



HAL
open science

Revue systématique de la littérature : Facteurs associés à la stigmatisation personnelle dans la schizophrénie

Morgane Joseph, Martin Vidal

► To cite this version:

Morgane Joseph, Martin Vidal. Revue systématique de la littérature : Facteurs associés à la stigmatisation personnelle dans la schizophrénie. Sciences du Vivant [q-bio]. 2021. dumas-03364406

HAL Id: dumas-03364406

<https://dumas.ccsd.cnrs.fr/dumas-03364406v1>

Submitted on 4 Oct 2021

HAL is a multi-disciplinary open access archive for the deposit and dissemination of scientific research documents, whether they are published or not. The documents may come from teaching and research institutions in France or abroad, or from public or private research centers.

L'archive ouverte pluridisciplinaire **HAL**, est destinée au dépôt et à la diffusion de documents scientifiques de niveau recherche, publiés ou non, émanant des établissements d'enseignement et de recherche français ou étrangers, des laboratoires publics ou privés.



Faculté des sciences
médicales et paramédicales
Aix-Marseille Université

**Revue systématique de la littérature :
Facteurs associés à la stigmatisation personnelle dans la schizophrénie**

T H E S E E N B I N Ô M E

Présentée et publiquement soutenue devant

LA FACULTÉ DES SCIENCES MEDICALES ET PARAMEDICALES

DE MARSEILLE

Le 21 Septembre 2021

Par Madame Morgane JOSEPH

Née le 6 août 1993 à Libreville (GABON)

Et par monsieur Martin VIDAL

Né le 8 octobre 1994 à Perpignan (66)

Pour obtenir le grade de Docteur en Médecine

D.E.S. de PSYCHIATRIE

Membres du Jury de la Thèse :

Monsieur le Professeur LANÇON Christophe

Président

Monsieur le Docteur FOND Guillaume

Directeur

Madame le Professeur RICHERI Raphaëlle

Assesseur

Monsieur le Professeur BOYER Laurent

Assesseur



Faculté des sciences
médicales et paramédicales
Aix-Marseille Université

**Revue systématique de la littérature :
Facteurs associés à la stigmatisation personnelle dans la schizophrénie**

T H E S E E N B I N Ô M E

Présentée et publiquement soutenue devant

LA FACULTÉ DES SCIENCES MEDICALES ET PARAMEDICALES

DE MARSEILLE

Le 21 Septembre 2021

Par Madame Morgane JOSEPH

Née le 6 août 1993 à Libreville (GABON)

Et par monsieur Martin VIDAL

Né le 8 octobre 1994 à Perpignan (66)

Pour obtenir le grade de Docteur en Médecine

D.E.S. de PSYCHIATRIE

Membres du Jury de la Thèse :

Monsieur le Professeur LANÇON Christophe

Président

Monsieur le Docteur FOND Guillaume

Directeur

Madame le Professeur RICHIERI Raphaëlle

Assesseur

Monsieur le Professeur BOYER Laurent

Assesseur

FACULTÉ DES SCIENCES MÉDICALES & PARAMÉDICALES

Doyen	:	Pr. Georges LEONETTI
Vice-Doyen aux affaires générales	:	Pr. Patrick DESSI
Vice-Doyen aux professions paramédicales	:	Pr. Philippe BERBIS
Conseiller	:	Pr. Patrick VILLANI

Asseseurs :

➤ aux études	:	Pr. Kathia CHAUMOITRE
➤ à la recherche	:	Pr. Jean-Louis MEGE
➤ à l'unité mixte de formation continue en santé	:	Pr. Justin MICHEL
➤ pour le secteur NORD	:	Pr. Stéphane BERDAH
➤ Groupements Hospitaliers de territoire	:	Pr. Jean-Noël ARGENSON
➤ aux masters	:	Pr. Pascal ADALIAN

Chargés de mission :

➤ sciences humaines et sociales	:	Pr. Pierre LE COZ
➤ relations internationales	:	Pr. Stéphane RANQUE
➤ DU/DIU	:	Pr. Véronique VITTON
➤ DPC, disciplines médicales & biologiques	:	Pr. Frédéric CASTINETTI
➤ DPC, disciplines chirurgicales	:	Dr. Thomas GRAILLON

ÉCOLE DE MEDECINE

Directeur	:	Pr. Jean-Michel VITON
------------------	---	------------------------------

Chargés de mission

▪ PACES – Post-PACES	:	Pr. Régis GUIEU
▪ DFGSM	:	Pr. Anne-Laure PELISSIER
▪ DFASM	:	Pr. Marie-Aleth RICHARD
▪ DFASM	:	Pr. Marc BARTHET
▪ Préparation aux ECN	:	Dr Aurélie DAUMAS
▪ DES spécialités	:	Pr. Pierre-Edouard FOURNIER
▪ DES stages hospitaliers	:	Pr. Benjamin BLONDEL
▪ DES MG	:	Pr. Christophe BARTOLI
▪ Démographie médicale	:	Dr. Noémie RESSEGUIER
▪ Etudiant	:	Elise DOMINJON

ÉCOLE DE DE MAIEUTIQUE

Directrice : **Madame Carole ZAKARIAN**

Chargés de mission

- 1^{er} cycle : Madame Estelle BOISSIER
- 2^{ème} cycle : Madame Cécile NINA

ÉCOLE DES SCIENCES DE LA RÉADAPTATION

Directeur : **Monsieur Philippe SAUVAGEON**

Chargés de mission

- Masso- kinésithérapie 1^{er} cycle : Madame Béatrice CAORS
- Masso-kinésithérapie 2^{ème} cycle : Madame Joannie HENRY
- Mutualisation des enseignements : Madame Géraldine DEPRES

ÉCOLE DES SCIENCES INFIRMIERES

Directeur : **Monsieur Sébastien COLSON**

Chargés de mission

- Chargée de mission : Madame Sandrine MAYEN RODRIGUES
- Chargé de mission : Monsieur Christophe ROMAN

PROFESSEURS HONORAIRES

MM	AGOSTINI Serge	MM	DEVRED Philippe
	ALDIGHERI René		DJIANE Pierre
	ALESSANDRINI Pierre		DONNET Vincent
	ALLIEZ Bernard		DUCASSOU Jacques
	AQUARON Robert		DUFOUR Michel
	ARGEME Maxime		DUMON Henri
	ASSADOURIAN Robert		ENJALBERT Alain
	AUFFRAY Jean-Pierre		FAUGERE Gérard
	AUTILLO-TOUATI Amapola		FAVRE Roger
	AZORIN Jean-Michel		FIECHI Marius
	BAILLE Yves		FARNARIER Georges
	BARDOT Jacques		FIGARELLA Jacques
	BARDOT André		FONTES Michel
	BERARD Pierre		FRANCES Yves
	BERGOIN Maurice		FRANCOIS Georges
	BERLAND Yvon		FUENTES Pierre
	BERNARD Dominique		GABRIEL Bernard
	BERNARD Jean-Louis		GALINIER Louis
	BERNARD Jean-Paul		GALLAIS Hervé
	BERNARD Pierre-Marie		GAMERRE Marc
	BERTRAND Edmond		GARCIN Michel
	BISSET Jean-Pierre		GARNIER Jean-Marc
	BLANC Bernard		GAUTHIER André
	BLANC Jean-Louis		GERARD Raymond
	BOLLINI Gérard		GEROLAMI-SANTANDREA André
	BONGRAND Pierre		GIUDICELLI Sébastien
	BONNEAU Henri		GOUDARD Alain
	BONNOIT Jean		GOUIN François
	BORY Michel		GRILLO Jean-Marie
	BOTTA Alain		GRIMAUD Jean-Charles
	BOTTA-FRIDLUND Danielle		GRISOLI François
	BOURGEADE Augustin		GROULIER Pierre
	BOUVENOT Gilles		HADIDA/SAYAG Jacqueline
	BOUYALA Jean-Marie		HASSOUN Jacques
	BREMOND Georges		HEIM Marc
	BRICOT René		HOUEL Jean
	BRUNET Christian		HUGUET Jean-François
	BUREAU Henri		JAQUET Philippe
	CAMBOULIVES Jean		JAMMES Yves
	CANNONI Maurice		JOUVE Paulette
	CARTOUZOU Guy		JUHAN Claude
	CAU Pierre		JUIN Pierre
	CHABOT Jean-Michel		KAPHAN Gérard
	CHAMLIAN Albert		KASBARIAN Michel
	CHARPIN Denis		KLEISBAUER Jean-Pierre
	CHARREL Michel		LACHARD Jean

CHAUVEL Patrick
CHOUX Maurice
CIANFARANI François
CLAVERIE Jean-Michel
CLEMENT Robert
COMBALBERT André
CONTE-DEVOLX Bernard
CORRIOL Jacques
COULANGE Christian
CURVALE Georges
DALMAS Henri
DE MICO Philippe
DELPERO Jean-Robert
DESSEIN Alain
DELARQUE Alain
DEVIN Robert

LAFFARGUE Pierre
LAUGIER René
LE TREUT Yves
LEVY Samuel
LOUCHET Edmond
LOUIS René
LUCIANI Jean-Marie
MAGALON Guy
MAGNAN Jacques
MALLAN- MANCINI Josette
MALMEJAC Claude
MARANINCHI Dominique
MARTIN Claude
MATTEI Jean François
MERCIER Claude
METGE Paul

MM MICHOTÉY Georges
MIRANDA François
MONFORT Gérard
MONGES André
MONGIN Maurice
MUNDLER Olivier
NAZARIAN Serge
NICOLI René
NOIRCLERC Michel
OLMER Michel
OREHEK Jean
PAPY Jean-Jacques
PAULIN Raymond
PELOUX Yves
PENAUD Antony
PENE Pierre
PIANA Lucien
PICAUD Robert
PIGNOL Fernand
POGGI Louis
POITOUT Dominique
PONCET Michel
POUGET Jean
PRIVAT Yvan
QUILICHINI Francis
RANQUE Jacques
RANQUE Philippe
RICHAUD Christian
RIDINGS Bernard
ROCHAT Hervé
ROHNER Jean-Jacques
ROUX Hubert

VANUXEM Paul
VERVLOET Daniel
VIALETTES Bernard
WEILLER Pierre-Jean

ROUX Michel
RUFO Marcel
SAHEL José
SALAMON Georges
SALDUCCI Jacques
SAMBUC Roland
SAN MARCO Jean-Louis
SANKALE Marc
SARACCO Jacques
SARLES Jacques
SARLES - PHILIP Nicole
SASTRE Bernard
SCHIANO Alain
SCOTTO Jean-Claude
SEBAHOUN Gérard
SEITZ Jean-François
SERMENT Gérard
SOULAYROL René
STAHL André
TAMALET Jacques
TARANGER-CHARPIN Colette
THIRION Xavier
THOMASSIN Jean-Marc
UNAL Daniel
VAGUE Philippe
VAGUE/JUHAN Irène

EMERITAT

2008

M. le Professeur	LEVY Samuel	31/08/2011
Mme le Professeur	JUHAN-VAGUE Irène	31/08/2011
M. le Professeur	PONCET Michel	31/08/2011
M. le Professeur	KASBARIAN Michel	31/08/2011
M. le Professeur	ROBERTOUX Pierre	31/08/2011

2009

M. le Professeur	DJIANE Pierre	31/08/2011
M. le Professeur	VERVLOET Daniel	31/08/2012

2010

M. le Professeur	MAGNAN Jacques	31/12/2014
------------------	----------------	------------

2011

M. le Professeur	DI MARINO Vincent	31/08/2015
M. le Professeur	MARTIN Pierre	31/08/2015
M. le Professeur	METRAS Dominique	31/08/2015

2012

M. le Professeur	AUBANIAC Jean-Manuel	31/08/2015
M. le Professeur	BOUVENOT Gilles	31/08/2015
M. le Professeur	CAMBOULIVES Jean	31/08/2015
M. le Professeur	FAVRE Roger	31/08/2015
M. le Professeur	MATTEI Jean-François	31/08/2015
M. le Professeur	OLIVER Charles	31/08/2015
M. le Professeur	VERVLOET Daniel	31/08/2015

2013

M. le Professeur	BRANCHEREAU Alain	31/08/2016
M. le Professeur	CARAYON Pierre	31/08/2016
M. le Professeur	COZZONE Patrick	31/08/2016
M. le Professeur	DELMONT Jean	31/08/2016
M. le Professeur	HENRY Jean-François	31/08/2016
M. le Professeur	LE GUICHAOUA Marie-Roberte	31/08/2016
M. le Professeur	RUFO Marcel	31/08/2016
M. le Professeur	SEBAHOUN Gérard	31/08/2016

2014

M. le Professeur	FUENTES Pierre	31/08/2017
M. le Professeur	GAMERRE Marc	31/08/2017
M. le Professeur	MAGALON Guy	31/08/2017
M. le Professeur	PERAGUT Jean-Claude	31/08/2017
M. le Professeur	WEILLER Pierre-Jean	31/08/2017

2015

M. le Professeur	COULANGE Christian	31/08/2018
M. le Professeur	COURAND François	31/08/2018
M. le Professeur	FAVRE Roger	31/08/2016
M. le Professeur	MATTEI Jean-François	31/08/2016
M. le Professeur	OLIVER Charles	31/08/2016
M. le Professeur	VERVLOET Daniel	31/08/2016

2016

M. le Professeur	BONGRAND Pierre	31/08/2019
M. le Professeur	BOUVENOT Gilles	31/08/2017
M. le Professeur	BRUNET Christian	31/08/2019
M. le Professeur	CAU Pierre	31/08/2019
M. le Professeur	COZZONE Patrick	31/08/2017
M. le Professeur	FAVRE Roger	31/08/2017
M. le Professeur	FONTES Michel	31/08/2019
M. le Professeur	JAMMES Yves	31/08/2019
M. le Professeur	NAZARIAN Serge	31/08/2019
M. le Professeur	OLIVER Charles	31/08/2017
M. le Professeur	POITOUT Dominique	31/08/2019
M. le Professeur	SEBAHOUN Gérard	31/08/2017
M. le Professeur	VIALETTES Bernard	31/08/2019

2017

M. le Professeur	ALESSANDRINI Pierre	31/08/2020
M. le Professeur	BOUVENOT Gilles	31/08/2018
M. le Professeur	CHAUVEL Patrick	31/08/2020
M. le Professeur	COZZONE Pierre	31/08/2018
M. le Professeur	DELMONT Jean	31/08/2018
M. le Professeur	FAVRE Roger	31/08/2018
M. le Professeur	OLIVER Charles	31/08/2018
M. le Professeur	SEBBAHOUN Gérard	31/08/2018

2018

M. le Professeur	MARANINCHI Dominique	31/08/2021
M. le Professeur	BOUVENOT Gilles	31/08/2019
M. le Professeur	COZZONE Pierre	31/08/2019
M. le Professeur	DELMONT Jean	31/08/2019
M. le Professeur	FAVRE Roger	31/08/2019
M. le Professeur	OLIVER Charles	31/08/2019

2019

M. le Professeur	BERLAND Yvon	31/08/2022
M. le Professeur	CHARPIN Denis	31/08/2022
M. le Professeur	CLAVERIE Jean-Michel	31/08/2022
M. le Professeur	FRANCES Yves	31/08/2022
M. le Professeur	CAU Pierre	31/08/2020
M. le Professeur	COZZONE Patrick	31/08/2020
M. le Professeur	DELMONT Jean	31/08/2020

M. le Professeur	FAVRE Roger	31/08/2020
M. le Professeur	FONTES Michel	31/08/2020
M. le Professeur	MAGALON Guy	31/08/2020
M. le Professeur	NAZARIAN Serge	31/08/2020
M. le Professeur	OLIVER Charles	31/08/2020
M. le Professeur	WEILLER Pierre-Jean	31/08/2020

2020

M. le Professeur	DELPERO Jean-Robert	31/08/2023
M. le Professeur	GRIMAUD Jean-Charles	31/08/2023
M. le Professeur	SAMBUC Roland	31/08/2023
M. le Professeur	SEITZ Jean-François	31/08/2023
M. le Professeur	BERLAND Yvon	31/08/2022
M. le Professeur	CHARPIN Denis	31/08/2022
M. le Professeur	CLAVERIE Jean-Michel	31/08/2022
M. le Professeur	FRANCES Yves	31/08/2022
M. le Professeur	BONGRAND Pierre	31/08/2021
M. le Professeur	COZZONE Patrick	31/08/2021
M. le Professeur	FAVRE Roger	31/08/2021
M. le Professeur	FONTES Michel	31/08/2021
M. le Professeur	NAZARIAN Serge	31/08/2021

Honoris causa

1967	
MM. les Professeurs	DADI (Italie) CID DOS SANTOS (Portugal)
1974	
MM. les Professeurs	MAC ILWAIN (Grande-Bretagne) T.A. LAMBO (Suisse)
1975	
MM. les Professeurs	O. SWENSON (U.S.A.) Lord J.WALTON of DETCHANT (Grande-Bretagne)
1976	
MM. les Professeurs	P. FRANCHIMONT (Belgique) Z.J. BOWERS (U.S.A.)
1977	
MM. les Professeurs	C. GAJDUSEK-Prix Nobel (U.S.A.) C.GIBBS (U.S.A.) J. DACIE (Grande-Bretagne)
1978	
M. le Président	F. HOUPHOUET-BOIGNY (Côte d'Ivoire)
1980	
MM. les Professeurs	A. MARGULIS (U.S.A.) R.D. ADAMS (U.S.A.)
1981	
MM. les Professeurs	H. RAPPAPORT (U.S.A.) M. SCHOU (Danemark) M. AMENT (U.S.A.) Sir A. HUXLEY (Grande-Bretagne) S. REFSUM (Norvège)
1982	
M. le Professeur	W.H. HENDREN (U.S.A.)
1985	
MM. les Professeurs	S. MASSRY (U.S.A.) KLINSMANN (R.D.A.)
1986	
MM. les Professeurs	E. MIHICH (U.S.A.) T. MUNSAT (U.S.A.) LIANA BOLIS (Suisse) L.P. ROWLAND (U.S.A.)

1987	
M. le Professeur	P.J. DYCK (U.S.A.)
1988	
MM. les Professeurs	R. BERGUER (U.S.A.) W.K. ENGEL (U.S.A.) V. ASKANAS (U.S.A.) J. WEHSTER KIRKLIN (U.S.A.) A. DAVIGNON (Canada) A. BETTARELLO (Brésil)
1989	
M. le Professeur	P. MUSTACCHI (U.S.A.)
1990	
MM. les Professeurs	J.G. MC LEOD (Australie) J. PORTER (U.S.A.)
1991	
MM. les Professeurs	J. Edward MC DADE (U.S.A.) W. BURGDORFER (U.S.A.)
1992	
MM. les Professeurs	H.G. SCHWARZACHER (Autriche) D. CARSON (U.S.A.) T. YAMAMURO (Japon)
1994	
MM. les Professeurs	G. KARPATI (Canada) W.J. KOLFF (U.S.A.)
1995	
MM. les Professeurs	D. WALKER (U.S.A.) M. MULLER (Suisse) V. BONOMINI (Italie)
1997	
MM. les Professeurs	C. DINARELLO (U.S.A.) D. STULBERG (U.S.A.) A. MEIKLE DAVISON (Grande-Bretagne) P.I. BRANEMARK (Suède)
1998	
MM. les Professeurs	O. JARDETSKY (U.S.A.)
1999	
MM. les Professeurs	J. BOTELLA LLUSIA (Espagne)

D. COLLEN (Belgique)
S. DIMAURO (U. S. A.)

2000

MM. les Professeurs

D. SPIEGEL (U. S. A.)
C. R. CONTI (U.S.A.)

2001

MM. les Professeurs

P-B. BENNET (U. S. A.)
G. HUGUES (Grande Bretagne)
J-J. O'CONNOR (Grande Bretagne)

2002

MM. les Professeurs

M. ABEDI (Canada)
K. DAI (Chine)

2003

M. le Professeur
Sir

T. MARRIE (Canada)
G.K. RADDI (Grande Bretagne)

2004

M. le Professeur

M. DAKE (U.S.A.)

2005

M. le Professeur

L. CAVALLI-SFORZA (U.S.A.)

2006

M. le Professeur

A. R. CASTANEDA (U.S.A.)

2007

M. le Professeur

S. KAUFMANN (Allemagne)

PROFESSEURS DES UNIVERSITES-PRATICIENS HOSPITALIERS

AGOSTINI FERRANDES Aubert	CHOSSEGROS Cyrille
ALBANESE Jacques	COLLART Frédéric
ALIMI Yves	COSTELLO Régis
AMABILE Philippe	COURBIERE Blandine
AMBROSI Pierre	COWEN Didier
ANDRE Nicolas	CRAVELLO Ludovic
ARGENSON Jean-Noël	CUISSET Thomas
ASTOUL Philippe	DA FONSECA David
ATTARIAN Shahram	DAHAN-ALCARAZ Laetitia
AUDOUIN Bertrand	DANIEL Laurent
AUQUIER Pascal	DARMON Patrice
AVIERINOS Jean-François	DAVID Thierry
AZULAY Jean-Philippe	D'ERCOLE Claude
BAILLY Daniel	D'JOURNO Xavier
BARLESI Fabrice	DEHARO Jean-Claude
BARLIER-SETTI Anne	DELAPORTE Emmanuel
BARLOGIS Vincent	DENIS Danièle
BARTHET Marc	DISDIER Patrick
BARTOLI Christophe	DODDOLI Christophe
BARTOLI Jean-Michel	DRANCOURT Michel
BARTOLI Michel	DUBUS Jean-Christophe
BARTOLOMEI Fabrice	DUFFAUD Florence
BASTIDE Cyrille	DUFOUR Henry
BENSOUSSAN Laurent	DURAND Jean-Marc
BERBIS Philippe	DUSSOL Bertrand
BERBIS Julie	EBBO Mikael
BERDAH Stéphane	EUSEBIO Alexandre
BEROUD Christophe	FABRE Alexandre
BERTUCCI François	FAKHRY Nicolas
BLAISE Didier	FELICIAN Olivier
BLIN Olivier	FENOLLAR Florence
BLONDEL Benjamin	FIGARELLA/BRANGER Dominique
BONIN/GUILLAUME Sylvie	FLECHER Xavier
BONELLO Laurent	FOUILLOUX Virginie
BONNET Jean-Louis	FOURNIER Pierre-Edouard
<i>BOUBLI Léon Surnombre</i>	FRANCESCHI Frédéric
BOUFI Mourad	FUENTES Stéphane
BOYER Laurent	GABERT Jean
BREGEON Fabienne	GABORIT Bénédicte
BRETELLE Florence	GAINNIER Marc
BROUQUI Philippe	GARCIA Stéphane
BRUDER Nicolas	GARIBOLDI Vlad
BRUE Thierry	GAUDART Jean
BRUNET Philippe	GAUDY-MARQUESTE Caroline
BURTEY Stéphane	GENTILE Stéphanie
CARCOPINO-TUSOLI Xavier	GERBEAUX Patrick
CASANOVA Dominique	GEROLAMI/SANTANDREA René
CASTINETTI Frédéric	GILBERT/ALESSI Marie-Christine
CECCALDI Mathieu	GIORGI Roch
CHAGNAUD Christophe	GIOVANNI Antoine
CHAMBOST Hervé	GIRARD Nadine
CHAMPSAUR Pierre	GIRAUD/CHABROL Brigitte
CHANEZ Pascal	GONCALVES Anthony
CHARAFFE-JAUFFRET Emmanuelle	GRANEL/REY Brigitte
CHARREL Rémi	GRANVAL Philippe
CHAUMOITRE Kathia	GREILLIER Laurent
CHIARONI Jacques	GROB Jean-Jacques
CHINOT Olivier	GUEDJ Eric

PROFESSEURS DES UNIVERSITES-PRATICIENS HOSPITALIERS

PAGANELLI Franck	ROCHE Pierre-Hugues
<i>PANUEL Michel Surnombre</i>	ROCH Antoine
PAPAZIAN Laurent	ROCHWERGER Richard
PAROLA Philippe	ROLL Patrice
<i>PARRATTE Sébastien Disponibilité</i>	ROSSI Dominique
PELLISSIER-ALICOT Anne-Laure	ROSSI Pascal
PELLETIER Jean	ROUDIER Jean
PERRIN Jeanne	SALAS Sébastien
PETIT Philippe	SARLON-BARTOLI Gabrielle
PHAM Thao	SCAVARDA Didier
PIERCECCHI/MARTI Marie-Dominique	SCHLEINITZ Nicolas
PIQUET Philippe	SEBAG Frédéric
PIRRO Nicolas	SIELEZNEFF Igor
POINSO François	SIMON Nicolas
RACCAH Denis	STEIN Andréas
RANQUE Stéphane	TAIEB David
<i>RAOULT Didier Surnombre</i>	THOMAS Pascal
REGIS Jean	THUNY Franck
REYNAUD/GAUBERT Martine	TREBUCHON-DA FONSECA Agnès
REYNAUD Rachel	TRIGLIA Jean-Michel
RICHARD/LALLEMAND Marie-Aleth	TROPIANO Patrick
RICHERI Raphaëlle	TSIMARATOS Michel

PROFESSEUR DES UNIVERSITES

ADALIAN Pascal
AGHABABIAN Valérie
BELIN Pascal
CHABANNON Christian
CHABRIERE Eric
FERON François
LE COZ Pierre
LEVASSEUR Anthony
RANJEVA Jean-Philippe
SOBOL Hagay

PROFESSEUR CERTIFIE

BRANDENBURGER Chantal retraite mars 2021
FRAISSE-MANGIALOMINI Jeanne

PROFESSEUR DES UNIVERSITES ASSOCIE à MI

REVIS Joana

PROFESSEUR DES UNIVERSITES MEDECINE GEN

GENTILE Gaëtan

PROFESSEUR ASSOCIE DE MEDECINE GENERALE

GUIDA Pierre

PROFESSEURS DES UNIVERSITES-PRATICIENS HOSPITALIERS

GUIEU Régis
GUIS Sandrine
GUYE Maxime
GUYOT Laurent
GUYS Jean-Michel Surnombre
HABIB Gilbert
HARDWIGSEN Jean
HARLE Jean-Robert
HOUVENAEGHEL Gilles
JACQUIER Alexis
JOURDE-CHICHE Noémie
JOUVE Jean-Luc
KAPLANSKI Gilles
KARSENTY Gilles
KERBAUL François détachement
KRAHN Martin
LAFFORGUE Pierre
LAGIER Jean-Christophe
LAMBAUDIE Eric
LANCON Christophe
LA SCOLA Bernard
LAUNAY Franck
LAVIEILLE Jean-Pierre
LE CORROLLER Thomas
LECHEVALLIER Eric
LEGRE Régis
LEHUCHER-MICHEL Marie-Pascale
LEONE Marc
LEONETTI Georges
LEPIDI Hubert
LEVY Nicolas
MACE Loïc
MAGNAN Pierre-Edouard
MANCINI Julien
MEGE Jean-Louis
MERROT Thierry
METZLER/GUILLEMAIN Catherine
MEYER/DUTOUR Anne
MICCALEF/ROLL Joëlle
MICHEL Fabrice
MICHEL Gérard
MICHEL Justin
MICHELET Pierre
MILH Mathieu
MILLION Matthieu
MOAL Valérie
MORANGE Pierre-Emmanuel
MOULIN Guy
MOUTARDIER Vincent
NAUDIN Jean
NICOLAS DE LAMBALLERIE Xavier
NICOLLAS Richard
NGUYEN Karine
OLIVE Daniel
OLLIVIER Matthieu
OUAFIK L'Houcine
OVAERT-REGGIO Caroline
PADOVANI Laetitia

