professions: assistant nurses, peer assistants, occupational therapists.

Table 2. STIGMApro scale scores details.

	Total	Nurses	Psychiatrists	Psychologists	Others
Stereotype score: mean (sd)	2.76 (0.8)	2.91 (0.8)	2.63 (0.7)	2.56 (0.7)	2.83 (0.8)
Prejudice score: mean (sd)	3.09 (0.9)	3.19 (1)	2.91 (0.7)	2.95 (0.8)	3.23 (1.1)
Discrimination score[a]: mean (sd)	6.05 (1.3)	5.82 (1.4)	5.95 (1.4)	6.51 (0.9)	6.2 (1.4)

[a]This discrimination score is a social distance score, lower scores indicating more agreement with social distance, i.e., higher discrimination score.

Table 3. Regression results using stereotype score as criterion.

Predictor	*b(se)*	*t* value	*p* Value	*beta*	*beta* 95% CI [LL,UL]	Adjusted Eta^2	Fit
Model 1: Sociodemographic characteristics							
(Intercept)	2.267 (0.18)	12.675	<0.001		[−0.352, 0.352]		
Age	0.009 (0.00)	2.546	**0.011**	0.140	[0.133, 0.147]	0.012	
Gender: Men	0.056 (0.10)	0.564	0.573	0.031	[−0.157, 0.219]	0.000	
Academic level:						0.040	
>5	0.157 (0.12)	1.266	0.206	0.087	[−0.157, 0.331]		
3	0.290 (0.11)	2.644	**0.009**	0.187	[−0.029, 0.403]		
<2	0.477 (0.15)	3.140	**0.002**	0.187	[−0.112, 0.485]		
Familiarity: yes	−0.271 (0.09)	−3.110	**0.002**	−0.164	[−0.336, 0.007]	0.026	
							F(6,350) = 4.771 *p* Value = <0.001 Adjusted R^2 = 0.060
Model 2: Contextual professional characteristics							
(Intercept)	2.860 (.17)	16.846	<0.001		[−0.334,0.334]		
Work setting:						0.070	
Independent practice	0.352 (.17)	2.081	**0.038**	0.155	[−0.178,0.487]		
Other	−0.145 (.09)	−1.461	0.145	−0.094	[−0.289,0.101]		
Community mental health centre	−0.025 (.13)	−0.185	0.854	−0.011	[−0.276, 0.253]		
Multidisciplinary team: yes	−0.135 (.15)	−0.911	0.363	−0.062	[−0.355, 0.230]	0.005	
Contact frequency:						0.005	
>1/week	0.051(.11)	0.478	0.633	0.026	[−0.185, 0.238]		
<1/week	0.131 (.16)	0.805	0.422	0.043	[−0.278, 0.364]		
No longer	0.156 (.08)	1.261	0.208	0.075	[−0.168, 0.318]		
							F(7,349) = 4.263 *p* value = <0.001 Adjusted R^2 = 0.060
Model 3: Individual professional characteristics							
(Intercept)	4.120 (0.28)	14.659	<0.001		[−0.553, 0.553]		
Recovered-oriented practice	−0.152 (0.05)	−3.291	**0.001**	−0.184	[−0.274, −0.093]	0.0800	
Professional utility belief	−0.129 (0.04)	−3.374	**<0.001**	−0.187	[−0.262, −0.111]	0.025	
Ethical conflict	−0.009 (0.03)	−0.272	0.786	−0.014	[−0.076, 0.048]	0.000	
Profession:						0.041	
Nurses	0.299 (0.11)	2.750	**0.006**	0.191	[−0.023, 0.405]		
Psychiatrists	0.082 (0.12)	0.706	0.481	0.045	[−0.195, 0.286]		
Other	0.324 (0.13)	2.554	**0.011**	0.155	[−0.094, 0.405]		
Years of practice	0.012 (0.00)	2.972	**0.003**	0.153	[0.145, 0.161]	0.025	
Recovery-trained: yes	−0.056 (0.10)	−0.557	0.578	−0.032	[−0.231, 0.167]	0.001	
Stigma-trained: yes	−0.073 (0.10)	−0.766	0.444	−0.044	[−0.233, 0.145]	0.004	
							F(9,347) = 7.143 *p* Value = <0.001 Adjusted R^2=0.134
Model 4: Theoretical believes							
(Intercept)	4.392 (0.31)	14.134	<0.001		[−0.611, 0.611]		
Theoretical orientation:						0.035	
Humanism	−0.168 (0.12)	−1.413	0.158	−0.075	[−0.309, 0.159]		
Psychoanalysis	−0.257 (0.13)	−2.000	**0.046**	−0.111	[−0.364, 0.142]		
Other	−0.238 (0.09)	−2.585	**0.010**	−0.149	[−0.330, 0.032]		
Do not know	−0.037 (0.12)	−0.321	0.748	−0.018	[−0.245, 0.210]		
Biological aetiological belief	−0.013 (0.00)	−4.911	**<0.001**	−0.228	[−0.233, −0.223]	0.098	
Cognitive beliefs	0.017 (0.03)	0.597	0.550	0.028	[−0.029, 0.086]	0.003	
Continuum beliefs	−0.010 (0.03)	−0.392	0.695	−0.019	[−0.069, 0.031]	0.046	
Categorical beliefs	0.096(0.02)	4.031	**<0.001**	0.191	[.144,.238]	0.110	
Incremental beliefs	−0.117 (0.04)	−3.074	**0.002**	−0.139	[−0.213, −0.064]	0.047	
Similarity	−0.148 (0.02)	−7.152	**<0.001**	−0.351	[−0.392, −0.310]	0.129	
							F(10,346) = 17.86 *p* Value = <0.001 Adjusted R^2 = 0.321

