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Stigmatisierung im Kontext von Mental Health Literacy und Hilfesuchverhalten

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Zusammenfassung

Jeder vierte erwachsene Europäer erfüllt innerhalb eines Jahres die Kriterien einer psychischen Erkrankung. Betroffene leiden nicht nur unter den Symptomen, sondern erfahren häufig auch eine gesellschaftliche Stigmatisierung. Sie suchen daher keine Hilfe oder nehmen diese nur mit einer erheblichen Verspätung in Anspruch. Um einer Stigmatisierung entgegenzuwirken, wurden seit den 90er Jahren in Anti-Stigma-Kampagnen versucht, das Wissen über psychische Erkrankungen, der sogenannten *Mental Health Literacy* (MHL), zu verbessern. Wenn auch MHL in der Bevölkerung zunahm, so stellt die Stigmatisierung von psychischen Erkrankungen noch heute ein Problem dar.

In der vorliegenden Arbeit wurde daher in einer Stichprobe von 1526 deutschsprachigen Teilnehmern aus der Schweizer *‚Bern Epidemiological At-Risk‘* Studie (Alter 16-40 Jahre) der Einfluss von MHL auf Stigmatisierung untersucht. Des Weiteren wurden potentielle Prädiktoren von Hilfesuchverhalten in einer Stichprobe von 307 Personen mit mentalen gesundheitlichen Problemen prospektiv analysiert. Beide Untersuchungen wurden mithilfe eines Strukturgleichungsmodells (SEM), welches gegenüber Regressionsanalysen den Vorteil hat, nicht nur direkte, sondern auch indirekte Effekte zu berücksichtigen, durchgeführt. Hierbei zeigte sich kein direkter Zusammenhang zwischen MHL und Stigmatisierung im Sinne des Wunsches nach sozialer Distanz (WSD). Als Ursachenmodell hatte nur das psychosoziale Ursachenmodell einen reduzierenden Effekt auf den WSD. Im Gegensatz dazu führte das Stereotyp ‚wahrgenommene Gefährlichkeit‘, welches durch eine vermehrte biogenetische Ursachenzuschreibung für die psychische Erkrankung verstärkt und durch eine vermehrte psychosoziale Ursachenzuschreibung vermindert wurde, zu einem erhöhten WSD. Außerdem prädizierte Funktionsbeeinträchtigung, gefolgt von bereits erfolgtem Hilfesuchverhalten zu Untersuchungsbeginn, Hilfesuchverhalten während der drei Folgejahre am besten. In der longitudinalen Studie zeigte sich, dass die zu Studienbeginn gemessene antizipierte Stigmatisierung (antizipiertes Schamgefühl, wenn Freunde über eigene Hilfesuche erfahren würden) das Hilfesuchverhalten langfristig reduzierte. Im Gegensatz dazu hatten die persönliche Stigmatisierung oder die wahrgenommene Stigmatisierung langfristig keinen signifikanten Einfluss auf das Hilfesuchverhalten. Schlussendlich sollten Anti-Stigma-Kampagnen in Hinblick auf die Entstehung von psychischen Erkrankungen neben biogenetischen Ursachenmodellen, psychosoziale Ursachenmodelle hervorheben. Es zeigte sich auch eine klare Behandlungslücke, da nur 22.5% der Personen mit psychischen Problemen innerhalb von drei Jahren Hilfe aufsuchten. Da die Funktionsbeeinträchtigung der stärkste Prädiktor war, lässt sich schlussfolgern, dass Personen erst Hilfe für persönliche Probleme suchen, wenn diese mit stärkeren Einschränkungen verbunden sind.

Summary

In a given year, one in four European adults are fulfilling the criteria for a mental illness. Although people with a mental illness suffer not only from their symptoms, but also experiencing stigmatization, the majority of people with a mental illness do not seek help at all or only with a significant delay. In order to reduce stigmatization, in the last decades anti-stigma campaigns tried to enhance the knowledge of mental illness, the so-called *Mental Health Literacy* (MHL). Although MHL has increased over the last decades, stigmatization of people with mental illness is still a common problem.

In the present work we examined the interplay of MHL and stereotypes on stigma, which was measured by the *wish for social distance* (WSD), from a community sample of 1,526 German-speaking participants in the Swiss *'Bern Epidemiological At-Risk'* study (age 16-40 years). Furthermore, we assessed potential predictors of help-seeking behaviour among 307 people with mental health problems in this sample over 3 years. Both analyses were conducted by using structural equation modelling, which has the advantage to consider not only direct but also indirect effects compared to regression analysis. It was shown that MHL was hardly directly linked to WSD. Only the psychosocial model had a direct, stigma-reducing association with WSD. In contrast, the stereotype 'perceived dangerousness', which was increased by a biogenetic explanation model of mental illness and decreased by a psychosocial explanation model of mental illness, caused a higher WSD.

Furthermore, functional impairment at baseline, followed by help-seeking at baseline, were the best predictors for follow-up help-seeking in the consecutive three years. Whereas in the longitudinal study anticipated stigma at baseline (anticipated embarrassment, when friends would know about own help-seeking) reduced help-seeking behaviour in the long-term, personal and public stigma had no significant longitudinal effect on help-seeking behaviour.

In summary, anti-stigma campaigns should beyond biological models emphasize psychosocial models. Additionally, there was a clear treatment gap as only 22.5% of persons with mental problems sought help to address these issues within three years. Functional deficits, were the strongest predictor of help-seeking, indicating that help is only sought when mental problems have become more severe.

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Abkürzungsverzeichnis

FIML	*full information maximum likelihood*
HSmental	Hilfesuche für psychische Erkrankungen
MHL	*Mental Health Literacy*
SEM	Strukturgleichungsmodell *(engl. Structural equation model)*
SEMs	Strukturgleichungsmodells
WHO	*World Health Organization*
WSD	Wunsch nach sozialer Distanz *(engl. wish for social distance)*

1 Einleitung

1.1 Hilfesuchverhalten bei psychischen Erkrankungen

Psychische Erkrankung treten weltweit auf und sind eine enorme Belastung nicht nur für das Gesundheitssystem, sondern auch für die Betroffenen und deren Familien. Ungefähr 164,8 Millionen Menschen in Europa leiden jährlich unter psychischen Erkrankungen (Wittchen et al., 2011). Hierbei zählt die Major Depression zu einer der häufigsten psychischen Erkrankung (6,9%), während psychotische Störungen weniger häufig auftreten (1,2%) (Wittchen et al., 2011). Diese haben jedoch meistens einen chronischen und schweren Verlauf (Collaborators, 2017) und werden in den Medien stärker stigmatisiert (Robinson et al., 2019). Bei einem Großteil der Betroffenen treten psychische Erkrankungen bereits das erste Mal in der Kindheit oder im Jugendalter auf, remittieren eher selten von alleine und erhöhen das Risiko für eine weitere psychische Erkrankung (Kessler et al., 2012, Beesdo et al., 2010).