PROFESSEURS DES UNIVERSITES-PRATICIENS HOSPITALIERS

TURRINI Olivier

VALERO René

VAROQUAUX Arthur Damien

VELLY Lionel

VEY Norbert

VIDAL Vincent

VIENS Patrice

VILLANI Patrick

VITON Jean-Michel

VITTON Véronique

VIEHWEGER Heide Elke détachement

VIVIER Eric

XERRI Luc

AHERFI Sarah	ELDIN Carole	PAULMYER/LACROIX Odile
ANGELAKIS Emmanouil (<i>disponibilité</i>)	FAURE Alice	PESENTI Sébastien
ATLAN Catherine (<i>disponibilité</i>)	FOLETTI Jean- Marc	RADULESCO Thomas
BEGE Thierry	FRANKEL Diane	RESSEGUIER Noémie
BELIARD Sophie	FROMNOT Julien	ROBERT Philippe
BENYAMINE Audrey	GASTALDI Marguerite	ROBERT Thomas
BERTRAND Baptiste	GELSI/BOYER Véronique	ROMANET Pauline
BEYER-BERJOT Laura	GIUSIANO Bernard	SABATIER Renaud
BIRNBAUM David	GIUSIANO COURCAMBECK Sophie	SARI-MINODIER Irène
BONINI Francesca	GONZALEZ Jean-Michel	SAVEANU Alexandru
BOUCRAUT Joseph	GOURIET Frédérique	SECQ Véronique (<i>disponibilité</i>)
BOULAMERY Audrey	GRAILLON Thomas	STELLMANN Jan-Patrick
BOULLU/CIOCCA Sandrine	GUERIN Carole	SUCHON Pierre
BOUSSEN Salah Michel	GUENOUN MEYSSIGNAC Daphné	TABOURET Emeline
BUFFAT Christophe	GUIDON Catherine	TOGA Caroline
CAMILLERI Serge	GUIVARCH Jokthan	TOGA Isabelle
CARRON Romain	HAUTIER/KRAHN Aurélie	TOMASINI Pascale
CASSAGNE Carole	HRAIECH Sami	TOSELLO Barthélémy
CERMOLACCE Michel	KASPI-PEZZOLI Elise	TROUSSE Delphine
CHAUDET Hervé	L'OLLIVIER Coralie	TUCHTAN-TORRENTS Lucile
CHRETIEN Anne-Sophie	LABIT-BOUVIER Corinne	VELY Frédéric
COZE Carole	LAFAGE/POCHITALOFF-HUVALE Marina	VION-DURY Jean
CUNY Thomas	LAGARDE Stanislas	ZATTARA/CANNONI Héléne
DADOUN Frédéric (<i>disponibilité</i>)	LAGIER Aude (<i>disponibilité</i>)	
DALES Jean-Philippe	LAGOUANELLE/SIMEONI Marie-Claude	
DARIEL Anne	LEVY/MOZZICONACCI Annie	
DAUMAS Aurélie	LOOSVELD Marie	
DEGEORGES/VITTE Joëlle	MAAROUF Adil	
DELLIAUX Stéphane	MACAGNO Nicolas	
DESPLAT/JEGO Sophie	MAUES DE PAULA André	
DEVILLIER Raynier	MEGE Diane	
DUBOURG Grégory	MOTTOLA GHIGO Giovanna	
DUCONSEIL Pauline	NINOVE Laetitia	
DUFOUR Jean-Charles	NOUGAIREDE Antoine	

MAITRES DE CONFERENCES DES UNIVERSITES

(mono-appartenants)

ABU ZAINEH Mohammad	DESNUES Benoît	RUEL Jérôme
BARBACARU/PERLES T. A.	MARANINCHI Marie	THOLLON Lionel
BERLAND Caroline	MERHEJ/CHAUVEAU Vicky	THIRION Sylvie
BOYER Sylvie	MINVIELLE/DEVICTOR Bénédicte	VERNA Emeline
COLSON Sébastien	POGGI Marjorie	
DEGIOANNI/SALLE Anna	POUGET Benoît	

MAITRE DE CONFERENCES DES UNIVERSITES DE MEDECINE GENERALE

CASANOVA Ludovic

MAITRES DE CONFERENCES ASSOCIES DE MEDECINE GENERALE à MI-TEMPS

BARGIER Jacques
 CALVET-MONTREDON Céline
 FORTE Jenny
 JANCZEWSKI Aurélie
 NUSSLI Nicolas
 ROUSSEAU-DURAND Raphaëlle

THERY Didier

MAITRE DE CONFERENCES ASSOCIE à MI-TEMPS

BOURRIQUEN Maryline

EVANS-VIALLAT Catherine

LAZZAROTTO Sébastien

LUCAS Guillaume

MATHIEU Marion

MAYENS-RODRIGUES Sandrine

MELLINAS Marie

ROMAN Christophe

TRINQUET Laure

**ESSEURS DES UNIVERSITES et MAITRES DE CONFERENCES DES UNIVERSITES - PRATICIENS HOSPITALIERS
PROFESSEURS ASSOCIES, MAITRES DE CONFERENCES DES UNIVERSITES mono-appartenants**

ANATOMIE 4201

CHAMPSAUR Pierre (PU-PH)
LE CORROLLER Thomas (PU-PH)
PIRRO Nicolas (PU-PH)

GUENOUN-MEYSSIGNAC Daphné (MCU-PH)
LAGIER Aude (MCU-PH) *disponibilité*

THOLLON Lionel (MCF) (60ème section)

ANATOMIE ET CYTOLOGIE PATHOLOGIQUES 4203

CHARAFE/JAUFFRET Emmanuelle (PU-PH)
DANIEL Laurent (PU-PH)
FIGARELLA/BRANGER Dominique (PU-PH)
GARCIA Stéphane (PU-PH)
XERRI Luc (PU-PH)

DALES Jean-Philippe (MCU-PH)
GIUSIANO COURCAMBECK Sophie (MCU PH)
LABIT/BOUVIER Corinne (MCU-PH)
MACAGNO Nicolas (MCU-PH)
MAUES DE PAULA André (MCU-PH)
SECQ Véronique (MCU-PH) *disponibilité*

**ANESTHESIOLOGIE ET REANIMATION CHIRURGICALE ;
MEDECINE URGENCE 4801**

ALBANESE Jacques (PU-PH)
BRUDER Nicolas (PU-PH)
LEONE Marc (PU-PH)
MICHEL Fabrice (PU-PH)
VELLY Lionel (PU-PH)

BOUSSEN Salah Michel (MCU-PH)
GUIDON Catherine (MCU-PH)

ANTHROPOLOGIE 20

ADALIAN Pascal (PR)

DEGIOANNI/SALLE Anna (MCF)
POUGET Benoît (MCF)
VERNA Emeline (MCF)

BACTERIOLOGIE-VIROLOGIE ; HYGIENE HOSPITALIERE 4501

CHARREL Rémi (PU PH)
DRANCOURT Michel (PU-PH)
FENOLLAR Florence (PU-PH)
FOURNIER Pierre-Edouard (PU-PH)
NICOLAS DE LAMBALLERIE Xavier (PU-PH)

LA SCOLA Bernard (PU-PH)
RAOULT Didier (PU-PH) *Surnombre*

AHERFI Sarah (MCU-PH)
ANGELAKIS Emmanouil (MCU-PH) *disponibilité*
DUBOURG Grégory (MCU-PH)
GOURIET Frédérique (MCU-PH)
NOUGAIREDE Antoine (MCU-PH)
NINOVE Laetitia (MCU-PH)

CHABRIERE Eric (PR) (64ème section)

LEVASSEUR Anthony (PR) (64ème section)
DESNUES Benoit (MCF) (65ème section)
MERHEJ/CHAUVEAU Vicky (MCF) (87ème section)

BIOCHIMIE ET BIOLOGIE MOLECULAIRE 4401

BARLIER/SETTI Anne (PU-PH)
GABERT Jean (PU-PH)
GUIEU Régis (PU-PH)
OUAFIK L'Houcine (PU-PH)

BUFFAT Christophe (MCU-PH)
FROMNOT Julien (MCU-PH)
MOTTOLA GHIGO Giovanna (MCU-PH)
ROMANET Pauline (MCU-PH)
SAVEANU Alexandru (MCU-PH)

ANGLAIS 11

BRANDENBURGER Chantal (PRCE) *retraite mars 2021*
FRAISSE-MANGIALOMINI Jeanne (PRCE)

BIOLOGIE CELLULAIRE 4403

ROLL Patrice (PU-PH)

FRANKEL Diane (MCU-PH)
GASTALDI Marguerite (MCU-PH)
KASPI-PEZZOLI Elise (MCU-PH)
LEVY-MOZZICONNACCI Annie (MCU-PH)

**BIOLOGIE ET MEDECINE DU DEVELOPPEMENT
ET DE LA REPRODUCTION ; GYNECOLOGIE MEDICALE 5405**

METZLER/GUILLEMAIN Catherine (PU-PH)
PERRIN Jeanne (PU-PH)

BIOPHYSIQUE ET MEDECINE NUCLEAIRE 4301

GUEDJ Eric (PU-PH)

CARDIOLOGIE 5102

AVIERINOS Jean-François (PU-PH)

GUYE Maxime (PU-PH)
TAIEB David (PU-PH)

BELIN Pascal (PR) (69ème section)
RANJEVA Jean-Philippe (PR) (69ème section)

CAMMILLERI Serge (MCU-PH)
VION-DURY Jean (MCU-PH)

BARBACARU/PERLES Téodora Adriana (MCF) (69ème section)

**BIostatistiques, Informatique Médicale
ET TECHNOLOGIES DE COMMUNICATION 4604**

GAUDART Jean (PU-PH)
GIORGI Roch (PU-PH)
MANCINI Julien (PU-PH)

CHAUDET Hervé (MCU-PH)
DUFOUR Jean-Charles (MCU-PH)
GIUSIANO Bernard (MCU-PH)

ABU ZAINEH Mohammad (MCF) (5ème section)
BOYER Sylvie (MCF) (5ème section)

CHIRURGIE ORTHOPÉDIQUE ET TRAUMATOLOGIQUE 5002

ARGENSON Jean-Noël (PU-PH)
BLONDEL Benjamin (PU-PH)
FLECHER Xavier (PU-PH)
OLLIVIER Matthieu (PU-PH)
PARRATTE Sébastien (PU-PH) *Disponibilité*
ROCHWERGER Richard (PU-PH)
TROPANO Patrick (PU-PH)

ROLOGIE ; RADIOTHERAPIE 4702 CANCÉROLOGIE ; RADIOTHERAPIE

BERTUCCI François (PU-PH)
CHINOT Olivier (PU-PH)
COWEN Didier (PU-PH)
DUFFAUD Florence (PU-PH)
GONCALVES Anthony (PU-PH)
HOUVENAEGHEL Gilles (PU-PH)
LAMBAUDIE Eric (PU-PH)
PADOVANI Laetitia (PH-PH)
SALAS Sébastien (PU-PH)
VIENS Patrice (PU-PH)

SABATIER Renaud (MCU-PH)
TABOURET Emeline (MCU-PH)

BONELLO Laurent (PU-PH)
BONNET Jean-Louis (PU-PH)
CUISSSET Thomas (PU-PH)
DEHARO Jean-Claude (PU-PH)
FRANCESCHI Frédéric (PU-PH)
HABIB Gilbert (PU-PH)
PAGANELLI Franck (PU-PH)
THUNY Franck (PU-PH)

CHIRURGIE VISCÉRALE ET DIGESTIVE 5202

BERDAH Stéphane (PU-PH)
HARDWIGSEN Jean (PU-PH)
MOUTARDIER Vincent (PU-PH)
SEBAG Frédéric (PU-PH)
SIELEZNEFF Igor (PU-PH)
TURRINI Olivier (PU-PH)

BEGE Thierry (MCU-PH)
BEYER-BERJOT Laura (MCU-PH)
BIRNBAUM David (MCU-PH)
DUCONSEIL Pauline (MCU-PH)
GUERIN Carole (MCU-PH)
MEGE Diane (MCU-PH)

CHIRURGIE INFANTILE 5402 CHIRURGIE INFANTILE 5402

GUYS Jean-Michel (PU-PH) Surnombre
JOUVE Jean-Luc (PU-PH)
LAUNAY Franck (PU-PH)
MERRROT Thierry (PU-PH)
VIEHWEGER Heide Elke (PU-PH) détachement
DARIEL Anne (MCU-PH)
FAURE Alice (MCU-PH)
PESENTI Sébastien (MCU-PH)

FACIALE ET STOMATOLOGIE 5503 CHIRURGIE MAXILLO-FACIALE

CHOSSEGROS Cyrille (PU-PH)
GUYOT Laurent (PU-PH)

FOLETTI Jean-Marc (MCU-PH)

CHIRURGIE THORACIQUE ET CARDIOVASCULAIRE 5103

COLLART Frédéric (PU-PH)
 D'JOURNO Xavier (PU-PH)
 DODDOLI Christophe (PU-PH)
 FOUILLOUX Virginie (PU-PH)
 GARIBOLDI Vlad (PU-PH)
 MACE Loïc (PU-PH)
 THOMAS Pascal (PU-PH)
 TROUSSE Delphine (MCU-PH)

CHIRURGIE PLASTIQUE, RECONSTRUCTRICE ET ESTHETIQUE ; BRÛLOGIE 5004

CASANOVA Dominique (PU-PH)
 LEGRE Régis (PU-PH)

BERTRAND Baptiste (MCU-PH)
 HAUTIER/KRAHN Aurélie (MCU-PH)

CHIRURGIE VASCULAIRE ; MEDECINE VASCULAIRE 5104

ALIMI Yves (PU-PH)
 AMABILE Philippe (PU-PH)
 BARTOLI Michel (PU-PH)
 BOUFI Mourad (PU-PH)
 MAGNAN Pierre-Edouard (PU-PH)
 PIQUET Philippe (PU-PH)
 SARLON-BARTOLI Gabrielle (PU PH)

GASTROENTEROLOGIE ; HEPATOLOGIE ; ADDICTOLOGIE 5201

BARTHET Marc (PU-PH)
 DAHAN-ALCARAZ Laetitia (PU-PH)
 GEROLAMI-SANTANDREA René (PU-PH)
 GRANDVAL Philippe (PU-PH)
 VITTON Véronique (PU-PH)

HISTOLOGIE, EMBRYOLOGIE ET CYTOGENETIQUE 4202

LEPIDI Hubert (PU-PH)

PAULMYER/LACROIX Odile (MCU-PH)

GONZALEZ Jean-Michel (MCU-PH)

DERMATOLOGIE - VENEREOLOGIE 5003

BERBIS Philippe (PU-PH)
 DELAPORTE Emmanuel (PU-PH)
 GAUDY/MARQUESTE Caroline (PU-PH)
 GROB Jean-Jacques (PU-PH)
 RICHARD/LALLEMAND Marie-Aleth (PU-PH)

GENETIQUE 4704

BEROUD Christophe (PU-PH)
 KRAHN Martin (PU-PH)
 LEVY Nicolas (PU-PH)
 NGYUEN Karine (PU-PH)

DUSI

COLSON Sébastien (MCF)

BOURRIQUEN Maryline (MAST)
 EVANS-VIALLAT Catherine (MAST)
 LUCAS Guillaume (MAST)
 MAYEN-RODRIGUES Sandrine (MAST)
 MELLINAS Marie (MAST)
 ROMAN Christophe (MAST)
 TRINQUET Laure (MAST)

TOGA Caroline (MCU-PH)
 ZATTARA/CANNONI Hélène (MCU-PH)

GYNECOLOGIE-OBSTETRIQUE ; GYNECOLOGIE MEDICALE 5403

AGOSTINI Aubert (PU-PH)
BOUBLI Léon (PU-PH) Surnombre
 BRETELLE Florence (PU-PH)
 CARCOPINO-TUSOLI Xavier (PU-PH)
 COURBIERE Blandine (PU-PH)
 CRAVELLO Ludovic (PU-PH)
 D'ERCOLE Claude (PU-PH)

ENDOCRINOLOGIE ,DIABETE ET MALADIES METABOLIQUES ; GYNECOLOGIE MEDICALE 5404

BRUE Thierry (PU-PH)
 CASTINETTI Frédéric (PU-PH)
 CUNY Thomas (MCU PH)

AUQUIER Pascal (PU-PH)
 BERBIS Julie (PU-PH)
 BOYER Laurent (PU-PH)
 GENTILE Stéphanie (PU-PH)

BLAISE Didier (PU-PH)
 COSTELLO Régis (PU-PH)
 CHIARONI Jacques (PU-PH)
 GILBERT/ALESSI Marie-Christine (PU-PH)
 MORANGE Pierre-Emmanuel (PU-PH)
 VEY Norbert (PU-PH)

LAGOUANELLE/SIMEONI Marie-Claude (MCU-PH)
 RESSEGUIER Noémie (MCU-PH)

DEVILLIER Raynier (MCU PH)
 GELSI/BOYER Véronique (MCU-PH)
 LAFAGE/POCHITALOFF-HUVALE Marina (MCU-PH)
 LOOSVELD Marie (MCU-PH)
 SUCHON Pierre (MCU-PH)

MINVIELLE/DEVICTOR Bénédicte (MCF)(06ème section)

POGGI Marjorie (MCF) (64ème section)

IMMUNOLOGIE 4703

MEDECINE LEGALE ET DROIT DE LA SANTE 4603

KAPLANSKI Gilles (PU-PH)
 MEGE Jean-Louis (PU-PH)
 OLIVE Daniel (PU-PH)
 VIVIER Eric (PU-PH)

BARTOLI Christophe (PU-PH)
 LEONETTI Georges (PU-PH)
 PELISSIER-ALICOT Anne-Laure (PU-PH)
 PIERCECCHI-MARTI Marie-Dominique (PU-PH)

FERON François (PR) (69ème section)

TUCHTAN-TORRENTS Lucile (MCU-PH)

BOUCRAUT Joseph (MCU-PH)
 CHRETIEN Anne-Sophie (MCU PH)
 DEGEORGES/VITTE Joëlle (MCU-PH)
 DESPLAT/JEGO Sophie (MCU-PH)
 ROBERT Philippe (MCU-PH)
 VELY Frédéric (MCU-PH)

BERLAND Caroline (MCF) (1ère section)

MEDECINE PHYSIQUE ET DE READAPTATION 4905

MALADIES INFECTIEUSES ; MALADIES TROPICALES 4503

BROUQUI Philippe (PU-PH)
 LAGIER Jean-Christophe (PU-PH)
 MILLION Matthieu (PU-PH)
 PAROLA Philippe (PU-PH)
 STEIN Andréas (PU-PH)

BENSOUSSAN Laurent (PU-PH)
 VITON Jean-Michel (PU-PH)

MEDECINE ET SANTE AU TRAVAIL 4602

ELDIN Carole (MCU-PH)

LEHUCHER/MICHEL Marie-Pascale (PU-PH)

MEDECINE D'URGENCE 4805

SARI/MINODIER Irène (MCU-PH)

KERBAUL François (PU-PH) détachement

MICHELET Pierre (PU-PH)

**MEDECINE INTERNE ; GERIATRIE ET BIOLOGIE DU
 VIEILLISSEMENT ; ADDICTOLOGIE 5301**

BONIN/GUILLAUME Sylvie (PU-PH)
 DISDIER Patrick (PU-PH)
 DURAND Jean-Marc (PU-PH)
 EBBO Mikael (PU-PH)
 GRANEL/REY Brigitte (PU-PH)
 HARLE Jean-Robert (PU-PH)
 ROSSI Pascal (PU-PH)
 SCHLEINITZ Nicolas (PU-PH)

BENYAMINE Audrey (MCU-PH)

MEDECINE GENERALE 5303

GENTILE Gaëtan (PR Méd. Gén. Temps plein)

CASANOVA Ludovic (MCF Méd. Gén. Temps plein)

GUIDA Pierre (PR associé Méd. Gén. à mi-temps) retraite au 25/09/2012 (MOAL Valérie (PU-PH)

BARGIER Jacques (MCF associé Méd. Gén. À mi-temps)

CALVET-MONTREDON Céline (MCF associé Méd. Gén. à temps plein)

FORTE Jenny (MCF associé Méd. Gén. À mi-temps)

JANCZEWSKI Aurélie (MCF associé Méd. Gén. À mi-temps)

NUSSLI Nicolas (MCF associé Méd. Gén. À mi-temps)

ROUSSEAU-DURAND Raphaëlle (MCF associé Méd. Gén. À mi-temps)

THERY Didier (MCF associé Méd. Gén. À mi-temps) (nomination au 1/11/2012)

NUTRITION 4404

DARMON Patrice (PU-PH)

RACCAH Denis (PU-PH)

VALERO René (PU-PH)

ATLAN Catherine (MCU-PH) disponibilité

BELIARD Sophie (MCU-PH)

MARANINCHI Marie (MCF) (66ème section)

ONCOLOGIE 65 (BIOLOGIE CELLULAIRE)

CHABANNON Christian (PR) (66ème section)

SOBOL Hagay (PR) (65ème section)

OPHTALMOLOGIE 5502

DAVID Thierry (PU-PH)

DENIS Danièle (PU-PH)

OTO-RHINO-LARYNGOLOGIE 5501

DESSI Patrick (PU-PH)

FAKHRY Nicolas (PU-PH)

GIOVANNI Antoine (PU-PH)

LAVIEILLE Jean-Pierre (PU-PH)

MICHEL Justin (PU-PH)

NICOLLAS Richard (PU-PH)

TRIGLIA Jean-Michel (PU-PH)

RADULESCO Thomas (MCU-PH)

REVIS Joana (PAST) (Orthophonie) (7ème Section)

NEPHROLOGIE 5203

BRUNET Philippe (PU-PH)

BURTEY Stéphanne (PU-PH)

DUSSOL Bertrand (PU-PH)

JOURDE CHICHE Noémie (PU PH)

MOAL Valérie (PU-PH)

ROBERT Thomas (MCU-PH)

NEUROCHIRURGIE 4902

DUFOUR Henry (PU-PH)

FUENTES Stéphane (PU-PH)

REGIS Jean (PU-PH)

ROCHE Pierre-Hugues (PU-PH)

SCAVARDA Didier (PU-PH)

CARRON Romain (MCU PH)

GRAILLON Thomas (MCU PH)

NEUROLOGIE 4901

ATTARIAN Sharham (PU PH)

AUDOIN Bertrand (PU-PH)

AZULAY Jean-Philippe (PU-PH)

CECCALDI Mathieu (PU-PH)

EUSEBIO Alexandre (PU-PH)

FELICIAN Olivier (PU-PH)

PELLETIER Jean (PU-PH)

MAAROUF Adil (MCU-PH)

PEDOPSYCHIATRIE; ADDICTOLOGIE 4904

DA FONSECA David (PU-PH)

POINSO François (PU-PH)

GUIVARCH Jokthan (MCU-PH)

**PHARMACOLOGIE FONDAMENTALE -
PHARMACOLOGIE CLINIQUE; ADDICTOLOGIE 4803**

BLIN Olivier (PU-PH)

MICALLEF/ROLL Joëlle (PU-PH)

SIMON Nicolas (PU-PH)

BOULAMERY Audrey (MCU-PH)

PARASITOLOGIE ET MYCOLOGIE 4502**PHILOSOPHIE 17**

RANQUE Stéphane (PU-PH)

LE COZ Pierre (PR) (17ème section)

CASSAGNE Carole (MCU-PH)

MATHIEU Marion (MAST)

L'OLLIVIER Coralie (MCU-PH)

TOGA Isabelle (MCU-PH)

PHYSIOLOGIE 4402

PEDIATRIE 5401

ANDRE Nicolas (PU-PH)

BARTOLOMEI Fabrice (PU-PH)

BARLOGIS Vincent (PU-PH)

BREGEON Fabienne (PU-PH)

CHAMBOST Hervé (PU-PH)

GABORIT Bénédicte (PU-PH)

DUBUS Jean-Christophe (PU-PH)

MEYER/DUTOUR Anne (PU-PH)

FABRE Alexandre (PU-PH)

TREBUCHON/DA FONSECA Agnès (PU-PH)

GIRAUD/CHABROL Brigitte (PU-PH)

BONINI Francesca (MCU-PH)

MICHEL Gérard (PU-PH)

BOULLU/CIOCCA Sandrine (MCU-PH)

MILH Mathieu (PU-PH)

DADOUN Frédéric (MCU-PH) (disponibilité)

OVAERT-REGGIO Caroline (PU-PH)

DELLIAUX Stéphane (MCU-PH)

REYNAUD Rachel (PU-PH)

LAGARDE Stanislas (MCU-PH)

TSIMARATOS Michel (PU-PH)

RUEL Jérôme (MCF) (69ème section)

TOSELLO Barthélémy (MCU-PH)

THIRION Sylvie (MCF) (66ème section)

PSYCHIATRIE D'ADULTES ; ADDICTOLOGIE 4903

PNEUMOLOGIE; ADDICTOLOGIE 5101

BAILLY Daniel (PU-PH)

ASTOUL Philippe (PU-PH)

LANCON Christophe (PU-PH)

BARLESI Fabrice (PU-PH)

NAUDIN Jean (PU-PH)

CHANEZ Pascal (PU-PH)

RICHERI Raphaëlle (PU-PH)

CERMOLACCE Michel (MCU-PH)

GREILLIER Laurent (PU PH)

REYNAUD/GAUBERT Martine (PU-PH)

CHOLOGIE - PSYCHOLOGIE CLINIQUE, PSYCHOLOGIE SOCIALE 16

TOMASINI Pascale (MCU-PH)

AGHABABIAN Valérie (PR)

LAZZAROTTO Sébastien (MAST)

RADIOLOGIE ET IMAGERIE MEDICALE 4302

RHUMATOLOGIE 5001

BARTOLI Jean-Michel (PU-PH)

GUIS Sandrine (PU-PH)

CHAGNAUD Christophe (PU-PH)

LAFFORGUE Pierre (PU-PH)

CHAUMOITRE Kathia (PU-PH)

PHAM Thao (PU-PH)

GIRARD Nadine (PU-PH)

ROUDIER Jean (PU-PH)

JACQUIER Alexis (PU-PH)

MOULIN Guy (PU-PH)

PANUEL Michel (PU-PH) surnombre

PETIT Philippe (PU-PH)

VAROQUAUX Arthur Damien (PU-PH)

VIDAL Vincent (PU-PH)

HERAPEUTIQUE; MEDECINE D'URGENCE; ADDICTOLOGIE 4801

AMBROSI Pierre (PU-PH)

VILLANI Patrick (PU-PH)

STELLMANN Jan-Patrick (MCU-PH)

DAUMAS Aurélie (MCU-PH)

GAINNIER Marc (PU-PH)
GERBEAUX Patrick (PU-PH)
PAPAZIAN Laurent (PU-PH)
ROCH Antoine (PU-PH)

HRAIECH Sami (MCU-PH)

BASTIDE Cyrille (PU-PH)
KARSENTY Gilles (PU-PH)
LECHEVALLIER Eric (PU-PH)
ROSSI Dominique (PU-PH)

REMERCIEMENTS Morgane Joseph

AU PRESIDENT DU JURY

Monsieur le Professeur Christophe LANCON

Vous me faites l'honneur d'accepter la présidence du jury de cette thèse, je vous en remercie très sincèrement. Je vous remercie pour votre implication dans l'organisation de notre D.E.S. de Psychiatrie à Marseille, pour la richesse de vos enseignements, votre guidance et vos qualités humaines.