Note. b represents unstandardised regression weights and se represents standard error. *beta* indicates the standardised regression weight. LL and UL indicate lower and upper limits of confidence interval, respectively. The reference of academic level is 5 years' higher education. The reference of work setting is full-time hospitalisation service. The reference of profession is psychologists. The reference of theoretical orientation is cognitive behavioural therapy.
Bold values traditionally refer to significant values.

size: MHP in independent practice reported more stereotyped beliefs than those working in full-time hospitalisation settings.

Among individual professional characteristics, higher professional utility beliefs and recovery-oriented practice scores were associated with a lower stereotype score, whereas greater years of practice were associated with a higher stereotype score. Among included professions, psychologists reported fewer stereotypes than nurses. Effect sizes were weak except for recovery-oriented practice scores, which showed a medium effect size.

Among theoretical beliefs, stereotype scores were negatively associated with incremental beliefs (weak effect size) and similarity scores (medium effect size), and positively associated with categorical beliefs (weak effect size). Cognitive behavioural therapy (CBT) theoretical orientation was associated with a lower stereotype score than psychoanalysis (weak effect size).

Predictors of prejudice score

Multiple regression results with prejudice score as criterion are displayed in Table 4. Among socio-demographic characteristics, none of the predictors was significant.

Table 4. Regression results using prejudice scale as the criterion.