Obwohl frühe Hilfe bei psychischen Erkrankungen dazu beiträgt, Belastungen, soziale und finanzielle Kosten, künftige Rückfälle und den Verlust sowohl der sozialen Funktionsfähigkeit als auch der Lebensqualität zu verhindern (Campion et al., 2012), nimmt ein Großteil der Betroffenen keine oder verspätet professionelle Hilfe in Form einer Behandlung in Anspruch (Clement et al., 2015, Wang et al., 2007b, Thornicroft, 2007, Wittchen et al., 2011).

Weltweit besteht eine Behandlungslücke bei psychischen Erkrankungen (Kohn et al., 2004, Werlen et al., 2020, Jo et al., 2020, Kagstrom et al., 2019, Subramaniam et al., 2020), welche an der Differenz zwischen der wahren Prävalenz einer Erkrankung und den tatsächlich behandelten Individuen gemessen wird (Kohn et al., 2004, Dua et al., 2011). Ungefähr eine von vier Personen mit einer psychischen Erkrankung erhält in Europa eine psychische Gesundheitsvorsorge (Wittchen und Jacobi, 2005). In Ländern mit niedrigem und mittlerem Einkommen ist die Anzahl derer, die Hilfe bekommen, sogar noch niedriger (Wang et al., 2007a). In den USA durchgeführte Studien zeigten beispielsweise, dass 30 bis 60% der Personen, die die klinischen Kriterien für eine Depression erfüllten, keine therapeutische Unterstützung erhielten (Hasin et al., 2018, Pratt und Brody, 2014). Aber auch in Ländern wie Deutschland, in denen ein Großteil der Gesundheitsleistungen durch ein Versicherungssystem abgedeckt ist (Blümel et al., 2020, Busse und Blümel, 2014), suchten 57% der Personen mit einer prävalenten psychischen Erkrankung keine Hilfe auf (Brandstetter et al., 2017). In einer Schweizer Studie zeigte sich, dass 38% der jungen Erwachsenen mit gegenwärtigen Symptomen einer Depression, einer Angststörung oder einer Aufmerksamkeitsdefizitstörung mit Hyperaktivität bereits schon Zugang zu einem Gesundheitsservice hatten (Werlen et al., 2020). PatientInnen mit einer psychotischen Störung erfahren im Durchschnitt sogar ein Jahr psychotische Symptome, bevor sie eine antipsychotische Behandlung erhalten (Schaffner et al., 2012), obwohl eine unbehandelte Psychose häufig mit einem negativen Verlauf assoziiert ist (Schimmelmann et al., 2008).

1.1.1 Definition Hilfesuchverhalten

Obgleich der Begriff Hilfesuche in der Forschungsliteratur häufig verwendet wird und auch zentraler Bestandteil vieler Interventionen ist, besteht keine übereinstimmende Definition. Im Lexikon beschreibt das Hilfesuchverhalten „Formen der Inanspruchnahme professioneller med. oder psychologische Hilfe vorausgehenden Prozesse bei subjektiven empfunden Beschwerden bzw. Symptomen" (Wirtz 2017). Im Gesundheitskontext führte Mechanic (Mechanic, 1962) den Begriff *„Illness behaviour"* ein. Dieser beschreibt, in welcher Art und Weise Personen Symptome wahrnehmen, interpretieren und dementsprechend unterschiedliche Hilfe in Anspruch nehmen. Er definierte hierbei Hilfesuche als einen adaptiven Bewältigungsprozess. Später wurde Hilfesuche als das Verhalten aktiv bei anderen Hilfe zu suchen definiert, wie beispielsweise durch die Kommunikation mit anderen Personen, um dadurch Beratung, Informationen, Behandlung, und/oder allgemeine Unterstützung in Hinblick auf ein Problem oder eine belastende Situation zu erhalten (Rickwood et al., 2005).

Von Beginn an wurde jedoch bei Hilfesuche zwischen formeller und informeller Hilfesuche unterschieden (Rickwood und Thomas, 2012). Formelle Hilfesuche umfasst die Unterstützung von professionellen Behandlern, die eine legitimierte und anerkannte professionelle Rolle in Bezug auf Beratung, Unterstützung und/oder Behandlung geben. Dies beinhaltet eine große Auswahl von Berufen aus der spezialisierten, allgemeinen Versorgung sowie aus der medizinischen Grundversorgung (Rickwood und Thomas, 2012). Überdies hinaus werden auch AnsprechpartnerInnen aus nicht gesundheitlichen Bereichen, wie beispielsweise LehrerInnen, zu der professionellen Hilfesuche gezählt (Rickwood und Thomas, 2012). Allen ist die professionelle Beziehung zwischen der hilfesuchenden Person und dem Versorger gemein. Hingegen besteht bei informeller Hilfesuche eine persönliche Beziehung zwischen Hilfesuchendem und Versorger. Versorger sind beispielsweise Freunde und/oder Familienmitglieder. Dabei ist die psychische Gesundheitsvorsorge meist von externen Anlaufstellen abhängig, womit sie sich von einer gesunden Lebensführung im Sinne einer physischen Gesundheitsvorsorge (z.B. durch Sport und gesunde Ernährung) unterscheidet, die oftmals in der Hand des Einzelnen liegt (Cornally und McCarthy, 2011). Psychische Gesundheitsvorsorge wird daher in der Literatur meistens durch Problemfokussierung, Handlungsintentionen und interpersonelle Interaktion mit einer dritten Person charakterisiert (Rickwood et al., 2005).

1.1.1 Intentions-Verhaltens-Lücke

Vorangegangene Studien verwendeten häufig Hilfesuch-Intentionen um tatsächliches Hilfesuchverhalten zu erforschen und um Behandlungslücken und die daraus resultierenden Folgen zu reduzieren (z.B. Calear et al., 2014, Rüsch et al., 2014, Mojtabai, 2010, Kosyluk et al., 2021, Nearchou et al., 2018, Schomerus et al., 2009, Mackenzie et al., 2019). Während die Intention als bewusste Entscheidung oder Motivation, ein bestimmtes Verhalten auszuführen, definiert wird, beinhaltet das Verhalten die beobachtbare Reaktion in einer bestimmten Situation (Ajzen, 1991). In früheren Studien wurde häufig die Handlungsintention verwendet, um Aussagen über tatsächliches Hilfesuchverhalten zu treffen (z.B. Calear et al., 2014, Rüsch et al., 2014, Mojtabai, 2010, Kosyluk et al., 2021, Nearchou et al., 2018, Schomerus et al., 2009, Mackenzie et al., 2019). Studien zeigten jedoch, dass Intentionen nicht unbedingt auch zu der Ausführung eines bestimmten Verhaltens führen (Rothman et al., 2015, Sheeran und Webb, 2016). Personen suchten trotz ihrer Intentionen für Hilfesuchverhalten keine Hilfe bei psychischen Problemen oder Erkrankungen auf (Clement et al., 2015, Wang et al., 2007b, Thornicroft, 2007, Tomczyk et al., 2020b). Die Gleichsetzung von Hilfesuch-Intentionen mit tatsächlichem Hilfesuchverhalten ist somit problematisch. Die Diskrepanz zwischen Intention und Verhalten wird in der Literatur als Intentions-Verhaltens-Lücke bezeichnet (Sheeran und Webb, 2016) und konnte auch in anderen Bereichen aufgezeigt werden. So nahmen zum Beispiel Personen trotz gesunder Intentionen ungesundes Essen zu sich, da dieses mitunter belohnende Stimulationen auslöst (Chen et al., 2016), oder weiterhin werden aufgrund der schnelleren Verfügbarkeit nicht nachhaltige Produkte konsumiert, obwohl die Personen umweltfreundliche Einstellungen und Intentionen aufweisen (Young et al., 2010).