Je vous prie de bien vouloir accepter l'expression de ma reconnaissance et de mon profond respect.

AU DIRECTEUR DE THESE

Monsieur le Docteur Guillaume FOND

Vous m'avez fait l'honneur d'accepter de diriger ce travail de thèse. Je vous remercie pour votre bienveillance, votre disponibilité et votre encadrement tout au long de ce travail. Merci de m'avoir donné un aperçu du vaste univers de la recherche et la complexité de la méta-analyse. Merci de m'avoir transmis rigueur et persévérance nécessaire à la réalisation de ce travail.

Veillez trouver ici le témoignage de ma reconnaissance et de mon profond respect.

AUX ASSESSEURS

Monsieur le Professeur Laurent BOYER

Je vous suis très reconnaissant d'avoir accepté de juger ce travail de thèse. Merci pour votre accompagnement et vos conseils avisés.

Je vous prie d'accepter l'expression de ma reconnaissance et de mon profond respect.

Madame la Professeure Raphaëlle RICHIERI

Je vous suis très reconnaissant d'avoir accepté de juger ce travail de thèse. Je vous remercie pour votre implication aussi bien dans ma formation universitaire que sur le terrain, à Orion. Vous avez vu mes premiers pas dans le monde de la psychiatrie et vous avez su, à travers le partage de vos connaissances et de votre expérience, et avoir su être à l'écoute.

Je vous prie d'accepter l'expression de ma sympathie, de ma reconnaissance et de mon profond respect.

Remerciement à tous les psychiatres qui ont contribué à ma formation, avec dans l'ordre de rencontre,

Le **Docteur Jean Farisse**, avec qui j'ai commencé à faire de la psychiatrie et qui m'a permis une entrée en matière dont je me souviendrai longtemps grâce à une grande bienveillance.

Le **Docteur Waintraub**, pour votre accueil chaleureux dans votre unité de soins, votre disponibilité et votre gentillesse.

Le **Docteur Zendjidjian**, de m'avoir accueilli au sein de son unité et d'avoir été à notre écoute lors de notre stage.

Les **Docteurs Dassa Deborah et Lecoq David**, merci d'avoir apporté légèreté et allégresse dans des situations ayant pu se montrer difficiles.

Les **Doctoresses Atzori Paola et Givaudan Marion**, merci de m'avoir permis de découvrir le monde de la pédopsychiatrie et pour cette mise en autonomie progressive.

A MES COLLABORATEURS

A mon binôme, Martin VIDAL PENAS :

Merci de m'avoir accueilli au sein de ce projet, qui de prime abord, semblait pharaonique. Tu as su rendre cela plus simple et plus clair pour l'étudiante chétive que j'étais avant que l'on ne commence ce travail. Merci d'avoir été à mon écoute dans mes moments d'inquiétudes et d'avoir eu la patience d'écouter tous mes messages vocaux nuits et jours. Je n'aurais pas pu rêver mieux comme binôme de thèse. Je te souhaite une vie emplie de bonheur.

Au Docteur Damien ETCHECOPAR-ETCHART

Je vous remercie infiniment pour votre aide et votre temps. Merci pour votre patience, pour vos longues explications d'une limpide clarté, et vos conseils avisés pour parvenir à bout de ce long travail. Merci également pour votre accessibilité.

A LA FAMILLE ET AUX AMIS

A mon père, Olivier, mon papou, mon paparr, merci d'avoir été là tout au long de ma vie et de m'avoir donné la chance d'être là où j'en suis aujourd'hui. Merci pour tous les sacrifices fait en mon nom, je t'en serais pour toujours reconnaissante. Bravo à toi, bravo pour toutes ces années où tu as travaillé d'arrache-pied pour être là où tu en es aujourd'hui, je n'ai jamais été aussi fière d'être ta fille, je t'aime.

A ma mère, Sandra, ma moonette d'amour que j'aime de tout mon cœur, merci de m'avoir donné tout l'amour du monde et d'avoir fait de moi celle que je suis aujourd'hui. Nos galères et notre histoire à été le fondement même de la vie merveilleuse que tu m'as donnée, je suis fière de toi et je ne changerai notre passé pour rien au monde. Merci d'avoir été un soutien moral sans faille, je t'aime gros comme la lune.

A toi, Sabine, merci d'avoir toujours su être de bon conseil, merci pour cette belle petite famille que l'on constitue tous ensemble, je nous souhaite encore plein d'années de partage, je t'aime.

A mon copain, Yann, mon doudou, merci de m'avoir accepté avec toutes mes facettes, merci de me laisser être celle que je suis, merci d'avoir toujours été à l'écoute. Merci pour ta présence douce et rigolote jour après jour, je nous souhaite un amour comme celui qu'on vit en ce moment même, délicat et naïf. Je t'aime.

A Ever, ma sœur chérie, merci pour ta vivacité d'esprit et ta gentillesse, tu es une petite fille merveilleuse, ne l'oublie jamais je t'aime.

A Mia, ma petite sœur d'amour, merci d'avoir apporté piment et rigolade à nos vies, tu es une fillette formidable, je t'aime.

A Noa, mon petit frère, merci d'être ce petit être rayonnant et plein de vie, je t'aime.

A ma mamie, mamie Mylène, merci d'avoir été la 1^{ère} supportrice de ton bouchon d'amour, merci pour cet amour inconditionnel, je t'aime et je nous souhaite de nombreuses années de bonheur, je t'aime.

A ma mamie, mamie Rose, merci d'avoir contribué à faire de moi la femme que je suis aujourd'hui, god bless your soul, love you.

A mes papis.

A mes tantes et oncles, ma tatchie Catchy, toujours souriante, mon tonton et parrain, ton François, merci d'avoir fait de moi une freeman, ma tatie Mimie et tous ces beaux souvenirs d'enfance, ma tatie Jessy, partie trop tôt, que j'aimerais pour toujours et mon tonton Fargas, ton lapin te remerci. Merci à tous mes beaux cousins et cousines.

Merci à toi mon tonton benoît le roi des guilis. Merci à toi ma tatie Claudia d'avoir été ma 2^{ème} maman avec de l'amour à revendre.

A tous les Joseph, merci pour tous ces souvenirs et toutes ces années de bonheur, merci à toi tatie Bico mon autre mère, merci à toi Lulu ma cousine préférée, ma sœur, tellement de bons moments passés ensemble, merci à toi Kikou, pour toutes ces après-midis entre cousins, berçés de jeux et de rires.

Merci Daniel et Claude, Rémy et Jess de m'avoir accueillie chez vous en toute simplicité et avec beaucoup de bienveillance.

A toi, ma Lélé, merci pour ta douceur et tous cet amour, à toi Vincent G. pour me rappeler ce qui est important dans la vie, merci à vous Gilles, Patrick, Vincent M., Pierre, Stéphane et Regis de m'avoir accueillie auprès de vous depuis toujours.

Merci à toi Vero pour ta gentillesse.

Merci toi ma juju, meuf, celle avec qui j'ai partagé les plus belles années de ma vie, tu restes la femme de ma vie.

Merci à toi, ma cécé d'amour d'avoir toujours cette place dans ma vie.

Merci à toi, Léa Morrrrrazzzani, ma corse préférée, ma grande sœur, merci d'avoir été la aux prémices de ma vie d'adulte.

Merci à toi, Nèle, mon beb, mon bebou nèle, ma meilleure amie, celle avec qui tout est si simple, je t'aime.

Merci à toi, Marion, la meilleure tutrice qu'on est pu rêver, merci pour ton beau sourire en toutes circonstances, je vous souhaite toute la douceur du monde.

Merci à toi, ma mounne, tu sais que toi et moi c'est pour toujours, merci de m'avoir montré ce qu'étais la vraie amitié et de m'avoir permise d'être là où je suis aujourd'hui.

Merci à toi, Lucas, mon frère, le meilleur colocataire qu'on puisse rêver, mon confident. Vivement qu'on s'achète le domaine.

Merci à toi, Maxime, bon je n'étais pas ton 1^{er} choix mais le destin à eu raison de nous, à tous nos moments complices.

Merci à vous Aure et Toto, mes sangs pour toujours, loin des yeux mais toujours très près du cœur.

Merci à toi ma marmoule, ma marmoulasse, tu es une merveilleuse compagne de vie et j'espère te garder à mes côtés pour longtemps. Je vous souhaite beaucoup d'amour (et de courage, lol).

Merci à toi, mon ptit Nico, sans toi je ne serais pas la grande MJ que je suis aujourd'hui.

Merci ma fofo, j'espère que tu te reconnais Sophie Novak, je suis heureuse de te compter dans mes rangs.

Merci ma Momo, la deuxième plus belle des Morgane, garde ce sourire pour les 100 ans qu'il te reste.

Merci Milou pour toute cette douceur.

Merci à ma team de Néné d'être toujours là dans les bons moments et de garantir kiff et bienveillance.

Merci à vous las poulpitas, muy sexy guapa d'être ces petites boules de vie : Maud, Juju, Camille et Alix, inshallah on va à Madrid avant 2035.

Merci à toi Vincent, mon premier co-interne, le S, on ne vivra plus jamais autant d'émerveillement, ne change pas, t'es parfait.

Merci à toi Baptiste, en même temps, comment ne pas aimer un homme au si grand cœur, par contre, rends l'ISF.

Merci à toi ma memou, Meriem, d'avoir été ma complice, mon acolyte, ma chemise, je n'en serais pas là sans toi.

Merci à toi Romy K, ma sœur, beaucoup trop loin de moi, mais que je porte dans mon cœur.

REMERCIEMENTS Martin Vidal

AU PRESIDENT DU JURY

Monsieur le Professeur Christophe LANCON

Vous me faites l'honneur d'accepter la présidence du jury de cette thèse, je vous en remercie très sincèrement. Je vous remercie pour votre implication dans l'organisation du D.E.S. de Psychiatrie à Marseille, pour la richesse de vos enseignements et pour votre guidance tout au long de mon internat.

Je vous prie de bien vouloir accepter l'expression de ma reconnaissance et de mon profond respect.

AU DIRECTEUR DE THESE

Monsieur le Docteur Guillaume FOND

Vous m'avez fait l'honneur d'accepter de diriger ce travail de thèse. Je vous remercie pour votre bienveillance, et pour votre disponibilité tout au long de cette année. Merci de m'avoir fait découvrir le vaste univers de la recherche et la complexité de la méta-analyse. Merci de m'avoir transmis la rigueur, la patience et la persévérance nécessaires à la réalisation de ce travail.

Veillez trouver ici le témoignage de ma reconnaissance et de mon profond respect.

AUX ASSESSEURS

Monsieur le Professeur Laurent BOYER

Je vous suis très reconnaissant d'avoir accepté de juger ce travail de thèse. Merci pour votre accompagnement et vos conseils avisés. J'ai eu la chance d'avoir pu passer dans votre service, en distanciel, et de découvrir d'autres facettes de la recherche en Psychiatrie.

Je vous prie d'accepter l'expression de ma reconnaissance et de mon profond respect.

Madame le Professeur Raphaëlle RICHIERI

Je vous suis très reconnaissant d'avoir accepté de juger ce travail de thèse. Je vous remercie pour votre implication aussi bien dans ma formation universitaire que sur le terrain, à Orion. Vous avez vu mes premiers pas dans le monde de la psychiatrie et vous avez su, à travers le partage de vos connaissances et de votre expérience, m'initier aux complexités de ce métier et me faire prendre confiance en moi.

Je vous prie d'accepter l'expression de ma sympathie, de ma reconnaissance et de mon profond respect.

A MES COLLABORATEURS

A ma binôme, Morgane JOSEPH :

Tu m'as rejoint en cours de route sur ce fastidieux travail, l'inconscience sûrement !
Merci pour ton travail acharné. Je te remercie pour l'énergie que tu as déployée dans ce travail.
Merci de m'avoir tenu motivé dans les hauts comme dans les bas, et merci pour ta réactivité quand je t'ai annoncé la date de la thèse il y a deux mois. Je ne te connaissais pas il y a un an, et pourtant c'était si facile et agréable de travailler avec toi.

Au Docteur Damien ETCHECOPAR-ETCHART

Je te remercie infiniment pour ton aide. Merci pour ta patience, pour tes longues explications d'une limpide clarté, et tes conseils avisés pour parvenir à bout de ce long travail.
Merci également pour ton accessibilité et ta bienveillance envers moi. Tu as su me transmettre une partie de ta passion pour la recherche, le tout avec une bonne humeur inégalable.

A LA FAMILLE ET AUX AMIS

A mon copain, Julien, qui a su me soutenir du début à la fin. Tu as su supporter avec beaucoup de patience mes sautes d'humeur dans les moments de stress, et me remotiver dans les moments de creux. Je suis si heureux de t'avoir auprès de moi au quotidien. Merci de me faire rire chaque jour. Merci de m'amener aux bouts du monde. Merci de m'avoir protégé des intrus et des scorpions. Je t'aime

A ma mère, Elise, merci pour ta prévenance et ta douceur. Merci pour ton inépuisable lutte contre ma procrastination. Merci pour ta voix réconfortante, au téléphone quand j'avais l'impression que je ne pouvais pas y arriver. Merci pour ton amour.

A mon père, Thierry, merci pour ta patience, pour les allers-retours à Montpellier quand je n'en pouvais plus, merci pour le ménage et surtout pour ton soutien. Merci pour ta fierté sans orgueil. Merci pour le regard que tu poses sur moi, et, tout simplement, pour ton amour.

Papa, Maman, c'est grâce à vous si je suis psychiatre aujourd'hui. Merci de m'avoir transmis cette curiosité sur le monde, cette passion du voyage, ce gout de l'autre. Vous m'avez toujours montré le monde tel qu'il est, ses beautés, ses laideurs, ma chance. Vous avez su m'y accompagner et m'aider à y trouver une place. Vous avez su créer cet endroit parfait, d'où je pars souvent mais où je reviens toujours, mon foyer. Je vous aime fort.

A mon frère, Paul, que j'ai toujours admiré, par ta vivacité, ton humour, ton aisance avec les autres. Merci de m'avoir fait redescendre sur terre chaque fois qu'il le fallait, par quelques disputes et un peu de mauvaise foi, finalement peut être que j'avais pas toujours raison ? Merci d'avoir fait de moi ce que je suis. Je t'aime fort.

A mon neveu et filleul, Léon, qui grandit si vite. A ta curiosité, à tes éclats de rire, au bâllon et au cracteur. Garde ton innocence et ta joie de vivre. A ma belle-sœur, Alice, merci d'avoir débarqué dans nos vies, et de nous régaler de ton entrain et de tes petits plats.

A ma grand-mère, Mamie Blue, merci pour tes gâteaux, qui ont nourri la moitié des externes de Montpellier puis des psychiatres marseillais, merci pour ton soutien, et pour tes appels aux accents ponteillanais. Papi André, avec toi la vie m'a appris qu'on peut se manquer sans jamais s'être connus, j'ai une pensée pour toi.

A mon grand-père, Papi Joseph, merci pour tes anecdotes haletantes, qui, notamment, donnent à la Belle-de-Mai une autre dimension. J'ai une pensée pour Mamie Marie, qui malheureusement n'a pas pu suivre mon parcours de carabin.

A ma tata folle, Thérèse, sans l'aide de laquelle je me serais probablement arrêté à la première année. Merci pour les petits plats, les soirées devant scènes de ménage, et pour ta présence, tout simplement.

A la grande famille d'origine ponteillanaise, à Adrien, Claudine, Hervé, à Sophie, Léa, à Maryse, Christian, à Philippe, à Jacky et Françoise, merci pour vos mots de soutien, vos encouragements.

A la famille Gardella, merci pour ces moments passés au Racou, à Bidart, Tamariu et compagnie! Laetitia, Christophe, Jeanne, Merci pour tous les petits messages, pour l'humour gras, pour les remarques vives, qui ont fait de ces vacances de grands bols d'air frais avant chaque reprise. Laura, hasard du timing tu prends aujourd'hui le relai, je crois fort en toi, ça peut paraître si long, et pourtant ça passe trop vite. Une pensée pour notre ami Corse qui ne nous a toujours pas envoyé la photo de sa bite en photo.

A mes vieux amis, de la crèche, maternelle, primaire, lycée. Andréa, Jules, Quentin, Mariane, Caroline, Ophélie, et bien d'autres... Merci pour ces belles années Illibériennes et Perpignanaises, pour les carabistouilles et les complexes hexagono-faciaux, pour ces phrases qui n'ont aucun sens mais qui resteront toujours « Je suis une goutte d'eau », pour l'indémodable danse du Sapin, et le majestueux Lacrymal Circus, pour avoir appris la vie ensemble, pour les premières soirées et la découverte de la liberté. Merci Cyrielle d'avoir toujours été là, de près et de loin, à chaque instant, pour les concours du plus têtue de nous deux, pour les moments cucu plein de pépites de bonheur. Merci Manon, pour ces moments hors du temps, à La pradelle ou en Tiny, pour ta chaleur, ta convivialité, ta douceur et ta folie de Panchita (grrraou)

A mon acolyte de PACES, Mauranne, qui à elle seule représente la quasi-totalité de ma vie sociale en P1. Sans toi j'aurais craqué. Merci pour les fous rires, les coups de gueules et les ragots.

A mes compagnons du CDE, pour la folie et le grand n'importe quoi. Merci pour ces incroyables années d'externat qui resteront gravées à jamais. Merci pour d'avoir été là pour danser, pour galérer, pour bitcher, pour rire et pour voyager, pour se disputer (RIP l'appart du Skimed) et pour se réconcilier. Merci Camille, pour l'orga des meilleures soirées, Merci Alexis, Merci Sara, pour ce magnifique hymne de manade (*Sal*****pe*), et pour avoir toujours été à l'affut du potin le plus croustillant, « Vous avez vu qui est enceinte ?? Il va être moche ce gosse. » Vous me tuez, changez rien. Merci Estelle, pour ton rire et ta discrétion à toutes épreuves. Merci Pauline, de nous montrer qu'on peut devenir médecin sans savoir cuire du riz ! Merci Julie, ma Cristina Cordula préférée, de nous avoir prouvé qu'on pouvait être aérienne en bottes de pluie, Merci Valentin, de nous rappeler dans les pires moments qu'il y a toujours plus épousé que nous (coucou Pip). Merci de n'avoir aucun filtre. Je vous aime jusqu'au-delà du Connemara

A mes ouzbeko-kirghiz préférées, je n'oublierai jamais ces instants hors du temps, ici comme ailleurs. Merci Estelle pour toutes ces grandes discussions, sur la vie, sur le monde, sur la politique et les potins, sur notre flemme et notre passion pour la procrastination. Merci pour ton énergie tonitruante, merci pour ta confiance et ta présence. Merci Maud, ma comtesse d'Adhémar, pour les soirées GoT à la chandelle, pour les grandes discussions chez toi, chez moi, en haut d'un volcan, au bord d'un lac, en tout simplicité. Merci Aurélie, pour l'amour des plantes et des calendriers, merci pour ton grain de folie, pour les chorégraphies, pour ton enthousiasme que seule l'hypoglycémie peut altérer. Merci Nazar pour ces grandes discussions, j'ai pas tout compris. On se donne rendez-vous en Géorgie, en 2022, 2023 ou 2035 ? Je vous aime fort.

Aux amis de toujours, Anne et Loïc, Maguie, Anne et Clément, Mathieu, Sylvie et Jean-Pierre, JPP et Michèle, Merci pour les petites attentions, les conseils, les encouragements. Aux Bernaux, merci pour ces souvenirs plein la tête, et pour ces fous rires dont je ne me remettrai sûrement jamais. Aux sœurs Marti, Natacha, Joanna et Sandra, merci pour les baby-sittings, les cours de catalan, les voyages, merci d'être là, merci de faire partie de la famille, je vous aime fort.

A la coloc, qui a su résister aux fissures, aux douches froides, aux cambriolages, et aux voisines hystériques. Merci Caro, Bap, Zac, Andréa, Adé, Yannis, pour les histoires à faire pâlir

la Villa, pour ce confinement WTF, pour les petits plats plus ou moins réussis, pour les chaussettes perdues, pour les disputes sans queue ni tête (*Frappe moi!!!!*), merci pour les Catane que je gagnais à chaque fois, merci petit ange pour ces défis du lundi. Au sang de la Hess, Marie, Teddy, Nathan, merci pour cet internat qui n'a aucun sens du début à la fin.

A la meilleure des co-internes, Valentine. Merci pour ces semestres parfaits, pour les fous rires, même dans les plus grands moments de solitude, de la fistule de couille aux entretiens en russe. Merci pour ton énergie débordante sur fond d'Aya Nakamura. Merci pour toutes les pauses où on était « oisoux ». A Mahaut, Merci d'avoir fait le forcing pour rejoindre le duo infernal, vous avez fait éclater le seuil des potins à un niveau jamais atteint. C'est ouf de travailler avec vous, vous êtes incontrôlables, on remet ça quand vous voulez.

A ma coloc d'adoption, la Coloc 4 de Perpicity, Pauline, Maya, Marie et Solenn. Merci de m'avoir accueilli tout au long de mon semestre de thèse, merci pour les soirées confinées, les Bang, les Mister White, les petits plats, les Hugo, les commérages, les jus d'orange et les pantoufles qui traînent. Pas merci Pauline pour les multiples actes de vandalisme.

A tous ceux qui m'ont enseigné ce beau métier sur le terrain, et qui ont partagé avec moi leurs connaissances, leur vision de la psychiatrie, sur tous les plans. Merci à Laura Brandejsky, à Jean Farisse, et à toute l'équipe d'Orion, Merci au Docteur Abrieu, à Sandrine Combe, Merci à Alexandre Hayek, à Pierre Lazerges, et à toute l'équipe soignante, éducative, psycho et ergo de l'Escale, Merci à Victoire Cannoni, à Sandrine Limousin, à Julien Testart, au Docteur Zendjidjian, et à toute l'équipe IDE et AS de Zen2, Merci également au Professeur Courtet de m'avoir (ré)accueilli à Montpellier, Merci au Professeur Olie, à Lucile Villain, à Marine Bonnin, à Delphine de Larminat, et à toute l'équipe de l'UPUP et des urgences de Lapeyronie. Merci à mes co-internes Sarah, Maxime et Pierre de m'avoir supporté quand je râlais sur la dernière ligne droite !

Aux Voyages, à Pizza Papa, et au soleil de Méditerranée

Table of contents

- I. INTRODUCTION
- II. METHODS
- III. RESULTS
 - 1. Flow chart
 - 2. General results
 - a) Study characteristics
 - b) Population characteristics
 - c) Other studied variables
 - 3. Perceived stigma
 - a) Raw data
 - b) Summary
 - 4. Perceived stigma associated experienced stigma
 - a) Raw data
 - b) Summary
 - 5. Experienced stigma
 - a) Raw data
 - b) Summary
 - 6. Internalized stigma (experienced stigma associated to self-stigma)
 - a) Raw data
 - b) Summary
 - 7. Perceived stigma associated to self-stigma
 - a) Raw data
 - b) Summary
 - 8. Self-stigma
 - a) Raw data
 - b) Summary
 - 9. All types of personal stigma sub-scales
 - a) Raw data
 - b) Summary
 - 10. Additional results: z-scores
- IV. DISCUSSION
- V. CONCLUSION
- VI. APPENDIX
- VII. REFERENCES

I. INTRODUCTION

Stigmas definitions, from Goffman's² "attribute that is deeply discrediting", Link's and Phelan's³ "labelling, stereotyping, separation, status loss and discrimination" or again to Kleinman's⁴ "decay of ability to hold on to what matters most to ordinary people", have in common a multifaceted construct that involves feelings, attitudes, and behaviors⁵ which have harmful effects on the lives of people with mental illness.

Research on stigma has made a good progress those last decades, for it is now anchored that it has a negative impact on functional outcomes and self-esteem⁶.

The upstream research started with the elaboration of factors responsible or influencing on the stigma, thus allowing different downstream therapies, terms of care, strategies to emerge, giving the mentally ill suffering patient a way to cope with stigma.

Our interest turned to personal stigma which is stigma seen from the point of view of the person affected by it; in opposition to public stigma which comprises the prejudice and discrimination endorsed by the general population that affects a person⁷.

Personal stigma is declined in 3 sub measures that involve:

- perceived stigma, as how most people or society believes or thinks about the stigmatized group or personally as a member of the stigmatized group⁸.
- experienced stigma, in which the subject experiences actual discrimination and/or participation restrictions⁹.
- self-stigma, which includes negative stereotypes, responsible of negative feelings and emotional reactions; leading to prejudice and from this emotional reaction comes discrimination¹⁰.

Those sub measures can be found in different scales exploring stigma.

Gerlinger explored prevalence rates and correlates of personal stigma in schizophrenia doing a systematic review of studies from 1994 to 2011¹. His results show that an average of 64.5% of

patients had perceived stigma, 55.9% had experienced stigma and 49.2% reported shame (as the most common aspect of self-stigma).

The factors that were significantly associated to personal stigma were principally: Positive symptoms and general psychopathology.

Other factors were inversely related, such as, psychosocial functioning, quality of life, empowerment, self-esteem, and self-efficacy.

But for some studies differences of correlation emerged between perceived/experienced stigma and self-stigma regarding the age, the sexes, and the age of onset, among others. (10)

This will allow us to highlight the changes and differences that occurred in the past decade considering the aim of our study is to systematically review the prevalence rates and correlates of personal stigma in patients suffering from schizophrenia spectrum disorder in studies from 2005 to 2020.

II. METHODS

A systematic literature review was conducted following the Cochrane methodology searching the databases of Medline from inception until November 30th, 2020. This systematic literature review is based on the interface PubMed (MEDLINE database), based on a combination of MeSH terms “schizophrenia” AND “stigma”, then a second search was based on the identified scales for personal stigma using the keywords “schizophrenia” and the different scales of stigma in mental health, including Consumer Experiences of Stigma Questionnaire (CESQ) ¹¹, Devaluation Discrimination Measure (DDM) ³, Devaluation Discrimination Scale (DDS), Discrimination and Stigma Scale (DISC) ¹², Experiences of discrimination Scale (EDS). Stigmatization Scale (HSS), The Inventory of Stigmatizing Experiences (ISE), Internalized Stigma of Mental Illness (ISMI) ¹³, Spanish version of King's Internalized Stigma Scale (ISS13) ¹⁴, Different and Ashamed Scale (LDAS), Modified Consumers Experiences of Stigma Questionnaire (MCESQ) ¹¹, Perceived Devaluation and Discrimination scale (PDD) ¹⁵, Perceived Devaluation-Discrimination Questionnaire (PDDQ), Perceived Stigma Scale (PSS) ¹⁶, Perceived Stigma Questionnaire (PSQ), Rejection Experience Scale (RES), Stigma Experience Scale (SES) ¹⁷, Social Impact Scale (SIS) ¹⁸, Self-reported Experiences of

Rejection (SRER), The Stigma Scale (SS) ¹⁴, Stigma Score (SS12) ¹⁹, Stigma Impact Scale (SIS2), Stigma Scale for Mental Illness (SSMI) ²⁰, Stigma Scale for Mental Illness Short Form (SSMIS), German version of the Self-Stigma of Mental Illness Scale (GSSMIS) ²¹, Self-Stigma of Mental Illness Scale Short Form (SSMIS-SF), Self-Stigma Scale-Short (SSS-S)²². The full name and the abbreviation of every questionnaire is used in the search paradigm.