Predictor	*b(se)*	*t* value	*p* Value	*beta*	*beta* 95% CI [LL,UL]	Adjusted Eta^2	Fit
Model 1: Sociodemographic characteristics							
(Intercept)	2.645 (0.19)	13.800	<0.001		[−0.377, 0.377]		
Age	0.007 (0.00)	1.746	0.082	0.102	[0.095, 0.110]	0.011	
Gender: Men	−0.023 (0.10)	−0.224	0.823	−0.013	[−0.215, 0.189]	0.001	
Grade level:						0.013	
>5	−0.038 (0.13)	−0.288	0.774	−0.021	[−0.238, 0.279]		
3	0.168 (0.10)	1.201	0.231	0.083	[−0.121, 0.335]		
<2	0.260 (0.17)	1.444	0.150	0.107	[−0.238, 0.450]		
Familiarity: yes	0.029 (0.09)	0.306	0.760	0.017	[−0.167, 0.202]	0.000	
							$F(6,330) = 1.413$ p Value = 0.209 Adjusted $R^2 = 0.007$
Model 2: Contextual professional characteristics							
(Intercept)	3.137 (0.19)	16.551	<0.001		[−0.373, 0.373]		
Work setting:						0.032	
Independent practice	0.103 (0.20)	0.516	0.606	0.042	[−0.349, 0.433]		
Other	0.202 (0.10)	1.961	0.051	0.131	[−0.071, 0.333]		
Community mental health centre	0.254 (0.14)	1.807	0.072	0.117	[−0.160, 0.393]		
Multidisciplinary team: yes	−0.350 (0.17)	−2.046	**0.042**	−0.156	[−.492,.180]	0.016	
Contact frequency:						0.003	
>1/week	0.059 (0.11)	0.532	0.595	0.031	[−0.186, 0.248]		
<1/week	−0.068 (0.23)	−0.301	0.764	−0.016	[−0.461, 0.429]		
No longer	0.097 (0.13)	0.745	0.454	0.047	[−0.209, 0.303]		
							$F(7,328) = 2.417$ p Value = 0.020 Adjusted $R^2 = 0.029$
Model 3: Individual professional characteristics							
(Intercept)	4.144 (0.30)	13.602	<0.001		[−0.599, 0.599]		
Recovered-oriented practice	−0.179 (0.05)	−3.590	**<0.001**	−0.211	[−0.308, −0.113]	0.058	
Professional utility belief	−0.075 (0.04)	−1.794	0.074	−.104	[−0.187, −0.021]	0.008	
Ethical conflict	0.014 (0.03)	.401	0.688	0.022	[−0.046, 0.090]	0.001	
Profession:						0.015	
Nurses	0.142 (0.12)	1.212	0.226	0.089	[−0.142, 0.320]		
Psychiatrists	0.011 (0.13)	0.085	0.932	0.006	[−0.253, 0.264]		
Other	0.236 (0.14)	1.706	0.089	0.110	[−0.163, 0.382]		
Years of practice	0.008 (0.00)	1.797	0.073	0.098	[0.090, 0.106]	0.010	
Recovery-trained: yes	−0.093 (0.10)	−0.893	0.373	−0.054	[−0.259, 0.150]	0.000	
Stigma-trained: yes	0.202 (0.11)	1.826	0.069	0.112	[−0.106, 0.330]	0.010	
							$F(9,334) = 3.916$ p Value = <0.001 Adjusted $R^2 = 0.071$
Model 4: Theoretical believes							
(Intercept)	3.508 (0.38)	9.346	<0.001		[−0.739, 0.739]		
Theoretical orientation:						0.023	
Humanism	0.004 (0.14)	0.025	0.980	0.002	[−0.272, 0.275]		
Psychoanalysis	0.106 (0.15)	0.713	0.476	0.047	[−0.245, 0.339]		
Other	0.035 (0.11)	0.328	0.743	0.022	[−0.186, 0.230]		
Do not know	0.270 (0.13)	2.034	**0.043**	0.132	[−0.129, 0.393]		
Biological aetiological beliefs	0.001 (0.00)	0.041	0.967	0.002	[−0.004, 0.223]	0.001	
Cognitive beliefs	0.010 (0.03)	0.305	0.761	0.017	[−0.050, 0.084]	0.000	
Continuum beliefs	0.022 (0.03)	0.736	0.465	0.042	[−0.016, 0.100]	0.002	
Categorical beliefs	−0.004 (0.03)	−0.148	0.883	−0.009	[−0.063, 0.046]	0.005	
Incremental beliefs	−0.040 (0.05)	−0.813	0.417	−0.045	[−0.140, 0.051]	0.007	
Similarity	−0.116 (0.02)	−4.845	**<0.001**	−0.285	[−0.332, −0.238]	0.067	
							$F(10,326) = 3.678$ p Value = <0.001 Adjusted $R^2 = 0.074$

Note. b represents unstandardised regression weights and se represents standard error. *beta* indicates standardised regression weight. LL and UL indicate lower and upper limits of confidence interval, respectively. The reference of work setting is full-time hospitalisation service. The reference of profession is psychologists. The reference of theoretical orientation is cognitive behavioural therapy. The reference of grade level is 5 years' higher education.
Bold values traditionally refer to significant values.

Table 5. Association of continuous variables with desire for social distance score.

	Age	Recovery-oriented practice	Utility beliefs	Ethical conflict	Years of practice	Biological aetiological beliefs	Cognitive beliefs	Continuum beliefs	Categorical beliefs	Incremental beliefs	Similarity
Spearman rho	−0.077	0.266***	0.105*	−0.096	−0.135*	−0.024	0.012	0.108*	−0.223***	0.139**	0.248***

Note: $^{*}p < 0.05$; $^{**}p < 0.01$; $^{***}p < 0.001$.

Among contextual professional characteristics, belonging to a multidisciplinary team was associated with a lower prejudice score, with a weak effect size.