Um das Problem der Intentions-Verhaltens-Lücke zu verstehen, wurde in der Forschung häufig die Theorie des überlegten Handelns, die die Zusammenhänge zwischen kognitiven Intentionen und Verhalten beschreibt, herangezogen (Ajzen, 1991). Die Theorie des überlegten Handelns ermöglicht es, anhand verschiedener Mechanismen bestimmtes Verhalten von Menschen zu verstehen (Abb. 1, Ajzen, 1991). Sie besagt, dass das finale Verhalten durch ‚Einstellung', ‚subjektive Norm' und ‚wahrgenommene Kontrolle' über das Verhalten beeinflusst wird. Die ‚Einstellung' umfasst die Bewertung einer Person über das positive oder negative Ergebnis eines Verhaltens, während die ‚subjektive Norm' inkludiert, ob andere Personen das Verhalten billigen oder nicht (Ajzen, 1991). Die ‚wahrgenommene Kontrolle' wird anhand der eigenen Überzeugung über die Fähigkeiten, das Verhalten auszuführen, gemessen (Ajzen, 1991). Wenn eine Person also ein Verhalten positiv bewertet und glaubt, dass es von anderen gebilligt wird und dass sie die Fähigkeiten besitzt, dieses umzusetzen, dann formt sich aus der ‚subjektiven Norm', ‚der wahrgenommenen Kontrolle' sowie der Komponente ‚Einstellung' die Intention einer Person zu handeln (Ajzen, 1991).

In Bezug auf Hilfesuch-Intentionen bei Personen mit einer depressiven Erkrankung konnten beispielsweise mit der Theorie des überlegten Handelns Hilfesuch-Intentionen zwischen 50% und 61% prädiziert werden (Schomerus et al., 2009). Hierbei wurden Intentionen bzgl. der Hilfesuche bei Depression mithilfe der verschiedenen Komponenten der Theorie des überlegten Handelns (Verhaltensüberzeugungen, Kontrollüberzeugungen, normative Überzeugungen) in einer repräsentativen Stichprobe untersucht und für die Vorhersage von Hilfesuchverhalten verwendet (Schomerus et al., 2009).

Des Weiteren stellte sich heraus, dass in Hinblick auf das Hilfesuchverhalten die ‚Einstellung' gegenüber dem Verhalten im Vergleich zur ‚subjektiven Norm' wichtiger war und dass die ‚wahrgenommene Kontrolle' bzgl. der Umsetzung des Verhaltens einen geringeren Einfluss hatte (Schomerus et al., 2009).

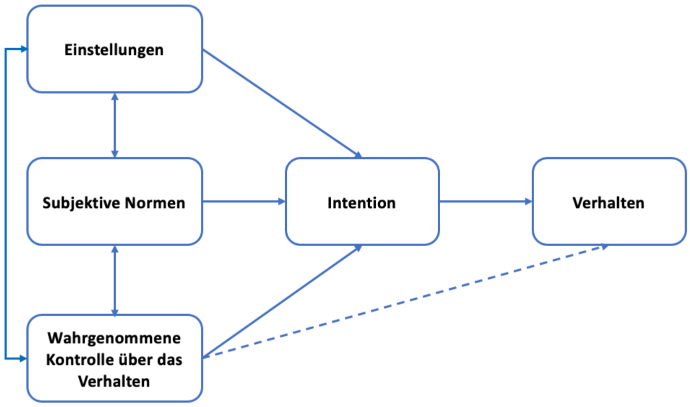

Abb. 1: **Darstellung der verschiedenen Komponenten der Theorie des geplanten Verhaltens (Ajzen, 1991).** Die durchgezogenen Linien stellen die direkten Verbindungen sowie die wechselseitigen Wirkungen der Komponenten dar. Die Linie zwischen ‚wahrgenommener Kontrolle' und Verhalten ist gestrichelt, da die ‚wahrgenommene Kontrolle' nur bei einer hohen Übereinstimmung mit der tatsächlichen Verhaltenssteuerung einen direkten Einfluss auf das Verhalten hat.

1.2 Einflussfaktoren des Hilfesuchverhaltens

Studien in unterschiedlichen Ländern konnten weitere Einflussfaktoren identifizieren. Zum Beispiel zeigte sich, dass eine höhere physische Dysfunktion (Komiti et al., 2006), ein niedrigeres Funktionsniveau (Michel et al., 2018), eine erhöhte wahrgenommene Effektivität der professionellen Behandlung (Ten Have et al., 2010) und eine erhöhte wahrgenommene Notwendigkeit (Schomerus et al., 2012a) das Hilfesuchverhalten positiv beeinflussten. Außerdem weisen Studien darauf hin, dass insbesondere ältere Personen (+65 J.) im Vergleich zu jüngeren Erwachsenen (18-29 J.) oder Erwachsenen mittleren Alters (30-64 J.) weniger wahrscheinlich Behandlung in Anspruch nahmen (Klap et al., 2003), obwohl sie im Vergleich zu jüngeren Probanden ein geringeres wahrgenommenes (öffentliches) Stigma, ein geringeres Selbststigma und eine positivere Einstellung gegenüber Hilfesuche zeigten (Mackenzie et al., 2019). Die geringere Inanspruchnahme von Hilfe bei älteren Personen ist möglicherweise auch auf eine schlechtere MHL, auf eine geringere wahrgenommene Notwendigkeit oder auf strukturelle Versorgungsschwierigkeiten zurückzuführen (Farrer et al., 2008, Hadjimina und Furnham, 2017, Klap et al., 2003, Hoge et al., 2015, Moye et al., 2019). Die meisten Studien legten jedoch stigmatisierende Einstellungen gegenüber psychischen Erkrankungen sowie ein mangelndes Wissen über diese als Hauptbarrieren für Hilfesuchverhalten offen (z.B. Mojtabai, 2010, Schnyder et al., 2017, Aguirre Velasco et al., 2020, Bonabi et al., 2016, Clement et al., 2015, Coleman et al., 2017, Corrigan et al., 2014, Haidl et al., 2019).