To ensure the comprehensiveness of the search, we also perform the research with (stigma [MeSH Terms]) AND (schizophrenia [MeSH Terms]) in MEDLINE. These searches were carried out first on MEDLINE database, then on Cochrane database. There were no restrictions for languages and dates. The reference lists and bibliographies of relevant reviews and articles collected from the database searches, was hand searched for other relevant articles collection.

To be included, studies had to meet the following inclusion criteria:

- (i) Patients were diagnosed schizophrenia or a schizophrenia spectrum disorder according to the DSM or the ICD.
- (ii) Using a standardized scale measuring personal stigma (i.e., self-stigma, experienced stigma or perceived stigma) among patients with schizophrenia.
- (iii) Evaluation of stigma with a mean score and a standard deviation (SD), or with a rate of high stigma, based on a standardized scale.

Two independent reviewers (MVP and MJ) decided on the eligibility of each study and extracted all the data in a standardized electronic form. In case of non-consensus, a third author (GF) made the final decision.

At the beginning of our work, we register on PROSPERO platform. The number of this registration is CRD42020185030.

III. RESULTS

1. Flow chart

Through the database research 5448 references were found, among them few were systematic reviews, from which supplementary research was done.

Articles were then reviewed, using their abstract, for relevance. This excluded 5153 studies which did not match the inclusion criteria, focused on public stigma, or focused on a different population (families of patients with schizophrenia, healthcare professionals, student, general population, patients with other illnesses).

Then 111 studies were excluded by reading the full text. 82 studies did not match inclusion criteria and 29 shared the same study population. In those cases, studies with the more data were included.

Teams were contacted if they used a standardized stigma scale in patients with schizophrenia but did not present in their paper the results needed to be included in our study. Of 123 teams contacted, 30 responded and 11 were included.

In total, 92 studies and 15.824 patients were included in the final analysis, as presented in **Figure 1**.

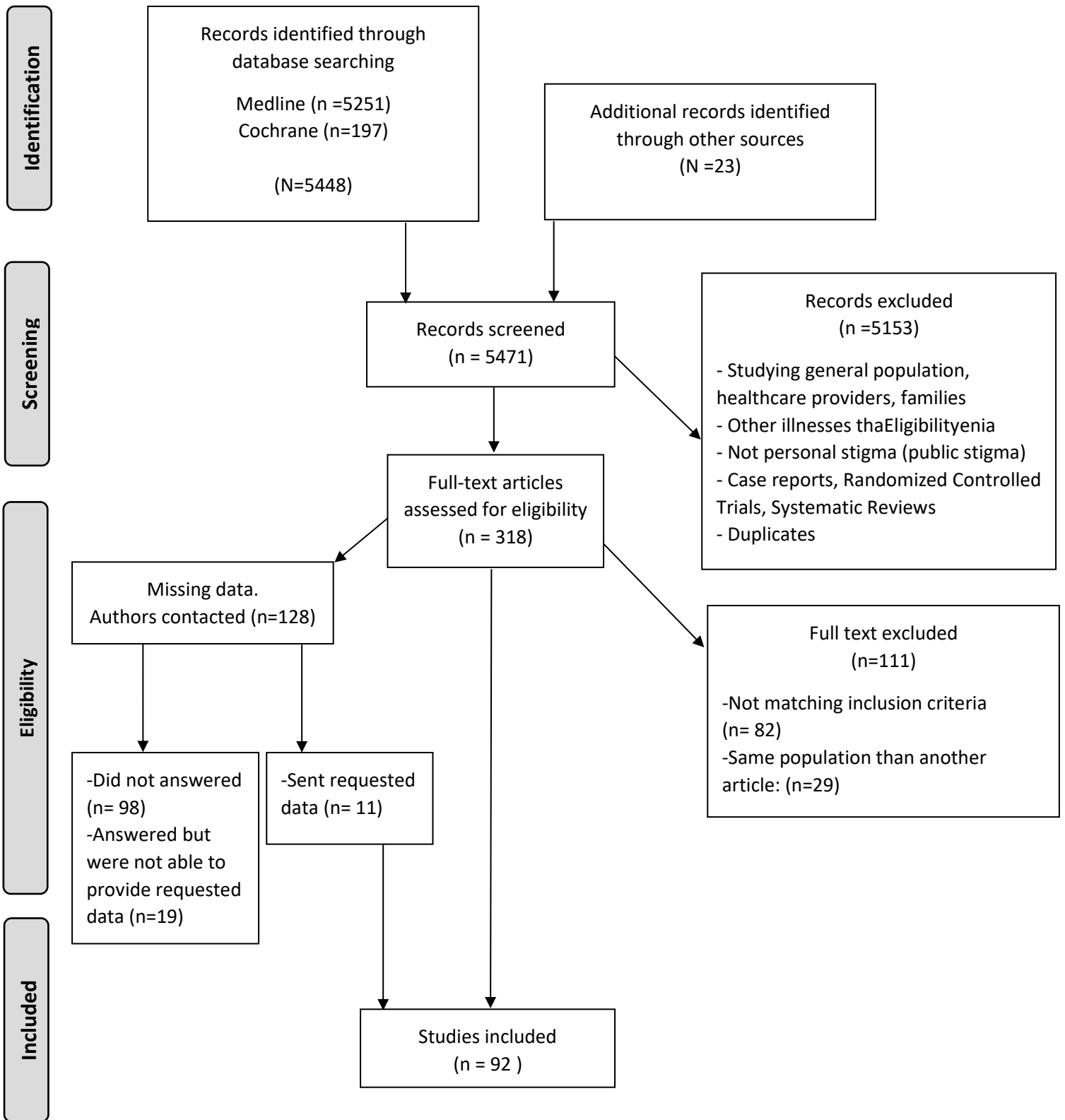


Figure 1. Study selection process (PRISMA flow diagram)

2. GENERAL RESULTS

a) Study characteristics

Ninety-two cross sectional studies were included, they differ by the different ethnicities studied, the level of income of the country, the scales, and the outcomes.

Out of 92, 84 were published in the past decade (91.3%). **Figure 3** shows the repartition of the countries in which those studies were carried out. Twenty-six studies took place in Europe (28,3%), 6 in North America (6.5%), 25 in East Asia (27.2%), 10 in South-East Asia (10.9%), 4 in South Asia (4,3%), 14 in the Middle East (15,2%), 1 in Oceania (1,1%), 5 in Africa (5.6%), and 1 study studied the populations of 20 different countries (1.1%). Facility recruitments were diverse and went from public mental health clinics to university hospitals or to day care centers for example and 87 of them (96,7%) have resorted to a consecutive inclusion, with 2 missing data. Forty-nine were multicentric (53,8%), with 1 missing data. Seventy studies called upon an outpatient recruitment (76,1%), 65 to stabilized patients (70,7%), and the studies had a 100% rate of treated patients.

Out of 92 studies, 26 analyzed perceived stigma throughout 11 different scales (mostly the PDD scale for 13 of them), 68 analyzed experienced stigma using 8 scales (mostly the ISMI) and 75 analyzed self-stigma by 6 distinct scales (also mostly the ISMI). Characteristics of each scale are detailed in the appendix **Table 8**. None of them were specific to patients suffering from schizophrenia. Sample sizes ranged from 8 to 1,229 participants (total N=15824, mean: n=15824).

b) Population characteristics

In total, 15.824 patients were included in our analysis (sample sizes ranged from 8 to 1.229 participants). The most studied demographic variables were sex (96.7% of the studies), age (84.7%), marital status (65.2%), employment status (63%), living status (20.7%), illness characteristics were also analyzed such as the duration of illness (DI = 45.7%), age of onset (AOO = 37%) and the number of past psychiatric hospitalization (26%). Finally, 23 studies (25%) excluded patients with substances abuses.

Participants were 38.5 years old in mean and were mostly males (58.67%). The mean level of education was 11.3 years, and 64.7% were unemployed. 75.3% of the participants declared being single, and 27.7% lived alone (neither with their family, nor in a healthcare place). Age of onset of

schizophrenia had a mean of 25.2 years old, and duration of illness was 13.23 years when the studies took place. Patients had family history of mental illness in 32.5% of the cases and had been hospitalized in psychiatric hospital 4.22 times in mean. Other data have been collected: number of educated participants (over high school/over college), race, religion, if they lived in urban or rural areas, income, duration of hospitalization, mean chlorpromazine equivalent, number of participants taking first or second-generation antipsychotics, antidepressants or mood stabilizers, number of participants with suicidal ideations, and history of suicide attempts.

c) Other studied variables

On the 92 studies included, 17 (18.48%) measured the total of Positive and Negative Symptoms Scale (PANSS), 23.9% explored positive symptoms with different scales, and 27.1% explored negative symptoms. Depression symptoms were measured in 26.1% of the studies, anxiety in 4.4%. Other dimensions were measured: 25% explored quality of life, 15.2% insight of the patients, 15.2% the self-esteem levels, 14.1% the functioning level of the participants, 8.7% analyzed hope levels, 6.5% measured recovery and 5.4% empowerment. Other variables were investigated in some studies: attitude toward drugs, adherence, compliance, and knowledge of their illness. It must be emphasized that drug user patients were often excluded, comorbid drug dependence constitutes by itself significant stigma.

3. PERCEIVED STIGMA

Perceived stigma was essentially assessed using the PDD scale (65% of the studies exploring perceived stigma). It is a 12 item self-complete measure exploring perceived discrimination and perceived devaluation. Each item is rated on a six-point Likert scale anchored at 1 = strongly disagree and 6 = strongly agree. The internal consistency of the scale ranges from $\alpha = 0.86$ to $\alpha = 0.88$ ²³. Three different versions of the PDD scale were used.

a) Raw data

Table 1a. Study characteristics (perceived stigma)

<i>Author</i>	<i>Year</i>	<i>Place</i>	<i>Multicentric</i>	<i>Outpatient recruitment</i>	<i>Stabilized</i>	<i>Treated</i>	<i>N</i>	<i>Stigma scales</i>	<i>Mean</i>	<i>SD</i>	<i>Moderate to high (%)</i>
<i>Amore</i> ²⁴	2020	Italy	1	1	1	1	921	PDD12_2	2.57	0.5	-
<i>Belvederimurri</i> ²⁵	2016	Italy	1	1	1	1	89	PDD12_1	31.8	5.4	-
<i>Berge</i> ²⁶	2005	USA	1	1	1	1	31	DDM12	32.86	6.22	-
<i>Bifftu</i> ²⁷	2014	Ethiopia	0	1	1	1	411	PDD12_2	-	-	83.5
<i>Brohan</i> ²⁸	2010	20 countries*	1	0	0	1	1229	PDD12_2	2.79	0.46	41.7
<i>Chen</i> ²⁹	2014	Taiwan	1	0	0	1	212	PDD12_1	21.91	4.46	-
<i>Chien</i> ³⁰	2014	Hong Kong	1	1	0	1	100	DDS18	58.33	7.98	-
<i>Hsiung</i> ¹⁸	2010	Taiwan	0	1	1	1	199	SIS	62.7	10.89	-
<i>Jung</i> ³¹	2012	South Korea	1	1	1	1	521	PSS	2.99	0.52508	-
<i>Ow</i> ³²	2012	Singapore	0	1	1	1	80	PDD12_2	2.67	0.41	-
<i>Picco</i> ³³	2017	Singapore	1	1	0	1	74	DDS	42.5	11.6	-
<i>Sibitz</i> ³⁴	2011	Austria	1	0	1	1	157	PDD12_2	3.2	0.85	-
<i>Singh</i> ³⁵	2016	India	0	1	1	1	100	EMIC	22	7.4	-
<i>Staring</i> ³⁶	2009	Netherlands	1	1	0	1	114	PDD12_2	2.7456	0.47021	44.7
<i>Stip</i> ³⁷	2017	Canada	1	0	1	1	30	StS	25.8	6.41	-
<i>Tesfaw</i> ³⁸	2020	Ethiopia	0	1	1	1	409	PDD12_2	-	-	62.6
<i>Vauth</i> ⁶	2007	Switzerland	1	1	0	1	172	PDD12_2	2.7	0.62	-
<i>Wang</i> ³⁹	2016	China	0	0	1	1	146	PDD12_2	2.53	0.43	-
<i>Yokoyama</i> ⁴⁰	2019	Japan	1	1	0	1	62	PDD12_1	33.23	5.87	-
<i>Zaske</i> ⁴¹	2018	Germany	1	0	-	1	48	modified PDD	35	8.997	-

* 20 countries: Belgium, Bulgaria, Croatia, the Czech Republic, Estonia, Finland, France, Greece, Italy, Lithuania, Macedonia, Malta, Poland, Romania, Russia, Slovenia, Spain, Sweden, Turkey, and Ukraine

N = Total number of included patients

Table 1b. Socio-demographic factors (perceived stigma)

<i>Author</i>	<i>Year</i>	<i>Place</i>	<i>N</i>	<i>Age mean</i>	<i>Age SD</i>	<i>Male (%)</i>	<i>Education (%)</i>	<i>Single (%)</i>	<i>Unemployed (%)</i>	<i>Stigma scales</i>	<i>Mean</i>	<i>SD</i>	<i>Moderate to high (%)</i>
<i>Amore</i> ²⁴	2020	Italy	921	40.2	10.7	69.6	-	92.2	70.9	PDD12_2	2.57	0.5	-
<i>Belvederimurri</i> ²⁵	2016	Italy	89	42.2	10.8	69.7	-	-	67.4	PDD12_1	31.8	5.4	-
<i>Berge</i> ²⁶	2005	USA	31	-	-	43.3	33.4	100	-	DDM12	32.86	6.22	-
<i>Bifftu</i> ²⁷	2014	Ethiopia	411	33.24	9.73	73.5	20	82.4	62.5	PDD12_2	-	-	83.5
<i>Brohan</i> ²⁸	2010	20 countries*	1229	39.8	10.7	52.6	8.5	-	72.9	PDD12_2	2.79	0.46	41.7
<i>Chen</i> ²⁹	2014	Taiwan	212	41.6	-	57	75.4	78.3	74.1	PDD12_1	21.91	4.46	-
<i>Chien</i> ³⁰	2014	Hong Kong	100	33.76	10.25	58	26	-	-	DDS18	58.33	7.98	-
<i>Hsiung</i> ¹⁸	2010	Taiwan	199	36.68	10.34	39.7	48.2	84.4	-	SIS	62.7	10.89	-
<i>Jung</i> ³¹	2012	South Korea	521	-	-	60.4	33.7	91.7	-	PSS	2.99	0.52508	-
<i>Ow</i> ³²	2012	Singapore	80	43.4	10.6	52.5	-	81.3	57.5	PDD12_2	2.67	0.41	-
<i>Picco</i> ³³	2017	Singapore	74	43	10.4	51.4	5.4	80.8	39.2	DDS12	42.5	11.6	-
<i>Sibitz</i> ³⁴	2011	Austria	157	37.3	11.9	54.5	36.9	91.1	97.5	PDD12_2	3.2	0.85	-
<i>Singh</i> ³⁵	2016	India	100	36.8	12.1	54	-	39	58	EMIC	22	7.4	-
<i>Staring</i> ³⁶	2009	Netherlands	114	38.3	11.5	71	-	-	83	PDD12_2	2.7456	0.47021	44.7
<i>Stip</i> ³⁷	2017	Canada	30	32.3	9.62	73.3	-	83.3	86.66	StS	25.8	6.41	-
<i>Tesfaw</i> ³⁸	2020	Ethiopia	409	22	9.73	62.3	14.4	59.2	-	PDD12_2	-	-	62.6
<i>Vauth</i> ⁶	2007	Switzerland	172	39.6	11	60.5	-	81.4	51.8	PDD12_2	2.7	0.62	-
<i>Wang</i> ³⁹	2016	China	146	-	-	47.3	31.5	71.3	43.9	PDD12_2	2.53	0.43	-
<i>Yokoyama</i> ⁴⁰	2019	Japan	62	44.8	10.5	51.61	-	-	-	PDD12_1	33.23	5.87	-
<i>Zaske</i> ⁴¹	2018	Germany	48	32	10.079	54.2	-	-	-	modified PDD	35	8.997	-

* 20 countries: Belgium, Bulgaria, Croatia, the Czech Republic, Estonia, Finland, France, Greece, Italy, Lithuania, Macedonia, Malta, Poland, Romania, Russia, Slovenia, Spain, Sweden, Turkey, and Ukraine

N = Total number of included patients

Table 1c. Illness related variables (perceived stigma)

Author	AOO Mean (SD)	DI Mean (SD)	N Hospit Mean (SD)	PANSS scale	PANSS Tot Mean (SD)	Positive scale	Mean (SD)	Negative scale	Mean (SD)	Symptom scale	Mean (SD)	Depression scale	Mean (SD)	QoL scale	Mean (SD)
Amore ²⁴	24 (7.2)	-	-	P5	75.5 (23)	P5W	16.12 (6.74)	P5W	21.93 (8.52)	-	-	CDSS	4 (4)	-	-
Belvederimurri ²⁵	-	20.5 (12.2)	-	P5	75.9 (22.6)	P5W	2.2 (1.1)	P5W	3.1 (1.1)	-	-	CDSS	5.8 (4.9)	--	-
Berge ²⁶	25.96 (11.2)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Bifttu ²⁷	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Brohan ²⁸	24.2 (7.6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chen ²⁹	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chien ³⁰	-	-	-	-	-	-	-	-	-	BPRS	11.57 (11.09)	-	-	-	-
Hsiung ¹⁸	-	-	3.03 (1.71)	-	-	-	-	-	-	SSS	4.4 (3.09)	-	-	WQ-B	-
Jung ³¹	-	-	-	-	-	-	-	-	-	-	-	-	-	K-QOL	2.76 (0.761)
Ow ³²	-	-	-	-	-	-	-	-	-	-	-	CES-D	20.65 (11.21)	S-QOL	-
Picco ³³	25.7 (7.94)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Sibitz ³⁴	23.6 (9.1)	13.6 (10.6)	5.5 (5.5)	-	-	-	-	-	-	-	-	ADS-2	1.09 (0.67)	WQ-B	3.04 (1.09)
Singh ³⁵	26.5 (8.9)	10.2 (8.1)	-	-	34.4 (2.1)	-	-	-	-	-	-	-	-	-	-
Staring ³⁶	-	-	-	-	-	P3	13.7 (5.4)	P3	14 (5.7)	P3	30.4 (9.7)	-	-	-	-
Stip ³⁷	-	-	4.07 (4.16)	P3	37.43 (7.08)	P3	19.3 (5.83)	P3	17.76 (5.22)	-	-	CDSS	3.4 (3.39)	-	-
Tesfaw ³⁸	-	-	-	-	-	P3	11.8 (5)	P3	9.4 (3)	P3	23.92 (5.4)	-	-	-	-
Vauth ⁶	-	15.6 (11.2)	-	-	-	P3	13.1 (4.8)	P3	15.4 (5.7)	-	-	CES-D	28.8 (9.4)	LQOLP	4.7 (0.97)
Wang ³⁹	-	-	-	-	-	-	-	-	-	-	-	-	-	SQLS	27.02 (14.46)
Yokoyama ⁴⁰	-	18.8 (9.4)	-	-	-	-	-	-	-	-	-	-	-	-	-
Zaske ⁴¹	-	-	-	-	-	-	-	P3	50.7 (18.046)	-	-	CDSS	2.7 (3.095)	LQOLPm	(0.838)

AOO = Age of Onset, DI = Duration of illness, N Hospit = Number of lifetime hospitalization in psychiatric units, QoL = Quality of Life, P3 = PANSS 3 factors, P5W = PANSS 5 factors Wallwork, BPRS = Brief Psychiatric Rating Scale, SSS = Symptom Scale for Schizophrenia, CDSS = Calgary Depression Scale for Schizophrenia, CES-D = Center for Epidemiological Studies Depression Scale, ADS-2 = Allgemeine DepressionsSkala, WQ-B = WHOQOL-BREF = World Health Organization Quality of Life Scale, brief version, K-QOL = Korean Quality of Life Scale, S-QOL = QOL Questionnaire in Schizophrenia, LQOLP = Lancashire Quality of Life Profile, LQOLPm = German short version of the Lancashire Quality of Life Profile

b) Summary

Prevalence and perceived stigma

Four (20%) of the 20 included publications analyzing perceived stigma reported on the prevalence of this type of personal stigma, using the PDD scale, with a 2.5 cut point. On these studies, a mean of 69.6% of the patients were found to have a moderate to high perceived stigma.

Two studies conducted in the Northern hemisphere in 2009 and 2010 found that patients suffering from schizophrenia had a low perceived stigma respectively 44,7%³⁶ and 41,7%²⁸. Two studies conducted in Ethiopia, on the contrary, found a moderate to high perceived stigma: 83.5%²⁷ in 2014 and 62,6%³⁸ in 2020.

Sociodemographic variables

Relationship between sociodemographic factors and stigmatization have already widely been explored. In this systematic review 7 studies analyzed at least one of the sociodemographic factors whilst assessing perceived stigma.

Perceived stigma was found to be significantly and positively correlated with age³⁹, as well as an older age is associated with more burden due to stigma⁴¹

Female patients were associated to a 2.4 greater risk of high perceived stigma compared to male³⁸.

In one study, a low educational status was found associated to more perceived stigma²⁷ and oppositely, in two studies, a high educational status was found to associated to more stigma^{27,42}.

Other sociodemographic factors (relationship status, race, employment status, settlement situation) were not analyzed in association with perceived stigma.

Illness-related variables

Age of onset of schizophrenia

One study analyzed the link with the age of onset on the disease and found that when it occurs before 25 years, patients had a 1.85 times greater likelihood of developing higher perceived stigma³⁸.

Duration of illness

Perceived stigma was shown to be associated positively to the duration of illness in Ethiopia and China^{27, 39}. Furthermore, a greater odd of perceived stigma was found with a duration illness cut-off point superior at one year³⁸. On the other hand, in another study, no relationship between the illness duration and stigma impact was found⁴³.

Number of psychiatric hospitalizations

A history of being hospitalized in psychiatry once or twice increased perceived stigma by 1.94 times among schizophrenia patients when compared to patients who did not have a history of admission³⁸.

Symptom severity

A lot of studies included the type and severity of the psychopathologic symptoms but correlations between symptoms and perceived stigma were not really explored.

Depression severity

Perceived stigma and lack of empowerment lead to depression in patients suffering from schizophrenia³⁴, besides, perceived discrimination was found to partly mediate insight and depression²⁵.

Quality of life

Perceived stigma is found having negative effects on quality of life^{39,44}, perceived stigma also predicted lower QOL after controlling for depression, knowing that education partially mediated the effect of perceived stigma on QOL³².

4. PERCEIVED STIGMA ASSOCIATED TO EXPERIENCED STIGMA

a) Raw data

Table 2a. Study characteristics (perceived stigma and experienced stigma)

Author	Year	Place	Multicentric	Outpatient recruitment	Stabilized	Treated	N	Stigma scales	Mean	SD	Moderate to high (%)
Brain ⁴⁵	2014	Sweden	1	1	1	1	111	DISC25	0.729	0.446	-
Switaj ⁴³	2013	Poland	1	0	1	1	229	SES	3.58	2.85	-
Ucok ⁴⁶	2013	Turkey	0	1	1	1	103	DISC4	3.85	2.05	-

Table 2b. Socio-demographic factors (perceived stigma and experienced stigma)

Author	Year	Place	N	Age mean	Age SD	Male (%)	Education (%)	Single (%)	Unemployed (%)	Stigma scales	Mean	SD	Moderate to high (%)
Brain ⁴⁵	2014	Sweden	111	45.8	11.1	36.9	56.8	87.4	68.5	DISC25	0.729	0.446	-
Switaj ⁴³	2013	Poland	229	45.9	15.1	38	83.8	-	61.1	SES	3.58	2.85	-
Ucok ⁴⁶	2013	Turkey	103	31.49	9.94	59.22	-	91.7	62.7	DISC4	3.85	2.05	-

Table 2c. Illness related variables (perceived stigma and experienced stigma)

Author	AOO Mean (SD)	DI Mean (SD)	N hospit Mean (SD)	PANSS	PANSS Tot Mean (SD)	Positive scale	Mean (SD)	Negative scale	Mean (SD)	Symptom scale	Mean (SD)	Dep scale	Mean (SD)	QoL scale	Mean (SD)
Brain ⁴⁵	-	-	-	-	60.1 (13.2)	-	-	-	-	-	-	-	-	-	-
Switaj ⁴³	-	15.4 (12)	-	-	-	BPRS	6.21 (3.18)	BPRS	5.55 (2.95)	BPRS	28.5 (11.07)	-	-	-	-
Ucok ⁴⁶	22.08 (5.84)	9.91 (8.01)	1.57 (1.9)	P3	62.29 (18.3)	P3	14.76 (5.95)	P3	15.57 (5.65)	P3	31.82 (9.57)	CDSS	5.6 (4.72)	QLS	76.47 (19.7)

N = Total number of included patients, AOO = Age of Onset, DI = Duration of illness, N Hospit = Number of lifetime hospitalization in psychiatric units, QoL = Quality of Life, P3 = PANSS 3 factors, BPRS = Brief Psychiatric Rating Scale, SSS = Self Stigma Scale, CDSS = Calgary Depression Scale for Schizophrenia, QLS = Quality of Life Scale

b) Summary

In these studies, the stigma assessment was done through the DISC and SES scales which evaluate perceived and experienced stigma at once.

Few conclusions concerning correlates of sociodemographic, or illness related factors were found being related, except towards some subscales like the fact that patients with a low level of functioning and pronounced symptoms experienced a higher degree of anticipated discrimination at school, education or work⁴⁶.

5. EXPERIENCED STIGMA

a) Raw data

Table 3a. Study characteristics

Author	Year	Place	Multicentric	Outpatient recruitment	Stabilized	Treated	N	Stigma scales	Mean	SD	Moderate to high (%)
Lu ⁴⁷	2012	China	0	0	0	1	92	MCESQ	2.08	0.39	-
Switaj ⁴³	2009	Poland	1	0	1	1	153	CESQ	2.7	0.8	-
Switaj ⁴⁸	2013	Poland	1	0	1	1	229	SIS2	21.21	20.75	-

Table 3b. Socio-demographic factors

Author	Year	Place	N	Age mean	Age SD	Male (%)	Education (%)	Single (%)	Unemployed (%)	Stigma scales	Mean	SD	Moderate to high (%)
Lu ⁴⁷	2012	China	92	26.1	7.5	58.7	66.3	71.7	37	MCESQ	2.08	0.39	-
Switaj ⁴³	2009	Poland	153	42.5	12.6	48.4	49	58.8	81.7	CESQ	2.7	0.8	-
Switaj ⁴⁸	2013	Poland	229	45.9	15.1	38	83.8	-	61.1	SIS2	21.21	20.75	-

Table 3c. Illness related variables

Author	AOO Mean (SD)	DI Mean (SD)	N hospit Mean (SD)	PANSS scale	PANSS Tot Mean (SD)	Positive scale	Mean (SD)	Negative scale	Mean (SD)	Symptom scale	Mean (SD)	Depression scale	Mean (SD)	QoL scale	Mean (SD)
Lu ⁴⁷	21.6 (6.3)	-	-	-	-	SAPS	25.4 (15.3)	SANS	41 (19.7)	-	-	-	-	-	-
Switaj ⁴³	25.3 (8.1)	17.3 (11.2)	8.3 (10.8)	-	-	-	-	-	-	-	-	-	-	-	-
Switaj ⁴⁸	-	15.4 (12)	-	-	-	BPRS	6.21 (3.18)	BPRS	5.55 (2.95)	BPRS	28.5 (11.07)	-	-	-	-

N = Total number of included patients, AOO = Age of Onset, DI = Duration of illness, N Hospit = Number of lifetime hospitalization in psychiatric units, QoL = Quality of Life, SAPS = Scale for Assessment of Positive Symptoms, SANS = Scale for Assessment of Negative Symptoms, BPRS = Brief Psychiatric Rating Scale

b) Summary

Two scales assess experienced stigma on its own through CESQ and SIS2.