Among individual professional characteristics, recovery-oriented practice was associated with a lower prejudice score, with a weak effect size.

Among theoretical beliefs, theoretical orientation and similarity score were negatively associated with prejudice score (respectively, weak and medium effect sizes). CBT theoretical orientation was associated with a lower prejudice score than those who do not know their theoretical orientation (weak effect size).

Predictors of desire for social distance score

Results regarding intended discrimination score (desire for social distance) analyses are reported in Tables 5 and 6. Among sociodemographic characteristics, none of the correlates had a significant relationship on discrimination score.

Among contextual professional characteristics, MHP working in independent practice reported more desire for social distance than other work settings, with a weak effect size.

Among individual professional characteristics, recovery-oriented practice and professional utility beliefs scores were associated with lower desire for social distance scores (respectively, medium and weak effect sizes), and years of practice was associated with higher desire for social distance scores (weak effect size).

Among theoretical beliefs, similarity score, continuum and incremental beliefs were associated with a lower desire for social distance score (respectively, medium and weak effect sizes), whereas categorical beliefs were associated with a higher desire for social distance score (weak effect size).

Follow-up analysis

To further investigate some of the results, we conducted additional group comparisons. A regression analysis revealed that among work settings, independent practice predicted lower scores of recovery-oriented practices ($F(3,353) = 3.83$, $p = 0.01$, *adjusted* $R^2 = 0.023$), lower scores of continuum beliefs ($F(3,353) = 6.52$, $p < 0.001$, *adjusted* $R^2 = 0.045$), lower scores of professional utility beliefs ($F(3,353) = 3.13$, $p = 0.026$, *adjusted* $R^2 = 0.02$), lower scores of perceived similarities ($F(3,353) = 6.66$, $p < 0.001$, *adjusted* $R^2 = 0.045$) and higher scores of categorical beliefs ($F(3,353) = 6.16$, $p < 0.001$, *adjusted* $R^2 = 0.05$). Independent practice did not predict biological beliefs ($F(3,353) = 0.49$, $p = 689$, *adjusted* $R^2 = 0.004$). A Mann and Whitney analyses revealed that compared to isolated MHP ($n = 52$), MHP from multidisciplinary teams ($n = 305$) reported higher scores of recovery-oriented practices ($U(356) = 6416$, $p = 0.027$, $d = 0.38$), higher scores of utility beliefs ($U(356) = 5455$, $p < 0.001$, $d = 0.57$) and higher scores of perceived similarities ($U(356) = 5927$, $p = 0.003$, $d = 0.47$). No significant difference was found on biological beliefs scores ($U(356) = 7781$, $p = 0.828$, $d = 0.004$), on continuum beliefs scores ($U(356) = 7867$, $p = 0.93$, $d = 0.04$) and on categorical beliefs scores ($U(356) = 7040$, $p = 0.193$, $d = 0.18$). Compared to MHP with a psychoanalytic orientation ($n = 45$), MHP with a CBT orientation ($n = 77$) reported higher scores of recovery-oriented practices ($U(121) = 1261$, $p = .01$, $d = .42$), higher scores of biological beliefs ($U(121) = 1044$, $p < 0.001$, $d = 0.75$), higher scores of continuum beliefs ($U(121) = 1213$, $p = 0.005$, $d = 0.55$) and lower scores of categorical beliefs ($U(121) = 1309$, $p = 0.02$, $d = 0.42$). No significant difference was found in professional utility beliefs ($U(121) = 1583$, $p = 0.42$, $d = 0.21$) or in perceived similarities ($U(121) = 1437$, $p = 0.12$, $d = 0.28$). Finally, biological beliefs correlated positively with incremental beliefs ($r(356) = 0.135$, $p = 0.011$).