1.2.1 Mental Health Literacy

Das Wissen über die Art und Ursache von psychischen Erkrankungen, sodass diese erkannt, bewältigt und verhindert werden können, wird als *Mental Health Literacy* (MHL) bezeichnet (Jorm et al., 1997). MHL wird nicht nur als bloßes Wissen gesehen, sondern ist eng verbunden mit der Möglichkeit, aktiv etwas sowohl für die Eigene als auch die mentale Gesundheit von anderen zu unternehmen. Es umfasst das Wissen über die Prävention von psychischen Erkrankungen, über Hilfesuchmöglichkeiten und Behandlungsmöglichkeiten, über effektive Selbsthilfestrategien für leichte bis mittlere Probleme und über Erste-Hilfe-Fähigkeiten, um sich und anderen zu helfen (Jorm, 2012).

In der Forschung wird das Konzept MHL häufig in folgende vier Domänen unterteilt: 1) das Wissen über das Erlangen und Aufrechterhalten von guter mentaler Gesundheit; 2) das Verstehen von psychischer Erkrankung und deren Behandlung; 3) die verminderten stigmatisierenden Einstellungen gegenüber psychischen Erkrankungen und 4) die verbesserte Selbstwirksamkeit in Hinblick auf das eigene Hilfesuchverhalten. Dazu zählt beispielsweise das Wissen, wann und wo Hilfe zu finden wäre, und die Entwicklung von Kompetenzen, die die eigene psychische Gesundheitsversorgung und den Umgang mit eigenem Verhalten, Gedanken und Emotionen positiv beeinflussen (Kutcher et al., 2015, Wei et al., 2013, Kutcher et al., 2016).

Zur Verbesserung von MHL wurden verschiedene Trainingsmodule entwickelt. Sie sollten das Wissen über psychische Erkrankungen und die Einstellung gegenüber Hilfesuche verbessern sowie nicht-stigmatisierende Einstellungen fördern (O'Connell et al., 2021, Moll et al., 2018). Hierbei zeigte sich in einem Review (O'Connell et al., 2021), dass es über die Mehrheit der Programme gelang, das Wissen bzgl. psychischer Erkrankungen auszubauen. In Hinblick auf die Förderungen von tatsächlichem Hilfesuchverhalten konnte aufgrund von inkonsistenten Ergebnissen verschiedener Studien jedoch keine Aussage getroffen werden. Allgemein kann festgehalten werden, dass sich in den letzten Jahren MHL in der Allgemeinbevölkerung verbesserte (Angermeyer et al., 2009, Reavley und Jorm, 2012b, Angermeyer et al., 2013a, Schomerus et al., 2012b). Psychische Erkrankungen wurden daher eher erkannt, biologische Erklärungen konnten für ihre Entstehung herangezogen und Behandlungen im Gesundheitswesen häufiger empfohlen werden (Angermeyer et al., 2009, Reavley und Jorm, 2012b, Angermeyer et al., 2013a, Schomerus et al., 2012b).

Um MHL zu messen wurden häufig Vignetten verwendet, in denen die Symptome von einer Person mit einer psychischen Erkrankung beschrieben wurden (Furnham et al., 2009, Angermeyer et al., 2015, Schomerus et al., 2014, Schnyder et al., 2018, Michel et al., 2018, Von Lersner et al., 2019, Jorm et al., 2006). Nach der Präsentation einer Vignette beantworteten die Probanden verschiedene vorgelegte Fragen (z.B. Benennung des Störungsbildes, Ursachenzuschreibung) (z.B. Furnham et al., 2009, Angermeyer et al., 2015, Schomerus et al., 2014, Schnyder et al., 2018, Michel et al., 2018, Von Lersner et al., 2019, Jorm et al., 2006). Hierbei zeigte sich, dass beispielsweise beschriebene depressive Symptome häufiger korrekt dem richtigen Störungsbild zugeordnet werden konnten als beschriebene psychotische Symptome (Furnham et al., 2009).

Die Verbesserungen in Bezug auf MHL lassen sich zum Teil auf die Gesundheitskampagnen zurückführen, die MHL stärker berücksichtigen (Reavley und Jorm, 2012a). Es ist jedoch aufgrund fehlender Daten und Kontrollgruppen häufig keine eindeutige Aussage darüber zu treffen, ob die Kampagnen zu einem gesteigerten Hilfesuchverhalten führten (Henderson et al., 2013). Es zeigte sich lediglich, dass eine erhöhte MHL bei Erkrankung eine höhere Hilfesuch-Intention bewirkte (Rüsch et al., 2011).

1.2.2 Stigmatisierung von Personen mit einer psychischen Erkrankung

Obwohl das Wissen über MHL in der Allgemeinbevölkerung zugenommen hat, erfahren Personen mit einer psychischen Erkrankung noch immer häufig Stigmatisierung (Angermeyer et al., 2009, Deacon, 2013, Angermeyer et al., 2013a). Sie wird allgemein definiert als eine Abwertung aufgrund eines bestimmten Zeichens, eines Status oder eines Zustandes (Hinshaw und Stier, 2008, Sartorius, 2007). Damit Stigmatisierung stattfindet, ist die Unterscheidung und Kennzeichnung von Unterschieden, die Verbindung dieser Unterschiede mit negativen Attributionen und Stereotypen, welche negative Denkweisen über eine soziale Gruppe oder Person (z.B. Personen mit einer psychischen Erkrankung sind gefährlich) beinhalten, die Einteilung in Kategorien ("us and them"; Morone, 1997, Devine et al., 1999) sowie das Erleben von Statusverlust und Diskriminierung wesentlich (Link und Phelan, 2001, Corrigan und Watson, 2002).

Verschiedene Formen von Stigmatisierung können verhindern, dass Betroffene für ihre psychischen Probleme Hilfe suchen (Clement et al., 2015, Aguirre Velasco et al., 2020, Gulliver et al., 2010, Schnyder et al., 2017, Schnyder et al., 2018). Häufig wird

Stigmatisierung unterteilt in eine strukturelle, eine wahrgenommene, eine persönliche, eine antizipierte und einer Selbststigmatisierung (siehe Tabelle 1).

Strukturelle Stigmatisierung umfasst auf einer sozialen Makroebene kulturelle Normen und institutionelle Maßnahmen, welche das Wohlbefinden, die Ressourcen und Möglichkeiten der Betroffenen limitieren (Hatzenbuehler und Link, 2014). So wurde beispielsweise in der Hälfte aller Staaten der USA das Sorgerecht der Eltern mit einer psychischen Erkrankung eingeschränkt (Corrigan et al., 2005). In einem Drittel der Staaten wurde Betroffenen das Wahlrecht entzogen (Corrigan et al., 2005).