Prevalence and sociodemographic variables

Among studies exploring experienced stigma, prevalence and demographic factors associated to stigma were not evaluated.

Illness-related variables

Age of onset of schizophrenia

One study found that patients who became ill at a younger age were more likely to feel stigmatized⁴³.

Duration of illness

Illness duration and stigma impact turned out to be unrelated⁴⁸.

Symptom severity

Two out of 3 studies exploring only experienced stigma did not detect any significant associations between the frequency of stigmatization experiences and symptoms^{43,48}.

Quality of life

In one of the study, one of the strongest predictor of the greater frequency of stigmatization experiences proved to be the lowered level of the subjective quality of life⁴³.

6. INTERNALIZED STIGMA (EXPERIENCED STIGMA ASSOCIATED TO SELF STIGMA)

Internalized stigma explains the inner psychological harm caused by the devaluation, shame, secrecy and withdrawal triggered by applying negative stereotypes to oneself⁴⁹.

This scale is a 29 item self-complete measure. Each item is rated on a four-point Likert scale anchored at 1=strongly disagree and 4=strongly agree. Internal consistency ($\alpha = 0.90$), test-

retest reliability ($r = 0.92$)²³. Items were grouped into five subscales: alienation, stereotype endorsement, perceived discrimination, social withdrawal, and stigma resistance¹³, comprising the experience of stigma and self-stigma.

On the 92 studies included in the systematic review, the ISMI scale was used to measure stigma in 70 of them, showing the trust in this psychometric instrument in the measurement of personal stigma.

Eleven different versions of the ISMI scale were used, changing from the language, the number of items to the number of subscales. For example one study chose to use only the alienation and stereotype endorsement subscales⁵⁰, so focusing specifically on self-stigma.

Two other scales were used: one exploring internalized stigma similar to the content of the ISMI scale was used; the ISS¹⁴ and one exploring experienced and self-stigma just as the ISMI scale.

a) **Raw data**

Table 4a. Study characteristics (internalized stigma)

Author	Year	Place	Multicentric	Outpatient recruitment	Stabilized	Treated	N	Stigma scales	Mean	SD	Stigma resistance Mean (SD)	Moderate to high (%)
Alhadidi ⁵¹	2020	Jordan	0	0	0	1	135	ISMI10_1	26.56	5.75	-	-
Amore ²⁴	2020	Italy	1	1	1	1	921	ISMI29_2	2.1	0.5	-	-
Assefa ⁵²	2012	Ethiopia	0	1	0	1	212	ISMI24_1	-	-	-	46.7
Aukst-margetic ⁵³	2014	Croatia	1	1	1	1	117	ISMI29_1	62.2	12.88	-	-
Belvederimurri ²⁵	2016	Italy	1	1	1	1	89	ISMI29_3	38.5	12	-	-
Bouvet ⁵⁴	2015	France	1	0	0	1	62	ISMI29_2	2.23	0.46	2.46 (0.55)	-
Brohan ²⁸	2010	20 countries*	1	0	0	1	1229	ISMI24_2	2.4	0.56	2.47 (0.51)	-
Cai ⁵⁵	2017	China	1	1	1	1	172	ISMI29_1	92.65	15.55	-	-
Campellone ⁵⁶	2014	USA	1	1	1	1	51	ISMI24_2	2.08	0.6	2.9 (2.9)	-
Çapar ⁵⁷	2018	Turkey	0	1	1	1	250	ISMI29_1	80.31	10.94	12.08 (1.79)	-
Caqueourizar ⁵⁸	2019	Bolivia	0	1	1	1	83	ISMI29_2	2.4	0.61	2.4 (0.72)	48.7
Caqueourizar ⁵⁸	2019	Chile	0	1	1	1	85	ISMI29_2	2.3	0.53	2.4 (0.58)	38.6
Caqueourizar ⁵⁸	2019	Peru	0	1	1	1	85	ISMI29_2	2.2	0.46	2.2 (0.46)	28.6
Chan ⁵⁹	2017	Hong Kong	0	1	1	1	64	ISMI29_1	55	12.9	13.06 (2.56)	-
Chang ⁶⁰	2016	Taiwan	1	1	1	1	161	ISMI29_1	42	26.1	1.3 (0.05)	-
Chen ²⁹	2014	Taiwan	1	0	0	1	212	ISMI29_1	-	-	10.59 (2.67)	-
Costain ⁶¹	2012	Canada	1	1	1	1	25	ISMI29_2	2	-	-	-
Espinosa ⁶²	2016	USA	0	0	0	1	50	ISMI29_1	64.6	9.42	12.04 (2.56)	-
Fadipe ⁶³	2020	Nigeria	0	1	1	1	370	ISMI29_2	2.1262	0.36375	-	83.5
Feldhaus ⁶⁴	2018	Germany	0	0	1	1	81	ISMI29_2	2.12	0.47	2.65 (0.58)	-
Firmin (EP psychosis) ⁶⁵	2018	USA	0	1	0	1	40	ISMI29_3	29	15.4	-	-
Firmin (P psychosis) ⁶⁵	2018	USA	0	1	1	1	71	ISMI29_3	35.7	14.1	-	-
Fresan ⁶⁶	2018	Mexico	0	1	1	1	217	ISS13	27.5	8.7	-	-

* 20 countries: Belgium, Bulgaria, Croatia, the Czech Republic, Estonia, Finland, France, Greece, Italy, Lithuania, Macedonia, Malta, Poland, Romania, Russia, Slovenia, Spain, Sweden, Turkey, and Ukraine

N = Total number of included patients, EP = early phase, P = prolonged

Author	Year	Place	Multicentric	Outpatient recruitment	Stabilized	Treated	N	Stigma scale	Mean	SD	Stigma resistance Mean (SD)	Moderate to high (%)
Grover ⁶⁷	2017	India	1	0	1	1	707	ISMI24_2	2.37	0.51	2.38 (0.53)	37.9
Grover (1) ⁶⁸	2019	India	0	1	1	1	34	ISMI29_2	2.44	0.35	2.47 (0.34)	55.9
Grover (2) ⁶⁸	2019	India	0	1	1	1	56	ISMI29_2	2.35	0.35	2.37 (0.23)	35.7
Hasson-ohayon ⁶⁹	2014	Israël	1	1	1	1	80	ISMI29_2	2.23	0.58	-	-
Hill ⁷⁰	2013	Australia	1	0	0	1	60	ISMI29_1	74.15	14.27	-	-
Ho ⁷¹	2010	Hong Kong	1	1	1	1	201	ISMI17	39.49	17	-	-
Hofer ⁷²	2019	Austria	0	1	1	1	54	ISMI29_2	1.96	0.6	2.94 (0.52)	-
Holubova ⁷²	2016	Czech Republic	1	1	1	1	103	ISMI29_1	64	13.7	12.6 (2.4)	-
Horsselenberg ⁷³	2016	Netherlands	1	1	1	1	102	ISMI29_2	1.65	0.39	-	-
Hsiao ⁷⁴	2017	Taiwan	1	0	0	1	111	ISMI29_2	1.33	0.53	-	-
Kamaradova ⁷⁵	2016	Czech Republic	0	1	1	1	38	ISMI29_1	62.68	13.65	-	-
Karakas ⁷⁶	2016	Turkey	1	0	1	1	60	ISMI29_1	75.4	1.41	13.13 (3.15)	-
Kasli ⁷⁷	2020	Turkey	0	1	1	1	94	ISMI29_1	69.38	14.48	10.94 (2.97)	-
Kim MY	2016	South Korea	0	1	1	1	70	ISMI29_1	61.7	15.5	-	-
Kim EY ⁷⁸	2019	South Korea	1	1	1	1	123	ISMI29_1	62.33	14.4	11.05 (2.4)	-
Komatsu ⁷⁹	2020	Japan	0	0	0	1	127	ISMI29_2	2.25	0.49	-	24.4
Kondratova ⁸⁰	2018	Czech Republic	1	0	0	1	133	ISMI29_2	2.3	0.5	-	-
Lj ⁸¹	2017	China	1	0	1	1	384	ISMI29_2	2.3	0.39	-	-
Lj ⁸²	2020	China	1	1	1	1	48	ISMI29_2	2.2	0.45	2.28 (0.46)	-
Lien ⁸³	2016	Taiwan	1	1	1	1	170	ISMI24_2	2.36	0.52	-	-
Lim ⁸⁴	2019	Singapore	0	0	0	1	66	ISMI10_2	2.34	0.5	-	-
Lu ⁴⁷	2012	China	0	0	0	1	92	ISMI29_2	2.18	0.38	2.43 (0.34)	-
Mizuno ⁸⁵	2016	Japan	1	1	1	1	60	ISMI29_1	62.6	12	2.35 (0.46)	-

(1) = group 1, (2) = group 2, N = Total number of included patients

Table 4a. Continued

Author	Year	Place	Multicentric	Outpatient recruitment	Stabilized	Treated	N	Stigma scale	Mean	SD	Stigma resistance Mean (SD)	Moderate to high (%)
Morgades-bamba ⁵⁰	2018	Spain	1	1	0	1	167	ISMI13	2.05	0.55	-	-
Morgades-bamba ⁵⁰	2019	Spain	1	1	0	1	216	ISMI13	2.08	0.54	-	-
Mosanya ⁸⁶	2013	Nigeria	0	1	1	1	256	ISMI29_2	1.94	0.68	2.79 (0.53)	-
Olcun ⁸⁷	2017	Turkey	0	1	1	1	76	ISMI29_1	72.78	16.05	13.01 (3.04)	-
Park ⁸⁸	2019	Republic of Korea	1	1	1	1	116	ISMI29_2	2.51	0.65	3.35 (0.74)	-
Pellet ⁸⁹	2019	Switzerland	1	1	0	1	80	SS	20.82	4.93	-	-
Picco ³³	2017	Singapore	1	1	0	1	74	ISMI29_2	2.41	0.52	-	-
Pribadi ⁹⁰	2020	Indonesia	0	1	1	1	300	ISMI29_2	2.51	0.94	2.4 (0.8)	34
Ran ⁹¹	2017	China	1	0	0	1	232	ISMI29_3	71.5	8.4	12.5 (1.8)	-
Sarisoy ⁹²	2013	Turkey	0	1	1	1	109	ISMI29_2	2.17	0.51	2.56 (0.62)	-
Schrank ⁹³	2013	Austria	1	0	0	1	284	ISMI29_2	1.89	0.6	-	-
Shara ⁹⁴	2012	Egypt	0	1	1	1	200	ISMI29_1	66.79	19.98	-	-
Shin ⁹⁵	2016	South Korea	0	1	1	1	64	ISMI29_1	78.83	5.13	-	-
Sibitz ³⁴	2011	Austria	1	0	1	1	157	ISMI29_2	2.09	0.67	-	-
Singh ³⁵	2016	India	0	1	1	1	100	ISMI29_2	2.3	0.3	2.3 (0.7)	-
Singla ⁹⁶	2020	India	0	1	1	1	100	ISMI28	2.2	0.4	2.4 (0.6)	23
Stip ³⁷	2017	Canada	1	0	1	1	30	StS	25.8	6.41	-	-
Sum ⁹⁷	2020	China	1	1	1	1	30	ISMI24_1	53.67	12.04	-	-
Tanriverdi ⁹⁸	2019	Turkey	0	0	1	1	207	ISMI29_2	2.54	0.25	2.47 (0.47)	-
Vidovic ⁹⁹	2016	Croatia	0	1	0	1	46	ISMI29_2	2.13	0.93	2.37 (0.99)	-
Violeau ¹⁰⁰	2020	France	-	1	1	1	149	ISMI29_1	64	10.8	-	-
VrbovaFeb ¹⁰¹	2017	Turkey	0	1	1	1	61	ISMI29_1	60.44	13.73	12.52 (2.35)	-
VrbovaAug ¹⁰²	2017	Turkey	0	1	1	1	78	ISMI29_1	61.2	14	-	-
Wong ¹⁰³	2018	China	0	1	0	1	52	ISMI22	2.267	0.8755	-	-
Yildirim ¹⁰⁴	2019	Turkey	0	0	0	1	8	ISMI29_1	79.65	13.48	11.95 (2.12)	-
Yilmaz ¹⁰⁵	2015	Turkey	1	1	1	1	200	ISMI29_1	76.39	14.3	13.3 (2.16)	-

N = Total number of included patients

Table 4b. Socio-demographic factors (internalized stigma)

<i>Author</i>	<i>Year</i>	<i>Place</i>	<i>N</i>	<i>Age (mean)</i>	<i>Age (SD)</i>	<i>Male (%)</i>	<i>Education (%)</i>	<i>Single (%)</i>	<i>Unemployed (%)</i>	<i>Stigma scales</i>	<i>Mean</i>	<i>SD</i>	<i>Moderate to high (%)</i>
<i>Alhadidi</i> ⁵¹	2020	Jordan	135	45.1	8.55	100	14.7	89.6	-	ISMI10_1	26.56	5.75	-
<i>Amore</i> ²⁴	2020	Italy	921	40.2	10.7	69.6	-	92.2	70.9	ISMI29_2	2.1	0.5	-
<i>Assefa</i> ⁵²	2012	Ethiopia	212	33.3	8.9	65.1	20.8	74	70.3	ISMI24_1	-	-	46.7
<i>Aukst-margetic</i> ⁵³	2014	Croatia	117	34.1	10.51	58.11	-	-	-	ISMI29_1	62.2	12.88	-
<i>Belvederi murri</i> ²⁵	2016	Italy	89	42.2	10.8	69.7	-	-	67.4	ISMI29_3	38.5	12	-
<i>Bouvet</i> ⁵⁴	2015	France	62	38.71	0.43	75	24	-	-	ISMI29_2	2.23	0.46	-
<i>Brain</i> ⁴⁵	2014	Sweden	111	45.8	11.1	36.9	56.8	87.4	68.5	DISC25	0.729	0.446	-
<i>Brohan</i> ²⁸	2010	20 countries*	1229	39.8	10.7	52.6	8.5	-	72.9	ISMI24_2	2.4	0.56	-
<i>Cai</i> ⁵⁵	2017	China	172	43.1	10.7	61	-	75	90.6	ISMI29_1	92.65	15.55	-
<i>Campellone</i> ⁵⁶	2014	USA	51	45.92	10.6	52.9	-	-	-	ISMI24_2	2.08	0.6	-
<i>Çapar</i> ⁵⁷	2018	Turkey	250	-	-	80	43.6	81.6	-	ISMI29_1	80.31	10.94	-
<i>Caqueourizar</i> ⁵⁸	2019	Bolivie	83	33.7	11	75.9	12	95.1	65.1	ISMI29_2	2.4	0.61	48.7
<i>Caqueourizar</i> ⁵⁸	2019	Chili	85	37.9	15.3	68.2	7.1	90.5	68.2	ISMI29_2	2.3	0.53	38.6
<i>Caqueourizar</i> ⁵⁸	2019	Peru	85	35.2	10.3	50.5	28.2	90.5	74.1	ISMI29_2	2.2	0.46	28.6
<i>Chan</i> ⁵⁹	2017	Hong Kong	64	29.84	10.91	59.4	-	-	34.4	ISMI29_1	55	12.9	-
<i>Chang</i> ⁶⁰	2016	Taiwan	161	40.67	10.66	53.4	-	-	-	ISMI29_1	42	26.1	-
<i>Chen</i> ²⁹	2014	Taiwan	212	41.6	-	57	75.4	78.3	74.1	ISMI29_1	-	-	-
<i>Costain</i> ⁶¹	2012	Canada	25	-	-	60	40	-	-	ISMI29_2	2	-	-
<i>Espinosa</i> ⁶²	2016	USA	50	32.5	9.6	60.8	12	78.4	64	ISMI29_1	64.6	9.42	-
<i>Fadipe</i> ⁶³	2020	Nigeria	370	-	-	48.9	26	56.5	54.3	ISMI29_2	2.12	0.36	83.5
<i>Feldhaus</i> ⁶⁴	2018	Germany	81	38.35	13	54.3	-	-	-	ISMI29_2	2.12	0.47	-
<i>Firmin (EP psychosis)</i> ⁶⁵	2018	USA	40	24	4.3	80	-	-	-	ISMI29_3	29	15.4	-
<i>Firmin (P psychosis)</i> ⁶⁵	2018	USA	71	51.9	7.5	94.4	-	-	-	ISMI29_3	35.7	14.1	-
<i>Fresan</i> ⁶⁶	2018	Mexico	217	37.4	10.8	67.3	-	82.5	71	ISS13	27.5	8.7	-

* 20 countries: Belgium, Bulgaria, Croatia, the Czech Republic, Estonia, Finland, France, Greece, Italy, Lithuania, Macedonia, Malta, Poland, Romania, Russia, Slovenia, Spain, Sweden, Turkey, and Ukraine

N = Total number of included patients, EP = early phase, P = prolonged

Table 4b. continued

<i>Author</i>	<i>Year</i>	<i>Place</i>	<i>N</i>	<i>Age mean</i>	<i>Age SD</i>	<i>Male (%)</i>	<i>Education (%)</i>	<i>Single (%)</i>	<i>Unemployed (%)</i>	<i>Stigma scales</i>	<i>Mean</i>	<i>SD</i>	<i>Moderate to high (%)</i>
<i>Grover</i> ⁶⁷	2017	India	707	33.79	10.73	57.3	69.6	-	-	ISMI24_2	2.37	0.51	37.9
<i>Grover (1)</i> ⁶⁸	2019	India	34	28.61	9.08	64.7	-	85.8	76.5	ISMI29_2	2.44	0.35	55.9
<i>Grover (2)</i> ⁶⁸	2019	India	56	36.75	9.55	44.6	-	66.1	71.4	ISMI29_2	2.35	0.35	35.7
<i>Hasson-ohayon</i> ⁶⁹	2014	Israël	80	44	11.3	54	89	55	-	ISMI29_2	2.23	0.58	-
<i>Hill</i> ⁷⁰	2013	Australia	60	34.4	59.58	73.3	-	90	93.3	ISMI29_1	74.15	14.27	-
<i>Ho</i> ⁷¹	2010	Hong Kong	201	-	-	-	-	-	-	ISMI17	39.49	17	-
<i>Hofer</i> ⁷²	2019	Austria	54	43.9	10.5	50	-	77.9	77.8	ISMI29_2	1.96	0.6	-
<i>Holubova</i> ⁷²	2016	Czech Republic	103	42	10.2	41	16	74.2	68	ISMI29_1	64	13.7	-
<i>Horsselebenberg</i> ⁷³	2016	Netherlands	102	39.1	11.3	75.5	-	-	63	ISMI29_2	1.65	0.39	-
<i>Hsiao</i> ⁷⁴	2017	Taiwan	111	45.59	10.06	65.8	13.5	90.1	22	ISMI29_2	1.33	0.53	-
<i>Kamaradova</i> ⁷⁵	2016	Czech Republic	38	40.66	14.52	69.2	15.8	84.2	-	ISMI29_1	62.68	13.65	-
<i>Karakas</i> ⁷⁶	2016	Turkey	60	34.12	8.46	75	31.7	73.4	65	ISMI29_1	75.4	1.41	-
<i>Kasli</i> ⁷⁷	2020	Turkey	94	-	-	68.1	56.4	73.4	86.2	ISMI29_1	69.38	14.48	-
<i>Kim MY</i> ⁷⁷	2016	South Korea	70	35.8	10.4	47.1	-	51.4	-	ISMI29_1	61.7	15.5	-
<i>Kim EY</i> ⁷⁸	2019	South Korea	123	41.87	10.39	62.6	50.4	-	-	ISMI29_1	62.33	14.4	-
<i>Komatsu</i> ⁷⁹	2020	Japan	127	46.5	13.8	49.6	27.6	37.8	-	ISMI29_2	2.25	0.49	24.4
<i>Kondratova</i> ⁸⁰	2018	Czech Republic	133	42.3	11	52.6	12	79.7	-	ISMI29_2	2.3	0.5	-
<i>Li</i> ⁸¹	2017	China	384	39.96	7.69	51.3	-	62	70.8	ISMI29_2	2.3	0.39	-
<i>Li</i> ⁸²	2020	China	48	-	-	-	-	-	-	ISMI29_2	2.2	0.45	-
<i>Lien</i> ⁸³	2016	Taiwan	170	44.4	10.1	55	-	86	73.5	ISMI24_2	2.36	0.52	-
<i>Lim</i> ⁸⁴	2019	Singapore	66	40.29	10.552	45.5	57.6	86.4	39.4	ISMI10_2	2.34	0.5	-
<i>Lu</i> ⁴⁷	2012	Chine	92	26.1	7.5	58.7	66.3	71.7	37	ISMI29_2	2.18	0.38	-
<i>Mizuno</i> ⁸⁵	2016	Japan	60	45.9	10	36.7	-	76.7	60	ISMI29_1	62.6	12	-

(1) = group 1, (2) = group 2, N = Total number of included patients

Table 4b. continued

<i>Author</i>	<i>Year</i>	<i>Place</i>	<i>N</i>	<i>Age mean</i>	<i>Age SD</i>	<i>Male (%)</i>	<i>Education (%)</i>	<i>Single (%)</i>	<i>Unemployed (%)</i>	<i>Stigma scales</i>	<i>Mean</i>	<i>SD</i>	<i>Moderate to high (%)</i>
<i>Morgades-bamba</i> ⁵⁰	2018	Spain	216	44.38	9.69	73.6	-	-	-	ISMI13	2.05	0.55	-
<i>Morgades-bamba</i> ⁵⁰	2019	Spain	167	43.93	9.28	71.76	-	-	-	ISMI13	2.08	0.54	-
<i>Mosanya</i> ⁸⁶	2013	Nigeria	256	39.5	10.6	52	24.2	-	32.8	ISMI29_2	1.94	0.68	-
<i>Olcun</i> ⁸⁷	2017	Turkey	76	38.38	10.65	68.4	5.3	72.4	65.8	ISMI29_1	72.78	16.05	-
<i>Park</i> ⁸⁸	2019	Korea	116	41.08	9.11	65.5	-	-	-	ISMI29_2	2.51	0.65	-
<i>Pellet</i> ⁸⁹	2019	Switzerland	80	39.9	10.9	61.3	17.5	83.8	18.8	SS	20.82	4.93	-
<i>Picco</i> ³³	2017	Singapore	74	43	10.4	51.4	5.4	80.8	39.2	ISMI29_2	2.41	0.52	-
<i>Pribadi</i> ⁹⁰	2020	Indonesia	300	37.1	10.7	61.3	51.3	-	53	ISMI29_2	2.51	0.94	34
<i>Ran</i> ⁹¹	2017	China	232	-	-	40.95	9.58	36.21	-	ISMI29_3	71.5	8.4	-
<i>Sarisoy</i> ⁹²	2013	Turkey	109	35.48	10.56	47.4	-	77.1	20.2	ISMI29_2	2.17	0.51	-
<i>Schrank</i> ⁹³	2013	Austria	284	39.9	12.6	58.1	24.3	73.3	73.2	ISMI29_2	1.89	0.6	-
<i>Sharaf</i> ⁹⁴	2012	Egypt	200	30.4	6.82	83.5	-	-	60	ISMI29_1	66.79	19.98	-
<i>Shin</i> ⁹⁵	2016	South Korea	64	-	-	53.1	42.2	85.9	-	ISMI29_1	78.83	5.13	-
<i>Sibitz</i> ³⁴	2011	Austria	157	37.3	11.9	54.5	36.9	91.1	97.5	ISMI29_2	2.09	0.67	-
<i>Singh</i> ³⁵	2016	India	100	36.8	12.1	54	-	39	58	ISMI29_2	2.3	0.3	-
<i>Singla</i> ⁹⁶	2020	India	100	37.1	12.1	65	47	46	48	ISMI28	2.2	0.4	23
<i>Stip</i> ³⁷	2017	Canada	30	32.3	9.62	73.3	-	83.3	86.66	StS	25.8	6.41	-
<i>Sum</i> ⁹⁷	2020	China	207	38.4	13.3	28.5	-	72.5	15.9	ISMI24_1	53.67	12.04	-
<i>Tanriverdi</i> ⁹⁸	2019	Turkey	46	-	-	-	20.5	20.2	-	ISMI29_2	2.54	0.25	-
<i>Vidovic</i> ⁹⁹	2016	Croatia	149	-	-	71.8	14.8	85.9	71.8	ISMI29_2	2.13	0.93	-
<i>Violeau</i> ¹⁰⁰	2020	France	78	35	9.5	77	-	-	-	ISMI29_1	64	10.8	-
<i>Vrbova Feb</i> ¹⁰¹	2017	Turkey	52	35.94	9.5	51.9	17.3	82.7	48.1	ISMI29_1	60.44	13.73	-
<i>Vrbova Aug</i> ¹⁰²	2017	Turkey	61	35.6	9.6	49.2	14.5	81.7	50	ISMI29_1	61.2	14	-
<i>Wong</i> ¹⁰³	2018	China	8	42.38	10.419	37.5	25	75	75	ISMI22	2.26	0.87	-
<i>Yildirim</i> ¹⁰⁴	2019	Turkey	200	-	-	84.5	11.5	78	85	ISMI29_1	79.65	13.48	-
<i>Yilmaz</i> ¹⁰⁵	2015	Turkey	63	38.11	9.57	74.6	3.21	74.6	73	ISMI29_1	76.39	14.3	-

N = Total number of included patients

Table 4c. Illness related variables (internalized stigma)