Table 6. Association of categorical variables with desire for social distance score

	n	Mean (sd)	Test	Effect size
Gender:	95	6.16 (1.14)	U = 12,350	Cohen's
Men			$p = 0.907$	$d = 0.11$
Women	262	6.02 (1.40)		
Academic level:	81	6.02 (1.36)	$\chi^2 = 4.14$	$Eta^2 = 0.012$
>5			$p = 0.247$	
5	85	6.34 (1.04)		
3	155	5.95 (1.42)		
<3	36	5.88 (1.44)		
Familiarity:	114	6.31 (1.03)	U = 12,302	Cohen's
Yes			$p = 0.070$	$d = 0.28$
No	243	5.93 (1.44)		
Work setting:	92	5.96 (1.24)	$\chi^2 = 18.4$	$Eta^2 = 0.051$
Inpatient setting			**$p < 0.001$**	
Community mental health centre	52	6.09 (1.40)		
Independent practice	47	5.54 (1.52)		
Others	166	6.24 (1.27)		
Multidisciplinary team:	305	6.08 (1.30)	U = 7131	Cohen's
Yes			$p = 0.217$	$d = 0.16$
No	52	5.88 (1.48)		
Contact frequency:	204	6.02 (1.32)	$\chi^2 = 1.87$	$Eta^2 = 0.005$
>1/day			$p = 0.600$	
>1/week	70	6.15 (1.33)		
<1/week	24	6.31 (1.03)		
No longer	59	5.93 (1.48)		
Profession:	147	5.82 (1.40)	$\chi^2 = 17.7$	$Eta^2 = 0.050$
Nurses			**$p < 0.001$**	
Psychologists	78	6.51 (0.90)		
Psychiatrists	74	5.95 (1.40)		
Other	58	6.16 (1.42)		
Recovery-trained:	264	6.08 (1.33)	U = 11,580	Cohen's
Yes			$p = .388$	$d = 0.06$
No	93	5.99 (1.95)		
Stigma-trained:	247	6.11 (1.32)	U = 12450	Cohen's
Yes			$p = 0.181$	$d = 0.13$
No	110	5.93 (1.35)		
Theoretical orientation:	77	6.25 (1.10)	$\chi^2 = 7.05$	$Eta^2 = 0.020$
CBT			$p = 0.133$	
Humanism	49	5.87 (1.18)		
Psychoanalysis	45	5.89 (1.59)		
Other	130	6.15 (1.36)		
Do not know	56	5.87 (1.44)		

Note. CBT is cognitive behavioural therapy.
Bold values traditionally refer to significant values.

Discussion

The study aimed to identify predictors of schizophrenia stigmatisation (stereotype, prejudice and discrimination) in MHP.

Potential predictors were organised according to four levels: socio-demographic, professional contextual, professional individual characteristics and theoretical beliefs. Among them, theoretical beliefs were the strongest predictors of MHP schizophrenia stigma in its three dimensions (between 7% and 32% of explained variance of stigma scores). Biological aetiological beliefs and similarity beliefs predicted less stigmatisation. Conversely, categorical beliefs predicted more stigmatisation. Moreover, among professional individual and contextual characteristics, recovery-oriented practices, professional utility beliefs, profession (psychologist) and working in multidisciplinary staff predicted less stigmatisation. Socio-demographic characteristics of MHP, such as age, academic level and familiarity, were weak predictors of stereotype and showed no association with prejudice or desire for social distance. These results are globally consistent with numerous previous studies that found no association between stigma and gender (Caldwell & Jorm, 2001; Dabby et al., 2015; Grausgruber et al., 2007; Heibach et al., 2014; Hori et al., 2011; Hsiao et al., 2015; Pavon & Vaes, 2017; Stuber et al., 2014), or between stigma and age (Grausgruber et al., 2007; Hori et al., 2011; Pavon & Vaes, 2017).

To our knowledge, no previous study investigated the role of familiarity (i.e., having a person with schizophrenia among one's relatives) on stigma in MHP. In our study, higher personal familiarity with schizophrenia predicted fewer stereotypes, whereas frequency of contacts at work showed no association. These results can be understood in the light of previous research that showed that contact may be effective in specific conditions. That is, positive contact in which there is an equality of status between the parties involved represents the optimal contact condition (for the most recent reviews, see Paluck et al., 2019; Pettigrew et al., 2011). In such a perspective, our results suggest that personal familiarity (spouse, family, friend, etc.) is more important than the frequency of contacts at work regarding stereotypes prediction.