Wahrgenommene (öffentliche) Stigmatisierung wird auf einer sozialen Mikroebene durch bestehende Vorurteile und negative Stereotypen gegenüber Personen mit einer psychischen Erkrankung in der Allgemeinbevölkerung ausgedrückt (Eisenberg et al., 2009, Griffiths et al., 2004). Zum Beispiel werden Personen mit einer Schizophrenie als gefährlicher wahrgenommen als Personen ohne eine psychische Erkrankung. Nationale und internationale Studien zeigen, dass Menschen mit einer psychischen Erkrankung in der Öffentlichkeit noch immer oder zum Teil sogar zunehmend stigmatisiert werden (Angermeyer und Dietrich, 2006, Corrigan, 2004, Speerforck et al., 2021, Jorm und Reavley, 2014, Mayer et al., 2021, Reavley und Jorm, 2012b, Pescosolido et al., 2019).

Persönliche Stigmatisierung umfasst die eigenen negativen Stereotype und Vorurteile gegenüber einer Gruppe von Personen, ohne selbst dazu zu gehören. Sie wird häufig mit dem Wunsch nach sozialer Distanz (WSD) gemessen und beinhaltet im Wesentlichen den Wunsch, eine bestimmte Gruppe, wie zum Beispiel Personen mit einer psychischen Erkrankung, zu meiden (Jorm und Oh, 2009).

Basierend auf eigenen Stigma-Erfahrungen oder einer wahrgenommenen Stigmatisierung, antizipieren Personen Stigmatisierung und Diskriminierung in der Zukunft (z.B.: „Wenn meine Freunde herausfinden, dass ich für eine psychische Erkrankung Hilfe in Anspruch genommen habe, wird mir das peinlich sein“) (Quinn und Chaudoir, 2009). Die Angst vor eventueller zukünftiger Diskriminierung führt häufig dazu, dass Personen versuchen, ihre psychische Erkrankung zu verheimlichen, und sie in der Folge soziale Situationen meiden, da sie Angst vor Ablehnung fürchten. (Link et al., 1989, Quinn und Chaudoir, 2009). In einer Studie konnte auch gezeigt werden, dass höheres antizipiertes Stigma auch zu einer höheren Selbststigmatisierung führt (Hing und Russell, 2017, Fox et al., 2018).

Selbststigmatisierung beschreibt die Internalisierung von negativen Stereotypen und Vorurteilen durch die betroffene Person (Corrigan et al., 2013). Diese entwickelt sich bereits bevor die Person selbst psychisch erkrankt und erst durch die Zugehörigkeit mit der betroffenen Gruppe identifiziert sich die Person auch mit diesen negativen Stereotypen und Vorurteilen (Link et al., 1987). Dies führt häufig auch zu der Entwicklung eines geringen Selbstwertgefühls und zu einer geringen Hilfesuche (Corrigan et al., 2016, Fox et al., 2018).

Tabelle 1: **Verschiedene Formen von Stigmatisierung**

Verschiedene Formen von Stigmatisierung				
Wahrgenommene Stigmatisierung	Strukturelle Stigmatisierung	Antizipierte Stigmatisierung	Persönliche Stigmatisierung	Selbststigmatisierung
„Andere Menschen denken, dass Personen mit einer psychischen Erkrankung einfach schwach sind.“	Menschen mit einer psychischen Erkrankung werden nicht eingestellt/benachteiligt, weil sie als schwach betrachtet werden.	„Wenn ich jemals psychisch erkranke, werden andere denken, dass ich schwach bin.“	„Da Personen mit einer psychischen Erkrankung schwach sind, möchte ich nicht mit so jemandem zusammenarbeiten.“	„Ich selbst bin psychisch krank, also bin ich schwach.“
→ *wahrgenommene Meinung in der Gesellschaft*	→ *Institution, Politik, Gesetze*	→ *zukünftige Befürchtungen eines Individuums*	→ *Einstellung eines Individuums gegenüber einer Gruppe*	→ *Selbst Identifikation mit einer stigmatisierten Gruppe*

1.2.2.1 Kognitive, affektive und behaviorale Komponenten von Stigma

Stigmatisierende Einstellungen beinhalten nicht nur kognitive-affektive Bewertungen der eigenen oder einer Person mit einer psychischen Erkrankung (z.B.: „Ich habe Angst vor Personen mit einer psychischen Erkrankung, da diese unberechenbar sind“), sondern können auch kognitiv-behaviorale Bewertungen zur Folge habe (z.B.: „Personen mit einer psychischen Erkrankung sollten keine Kinder betreuen, da sie unberechenbar sind“) (Lee et al., 2014, Schomerus et al., 2014).

In der Forschung wurde für die kognitive-behaviorale Komponente von Stigmatisierung häufig die Messung des WSD verwendet. In der Regel lesen die Probanden zuerst in einer Vignette Symptome von einer Person mit einer psychischen Erkrankung und werden danach anhand einer Likert Skala beispielsweise gefragt, wie wahrscheinlich sie einer Person mit einer psychischen Erkrankung ein Zimmer untervermieten würden, diese Person ihnen als Nachbar recht wäre, oder ob sie damit einverstanden wären, wenn sie in ihre Familie einheiraten würde (Link et al., 1987, Jorm und Oh, 2009).

Diskriminierung, welches die sogenannte Verhaltensfolge von Stigmatisierung ist, kann zu Nachteilen in verschiedenen Lebensbereichen führen. Sie kann die betroffenen Personen beispielsweise bei der Arbeits- oder Wohnungssuche, in persönlichen und familiären Beziehungen oder bei der Behandlung von Erkrankungen benachteiligen (Thornicroft, 2006, Ye et al., 2016, Hansson et al., 2014).