Author	AOO Mean (SD)	DI Mean (SD)	N Hospit Mean (SD)	PANSS scale	PANSS Tot Mean (SD)	Positive scale	Mean (SD)	Negative scale	Mean (SD)	Symptom scale	Mean (SD)	Depression scale	Mean (SD)	QoL scale	Mean (SD)
Alhadid ⁵¹	-	13.1 (7.32)	-	-	-	-	-	-	-	-	-	-	-	-	-
Amore ²⁴	24 (7.2)	-	-	P5W	75.5 (23)	P5W	16.12 (6.74)	P5W	21.93 (8.52)	-	-	CDSS	4 (4)	-	-
Assefa ⁵²	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Aukst-margetic ⁵³	-	7.2 (6.9)	-	-	-	-	-	-	-	-	-	BDI-II	10.7 (9.73)	-	-
Belvederimurri ²⁵	-	20.5 (12.2)	-	P5W	75.9 (22.6)	P5W	2.2 (1.1)	P5W	3.1 (1.1)	-	-	CDSS	5.8 (4.9)	-	-
Bouvet ⁵⁴	-	-	-	-	-	-	-	-	-	-	-	CDSS	6.16 (5.17)	-	-
Brohan ²⁸	24.2 (7.6)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Cai ⁵⁵	25.1 (5.81)	14.5 (md)	2.5 (5.5)	-	-	-	-	-	-	BPRS	86.79 (10.32)	-	-	SQLS	21.54 (11.62)
Campellone ⁵⁶	-	21.85 (md)	6.98 (md)	-	-	-	-	-	-	BPRS	43.89 (12)	-	-	-	-
Çapar ⁵⁷	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Caqueourizar ⁵⁸	20.3 (5.4)	-	-	P3	78.5 (25.4)	-	-	-	-	-	-	-	-	-	-
Caqueourizar ⁵⁸	20.6 (7.5)	-	-	P3	64.9 (26.6)	-	-	-	-	-	-	-	-	-	-
Caqueourizar ⁵⁸	21.6 (6.5)	-	-	P3	71.2 (31.2)	-	-	-	-	-	-	-	-	-	-
Chan ¹⁰⁶	25 (10.8)	4.39 (3.55)	-	-	-	-	-	P3	11.33 (3.8)	-	-	-	-	-	-
Chang ⁶⁰	27.02 (8.96)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Chen ²⁹	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Costain ⁶¹	22.6 (4.7)	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Espinosa ⁶²	-	-	-	-	-	-	-	-	-	-	-	BDI-II	16 (10.35)	-	-
Fadipe ⁶³	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Feldhaus ⁶⁴	26.57 (8.97)	11.81 (10.12)	5.7 (4.71)	P3	58.26 (15.14)	P3	12.27 (4.2)	P3	15.59 (5.71)	-	-	BDI-II	14.83 (9.52)	-	-
Firmin (EP psychosis) ⁶⁵	-	-	-	P5L	81.5 (21.3)	P5L	12.6 (4.9)	P5L	20.4 (7.1)	-	-	-	-	QLS	53.13 (21.1)
Firmin (P psychosis) ⁶⁵	-	-	-	P5L	73.7 (14.7)	P5L	17.8 (5.2)	P5L	19.8 (5.2)	-	-	-	-	QLS	50.2 (15.9)
Fresan ⁶⁶	24.5 (8)	-	1.7 (1.6)	P5L	59.6 (15.9)	P5L	15.5 (5.6)	P5L	16.8 (5)	-	-	-	-	-	-

EP = Early phase, P = Prolonged, AOO = Age of Onset, DI = Duration of illness, N Hospit = Number of lifetime hospitalization in psychiatric units, QoL = Quality of Life, P3 = PANSS 3 factors, P5L/W = PANSS 5 factors Lançon/Wallwork, BPRS = Brief Psychiatric Rating Scale, CDSS = Calgary Depression Scale for Schizophrenia, BDI-II = Beck Depression Inventory-II, QLS = Quality of Life Scale, SQLS = Schizophrenia Quality of life scale

Table 4c. continued

Author	AOO Mean (SD)	DI Mean (SD)	N Hospit Mean (SD)	PANSS scale	PANSS tot Mean (SD)	Positive scale	Mean (SD)	Negative scale	Mean (SD)	Symptom scale	Mean (SD)	Depression scale	Mean (SD)	QoL scale	Mean (SD)
Grover ⁶⁷	25.39 (8.41)	8.39 (6.97)	-	-	-	-	-	-	-	-	-	-	-	-	-
Grover (1) ⁶⁸	16.17 (1.76)	11.76 (7.78)	-	-	56.26 (13.25)	P3	10.02 (3.76)	P3	18.35 (15.19)	-	-	-	-	-	-
Grover (2) ⁶⁸	25.07 (5.98)	11.18 (7.06)	-	-	54.07 (14.42)	P3	10.8 (3.72)	P3	15.19 (4.52)	-	-	-	-	-	-
Hasson-ohayon ⁶⁹	-	-	5.6 (6.1)	-	-	-	-	-	-	-	-	-	-	-	-
Hill ⁷⁰	21.93 (4.97)	-	8.46 (7.45)	-	-	-	-	SANS	15.48 (2.54)	-	-	-	-	QOLSA	8.21 (6.1)
Ho ⁷¹	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Hofer ⁷²	-	14.8 (10.4)	-	-	56.2 (17.9)	P3	12.4 (5)	P3	15.7 (7)	-	-	-	-	SQLS	18.16 (11.66)
Holubova ⁷²	26.1 (9)	15.4 (9)	4.1 (4)	-	-	-	-	-	-	-	-	-	-	Q-LES-Q	271.5 (58)
Horselsenberg ⁷³	-	13.3 (10.3)	-	-	-	P3	15.31 (4.77)	P3	14.17 (5.41)	-	-	-	-	-	-
Hsiao ⁷⁴	-	20.9 (9.96)	7.57 (md)	-	-	-	-	-	-	-	-	-	-	WQ-B	78.15 (11.26)
Kamaradova ⁷⁵	27.03 (12.02)	13.4 (10.64)	3.37 (2.42)	-	-	-	-	-	-	-	-	-	-	-	-
Karakas ⁷⁶	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kasli ⁷⁷	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Kim MY ⁷⁷	-	-	-	-	-	-	-	-	-	MS	9.1 (7.8)	CDSS	5.7 (5.4)	WQ-B	82.58 (13.39)
Kim EY ⁷⁸	25.22 (md)	-	-	-	-	-	-	-	-	-	-	-	-	SQLS-R4	58.97 (18.96)
Komatsu ⁷⁹	27.48 (11.08)	-	4.03 (4.83)	-	-	-	-	-	-	-	-	-	-	-	-
Kondratova ⁸⁰	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
Lj ⁸¹	-	14.54 (7.97)	2.48 (3.03)	-	-	-	-	P3	17.15 (5.4)	BPRS	27.33 (7.16)	-	-	SQLS	31.79 (15.83)
Lj ⁸²	-	12.1 (11.6)	-	-	-	-	-	-	-	-	-	-	-	SQLS-R4	54.6 (23.6)
Lien ⁸³	26.4 (7.26)	17.9 (10)	5.2 (3.93)	-	-	P3	18.3 (7.51)	P3	19.5 (8.17)	-	-	BDI-II	13 (0.56)	-	-
Lim ⁸⁴	-	15.03 (9.22)	-	P5J	-	P5J	10.61 (4.63)	P5J	8 (3.36)	-	-	CDSS	2.79 (3.-42)	-	-
Lu ⁴⁷	21.6 (6.3)	-	-	-	-	SAPS	25.4 (15.3)	SANS	41 (19.7)	-	-	-	-	-	-
Mizuno ⁸⁵	-	18.9 (10.6)	2.4 (2.2)	P3	56 (22.2)	P3	12.6 (5.8)	P3	15.5 (6.9)	-	-	WQ-B	56.7 (14.4)	-	-

(1) = group 1, (2) = group 2, AOO = Age of Onset, DI = Duration of illness, N Hospit = Number of lifetime hospitalization in psychiatric units, QoL = Quality of Life, P3 = PANSS 3 factors, P5J = PANSS 5 factors Jiang, SAPS = Scale for Assessment of Positive Symptoms, SANS = Scale for Assessment of Negative Symptoms, MS = Manchester Scale, BPRS = Brief Psychiatric Rating Scale, CDSS = Calgary Depression Scale for Schizophrenia, BDI-II = Beck Depression Inventory-II, QOLSA = Quality of Life Scale Abbreviated, SQLS = Schizophrenia Quality of life scale, Q-LES-Q = Quality of Life Satisfaction and Enjoyment Questionnaire, WQ-B = WHOQOL-BREF = World Health Organization Quality of Life Scale-brief version, SQLS-R4 = Schizophrenia Quality of Life Scale Revision 4

Table 4c. continued

Author	AOO Mean (SD)	DI Mean (SD)	N Hospit Mean (SD)	PANSS scale	PANSS Tot Mean (SD)	Positive scale	Mean (SD)	Negative scale	Mean (SD)	Symptom Scale	Mean Depression scale (SD)	Mean (SD)	QoL scale	Mean (SD)	
Morgades-bamba ⁵⁰	-	18.23 (9.79)	-	-	-	-	-	-	-	-	-	-	-	-	
Morgades-bamba ⁵⁰	-	18.32 (9.62)	-	-	-	-	-	-	-	-	-	-	SQLS	-	
Mosanya ⁸⁶	28.6 (9.1)	10.8 (8.3)	-	-	-	-	-	-	-	-	-	-	-	-	
Olcun ⁸⁷	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Park ⁸⁸	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pellet ⁸⁹	-	16.07 (9.67)	-	-	-	-	-	-	-	-	CDSS	5.61 (4.65)	-	-	
Picco ³³	25.7 (7.94)	-	-	-	-	-	-	-	-	-	-	-	-	-	
Pribadi ⁹⁰	26.6 (6.8)	10.6 (7.9)	5.7 (3.6)	-	-	-	-	-	-	-	-	-	-	-	
Ran ⁹¹	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Sarisoy ⁹²	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Schrank ⁹³	-	15.2 (12.8)	-	P3	-	P3	12.1 (4.4)	P3	11 (3.4)	-	-	ADS1	16.6 (8.3)	-	
Sharaf ⁹⁴	24.21 (6.44)	6.22 (3.02)	-	-	-	-	-	-	-	-	-	P3	2.99 (1.58)	-	
Shin ⁹⁵	-	-	-	-	-	-	-	P3	18.19 (2.49)	-	-	-	SQLS-R4 Rev	75.9 (26.8)	
Sibitz ³⁴	23.6 (9.1)	13.6 (10.6)	5.5 (5.5)	-	-	-	-	-	-	-	-	ADS2	1.09 (0.67)	-	
Singh ³⁵	26.5 (8.9)	10.2 (8.1)	-	-	34.4 (2.1)	-	-	-	-	-	-	-	-	-	
Singla ⁹⁶	25.8 (9.4)	10.27 (7.63)	-	P3A	32.7 (3.5)	P3A	7.5 (0.9)	P3A	8.7 (1.6)	-	-	-	-	WQ-B	84.4 (11.9)
Stip ³⁷	-	-	4.07 (4.16)	P3L	37.43 (7.08)	P3L	19.3 (5.83)	P3L	17.76 (5.22)	-	-	-	-	-	
Sum ⁹⁷	-	-	-	P3	-	-	-	-	-	-	-	-	-	-	
Tanriverdi ⁹⁸	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Vidovic ⁹⁹	-	-	-	-	-	-	-	-	-	-	-	-	-	LQOLP	4.7 (0.97)
Violeau ¹⁰⁰	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
VrbovaFeb ¹⁰¹	29.24 (9.48)	-	3.36 (3.01)	-	-	-	-	-	-	-	-	BDI-II	15.04 (10.3)	Q-LES-Q	271.24 (58.57)
VrbovaAug ¹⁰²	28 (9.8)	7.27 (8.52)	3.48 (2.98)	P3	59.5 (13.2)	P3	-	P3	-	-	-	BDI-II	15.1 (10.4)	Q-LES-Q	269.1 (57.7)
Wong ¹⁰³	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Yildirim ¹⁰⁴	-	-	-	-	-	-	-	-	-	-	-	-	-	-	
Yilmaz ¹⁰⁵	-	14.58 (9.07)	-	-	-	-	-	-	-	-	-	-	-	-	

AOO = Age of Onset, DI = Duration of illness, N Hospit = Number of lifetime hospitalization in psychiatric units, QoL = Quality of Life, P3A/L = PANSS 3 factors Andrese/Lançon, CDSS = Calgary Depression Scale for Schizophrenia, ADS1 = Allgemeine DepressionsSkala 1st version, ADS2 = Allgemeine DepressionsSkala 2nd version, BDI-II = Beck Depression Inventory-II, SQLS = Schizophrenia Quality of life scale, SQLS-R4 Rev = Schizophrenia Quality of Life Scale Revision 4 Reversed, SQLS = Schizophrenia Quality of life scale, WQ-B = WHOQOL-BREF = World Health Organization Quality of Life Scale-brief version, LQOLP = Lancashire Quality of Life Profile, Q-LES-Q = Quality of Life Satisfaction and Enjoyment Questionnaire

b) Summary

Stigma resistance

Stigma resistance can be seen, for some, as a fourth element of the internalized stigma, a subscale which represents an individual's capacity to counteract the stigma of mental illness and that interacts with each type of stigma levels.

Just like the ISMI total and subscales, the cutoff point for considering high stigma is 2.5 (this concerns mean scores ranging from 0 to 4 and not total scores).

Prevalence and internalized stigma

Internalized stigma was explored using the ISMI scale, with a 2.5 cut point, in 12 different groups of patients suffering from schizophrenia. A mean of 41.5% of patients were found to have a moderate to high perceived stigma.

Two studies out of found a > 50% stigma in their population: one was conducted in Nigeria⁶³ (83.5% prevalence rate) and the other one conducted in India was concerning a group of patients with an onset age before 18 years old⁶⁸ (55.9% prevalence rate).

Sociodemographic

It was observed that internalized stigma was decreasing with increased age⁵⁷, in other words, that a younger age is correlated to more stigma^{67,90}, except in a study conducted in Turkey where a decreased age went along a decreased stigma¹⁰⁴.

The female gender was associated, in the majority of the studies analyzing it, to a higher stigma rate^{57,67,79}, however in some studies the ISMI scale could either not be linked to the gender⁹¹ or linked to male gender⁶⁴.

Education level can be found having a positive⁵⁷ or negative^{104,86} association with internalized stigma, depending of the studies. One study's relationship between number of years of education and internalized stigma lost statistical significance after taking into account the variables of interest (cognitive insight, illness severity, and functioning)⁹⁷.

In one study, being single has been found to be associated to higher internalized stigma^{52,90}, but no significant correlation have been found twice^{57,91}.

In one study, working patients felt more stigmatized than those who did not work⁵⁷, as well as unemployed (in particular homemaker and retired group) felt less internalized stigma⁹⁷. In others studies, unemployment brought high levels of internalized stigma⁹⁰ and more specifically self-stigma⁸², however a study found this relationship not being independent⁸⁶.

Finally some studies failed observing any statistical significance between internalized stigma and sociodemographic factors^{35,54,89}.

Illness-related variables

Age of onset of schizophrenia

Age of illness onset of schizophrenia contributed to the perception of discrimination (which begins with the experience of social rejection)⁶⁶.

Duration of illness

In one study it was observed that internalized stigma was greater among those with prolonged psychosis⁶⁵.

Number of psychiatric hospitalizations

A fewer number of hospitalizations have been found to be associated with higher levels of internalized stigma⁹⁰, but in another study, a higher number of hospitalizations has been found causing more internalized stigma⁷².

Symptom severity

A higher level of internalized stigma was associated to prominent psychotic symptoms⁵², as well as, psychotic symptoms had a strong correlate to internalized stigma^{86,90}. Furthermore, the longer the psychosis duration was, the stronger the negative relationship between internalized stigma and symptoms existed⁶⁵.

Associations between positive or negative symptoms are unclear. It was specifically observed that higher levels of stigma were associated to a lower severity of positive symptoms⁶⁷

and to more severe negative symptoms⁷⁰. Some studies showed that negative symptoms directly affect self-stigma^{73,93}. Others showed that positive symptoms indirectly affect self-stigma, by the more frequent occurrence of violent incidents⁷³, or through insight⁹³.

Whereas a study found few associations between the level of psychopathology and stigma^{35,67}.

Depression severity

Seven studies found a positive association between internalized stigma and depressive symptoms in schizophrenia^{34,53,54,64,85,89,93,95}.

Internalized stigma has also been found related to depression through the mediation of resilience⁸⁴.

Quality of life

An inversed relationship was observed between internalized stigma and quality of life: patients with higher levels of self-stigma have a lower quality of life^{35,72,81,86,107}.

Internalized stigma was found having direct and indirect effects on quality life notably mediated by resilience⁷⁸. Yet, a study found no direct effect of stigma on quality of life³⁴.

Two studies took in account the effect of stigma on health-related quality of life (which is a measure taken in account the WHOQOL-BREF) and detected that self-stigma and perceived stigma do not have a significant effect on it³³ and that the greater the internalized stigma was the less patients had satisfaction with HRQoL⁷⁴.

Finally in a study when all variables (employment status, annual family income, perceived stigma, personal empowerment, symptom severity, and uncertainty in illness) were taken into account into a regression equation, stigma was not significantly correlated to quality of life⁵⁵.

7. PERCEIVED STIGMA ASSOCIATED TO SELF-STIGMA

a) Raw data

Table 5a. Study characteristics (perceived stigma and self-stigma)

Author	Year	Place	Multicentric	Outpatient recruitment	Stabilized	Treated	N	Stigma scales	Mean	SD	Moderate to high (%)
Guo ¹⁰⁸	2018	China	0	1	1	1	602	SSMI	43.51	15.01	-
Ren ⁴²	2016	China	0	1	1	1	133	SSMI2C	6.49	0.9	-

Table 5b. Sociodemographic factors (perceived stigma and self-stigma)

Author	Year	Place	N	Age mean	Age SD	Male (%)	Education (%)	Single (%)	Unemployed (%)	Stigma scales	Mean	SD	Moderate to high (%)
Guo ¹⁰⁸	2018	China	602	44.56	10.63	48.5	7.3	64.3	91.4	SSMI	43.51	15.01	-
Ren ⁴²	2016	China	133	32.05	8.95	54.1	52.63	-	-	SSMI2C	6.49	0.9	-

Table 5c. Illness related variables (perceived stigma and self-stigma)

Author	AOO Mean (SD)	DI Mean (SD)	N hospit Mean (SD)	PANSS	PANSS Tot Mean (SD)	Positive scale	Mean (SD)	Negative scale	Mean (SD)	Symptom scale	Mean (SD)	Depression scale	Mean (SD)	QoL scale	Mean (SD)
Guo ¹⁰⁸	-	18.95 (9.32)	2.32 (1.61)	-	-	-	-	-	-	-	-	CDSS	5.61 (4.65)	-	-
Ren ⁴²	-	4.32 (6.14)	-	P3	44.11 (13.1)	-	-	-	-	BPRS	19.87 (5.46)	-	-	SQLS	32.99 (13.85)

N = Total number of included patients, AOO = Age of Onset, DI = Duration of illness, N Hospit = Number of lifetime hospitalization in psychiatric units, QoL = Quality of Life, P3 = PANSS 3 factors, CDSS = Calgary Depression Scale for Schizophrenia, BPRS = , BPRS = Brief Psychiatric Rating Scale, SQLS = Schizophrenia Quality of life scale

b) **Summary**

These 2 studies explored perceived stigma coupled to self-stigma through the Stigma Scale for Mental Illness.

First, it was found through sociodemographic data that educational level was a major positive factor of perceived stigma⁴². Then the illness related data concerning the patients duration of illness did not affect perceived stigma¹⁰⁸. Finally, like previously observed with others stigma dimensions, the higher the stigma of persons with schizophrenia, the lower the subjective quality of life was¹⁰⁸.

8. SELF-STIMGA

a) Raw data

Table 6a. Study characteristics (self-stigma)

Author	Year	Place	Multicentric	Outpatient recruitment	Stabilized	Treated	N	Stigma scales	Mean	SD	Moderate to high (%)
Chang ¹⁰⁹	2020	Taiwan	0	1	1	1	104	SSS-S9	2.3	0.72	-
Chio ¹¹⁰	2018	Hong Kong	1	1	0	1	181	SSS-S9	3.24	1.12	-
Kvrgic ¹¹¹	2013	Switzerland	0	1	1	1	156	SEDDSS	25.73	13.23	-
Mak ²²	2006	Hong Kong	1	1	0	1	162	SSS	2.34	0.61	-
Prub ¹¹²	2011	Germany	1	0	0	1	111	GSSMIS SA	22.10	7.08	-

Table 6b. Socio-demographic factors (self-stigma)

Author	Year	Place	N	Age mean	Age SD	Male (%)	Education (%)	Single (%)	Unemployed (%)	Stigma scales	Mean	SD	Moderate to high (%)
Chang ¹⁰⁹	2020	Taiwan	104	41.42	8.98	57.7	-	65.4	54.8	SSS-S9	2.3	0.72	-
Chio ¹¹⁰	2018	Hong Kong	181	31.67	11.13	41.4	22.7	-	68.8	SSS-S9	3.24	1.12	-
Kvrgic ¹¹¹	2013	Switzerland	156	44.5	11.67	65.4	-	76.3	57.7	SEDDSS	25.73	13.23	-
Mak ²²	2006	Hong Kong	162	36	10.7	66	49	-	-	SSS	2.34	0.61	-
Prub ¹¹²	2011	Germany	111	39.3	10.2	53	-	75	-	GSSMIS SA	22.10	7.08	-

Table 6c. Illness related variables (self-stigma)

Author	AOO Mean (SD)	DI Mean (SD)	N hospit Mean (SD)	PANSS	PANSS Tot Mean (SD)	Positive scale Mean (SD)	Negative scale Mean (SD)	Symptom scale Mean (SD)	Depression scale Mean (SD)	QoL scale Mean (SD)	
Chang ¹⁰⁹	-	8.46 (5.34)	-	-	-	-	-	-	DASS-21	0.84 (0.71)	
Chio ¹¹⁰	-	2.45 (2.45)	-	-	-	SAPS	12.44 (12.69)	SANS	28.46 (18.67)	-	
Kvrgic ¹¹¹	27.79 (13.53)	18.63 (11.82)	8.21 (6.45)	-	-	-	-	-	-	-	
Mak ²²	35 (10.38)	15.4 (9.33)	-	-	-	-	-	MCSI	24.53 (11.55)	-	
Prub ¹¹²	26.2 (8.4)	13.1 (10.3)	7.8 (9.8)	P3	-	PANSS-3	15.45 (7.12)	PANSS-3	17.46 (6.33)	PANSS-3	36.19 (11.93)

N = Total number of included patients, AOO = Age of Onset, DI = Duration of illness, N Hospit = Number of lifetime hospitalization in psychiatric units, QoL = Quality of Life, P3 = PANSS 3 factors, SAPS = Scale for Assessment of Positive Symptoms, SANS = Scale for Assessment of Negative Symptoms, MCSI = Modified Colorado Symptoms Index, DASS-21 = Depression, Anxiety, Stress Scale

a) Summary

Socio-demographic and illness related data, as shown in the table, were not analyzed in regards of self-stigma alone. However, among others, most of those studies focused specifically on insight, moreover some found a positive correlation between self-stigma and insight^{22,112}.

9. ALL TYPES OF PERSONAL STIGMA SUB-SCALES

a) Raw data

Table 7a. Study characteristics (all subscales)

Author	Year	Place	Multicentric	Outpatient recruitment	Stabilized	Treated	N	Stigma scales	Mean	SD	Moderate to high (%)
Chee ¹¹³	2005	Singapore	1	1	0	1	306	SS12	0.39	0.26	-

Table 7b. Socio-demographic factors (all subscales)

Author	Year	Place	N	Age mean	Age SD	Male (%)	Education (%)	Single (%)	Unemployed (%)	Stigma scales	Mean	SD	Moderate to high (%)
Chee ¹¹³	2005	Singapore	306	39.1	12.1	42	-	-	44.3	SS12	0.39	0.26	2005

Table 7c. Illness related variables (all subscales)

Author	AOO Mean (SD)	DI Mean (SD)	N hospit Mean (SD)	PANSS PANSS	PANSS Tot Mean (SD)	Positive scale	Mean (SD)	Negative scale	Mean (SD)	Symptom scale	Mean (SD)	Depression scale	Mean (SD)	QoL scale	Mean (SD)
Chee ¹¹³	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-

N = Total number of included patients, AOO = Age of Onset, DI = Duration of illness, N Hospit = Number of lifetime hospitalization in psychiatric units, QoL = Quality of Life

b) Summary

The stigma scale in this study was used to compare the level of stigma between patients in receiving outpatient care from the state mental hospital in comparison to psychiatric patients receiving outpatient care in psychiatric departments in psychiatric facilities housed in a tertiary-referral, university-affiliated general hospital.

10. Additional results: z-scores

Statistical studies preliminary to the future realization of a meta-analysis made it possible to calculate the Z-scores of each study, which enables us to classify the studies, from the least stigmatized population to the most stigmatized population (**Figure 2**).

These results are general results based on the total of each scale used, and do not take into account the different sub-scores (self-stigma, experienced stigma or perceived stigma). We then grouped all the studies according to the study population chose in each study and weighted them by the size of the studied population, in order to get a first idea of the importance of stigma according to each country and its geographical distribution in the world (**Figure 3**).

Among the studied countries, Sweden has the lowest z-scores, while the highest are in China. Overall, we observe that patients in European countries seem to feel less stigmatized. The results are more heterogeneous on the other continents.