Among contextual professional characteristics, multidisciplinary practice and work setting were the only significant predictors of stigma in MHP (weak-to-moderate effect sizes). Working in inpatient services did not predict more stigma than working in other work settings. This result is in contrast with some previous studies reporting that MHP working in inpatient services show more stigmatisation (Hsiao et al., 2015; Linden & Kavanagh, 2012). Rather, in our results, working in independent practice predicted higher stereotypes and desire for social distance. To further explore this unexpected result, we conducted additional group comparisons (independent practice vs. other work settings). Results showed that MHP in independent practice also report fewer continuum beliefs and perceived similarities than MHP working in inpatient services. These group differences in theoretical beliefs could account for differences in stereotype and social distance. Another original result is the positive effect of multidisciplinary practice, predicting fewer prejudice. Additional group comparisons showed that MHP in multidisciplinary teams also report more professional utility beliefs, more perceived similarity, more recovery-oriented practices, and more training in stigma and recovery. These specificities may account for differences in prejudice.

Regarding individual professional characteristics, recovery-oriented practice predicted fewer stereotypes, prejudice and desire for social distance, with a medium size effect. This original result can be understood in the light of recovery philosophy and its relevance in anti-stigma strategies (Bird et al., 2014). The conceptual framework of recovery promotes hope against the stereotype of prognosis pessimism, and fosters empowerment (e.g., personal responsibility, control over life, focussing on strengths) against the stereotype of incompetence. Another important predictor is beliefs in professional utility. These beliefs predicted fewer stereotypes and desire for social distance. This finding is consistent with a previous study reporting that personal accomplishment was associated with fewer avoidant and rejecting attitudes towards psychiatric patients. Interestingly, burnout among MHP, ranging from 21% to 67%, impacted this personal accomplishment (Zaninotto et al., 2018).

In our sample, psychologist profession predicted fewer stereotypes and desire for social distance than other professions (i.e., psychiatrists and nurses). While some previous studies reported similar results, others reported no difference between professions regarding schizophrenia stigmatisation (Caldwell & Jorm, 2001; Hori et al., 2011; Magliano et al., 2004; Reavley et al., 2014). However, profession or academic level were only weak predictors of schizophrenia stigma among MHP in our study. This finding suggests that, among individual professional characteristics, professions and academic level are far less important predictors than recovery-oriented practice and professional utility beliefs.

Our results suggest that several theoretical beliefs regarding schizophrenia may have a significant impact on stigma in MHP. First, the theoretical orientation predicted stigmatisation with a weak effect size: MHP with a CBT orientation reported fewer stereotypes than psychoanalysts. To further investigate these results, we conducted additional group comparisons (CBT *versus* Psychoanalysis) that showed two differences: MHP declaring a CBT orientation reported fewer categorical and more continuum beliefs than psychoanalysts. These group differences in theoretical beliefs could account for differences in stereotypes. Second, other relevant theoretical beliefs regarding schizophrenia are incremental beliefs and biological beliefs. Incremental beliefs predicted fewer stereotypes and desire for social distance (weak effect sizes). This suggests that MHP who consider schizophrenia as malleable and likely to get better reported less stigma than those with a fixed vision of schizophrenia as a chronic, unchangeable pathology, as postulated by the essentialist theories (Ryazanov & Christenfeld, 2018). Similarly, biological beliefs predicted fewer stereotypes, with a medium effect size. This last result is in contradiction with those obtained in Italian and American samples of MHP (Lebowitz & Ahn, 2014; Pavon & Vaes, 2017; for a recent review, see Larkings & Brown, 2018). A relevant explanation can be drawn from social psychology research. Indeed, in essentialist theories, genetic and neurobiological causes are likely to be seen as essence-like. Essentialism is the belief that a fixed, hidden and identity-determining cause generates the observed properties of a social category (Haslam & Kvaale, 2015). People intuit the existence of the essence without being able to observe it. When applied to social categories, essentialist thinking is often grounded in biological differences between people, and it frequently has destructive implications (Haslam & Kvaale, 2015). The de-essentialized concept of schizophrenia – that the attribute is malleable and developable with effort – is called incremental theory (Ryazanov & Christenfeld, 2018). We thus conducted further analyses to check whether biological beliefs are negatively associated with incremental beliefs, as postulated by essentialist theories (Haslam & Kvaale, 2015). Surprisingly, we found an opposite association: in our sample of French MHP, biological beliefs were associated with a more incremental vision, i.e., a less essentialist vision of schizophrenia. These results may be partly explained by the specific history of psychiatry in France, where psychoanalysis has long been a prevalent theoretical orientation, whereas biological psychiatry – and associated beliefs regarding schizophrenia – gained ground only more recently. It can be hypothesised that

in France, the bio-genetic model (Read et al., 2013) has not yet been sufficiently established or spread to show stigmatising effects, as described in the international literature.