1.2.3 Zusammenhang von Stigmatisierung und MHL

Die in bisherigen Studien nachgewiesenen Zusammenhänge zwischen MHL und Stigmatisierung sind teilweise widersprüchlich. Einerseits zeigte sich, dass eine erhöhte MHL zu einer Reduzierung von stigmatisierenden Einstellungen führte (Rüsch et al., 2005, Angermeyer et al., 2013b), andererseits widerlegten Studien die Hoffnung der Forschung, dass eine erhöhte MHL und die Vermittlung von überwiegend biologischen Erklärungsmodellen Stigmatisierung entgegenwirken (Kvaale et al., 2013a, Larkings und Brown, 2018, Lebowitz, 2019, Von Lersner et al., 2019, Rüsch et al., 2010, Schomerus et al., 2014). Im Rahmen von Gesundheitskampagnen mit der Absicht, MHL zu erhöhen, wurden insbesondere biologische Ursachen zur Erklärung von psychischen Entwicklungen, wie Depression und Schizophrenie, herangezogen (Pescosolido et al., 2010, Schomerus et al., 2012b). Sie halfen auf der einen Seite, die eigene Verantwortung und Schuld für die Entwicklung einer psychischen Erkrankung zu reduzieren (Kvaale et al., 2013a, Lebowitz und Appelbaum, 2017), auf der anderen Seite verstärkten diese Modelle aber die wahrgenommene Gefährlichkeit der Diagnosen, den Pessimismus bzgl. des eigenen Behandlungserfolges und den WSD (Kvaale et al., 2013a, Lebowitz, 2019, Speerforck et al., 2014). Es zeigten sich jedoch Unterschiede in Hinblick auf verschiedene psychische Störungsbilder. Im Vergleich zu Personen mit einer Depression war der WSD zu Personen mit einer Schizophrenie stärker ausgeprägt (Angermeyer et al., 2011, Angermeyer et al., 2015), da sie als gefährlicher wahrgenommen wurden (Angermeyer et al., 2004). Anders als das psychosoziale Erklärungsmodell verstärkte die biologische Ursachenbeschreibung einer psychotischen Symptomatik die Wahrnehmung, dass Personen mit einer Psychose unberechenbar und gefährlich seien (Walker und Read, 2002). Die Vermittlung von biologischen Erklärungsmodellen reduzierte somit nicht die Stigmatisierung von Personen mit einer psychischen Erkrankung, sondern verstärkte sie sogar (Larkings und Brown, 2018, Read et al., 2006, Schnyder et al., 2018, Kvaale et al., 2013a, Angermeyer et al., 2011, Angermeyer et al., 2015).

Zudem beeinflusste MHL auch den weiteren Behandlungsprozess. So waren die für die psychische Gesundheit zuständigen Fachkräfte bei einer biologischen Ursache eher geneigt, Patienten Medikamente zu verschreiben, als bei der Annahme einer psychosozialen Ursache als Auslöser der Erkrankung (Ahn et al., 2009). Des Weiteren zeigten sich diese Fachkräfte bei der Annahme eines psychosozialen Ursachenmodells den Patienten gegenüber empathischer (Lebowitz und Ahn, 2014). Dies hatte auch Auswirkungen auf den Erfolg von psychotherapeutischen Behandlungen, bei denen Empathie ein mäßig starker Prädiktor ist (Elliott et al., 2018). Außerdem wurden Personen mit einer Schizophrenie von Gesundheitsdienstleistern mit stigmatisierenden Einstellungen weniger häufig an andere Spezialisten für beispielsweise Rückenschmerzen weiter überwiesen (Corrigan et al., 2014).

Allgemein kann festgehalten werden, dass MHL und die Vermittlung von verschiedenen Erklärungsmodellen in Hinblick auf die Entstehung von psychischen Erkrankungen Stigmatisierung von Personen mit einer psychischen Erkrankung in unterschiedlichen Bereichen beeinflusst. Bisher wurden verschiedene Zusammenhänge zwischen MHL, persönlichem Stigma und Stereotypen in getrennten Regressionsanalysen untersucht (Angermeyer et al., 2009, Pescosolido et al., 2010, Norman et al., 2008b). In den Studien zeigten sich teilweise unterschiedliche Ergebnisse. Eine biogenetische Ursachenzuschreibung wurde so einerseits teils mit einem geringeren WSD in Verbindung gebracht (Angermeyer et al., 2013b), während andere Studien zeigten, dass eine biogenetische Ursachenzuschreibung zu mehr negativen Stereotypen (Haslam, 2015, Kvaale et al., 2013a) und zu einem stärkeren WSD führt (Kvaale et al., 2013a, Larkings und Brown, 2018, Lebowitz, 2019, Von Lersner et al., 2019, Rüsch et al., 2010).

1.3 Ziele der Studie

Die widersprüchlichen Untersuchungsergebnisse gilt es differenzierter zu betrachten. Die Ziele der vorliegenden Arbeit waren daher herauszufinden, inwiefern die verschiedenen Komponenten von MHL und die Wahrnehmung von Stereotypen Stigmatisierung beeinflussen und ob verschiedene Erklärungsmodelle unterschiedliche Auswirkungen auf die Stigmatisierung von psychischen Erkrankungen haben. Ein weiteres Ziel war zu erkennen, welche Faktoren das Hilfesuchverhalten langfristig beeinflussen und ob es hierbei Unterschiede in Hinblick auf die verschiedenen Stigmatisierungsformen gibt.

Hierbei wurden anhand eines Strukturgleichungsmodells (SEM) die Zusammenhänge zwischen MHL und Stigma in einer Allgemeinpopulation untersucht. Bereits gewonnene Erkenntnisse aus der Querschnittsstudie gilt es mit der Längsschnittstudie zu kombinieren. Im Fokus stehen zudem die Fragestellungen, inwiefern MHL die Wahrnehmung von Personen mit einer Depression oder Schizophrenie im Sinne von Stereotypen und WSD in der Allgemeinbevölkerung beeinflusst, und zudem, welche Faktoren Hilfesuchverhalten bei gesundheitlichen mentalen Problemen prädizieren.

Die Daten zu MHL und Einstellungen gegenüber Personen mit psychischen Störungen wurden für diese Untersuchung als Add-on-Studie im Rahmen der BEAR-Studie zwischen Juni 2011 und Juni 2015 erhoben (Schultze-Lutter et al., 2018, Schultze-Lutter et al., 2014). Das übergeordnete Ziel der BEAR-Studie war die Untersuchung von Psychose-Risiko-Symptomen und -Kriterien in der Allgemeinbevölkerung (Schultze-Lutter et al., 2018, Schultze-Lutter et al., 2014). Alle Abläufe der Studie erfolgten in Übereinstimmung mit dem ethischen Standard des nationalen und institutionellen Komitees für menschliche Experimente sowie der Deklaration von Helsinki von 1975, revidiert 2008, und wurden von dem ethischen Komitee der Universität Bern (Nr. 172/09) genehmigt.

Der Vorteil der vorliegenden Studie ist, dass mithilfe des SEMs im Gegensatz zu einer Regressionsanalyse nicht nur direkte, sondern auch indirekte Effekte in einem komplexen Modell untersucht und Mediationseffekte dadurch erkannt werden können. Des Weiteren erhebt die Studie im Unterschied zu anderen nicht nur Querschnittsdaten (Michel et al., 2018, Schnyder et al., 2018, Ruud et al., 2020), sondern beinhaltet auch eine Nachfolgeuntersuchung drei Jahre später. Anders als bisherige longitudinale Studien mit einer Nachverfolgungsdauer von 3 bis 6 Monaten (Tomczyk et al., 2020a, Schomerus et al., 2019, Bonabi et al., 2016), ist die vorliegende Studie mit einer Nachverfolgungsdauer von drei Jahren vom Zeitraum her lang genug, um Prädiktoren von Hilfesuchverhalten bei Menschen mit psychischen Gesundheitsproblemen zu analysieren. Im Gegensatz zu einer longitudinalen Studie mit einer Nachverfolgungsdauer von 11 Jahren ist sie jedoch auch kurz genug (Mojtabai et al., 2016), um eventuelle Einstellungsveränderungen basierend auf zeitlichen Entwicklungen oder politische Veränderungen weitgehend auszuschließen.