We have few results for developing countries, especially South America, Africa, Central Asia and Eastern Europe

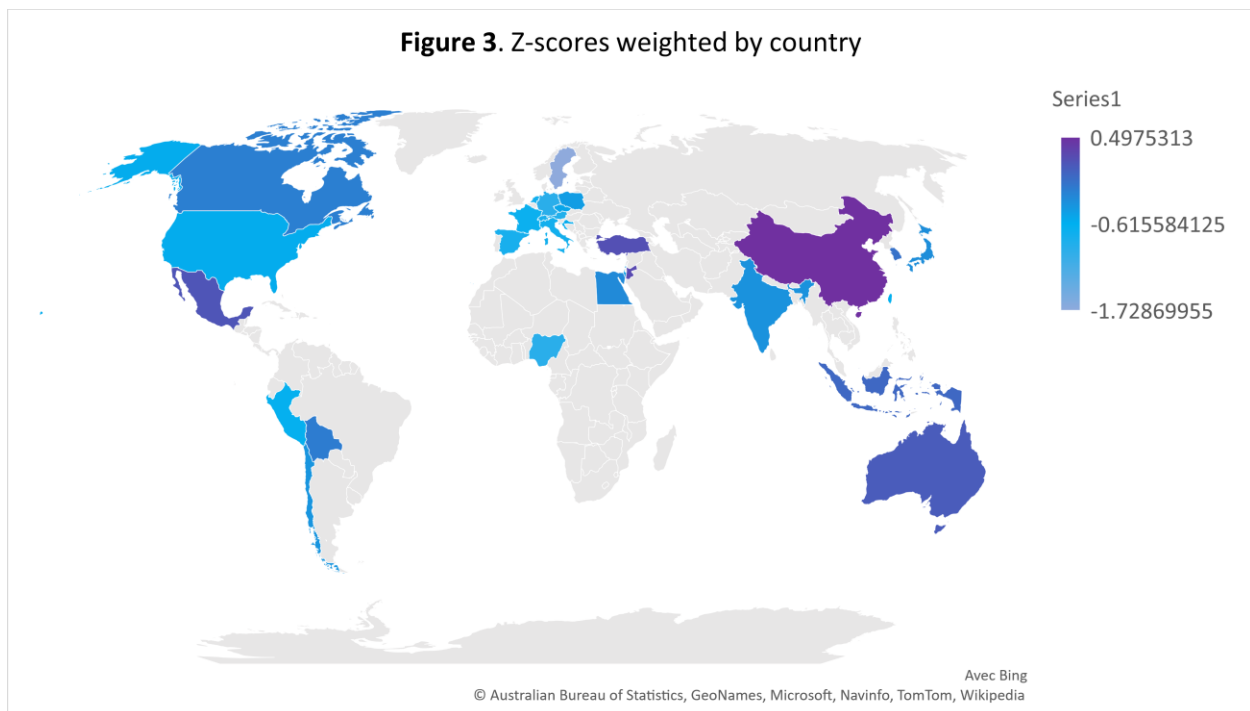
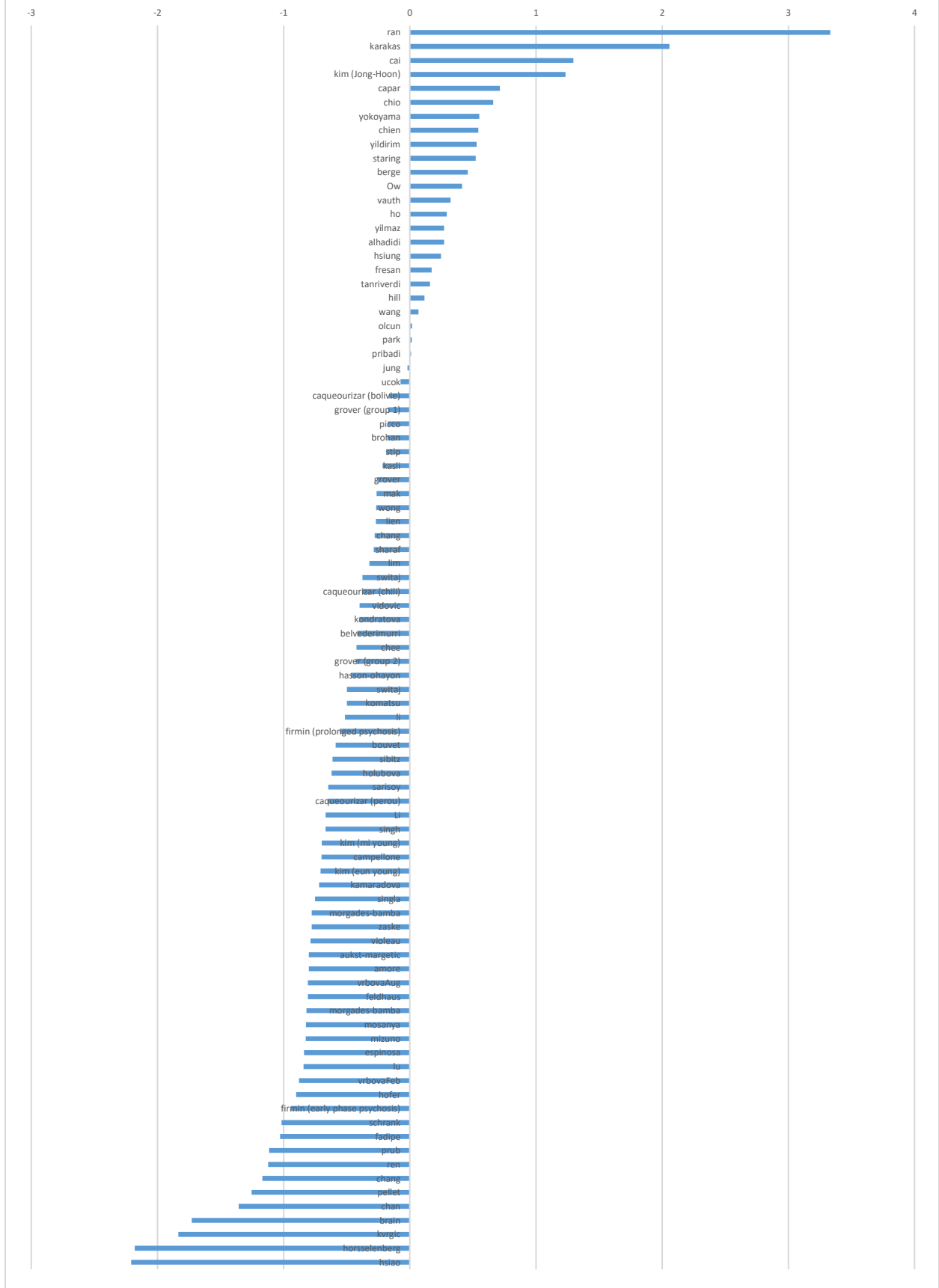


Figure 2. Z-scores



IV. DISCUSSION

A lot of the studies presented in this systematic review have been carried out to explore the levels of stigmatization and detect which factors are to take in account to decrease personal stigmatization in subjects suffering from schizophrenia. The assessment of personal stigma was done with a various quality and a high heterogeneity therefore difficulty underwent to cross-check the data.

Depression was one of the most analyzed and studied feature. This factor is to take in account especially because it is potentially life threatening, since depression is the most significant factor in completed suicide in schizophrenia, more so than acting on command hallucinations¹¹⁴ and that it has long term consequences for functional recovery and quality of life¹¹⁵. Studies suggest working on internalized stigma, before seeking to develop insight or at least to combine the two approaches simultaneously⁵⁴ or to try working on hope, depression and self-stigma conjointly given their strong and mutual relationship⁹³.

Quality of life, through different aspects of it, was also widely analyzed. No doubt exists about an association. When patients endorse negative societal perceptions of mental disorders, self-prejudice and self-discrimination are more likely to occur³², specifically, patients may identify with derogatory stereotypes and perceive themselves as weak and incompetent²⁷, individuals have to face many frustrations, especially rejection and discrimination by the public, and withdraw as a coping strategy to avoid rejection, which may result in isolation from society, less opportunity for employment, and ultimately a lower quality of life³⁹. Mediating factors seem necessary to explain the relationship between stigma and quality of life. Resilience has been found as one of those factors⁷⁸ for it is the capability of an individual to continuously discover and to create an environment suitable for strengthening his or her potential¹¹⁶. The studies which did not find an association, may have not, in regards of the missing mediators: symptom severity or coping strategies³³ and personal empowerment⁵⁵, for example.

A hypothesis of the existence of an association between stigma and the severity of symptoms may be that patients with higher levels of psychotic symptoms may be more likely to perceive negative attitudes from others and on the other hand, uncontrolled symptoms may attract more attention to the affected person and may lead to discrimination⁵². More specifically, patients can

have a greater tendency of withdraw when experiencing problems with social encounters, avoiding possible victimization, but this maybe facilitates internalizing negative stereotypes⁷³. An interesting hypothesis of the link between positive and negative symptoms with internalized stigma, was that ,following an acute episode, when positive symptoms fade and negative symptoms become more pronounced, the indirect ‘protective’ effect of positive symptoms against self-stigma is replaced by a direct clinically undesirable effect of negative symptoms on self-stigma, hope and depression⁹³.

Two divergent results were found concerning a correlation between the number of hospitalization and stigma: first a positive one, with the hypotheses that, those who have experienced more hospitalizations are more likely to have met discrimination from others^{27,43} ,or again, that patients who get more hospitalized may be more likely to have a chronic and severe illness which have higher rates of perceived stigma compared to the patients with less severe stages of the illness which require no hospitalizations³⁸. Than a negative one; that fewer hospitalizations lead to more internalized stigma⁹⁰.

Duration of illness has either been found having a positive correlation or no correlation at all. It seems intuitive that the more a person has been suffering from its illness a long time the more exposed to social rejection she will be⁴³.

Unanimously, a younger age of onset was found associated to a higher risk of personal stigma. One hypothesis can be what we’ve seen above concerning the duration of the illness and a longer exposure to social rejection and another one could be that the early onset of schizophrenia may impair the development of personality and the patient’s social roles before the patient can learn how to manage these situations³⁸.

Sociodemographic factors were all found evolving in both ways concerning their association to personal stigma, except for marital status in which being single was considered as associated to a higher risk of stigma.

Stigma resistance is defined as one’s ability to block the internalization of stigma¹¹⁷ and so, appears to be a key domain of recovery. It can either appear as an ISMI subscale or not if considered a separate construct¹¹⁸. Stigma resistance has been found associated to fewer negative

symptoms but having no relationship with internalized stigma⁵⁶. There was no correlation between stigma resistance subscale and insight, which implies that this subscale is related to some other variables yet to be determined⁹⁹.

Finally it was hypothesized that patients may develop stigma resistance through experience²⁷.

Stigma resistance has relationships with a variety of outcomes, notably positives (reduced symptoms and improved functioning, for example), that are central to recovery and should guide intervention in this domain¹¹⁹.

The highlights of those results are more ways of helping suffering patients through recovery and knowing which interventions are more adequate, taking in account not only the principal factors investigated in this systematic review but the mediating ones likewise and realizing the complexity of the interactions when it comes to the chronic illness which is schizophrenia and personal stigma.

Limits

There are some limitations in this review. First, we included only studies presenting stigma with mean and standard deviation. We excluded all studies presenting their results directly in correlates with other variables, when authors didn't respond or were not able to give us rough data.

All the included studies were based on cross-sectional design, which makes impossible to define causal relationships, since we cannot establish temporal ordering of the results.

Stigma is presented in all scales as un continuum between low and high stigma. There is no clear threshold consensus defined to determine if someone is stigmatized or not. Personal stigma is divided in three types of stigmas (self-stigma, experienced stigma and perceived stigma), and there are many scales studying one, two or all of these three dimensions. The heterogeneity of these measures makes the interpretation of the results more difficult. Almost all scales were auto-questionnaires.

Due to the high number of studies included, we can observe a high heterogeneity in the ways of measuring other variables too. Indeed, many scales were used for each variable; for

example, eight different scales were used to assess depression. Sociodemographic variables were subject to various interpretations too. For example, education level was measured sometimes using the number of years of education, sometimes considering a threshold that is not the same in all the studies.

Twenty five percent of the included studies excluded drug users, considering that it could be associated with stigma, independently of schizophrenia. However, we know that drug consumption is higher in people with schizophrenia than in general population, so the level of stigma could be underestimated.

Further research

It is necessary in a second phase to continue the statistical analyses in order to confirm in a meta-analysis the trends identified in this review of the literature.

Depending on the results found in the meta-analysis, it will be interesting to adapt the targets and modalities of destigmatization campaigns, and then in the longer term, to measure their effectiveness.

Our study focused on personal stigma and could be completed by a literature review or even a meta-analysis on public stigma (from the point of view of the general population and health professionals). It would then be interesting to see whether levels of personal and public stigma are correlated in each country, for example, and if they are not, to consider the reasons for the discrepancies between public and personal stigma levels.

V. CONCLUSION

Stigmatization of individuals with schizophrenia must be a major concern today with potentially serious medical and social repercussions. The attitude of health professionals and the general population towards these patients could have a significant impact on their lives. This review of the literature offers a new look at the factors associated with personal stigma (from the point of view of the person experiencing it) by providing an exhaustive inventory of the data

collected on the subject to date. We found out that the longer the disease is, the more a person living with schizophrenia will be hospitalized in psychiatry, the more will be led to stigmatize himself. Quality of Life and depression are two of the most studied factors associated with stigma. It is difficult to determine the sense of the causality for now.

This work will be completed in a second phase by statistical analyses, which are complex due to the heterogeneity of the measures used, in order to produce a meta-analysis. The results will then be compared with the data from studies concerning the public stigma (from the point of view of health professionals and the general population), with the ultimate aim of identifying the best strategies for reducing stigma in its entirety

La stigmatisation des personnes atteintes de schizophrénie doit aujourd'hui être une préoccupation majeure, car elle présente des répercussions médicales et sociales potentiellement graves. L'attitude des professionnels de santé et de la population générale envers ces patients pourrait avoir un impact significatif sur leur vie. Cette revue systématique de la littérature propose un nouveau point sur les facteurs associés à la stigmatisation « personnelle » (du point de vue du patient) en fournissant un inventaire exhaustif des données recueillies sur le sujet à ce jour. Nous avons découvert que plus la durée de la maladie est longue, plus une personne souffrant de schizophrénie sera hospitalisée en psychiatrie, plus elle sera amenée à s'auto-stigmatiser. La qualité de vie et la dépression sont les deux facteurs les plus étudiés associés à la stigmatisation. Il est difficile de déterminer, pour l'instant, le sens de la causalité.

Ce travail sera complété dans un deuxième temps par des analyses statistiques, aujourd'hui complexes du fait de l'hétérogénéité des outils de mesures utilisés, afin de produire une méta-analyse. Les résultats seront ensuite confrontés aux données d'études concernant la stigmatisation publique (du point de vue des professionnels de santé et de la population en général), dans un but ultime d'identifier les meilleures stratégies pour réduire la stigmatisation dans son ensemble

VI. APPENDIX

Table 8. Scales used to assess personal stigma in the included studies

Scale	Scale	Minimum possible score	Maximum possible score
Self reported questionnaires			
B-STE	Burden due Stigma Experiences ¹²⁰	5	25
CESQ	Consumers Experience of Stigma Questionnaire	1	5
DDS12	Devaluation-Discrimination Scale	12	72
DDM12	Devaluation-discrimination measure	12	48
GSSMIS	German Self Stigma of Mental Illness Scale	10	50
ISMI10_1	Internalized Stigma of Mental Illness	10	40
ISMI10_2	Internalized Stigma of Mental Illness	1	4
ISMI12	Internalized Stigma of Mental Illness	1	12
ISMI13	Internalized Stigma of Mental Illness	1	4
ISMI17	Internalized Stigma of Mental Illness	1	68
ISMI22	Internalized Stigma of Mental Illness	1	4
ISMI24_1	Internalized Stigma of Mental Illness	24	96
ISMI24_2	Internalized Stigma of Mental Illness	1	4
ISMI28	Internalized Stigma of Mental Illness	1	4
ISMI29_1	Internalized Stigma of Mental Illness	29	116
ISMI29_2	Internalized Stigma of Mental Illness	1	4
ISMI29_3	Internalized Stigma of Mental Illness	0	87
ISS	Spanish version of King's Internalized Stigma Scale	0	52
MCESQ	Modified Consumers Experiences of Stigma Questionnaire	1	5
PDD12_1	Perceived Devaluation and Discrimination	12	48
PDD12_2	Perceived Devaluation and Discrimination	1	4
PSS	Perceived Stigma Scale	1	5
SEDDSS	Self-Esteem Decrement Due to Self-Stigma	10	90
SES	Stigma Experiences Scale	0	10
SIS	Social Impact Scale	24	96
SIS	Stigma Impact Scale	0	70
StS	Stigmatization Scale	md	md
SS	Stigma Scale	0	36
SS12	Stigma Score	0	1
SSMI	Stigma Scale for Mental Illness	md	md
SSMIS	Stigma Scale for Mental Illness Short-Form	20	180
SSS	Self Stigma Scale	1	4
SSS-S9	Self-Stigma Scale-Short Form	1	4
Interview based questionnaires			
DISC4	Discrimination and Stigma Scale	0	8
DISC	Discrimination and Stigma Scale	0	3
EMIC	Explanatory Model Interview Catalogue		
SSMI 2C	Stigma Scale for Mental Illness	3	12

Table 9. Scales used to assess illness related variables in the included studies

Scale	Scale	Evaluation	Minimum possible score	Maximum possible score
MARS	Medication Adherence Rating Scale	Adherence	0	10
MMAS	Morisky Medication Adherence Scale	Adherence	0	8
BAI	Beck Anxiety Inventory	Anxiety	0	63
DASS-21	Depression, Anxiety, Stress Scale	Anxiety	0	3
SSTICS	Scale to Investigate Cognition in Schizophrenia	Cognition	0	84
WCST	Wisconsin Card Sorting Test	Cognition	md	md
CRS	Compliance Rating Scale	Compliance	1	7
KMI	Knowledge of mental illness	Knowledge about disease	0	5
ADS_1	Allgemeine DepressionsSkala	Depression	0	60
ADS_2	Allgemeine DepressionsSkala	Depression	0	3
BDI-7	BDI	Depression	0	21
BDI-II	Beck Depression Inventory-II	Depression	0	63
CDSS	Calgary Depression Scale for Schizophrenia	Depression	0	27
CES-D	Center for Epidemiological Studies Depression Scale	Depression	0	42
DASS-21	Depression, Anxiety, Stress Scale	Depression	0	3
QID-SR	Quick Inventory of Depressive Symptomatology Self-Report (QIDS)	Depression	0	27
DAI	Drug Attitude Inventory	Drug Attitude	-10	10
BUES	The Boston University Empowerment Scale	Empowerment	md	md
ES	Empowerment Scale	Empowerment	28	112
MSEI	Multidimensional Self-Esteem Inventory	Self-esteem	md	md
RSE	Rosemberg self Esteem	Self-esteem	10	40
SERS	Self-Esteem Rating Scale Short form	Self-esteem	md	md
SES	Self-esteem Scale	Self-esteem	10	50
FROGS	Functional remission of general schizophrenia scale	Functioning	19	95
GAF	Global Assessment Functioning	Functioning	0	100
SLOF	Specific levels of functioning	Functioning	0,2	1
SOFAS	Social and Occupational Functioning Assessment Scale	Functioning	13	65
ADHS	Adult Dispositional Hope Scale	Hope	md	md
ASHS	Adult State Hope Scale	Hope	md	md
HHI	Herth Hope Index	Hope	12	48
HHS	Herth Hope Scale	Hope	0	90
IHS	Integrative Hope Scale	Hope	23	138
BHS	Beck Hopelessness Scale	Hopelessness	md	md

Table 9. Continued

Scale	Scale	Evaluation	Minimum possible score	Maximum possible score
BCIS	Beck Cognitive Insight Scale	Insight	0	45
BCIS_2	Beck Cognitive Insight Scale	Insight	-15	30
BIS	Birchwook Insight Scale	Insight	0	16
ITAQ	Insight and treatment attitude questionnaire	Insight	md	md
SAI-E	The Schedule for the Assessment of Insight - Expanded Version	Insight	0	24
SUMD	Scale to assess Unawareness of Mental Disorder	Insight	md	md
CAINS EXP	Clinical Assessment Inventory for negative Symptoms (MAP Motivation and pleasure, EXP Expression)	Negative symptoms	0	16
CAINS MAP	Clinical Assessment Inventory for negative Symptoms (MAP Motivation and pleasure, EXP Expression)	Negative symptoms	0	36
PANSS	PANSS Negative subscale	Negative symptoms	7	49
SANS	Scale for Assessment of Negative Symptoms	Negative symptoms	25	125
PANSS	PANSS Positive subscale	Positive symptoms	7	49
SAPS	Scale for Assessment of Positive Symptoms	Positive symptoms	md	md
K-QOL	Korean Quality of Life Scale	Quality of Life	0	5
LQOLPm	German short version of the Lancashire Quality of Life Profile	Quality of Life	1	7
LQOLP	Lancashire Quality of Life Profile	Quality of Life		
MANSA	Self-rating Manchester Short Assessment of Quality of Life	Quality of Life	md	md
QLS	Quality of Life Scale	Quality of Life	0	126
Q-LES-Q	Quality of Life Satisfaction and Enjoyment Questionnaire	Quality of Life		
QOLSA	Quality of Life Scale Abbreviated	Quality of Life	md	md
SQLS	Schizophrenia Quality of life scale	Quality of Life	0	100
SQLS-R4	Schizophrenia Quality of Life Scale Revision 4	Quality of Life	0	132
SQLS-R4 Inv	Schizophrenia Quality of Life Scale Revision 4 Reversed	Quality of Life	0	132
S-QOL	QOL Questionnaire in Schizophrenia	Quality of Life		
WHOQOL-BREF	World Health Organization Quality of Life Scale, brief version	Quality of Life	28	140
MHRM	The Mental Health Recovery Measure	Recovery	0	112
QPR-15	Questionnaire about the process of recovery	Recovery	0	60
RAS12	Recovery Assessment Scale hebrew version	Recovery	1	5
RAS17	Recovery Assessment Scale	Recovery	17	85
RSQ	Recovery Style Questionnaire	Recovery	0	100
BPRS	Brief Psychotic Rating Scale	Symptoms	1	196
CASS	Clinical Assessment of Schizophrenic Syndromes	Symptoms	md	md
MCSI	Modified Colorado Symptoms Index	Symptoms	14	70
MS	Manchester Scale	Symptoms	md	md
SSSz	Symptom Scale for Schizophrenia	Symptoms	0	39

Table 10. Quality analysis

Authors	Years	1	2	3	4	5	6	7	8	9	11	14
Alhadidi	2020	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Amore	2020	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	Low
Assefa	2012	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	Low
Aukst-margetic	2014	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Belvederimurri	2016	Low	Low	Low	Low	Unclear	Low	Low	Low	Low	Low	Low
Berge	2005	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	High
Bifttu	2014	Low	Low	Low	Low	Low	Low	Low	High	Low	Low	High
Bouvet	2015	Low	Low	Unclear	Unclear	High	Low	Low	Low	Low	Low	High
Brain	2014	Low	Low	High	Low	Low	Low	Low	Low	Low	Low	Low
Brohan	2010	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Cai	2017	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Campellone	2014	Low	Low	Unclear	Low	High	Low	Low	Low	Low	Low	High
Capar	2018	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	High
Caqueourizar	2019	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Chan	2017	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	Low
Chang	2016	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	Low
Chang	2020	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Chee	2005	Low	Low	Low	Low	Low	Low	Low	High	Low	Low	Low
Chen	2014	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Chien	2014	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Chio	2018	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Costain	2012	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	Low
Espinosa	2016	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Fadipe	2020	Low	Low	Low	Low	Low	Low	Low	High	Low	Low	High
Feldhaus	2018	Low	Low	Low	Low	Unclear	Low	Low	Low	Low	Low	Low
Firmin	2018	Low	Unclear	Unclear	Low	Low	Low	Low	Low	Low	Low	Low
Fresan	2018	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Grover	2017	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Grover	2019	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Guo	2018	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Hasson-ohayon	2014	Unclear	Low	Unclear	Low	Unclear	Low	Low	High	Low	Low	Low
Hill	2013	Low	Low	High	Low	High	Low	Low	Low	Low	Low	High
Ho	2010	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Hofer	2019	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	Low
Holubova	2016	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low

Table 10. Continued

Authors	Years	1	2	3	4	5	6	7	8	9	11	14
Horsselenberg	2016	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	High
Hsiao	2017	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Hsiung	2010	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	Low
Jung	2012	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	Low
Kamaradova	2016	Low	Low	High	Low	High	Low	Low	Low	Low	Low	High
Karakas	2016	Low	Low	Unclear	Low	High	Low	Low	Low	Low	Low	High
Kasli	2020	Low	Low	Low	Low	Unclear	Low	Low	Low	Low	Low	Low
Kim (eun young)	2019	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Kim (Jong-Hoon)	2016	Low	Low	Unclear	Low	High	Low	Low	Low	Low	Low	Low
Komatsu	2020	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Kondratova	2018	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Kvrgic	2013	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	Low
Li	2017	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Lien	2016	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Lim	2019	Low	Low	Unclear	Low	High	Low	Low	Low	Low	Low	Low
Lu	2012	Low	Low	Low	Low	Unclear	Low	Low	Low	Low	Low	Low
Mak	2006	Low	Low	Unclear	High	Low	Low	Low	Low	Low	Low	High
Mizuno	2016	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Morgades-bamba	2018	Low	High	Unclear	Unclear	Low	Low	Low	Low	Low	Low	High
Morgades-bamba	2019	Low	High	Unclear	Unclear	Low	Low	Low	Low	Low	Low	Low
Mosanya	2013	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	High
Olcun	2017	Low	Low	Low	Low	Unclear	Low	Low	Low	Low	Low	Low
Park	2019	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	High
Pellet	2019	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Picco	2017	Low	Low	Unclear	Low	Unclear	Low	Low	Low	Low	Low	High
Pribadi	2020	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Prub	2011	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Ran	2017	Low	Low	Unclear	Low	Low	Low	Low	High	Low	Low	High
Ren	2016	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Sarisoy	2013	Low	Low	Unclear	Low	Low	Low	Low	High	Low	Low	High
Schrank	2013	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	High
Sharaf	2012	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Sibitz	2011	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Singh	2016	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	Low
Singla	2020	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low

Table 10. Continued

Authors	Years	1	2	3	4	5	6	7	8	9	11	14
Staring	2019	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Stip	2017	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	Low
Switaj	2009	Unclear	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Switaj	2013	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Tanriverdi	2019	Low	Low	Unclear	Low	High	Low	Low	Low	Low	Low	High
Tesfaw	2020	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Ucok	2013	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Vauth	2007	Unclear	High	Unclear	High	Low	Low	Low	Low	Low	Low	High
Vidovic	2016	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	High
Violeau	2020	Low	Low	Unclear	Low	Unclear	Low	Low	Low	Low	Low	High
Vrbova	2017	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	High
Vrbova	2017	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	Low
Wang	2016	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low
Wong	2018	Unclear	Low	Low	Low	High	Low	Low	High	Low	Low	High
Yildirim	2019	Low	Low	Low	Low	Low	Low	Low	High	Low	Low	High
Yilmaz	2015	Low	Low	Low	Low	High	Low	Low	Low	Low	Low	High
Yokoyama	2019	Low	Low	Unclear	Low	Low	Low	Low	Low	Low	Low	Low
Sum	2020	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Kim	2016	Low	Low	Low	Low	Low	Low	Low	Low	Low	Low	High
Ow	2012	Low	Low	Low	Low	Unclear	Low	Low	Low	Low	Low	High
Zaske	2018	Low	Low	High	Low	High	Low	Low	Low	Low	Low	Low
Li	2020	Low	Low	Low	Low	High	Low	Low	High	Low	Low	High

Legends: This table is presenting the risk of bias of all the included studies, according to
 Low: Low risk of bias; Unclear : unclear risk of bias ; High : High risk of bias

1. Research question or objective clearly stated?
2. Study population clearly specified and defined?
3. Was the participation rate of eligible persons at least 50%
4. Were all the subjects recruited from the same/similar populations (in the same time frame)?
 Were inclusion and exclusion criteria prespecified and applied uniformly to all participants?
5. Was a sample size justification, power description, or variance and effect estimates provided?
6. Are the exposure(s) of interest measured prior to the outcome(s) being measured?
7. Was the timeframe sufficient so that one could reasonably expect to see an association between exposure and outcome if it existed?
8. For exposures that can vary in amount or level, did the study examine different levels of the exposure as related to the outcome?
9. Were the exposure measures clearly defined, valid, reliable, and implemented consistently across all participants?
10. Was the exposure(s) assessed more than once over time? NON ADAPTE
11. Were the outcome measures clearly defined, valid, reliable, and implemented consistently across all participants?
12. Were the outcome assessors blinded to the exposure status of participants? NON ADAPTE
13. Was loss to follow-up after baseline 20% or less? NON ADAPTE
14. Were key potential confounding variables measured and adjusted statistically for their impact on the relationship between exposure(s) and outcome(s)?