Another original result of our study is that categorical beliefs predicted more stereotypes and desire for social distance (moderate effects sizes), whereas continuum beliefs predicted less desire for social distance (weak effect size). In other words, MHP believing that schizophrenia is not a discrete social category but rather the extreme of a continuum between 'normal' and 'pathologic' reported less stigmatisation. Furthermore, perceived similarities (i.e., MHP considering they have many similarities with persons with schizophrenia) predicted fewer stigmatisation. Of note, in our study, perceived similarities were the strongest predictor of MHP stigma in its three dimensions (moderate effect sizes). This result is consistent with some previous studies that used Mussweiler's social comparison model (Mussweiler, 2003), in MHP (Servais & Saunders, 2007) and in the general population (Violeau et al., 2020). Mussweiler's social comparison model provides explanations regarding the mechanisms by which perceived similarities may impact stigmatisation (Mussweiler, 2003). During social comparison situations, when someone is focussed on the similarities that may exist between him/herself and another, he/she tends to assimilate the characteristics of the other to him/herself. Conversely, if an individual is focussed on the differences between him/herself and another, he/she will perceive him/herself as contrasting with the characteristics of others, using distinct discrete social categories to do so. In the same perspective, a recent meta-analysis (Hill et al., 2019) provided recommendations about the use of self-disclosure in clinical practice. One of these recommendations is that similarities between what the person discloses and what the caregiver discloses should be emphasised to enhance the quality of therapeutic relationships. Self-disclosure may represent an operationalisation of perceived similarities that is directly transferable to mental health practice.

This study has several limitations. The first concerns generalisability. On the one hand, according to official data available in France (Drees, 2021), our study did not recruit a representative sample of French MHP. Disproportionate over- or under-representation of MHP has distorted representativeness (e.g., in France, there are five times fewer psychiatrists than psychologists). Our sample was also 10 years younger than the average MHP in France. However, the male/female distribution was representative. On the other hand, selection biases were potentially involved in participant recruitment (e.g., participants who decided to participate were more aware of the effects of stigma on persons with schizophrenia, or more aware of their own attitudes). Second, explicit measures of stigmatisation may have fostered social desirability in participants' responses, thus leading us to under-estimate the schizophrenia stigma of MHP (Joinson, 1999). The discrimination subscale is limited to intended discrimination items (social distance) and does not fully measure the concept of discrimination, which should ideally be complemented with behavioural assessments. Furthermore, regarding the MHP-specific scales, although internal consistency indicators were analysed, the main scale of this study (i.e., STIGMApro scale) lacks proper validation process. Additionally, some original associations that we found need to be confirmed, so caution is required when interpreting some of the findings as solutions against stigma. For example, biological beliefs were associated with less stigma, yet previous research has shown that an intervention applying a biological viewpoint to mental illness can lead to more stigma (Read et al., 2013). One measure of internal consistency (i.e., prejudice subscale) was low and could compromise accuracy of assessment. This could be due to the heterogeneity of the emotions addressed (compassion, serenity, anxiety and fear) in the prejudice subscale. Of note, completion time and stereotyped/automatic responses due to inattention were not checked. Future research is thus needed to replicate these findings in other cultural contexts, and to explore the relevance of associated factors in anti-stigma strategies among MHP.

Implication

Some interventions have been developed to fight stigma in MHP. A recent preliminary study suggests that recognition of negative attitudes in oneself and colleagues, self-reflection about the impact of stigma, one's own negative attitudes and recognition of one's ability to make change may be mechanisms of change among psychiatrists (Lagunes-Cordoba et al., 2022). Our results give further support for the relevance of fostering self-reflection by MHP and suggest additional strategies for stigma reduction in mental health practices. Interventions may focus on beliefs about schizophrenia as a continuum between the normal and the pathologic rather than as a discrete social category. In the same vein, interventions may emphasise similarities that MHP may share with persons diagnosed with schizophrenia. Another important factor is MHPs' feeling of professional utility from a global perspective of quality of life at work. Finally, health policies fostering recovery-oriented practice may have a significant impact on stigma reduction. Future studies are needed to test the impact of these strategies in interventions aimed at fighting stigma in mental health practices.

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