Außerdem wurden häufig anstelle von tatsächlichem Hilfesuchverhalten Hilfesuchintentionen betrachtet (Calear et al., 2014), und nicht wie in dieser Studie beide Variablen, sodass eine differenzierte Untersuchung möglich ist. Eine weitere Stärke ist die große Stichprobengröße (n=1526) in einer Allgemeinpopulation, die eine generelle Aussage ermöglicht.

Um die genannten Ziele zu erreichen, wurden zwei Studien durchgeführt:
In der ersten Studie wird der Zusammenhang von MHL und Stereotypen auf den WSD von Personen mit depressiven und psychotischen Symptomen anhand eines SEM in der Allgemeinbevölkerung mit folgenden Hypothesen analysiert (Doll et al., 2021a):

- Unabhängig von der Benennung einer Diagnose werden die beschriebenen Symptome von Personen mit einer Psychose mit einem stärkeren WSD assoziiert als die beschriebenen Symptomen von Personen mit einer Major Depression (Angermeyer et al., 2013b, Von Lersner et al., 2019, Schomerus et al., 2012b, Angermeyer et al., 2015).
- Gute MHL ist mit einem geringen WSD assoziiert (Hanisch et al., 2016).
- TeilnehmerInnen mit einer guten MHL befürworteten häufiger ein biologisches Modell (Pescosolido et al., 2010, Schomerus et al., 2012b).
- Das Befürworten eines biologischen Modells steigert den WSD (Haslam, 2015, Kvaale et al., 2013a, Larkings und Brown, 2018, Lebowitz, 2019, Rüsch et al., 2010, Von Lersner et al., 2019).
- Das Befürworten eines biologischen Modells steigert die wahrgenommene Gefährlichkeit von Personen mit einer psychischen Störung (Haslam, 2015, Kvaale et al., 2013a).
- Wahrgenommene Gefährlichkeit steigert den WSD (Norman et al., 2008b, Angermeyer und Matschinger, 2004).
- Das Befürworten eines psychosoziales Stressmodells reduziert die wahrgenommene Gefährlichkeit von Personen mit einer psychischen Störung (Schnyder et al., 2018).
- Im Vergleich zur Depression wird Schizophrenie eher mit einem biologischen Modell in Verbindung gebracht (Angermeyer et al., 2015, Von Lersner et al., 2019).
- Im Vergleich zur Schizophrenie wird Depression als psychische Störung häufiger korrekt benannt (Furnham et al., 2009, Jorm et al., 1997).

In der zweiten Studie wurden neben dem Einfluss von Stigmatisierung auf das Hilfesuchverhalten, zukünftige Prädiktoren von Hilfesuchverhalten bei Personen mit psychischen Gesundheitsproblemen untersucht. Hierbei wurden longitudinale Daten von Personen mit psychischen Gesundheitsproblemen in einem SEM analysiert (Doll et al., 2021b). Die Fragestellung umfasst die Untersuchung folgender Hypothesen:

- Wahrgenommenes Stigma bei Baseline ist negativ assoziiert mit Hilfesuchverhalten für psychische Problemen drei Jahre später (Clement et al., 2015, Nearchou et al., 2018).
- Persönliches Stigma (WSD) ist negativ assoziiert mit Hilfesuchverhalten bei psychischen Problemen (Schnyder et al., 2018).
- Hilfesuch-Intentionen sind positiv assoziiert mit Hilfesuchverhalten bei psychischen Problemen (Schomerus et al., 2009, Mojtabai et al., 2016, Schnyder et al., 2018).
- Antizipiertes Stigma ist negativ assoziiert mit Hilfesuchverhalten bei psychischen Problemen (Gulliver et al., 2010).
- Psychosoziales Funktionieren ist negativ assoziiert mit Hilfesuchverhalten bei psychischen Problemen (Michel et al., 2018).
- Behandlungserfahrungen in der Vergangenheit sind positiv assoziiert mit Hilfesuchverhalten bei psychischen Problemen (Michel et al., 2018).
- Im Vergleich zum männlichen Geschlecht ist das weibliche Geschlecht positiver mit Hilfesuchverhalten bei psychischen Problemen assoziiert (Calear et al., 2014, Slade et al., 2009).
- Ältere Personen sind positiv assoziiert mit Hilfesuchverhalten bei psychischen Problemen (Calear et al., 2014, Michel et al., 2018).

Gesamthaft dienten beide Studien damit dem übergeordneten Ziel, den Einfluss von Stigmatisierung im Kontext von Mental Health Literacy und Hilfesuchverhalten zu untersuchen. Hierbei war die Hoffnung, dass aus den Studien gewonnenen Erkenntnisse helfen können, die Aufklärung durch Anti-Stigma-Kampagnen zu verbessern und das Hilfesuchverhalten von betroffenen Personen zu erhöhen.

2 Publizierte Originalarbeiten

2.1 The important role of stereotypes in the relation between mental health literacy and stigmatization of depression and psychosis in the community, Doll, C.M., Michel, C., Betz, L.T., Schimmelmann, B., Schultze-Lutter, F., Community Ment Health Journal, (2021). Advance online publication. https://doi.org/10.1007/s10597-021-00842-5

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ORIGINAL PAPER

The Important Role of Stereotypes in the relation between Mental Health Literacy and Stigmatization of Depression and Psychosis in the Community

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Abstract

Increased mental health literacy (MHL) has not reduced stigmatization of people with mental disorder. Thus, we examined the role of stereotypes in the interplay of MHL (correct labelling, causal explanations) and the wish for social distance (WSD) from people with depressive and psychotic symptoms in a community sample of 1526 German-speaking participants in the Swiss 'Bern Epidemiological At-Risk' study (age 16–40 years; response rate: 60.1%). Following the presentation of an unlabelled case vignette of depression or psychosis, MHL, stereotypes and WSD were assessed in a questionnaire survey. Their interrelations were studied using structural equation modelling. MHL was not directly linked to WSD, only the psychosocial causal model was directly negatively associated with WSD. Perceived dangerousness particularly increased WSD, this was increased by a biogenetic causal model and decreased by a psychosocial causal model. Awareness-campaigns that, next to biological causes, emphasize psychosocial causes of mental disorders might better reduce stigmatization.