VII. REFERENCES

1. Gerlinger, G. *et al.* Personal stigma in schizophrenia spectrum disorders: a systematic review of prevalence rates, correlates, impact and interventions. *World Psychiatry* **12**, 155–164 (2013).
2. Goffman, Erving (1963) *Stigma*. London: Penguin.
3. Link, B. G. & Phelan, J. C. Conceptualizing Stigma. *Annu. Rev. Sociol.* **27**, 363–385 (2001).
4. Kleinman, A. & Hall-Clifford, R. Stigma: a social, cultural and moral process. *J. Epidemiol. Community Health* **63**, 418–419 (2009).
5. Penn, D. L. & Martin, J. [No title found]. *Psychiatr. Q.* **69**, 235–247 (1998).
6. Vauth, R., Kleim, B., Wirtz, M. & Corrigan, P. W. Self-efficacy and empowerment as outcomes of self-stigmatizing and coping in schizophrenia. *Psychiatry Res.* **150**, 71–80 (2007).
7. Corrigan, P. W., Morris, S. B., Michaels, P. J., Rafacz, J. D. & Rüsch, N. Challenging the public stigma of mental illness: a meta-analysis of outcome studies. *Psychiatr. Serv. Wash. DC* **63**, 963–973 (2012).
8. LeBel, T. P. Perceptions of and Responses to Stigma: Perceptions of and Responses to Stigma. *Sociol. Compass* **2**, 409–432 (2008).
9. van Brakel, W. H. *et al.* The Participation Scale: measuring a key concept in public health. *Disabil. Rehabil.* **28**, 193–203 (2006).
10. Corrigan, P. W. & Rao, D. On the self-stigma of mental illness: stages, disclosure, and strategies for change. *Can. J. Psychiatry Rev. Can. Psychiatr.* **57**, 464–469 (2012).
11. Wahl, O. F. Mental Health Consumers' Experience of Stigma. *Schizophr. Bull.* **25**, 467–478 (1999).
12. Thornicroft, G. *et al.* Global pattern of experienced and anticipated discrimination against people with schizophrenia: a cross-sectional survey. *Lancet Lond. Engl.* **373**, 408–415 (2009).
13. Boyd Ritsher, J., Otilingam, P. G. & Grajales, M. Internalized stigma of mental illness: psychometric properties of a new measure. *Psychiatry Res.* **121**, 31–49 (2003).
14. King, M. *et al.* The Stigma Scale: development of a standardised measure of the stigma of mental illness. *Br. J. Psychiatry* **190**, 248–254 (2007).
15. Link, B. G. Understanding Labeling Effects in the Area of Mental Disorders: An Assessment of the Effects of Expectations of Rejection. *Am. Sociol. Rev.* **52**, 96 (1987).
16. Link, B. G., Cullen, F. T., Struening, E., Shrout, P. E. & Dohrenwend, B. P. A Modified Labeling Theory Approach to Mental Disorders: An Empirical Assessment. *Am. Sociol. Rev.* **54**, 400 (1989).

17. Stuart, H., Koller, M. & Milev, R. Appendix Inventories to Measure the Scope and Impact of Stigma Experiences from the Perspective of those who are Stigmatized— Consumer and Family Versions. in *Understanding the Stigma of Mental Illness* (eds. Arboleda-Florez, J. & Sartorius, N.) 193–204 (John Wiley & Sons, Ltd, 2008). doi:10.1002/9780470997642.app1.
18. Pan, A.-W., Chung, L., Fife, B. L. & Hsiung, P.-C. Evaluation of the psychometrics of the Social Impact Scale: a measure of stigmatization. *Int. J. Rehabil. Res. Int. Z. Rehabil. Rev. Int. Rech. Readaptation* **30**, 235–238 (2007).
19. Lai, Y. M., Hong, C. P. & Chee, C. Y. Stigma of mental illness. *Singapore Med. J.* **42**, 111–114 (2001).
20. Geng F, Dong Y, King M, Liu H. Reliability and validity of the Chinese-version of Stigma Scale for Mental Illness. *Chin Mental Health J.* ;24(5):343–346. (2010).
21. Corrigan, P. W., Watson, A. C. & Barr, L. The Self–Stigma of Mental Illness: Implications for Self–Esteem and Self–Efficacy. *J. Soc. Clin. Psychol.* **25**, 875–884 (2006).
22. Mak, W. W. S. & Wu, C. F. M. Cognitive insight and causal attribution in the development of self-stigma among individuals with schizophrenia. *Psychiatr. Serv. Wash. DC* **57**, 1800–1802 (2006).
23. Brohan, E., Slade, M., Clement, S. & Thornicroft, G. Experiences of mental illness stigma, prejudice and discrimination: a review of measures. *BMC Health Serv. Res.* **10**, 80 (2010).
24. Amore, M. *et al.* The association between insight and depressive symptoms in schizophrenia: Undirected and Bayesian network analyses. *Eur. Psychiatry* **63**, (2020).
25. Belvederi Murri, M. *et al.* The ‘Insight Paradox’ in Schizophrenia: Magnitude, Moderators and Mediators of the Association Between Insight and Depression. *Schizophr. Bull.* **42**, 1225–1233 (2016).
26. Berge, M. & Ranney, M. Self-esteem and stigma among persons with schizophrenia: implications for mental health. *Care Manag. J. J. Case Manag. J. Long Term Home Health Care* **6**, 139–144 (2005).
27. Biftu, B. B. & Dachew, B. A. Perceived Stigma and Associated Factors among People with Schizophrenia at Amanuel Mental Specialized Hospital, Addis Ababa, Ethiopia: A Cross-Sectional Institution Based Study. *Psychiatry J.* **2014**, 694565 (2014).
28. Brohan, E., Elgie, R., Sartorius, N., Thornicroft, G., & GAMIAN-Europe Study Group. Self-stigma, empowerment and perceived discrimination among people with schizophrenia in 14 European countries: the GAMIAN-Europe study. *Schizophr. Res.* **122**, 232–238 (2010).
29. Chen, F.-P., Wu, H.-C. & Huang, C.-J. Influences of attribution and stigma on working relationships with providers practicing Western psychiatry in the Taiwanese context. *Psychiatr. Q.* **85**, 439–451 (2014).

30. Chien, W.-T., Yeung, F. K. K. & Chan, A. H. L. Perceived stigma of patients with severe mental illness in Hong Kong: relationships with patients' psychosocial conditions and attitudes of family caregivers and health professionals. *Adm. Policy Ment. Health* **41**, 237–251 (2014).
31. Jung, S. H. & Kim, H. J. Perceived stigma and quality of life of individuals diagnosed with schizophrenia and receiving psychiatric rehabilitation services: a comparison between the clubhouse model and a rehabilitation skills training model in South Korea. *Psychiatr. Rehabil. J.* **35**, 460–465 (2012).
32. Ow, C.-Y. & Lee, B.-O. Relationships Between Perceived Stigma, Coping Orientations, Self-esteem, and Quality of Life in Patients With Schizophrenia. *Asia Pac. J. Public Health* **27**, NP1932–NP1941 (2015).
33. Picco, L. *et al.* Mediating effects of self-stigma on the relationship between perceived stigma and psychosocial outcomes among psychiatric outpatients: findings from a cross-sectional survey in Singapore. *BMJ Open* **7**, e018228 (2017).
34. Sibitz, I. *et al.* The impact of the social network, stigma and empowerment on the quality of life in patients with schizophrenia. *Eur. Psychiatry J. Assoc. Eur. Psychiatr.* **26**, 28–33 (2011).
35. Singh, A., Mattoo, S. K. & Grover, S. Stigma and its correlates in patients with schizophrenia attending a general hospital psychiatric unit. *Indian J. Psychiatry* **58**, 291–300 (2016).
36. Staring, A. B. P., Van der Gaag, M., Van den Berge, M., Duivenvoorden, H. J. & Mulder, C. L. Stigma moderates the associations of insight with depressed mood, low self-esteem, and low quality of life in patients with schizophrenia spectrum disorders. *Schizophr. Res.* **115**, 363–369 (2009).
37. Stip, E., Caron, J., Tousignant, M. & Lecomte, Y. Suicidal Ideation and Schizophrenia: Contribution of Appraisal, Stigmatization, and Cognition. *Can. J. Psychiatry Rev. Can. Psychiatr.* **62**, 726–734 (2017).
38. Tesfaw, G., Kibru, B. & Ayano, G. Prevalence and factors associated with higher levels of perceived stigma among people with schizophrenia Addis Ababa, Ethiopia. *Int. J. Ment. Health Syst.* **14**, 19 (2020).
39. Wang, X. Q., Petrini, M. A. & Morisky, D. E. Predictors of quality of life among Chinese people with schizophrenia: Quality of life for people with schizophrenia. *Nurs. Health Sci.* **19**, 142–148 (2017).
40. Yokoyama, K. *et al.* Relationship between self-disclosure to first acquaintances and subjective well-being in people with schizophrenia spectrum disorders living in the community. *PloS One* **14**, e0223819 (2019).
41. Zäske, H. *et al.* Stigma experiences and perceived stigma in patients with first-episode schizophrenia in the course of 1 year after their first in-patient treatment. *Eur. Arch. Psychiatry Clin. Neurosci.* **269**, 459–468 (2019).

42. Ren, Z. *et al.* An exploratory cross-sectional study on the impact of education on perception of stigma by Chinese patients with schizophrenia. *BMC Health Serv. Res.* **16**, 210 (2016).
43. Switaj, P., Wciórka, J., Smolarska-Switaj, J. & Grygiel, P. Extent and predictors of stigma experienced by patients with schizophrenia. *Eur. Psychiatry J. Assoc. Eur. Psychiatr.* **24**, 513–520 (2009).
44. Hsiung, P.-C. *et al.* Mastery and stigma in predicting the subjective quality of life of patients with schizophrenia in Taiwan. *J. Nerv. Ment. Dis.* **198**, 494–500 (2010).
45. Brain, C. *et al.* Stigma, discrimination and medication adherence in schizophrenia: results from the Swedish COAST study. *Psychiatry Res.* **220**, 811–817 (2014).
46. Üçok, A., Karadayı, G., Emiroğlu, B. & Sartorius, N. Anticipated discrimination is related to symptom severity, functionality and quality of life in schizophrenia. *Psychiatry Res.* **209**, 333–339 (2013).
47. Lu, Y. & Wang, X. Correlation between insight and internalized stigma in patients with schizophrenia. *Shanghai Arch. Psychiatry* **24**, 91–98 (2012).
48. Świtaj, P., Chrostek, A., Grygiel, P., Wciórka, J. & Anczewska, M. Exploring Factors Associated with the Psychosocial Impact of Stigma Among People with Schizophrenia or Affective Disorders. *Community Ment. Health J.* **52**, 370–378 (2016).
49. Corrigan, P. W. The impact of stigma on severe mental illness. *Cogn. Behav. Pract.* **5**, 201–222 (1998).
50. Morgades-Bamba, C. I., Fuster-Ruizdeapodaca, M. J. & Molero, F. Internalized stigma and its impact on schizophrenia quality of life. *Psychol. Health Med.* **24**, 992–1004 (2019).
51. Knowledge about schizophrenia, insight into illness, and internalized stigma and their associated factors among people diagnosed with schizophrenia in a long-term care facility. doi:10.1111/ppc.12553.
52. Assefa, D., Shibre, T., Asher, L. & Fekadu, A. Internalized stigma among patients with schizophrenia in Ethiopia: a cross-sectional facility-based study. *BMC Psychiatry* **12**, 239 (2012).
53. Aukst-Margetić, B., Jakšić, N., Boričević Maršanić, V. & Jakovljević, M. Harm avoidance moderates the relationship between internalized stigma and depressive symptoms in patients with schizophrenia. *Psychiatry Res.* **219**, 92–94 (2014).
54. Bouvet, C. & Bouchoux, A. Études des liens entre la stigmatisation intériorisée, l'insight et la dépression chez des personnes souffrant de schizophrénie. *L'Encéphale* **41**, 435–443 (2015).

55. Cai, C. & Yu, L. Quality of Life in Patients With Schizophrenia in China: Relationships Among Demographic Characteristics, Psychosocial Variables, and Symptom Severity. *J. Psychosoc. Nurs. Ment. Health Serv.* **55**, 48–54 (2017).
56. Campellone, T. R., Caponigro, J. M. & Kring, A. M. The power to resist: the relationship between power, stigma, and negative symptoms in schizophrenia. *Psychiatry Res.* **215**, 280–285 (2014).
57. Çapar, M. & Kavak, F. Effect of internalized stigma on functional recovery in patients with schizophrenia. *Perspect. Psychiatr. Care* **55**, 103–111 (2019).
58. Caqueo-Úrizar, A., Boyer, L., Urzúa, A. & Williams, D. R. Self-stigma in patients with schizophrenia: a multicentric study from three Latin-America countries. *Soc. Psychiatry Psychiatr. Epidemiol.* **54**, 905–909 (2019).
59. Chan, K. K. S., Lee, C. W. L. & Mak, W. W. S. Mindfulness model of stigma resistance among individuals with psychiatric disorders. *Mindfulness* **9**, 1433–1442 (2018).
60. Chang, C.-C., Wu, T.-H., Chen, C.-Y. & Lin, C.-Y. Comparing Self-stigma Between People With Different Mental Disorders in Taiwan. *J. Nerv. Ment. Dis.* **204**, 547–553 (2016).
61. Costain, G. *et al.* Evaluating genetic counseling for individuals with schizophrenia in the molecular age. *Schizophr. Bull.* **40**, 78–87 (2014).
62. Espinosa, R., Valiente, C., Rigabert, A. & Song, H. Recovery style and stigma in psychosis: the healing power of integrating. *Cognit. Neuropsychiatry* **21**, 146–155 (2016).
63. Fadipe, B., Olagunju, A. T., Ogunwale, A., Fadipe, Y. O. & Adebowale, T. O. Self-stigma and decision about medication use among a sample of Nigerian outpatients with schizophrenia. *Psychiatr. Rehabil. J.* **43**, 214–224 (2020).
64. Feldhaus, T. *et al.* The impact of self-stigmatization on medication attitude in schizophrenia patients. *Psychiatry Res.* **261**, 391–399 (2018).
65. Firmin, R. L. *et al.* Internalized stigma in adults with early phase versus prolonged psychosis. *Early Interv. Psychiatry* **13**, 745–751 (2019).
66. Fresán, A. *et al.* Demographic and clinical features related to perceived discrimination in schizophrenia. *Psychiatry Res.* **262**, 427–430 (2018).
67. Grover, S. *et al.* Stigma experienced by patients with severe mental disorders: A nationwide multicentric study from India. *Psychiatry Res.* **257**, 550–558 (2017).
68. Grover, S., Sahoo, S. & Nehra, R. A comparative study of childhood/adolescent and adult onset schizophrenia: does the neurocognitive and psychosocial outcome differ? *Asian J. Psychiatry* **43**, 160–169 (2019).
69. Hasson-Ohayon, I. *et al.* Between self-clarity and recovery in schizophrenia: reducing the self-stigma and finding meaning. *Compr. Psychiatry* **55**, 675–680 (2014).

70. Hill, K. & Startup, M. The relationship between internalized stigma, negative symptoms and social functioning in schizophrenia: the mediating role of self-efficacy. *Psychiatry Res.* **206**, 151–157 (2013).
71. Ho, W. W. N., Chiu, M. Y. L., Lo, W. T. L. & Yiu, M. G. C. Recovery components as determinants of the health-related quality of life among patients with schizophrenia: structural equation modelling analysis. *Aust. N. Z. J. Psychiatry* **44**, 71–84 (2010).
72. Holubova, M. *et al.* Comparison of self-stigma and quality of life in patients with depressive disorders and schizophrenia spectrum disorders - a cross-sectional study. *Neuropsychiatr. Dis. Treat.* **12**, 3021–3030 (2016).
73. Horselenberg, E. M. A., van Busschbach, J. T., Aleman, A. & Pijnenborg, G. H. M. Self-Stigma and Its Relationship with Victimization, Psychotic Symptoms and Self-Esteem among People with Schizophrenia Spectrum Disorders. *PloS One* **11**, e0149763 (2016).
74. Hsiao, C.-Y., Lu, H.-L. & Tsai, Y.-F. Effect of family sense of coherence on internalized stigma and health-related quality of life among individuals with schizophrenia. *Int. J. Ment. Health Nurs.* **27**, 138–146 (2018).
75. Kamaradova, D. *et al.* Connection between self-stigma, adherence to treatment, and discontinuation of medication. *Patient Prefer. Adherence* **10**, 1289–1298 (2016).
76. Karakaş, S. A., Okanlı, A. & Yılmaz, E. The Effect of Internalized Stigma on the Self Esteem in Patients with Schizophrenia. *Arch. Psychiatr. Nurs.* **30**, 648–652 (2016).
77. Kaşlı, S., Al, O. & Bademli, K. Internalized stigmatization and subjective recovery in individuals with chronic mental illness. *Int. J. Soc. Psychiatry* 20764020960762 (2020) doi:10.1177/0020764020960762.
78. Kim, E. Y. & Jang, M. H. The Mediating Effects of Self-Esteem and Resilience on the Relationship Between Internalized Stigma and Quality of Life in People with Schizophrenia. *Asian Nurs. Res.* **13**, 257–263 (2019).
79. Komatsu, H. *et al.* Association Between Autistic Symptoms and Self-Stigma in Patients with Schizophrenia Spectrum Disorders. *Neuropsychiatr. Dis. Treat.* **16**, 2553–2561 (2020).
80. Kondrátová, L., König, D., Mladá, K. & Winkler, P. Correlates of Negative Attitudes towards Medication in People with Schizophrenia. *Psychiatr. Q.* **90**, 159–169 (2019).
81. Li, J. *et al.* Stigma and discrimination experienced by people with schizophrenia living in the community in Guangzhou, China. *Psychiatry Res.* **255**, 225–231 (2017).
82. Li, X.-H. *et al.* Peer-to-peer contact, social support and self-stigma among people with severe mental illness in Hong Kong. *Int. J. Soc. Psychiatry* 20764020966009 (2020) doi:10.1177/0020764020966009.
83. Insight, self-stigma and psychosocial outcomes in Schizophrenia: a structural equation modelling approach - PubMed. <https://pubmed.ncbi.nlm.nih.gov/27974084/>.

84. Lim, M., Li, Z., Xie, H., Tan, B. L. & Lee, J. An Asian study on clinical and psychological factors associated with personal recovery in people with psychosis. *BMC Psychiatry* **19**, 256 (2019).
85. Mizuno, Y. *et al.* Clinical and biological correlates of resilience in patients with schizophrenia and bipolar disorder: A cross-sectional study. *Schizophr. Res.* **175**, 148–153 (2016).
86. Mosanya, T. J., Adelufosi, A. O., Adebowale, O. T., Ogunwale, A. & Adebayo, O. K. Self-stigma, quality of life and schizophrenia: An outpatient clinic survey in Nigeria. *Int. J. Soc. Psychiatry* **60**, 377–386 (2014).
87. Olçun, Z. & Şahin Altun, Ö. The Correlation Between Schizophrenic Patients' Level of Internalized Stigma and Their Level of Hope. *Arch. Psychiatr. Nurs.* **31**, 332–337 (2017).
88. Park, K., MinHwa, L. & Seo, M. The impact of self-stigma on self-esteem among persons with different mental disorders. *Int. J. Soc. Psychiatry* **65**, 558–565 (2019).
89. Pellet, J. *et al.* The relationship between self-stigma and depression among people with schizophrenia-spectrum disorders: A longitudinal study. *Psychiatry Res.* **275**, 115–119 (2019).
90. Pribadi, T. *et al.* Factors associated with internalized stigma for Indonesian individuals diagnosed with schizophrenia in a community setting. *J. Psychiatr. Ment. Health Nurs.* **27**, 584–594 (2020).
91. Ran, M.-S. *et al.* Internalized stigma in people with severe mental illness in rural China. *Int. J. Soc. Psychiatry* **64**, 9–16 (2018).
92. Sarisoy, G. *et al.* Internalized stigma and intimate relations in bipolar and schizophrenic patients: a comparative study. *Compr. Psychiatry* **54**, 665–672 (2013).
93. Schrank, B., Amering, M., Hay, A. G., Weber, M. & Sibitz, I. Insight, positive and negative symptoms, hope, depression and self-stigma: a comprehensive model of mutual influences in schizophrenia spectrum disorders. *Epidemiol. Psychiatr. Sci.* **23**, 271–279 (2014).
94. Sharaf, A. Y., Ossman, L. H. & Lachine, O. A. A cross-sectional study of the relationships between illness insight, internalized stigma, and suicide risk in individuals with schizophrenia. *Int. J. Nurs. Stud.* **49**, 1512–1520 (2012).
95. Shin, Y.-J., Joo, Y.-H. & Kim, J.-H. Self-perceived cognitive deficits and their relationship with internalized stigma and quality of life in patients with schizophrenia. *Neuropsychiatr. Dis. Treat.* **12**, 1411–1417 (2016).
96. Singla, N., Avasthi, A. & Grover, S. Recovery and its correlates in patients with schizophrenia. *Asian J. Psychiatry* **52**, 102162 (2020).
97. Sum, M. Y. *et al.* Elucidating the relationship between internalized stigma, cognitive insight, illness severity, and functioning in patients with schizophrenia using a path analysis approach. *J. Ment. Health Abingdon Engl.* 1–10 (2020) doi:10.1080/09638237.2020.1836553.

98. Tanriverdi, D., Kaplan, V., Bilgin, S. & Demir, H. The comparison of internalized stigmatization levels of patients with different mental disorders. *J. Subst. Use* **25**, 251–257 (2020).
99. Vidović, D., Brečić, P., Vilibić, M. & Jukić, V. INSIGHT AND SELF-STIGMA IN PATIENTS WITH SCHIZOPHRENIA. *Acta Clin. Croat.* **55**, 23–28 (2016).
100. Violeau, L., Dudilot, A., Roux, S. & Prouteau, A. How internalised stigma reduces self-esteem in schizophrenia: the crucial role of off-line metacognition. *Cognit. Neuropsychiatry* **25**, 154–161 (2020).
101. Vrbova, K. *et al.* Quality of life, self-stigma, and hope in schizophrenia spectrum disorders: a cross-sectional study. *Neuropsychiatr. Dis. Treat.* **13**, 567–576 (2017).
102. Vrbova, K., Prasko, J., Ociskova, M. & Holubova, M. Comorbidity of schizophrenia and social phobia - impact on quality of life, hope, and personality traits: a cross sectional study. *Neuropsychiatr. Dis. Treat.* **13**, 2073–2083 (2017).
103. Wong, Y.-L. I., Kong, D., Tu, L. & Frasso, R. ‘My bitterness is deeper than the ocean’: understanding internalized stigma from the perspectives of persons with schizophrenia and their family caregivers. *Int. J. Ment. Health Syst.* **12**, 14 (2018).
104. Yildirim, T. & Kavak Budak, F. The relationship between internalized stigma and loneliness in patients with schizophrenia. *Perspect. Psychiatr. Care* **56**, 168–174 (2020).
105. Yılmaz, E. & Okanlı, A. The Effect of Internalized Stigma on the Adherence to Treatment in Patients With Schizophrenia. *Arch. Psychiatr. Nurs.* **29**, 297–301 (2015).
106. Chan, S. K. W. *et al.* Relationship between neurocognitive function and clinical symptoms with self-stigma in patients with schizophrenia-spectrum disorders. *J. Ment. Health Abingdon Engl.* **28**, 583–588 (2019).
107. Kim, M. Y. & Jun, S. S. Development and Effects of a Cognitive-behavioral Therapy Based Program in Reducing Internalized Stigma in Patients with Schizophrenia. *J. Korean Acad. Nurs.* **46**, 349 (2016).
108. Guo, Y., Qu, S. & Qin, H. Study of the relationship between self-stigma and subjective quality of life for individuals with chronic schizophrenia in the community. *Gen. Psychiatry* **31**, e100037 (2018).
109. Chang, Y.-H., Chang, K.-C., Hou, W.-L., Lin, C.-Y. & Griffiths, M. D. Internet gaming as a coping method among schizophrenic patients facing psychological distress. *J. Behav. Addict.* (2020) doi:10.1556/2006.2020.00081.
110. Chio, F. H. N., Mak, W. W. S., Chan, R. C. H. & Tong, A. C. Y. Unraveling the insight paradox: One-year longitudinal study on the relationships between insight, self-stigma, and life satisfaction among people with schizophrenia spectrum disorders. *Schizophr. Res.* **197**, 124–130 (2018).

111. Kvrjic, S., Cavelti, M., Beck, E.-M., Rüsçh, N. & Vauth, R. Therapeutic alliance in schizophrenia: the role of recovery orientation, self-stigma, and insight. *Psychiatry Res.* **209**, 15–20 (2013).
112. Pruß, L., Wiedl, K. H. & Waldorf, M. Stigma as a predictor of insight in schizophrenia. *Psychiatry Res.* **198**, 187–193 (2012).
113. Chee, C. Y. I., Ng, T. P. & Kua, E. H. Comparing the stigma of mental illness in a general hospital with a state mental hospital: a Singapore study. *Soc. Psychiatry Psychiatr. Epidemiol.* **40**, 648–653 (2005).
114. Dutta, R., Murray, R. M., Allardyce, J., Jones, P. B. & Boydell, J. Early risk factors for suicide in an epidemiological first episode psychosis cohort. *Schizophr. Res.* **126**, 11–19 (2011).
115. Conley, R. R., Ascher-Svanum, H., Zhu, B., Faries, D. & Kinon, B. J. The Burden of Depressive Symptoms in the Long-Term Treatment of Patients With Schizophrenia. *Schizophr. Res.* **90**, 186–197 (2007).
116. Crowe, A., Averett, P. & Glass, J. S. Mental illness stigma, psychological resilience, and help seeking: What are the relationships? *Ment. Health Prev.* **4**, 63–68 (2016).
117. Firmin, R. L., Luther, L., Salyers, M. P., Buck, K. D. & Lysaker, P. H. Greater Metacognition and Lower Fear of Negative Evaluation: Potential Factors Contributing to Improved Stigma Resistance among Individuals Diagnosed with Schizophrenia. **6**.
118. Sibitz, I., Unger, A., Woppmann, A., Zidek, T. & Amering, M. Stigma Resistance in Patients With Schizophrenia. *Schizophr. Bull.* **37**, 316–323 (2011).
119. Firmin, R. L., Luther, L., Lysaker, P. H., Minor, K. S. & Salyers, M. P. Stigma resistance is positively associated with psychiatric and psychosocial outcomes: A meta-analysis. *Schizophr. Res.* **175**, 118–128 (2016).
120. Zäske, H. *et al.* [Experiences of stigma and discrimination in patients with first-episode schizophrenia]. *Nervenarzt* **87**, 82–87 (2016).

SERMENT D'HIPPOCRATE

Au moment d'être admis(e) à exercer la médecine, je promets et je jure d'être fidèle aux lois de l'honneur et de la probité.

Mon premier souci sera de rétablir, de préserver ou de promouvoir la santé dans tous ses éléments, physiques et mentaux, individuels et sociaux.

Je respecterai toutes les personnes, leur autonomie et leur volonté, sans **aucune discrimination selon leur état ou leurs convictions**. J'interviendrai pour les protéger si elles sont affaiblies, vulnérables ou menacées dans leur intégrité ou leur dignité. Même sous la contrainte, je ne ferai pas **usage de mes connaissances contre les lois de l'humanité**.

J'informerai les patients des décisions envisagées, de leurs raisons et de leurs conséquences.

Je ne tromperai **jamais leur confiance** et **n'exploiterai pas le pouvoir hérité** des circonstances pour forcer les consciences.

Je donnerai mes soins à l'indigent et à quiconque me les demandera. Je ne me laisserai pas influencer par la soif du gain ou la recherche de la gloire.

Admis(e) dans l'intimité des personnes, je tairai les secrets qui me seront confiés. **Reçu(e) à l'intérieur des maisons, je respecterai les secrets des foyers** et ma conduite ne servira pas à corrompre les mœurs.

Je ferai tout pour soulager les souffrances. Je ne prolongerai pas abusivement les agonies. Je ne provoquerai jamais la mort délibérément.

Je préserverai l'indépendance nécessaire à l'accomplissement de ma mission. Je n'entreprendrai rien qui dépasse mes compétences. Je les entretiendrai et les perfectionnerai pour assurer au mieux les services qui me seront demandés.

J'apporterai mon aide à mes confrères ainsi qu'à leurs familles dans l'adversité.

Que les hommes et mes confrères m'accordent leur estime si je suis fidèle à mes promesses ; que je sois déshonoré(e) et méprisé(e) si j'y manque.