Keywords Mental disorders · Mental health literacy · Stereotyping · Stigma · Structural equation model

Introduction

Approximately every 4th European adult experiences a mental illness each year (World Health Organization, 2019). In doing so, patients suffer not only from their symptoms and related disabilities, but also experience stigmatization in the community (Alonso et al., 2009; Tsang, 2003; Wahl, 1999) and, similarly, in mental health care facilities (Nyblade et al., 2019; Schulze, 2007). Stigmatization is defined in the World Health Report 2001 as "a mark of shame, disgrace or disapproval which results in an individual being rejected, discriminated against, and excluded from participating in a number of different areas of society" (World Health Organization, 2001, p. 4). Stigma is commonly divided into public stigma, self-stigma and personal stigma. While public stigma is defined as negative stereotypes and prejudice toward people with mental illness held by the community, personal stigma is defined by the individual's own stereotypes and prejudice (Eisenberg et al., 2009; Griffiths et al., 2004). Based on these definitions, self-stigma occurs when a patient identifies him-/herself with the stigmatized group; thus causing shame, social withdrawal and demoralisation (Corrigan et al., 2009; Corrigan & Shapiro, 2010). Personal stigma, among others, can be measured as the wish for social distance (WSD), i.e., the wish to avoid a specific group, such as people with a mental disorder (Jorm & Oh, 2009).

Many anti-stigma campaigns (Brijnath et al., 2016; Crisp et al., 2004; Henderson et al., 2013; Larkings & Brown, 2018; Reavley et al., 2005) were based on the intuitive assumption that improved Mental Health Literacy (MHL) would reduce discrimination and stigmatization of people with mental disorders (Angermeyer et al., 2009; Hanisch

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et al., 2016; Hinshaw & Stier, 2008). MHL is defined as the knowledge about symptoms, causes, treatment, and prevention of mental disorders. This includes effective self-help strategies for mild mental problems and first-aid skills to help others (Jorm, 2012). Thus, MHL is frequently considered an important target in campaigns to improve help-seeking for mental problems (Henderson et al., 2013). MHL can vary depending on the mental disorder, for example people were more likely to correctly label symptoms of depression rather than symptoms of schizophrenia (Furnham et al., 2009; Jorm et al., 1997).

However, although MHL and hypothetical help-seeking intentions have steadily increased in the community (Angermeyer & Matschinger, 2005; Angermeyer et al., 2009; Deacon, 2013; Chamberlain et al., 2012; Goldney & Fisher, 2008; Goldney et al., 2005; Jorm et al., 2006; Schomerus et al., 2012), delays in or lack of active help-seeking and stigmatization of people with mental disorder continue to be a serious problem (Angermeyer et al., 2009; Angermeyer et al., 2004; Henderson et al., 2013; Schnyder et al., 2017; Wang et al., 2007).

One reason suggested for this lack of improvement in active help-seeking and attitudes towards people with mental disorders was an unintended consequence of increasing MHL. As part of MHL-improving campaigns, biological factors have frequently been emphasized as a cause of mental illness, in particular depression or schizophrenia (Pescosolido et al., 2010; Schomerus et al., 2012). Some studies also found that people were more likely to attribute schizophrenia to biological causal factors rather than depression (Angermeyer et al., 2015; Dietrich et al., 2004; Von Lersner et al., 2019). While the resulting higher endorsement of a biological model decreased the perception of psychiatric patients as responsible and blameworthy for their problems (Kvaale et al., 2013; Lebowitz & Appelbaum, 2017), it also increased prognostic pessimism, and the perceived unpredictability and dangerousness, i.e., negative stereotypes (Haslam, 2015). Thus, the related decrease in empathy towards psychiatric patients, and the increase in self-blame and personal distress likely intensified the WSD (Haslam, 2015; Kvaale et al., 2013; Larkings & Brown, 2018; Lebowitz, 2019; Rüsch et al., 2010; Von Lersner et al., 2019), thus not reducing but possibly even increasing stigmatization, especially in the case of psychosis (Larkings & Brown, 2018; Read et al., 2006; Schnyder et al., 2018).

Commonly, these various associations between MHL, personal stigma and stereotypes were studied selectively in separate regression analyses (Angermeyer et al., 2009; Norman et al., 2008; Pescosolido et al., 2010). These studies revealed various, partly contradictory associations between MHL and personal stigma that are summarized in Fig. 1. In particular, the role of biogenetic causal models was ambiguous, as, it was associated with good MHL that is related to lower WSD (Angermeyer, Matschinger, et al., 2013; Angermeyer, Millier, et al., 2013; Schomerus et al., 2012; Von Lersner et al., 2019) and, conversely, was related to both more negative stereotypes (Haslam, 2015; Kvaale et al., 2013) and stronger WSD (Haslam, 2015; Kvaale et al., 2013; Larkings & Brown, 2018; Lebowitz, 2019; Rüsch et al., 2010; Von Lersner et al., 2019).

To resolve such inconsistencies, complex models are needed, such as path analyses or structural equation modelling (SEM) that simultaneously consider complex interrelations of several factors. Yet, these were rarely conducted in this area of research and, if so, with regard to other variables; such as cultural collectivism, professional help-seeking beliefs, help-seeking intentions, healthcare utilisation, emotional reactions to people with mental illness (Altweck et al., 2015; Schnyder et al., 2018; Schomerus et al., 2014; Von Lersner et al., 2019), or in small non-representative or selected samples (Clement et al., 2015; Lanfredi et al., 2019; Trani et al., 2016; Von Lersner et al., 2019).

As SEM models have the advantage to show direct and indirect effects, we examined the interplay between MHL and stereotypes, with respect to personal stigmatization in terms of WSD, in the context of schizophrenia and depression, in a large representative Swiss community sample using a SEM approach (Fig. 1). Better understanding of this complex interplay will help to improve future anti-stigma campaigns, by avoiding potential unintended negative consequences.

Method

Study Design and Procedure

Our study was conducted as an add-on study to the 'Bern Epidemiological At-Risk' (BEAR) study between June 2011 and June 2015; and participation in the BEAR study was the main eligibility criterion of the add-on study, sufficient language skills in German the only other (Schnyder et al., 2018; Schultze-Lutter et al., 2014; Schultze-Lutter, Michel, et al., 2018; Schultze-Lutter, Schmidt, et al., 2018). Within the BEAR study, 2683 participants, randomly drawn from the population register of the Canton Bern, Switzerland, were recruited for a telephone interview (response rate: 63.4%; Supplementary material eFigure 1) (Schultze-Lutter et al., 2018; Schultze-Lutter, Schmidt, et al., 2018). Because the BEAR study had focussed on the assessment of the prevalence and clinical relevance of clinical high-risk of psychosis criteria and symptoms, inclusion criteria restricted the age range to between 16 and 40 years, i.e., age range with the highest incidence of first-episode psychosis, and excluded people with a past or present psychosis (Schultze-Lutter et al., 2018a, 2018b). Further inclusion criteria were

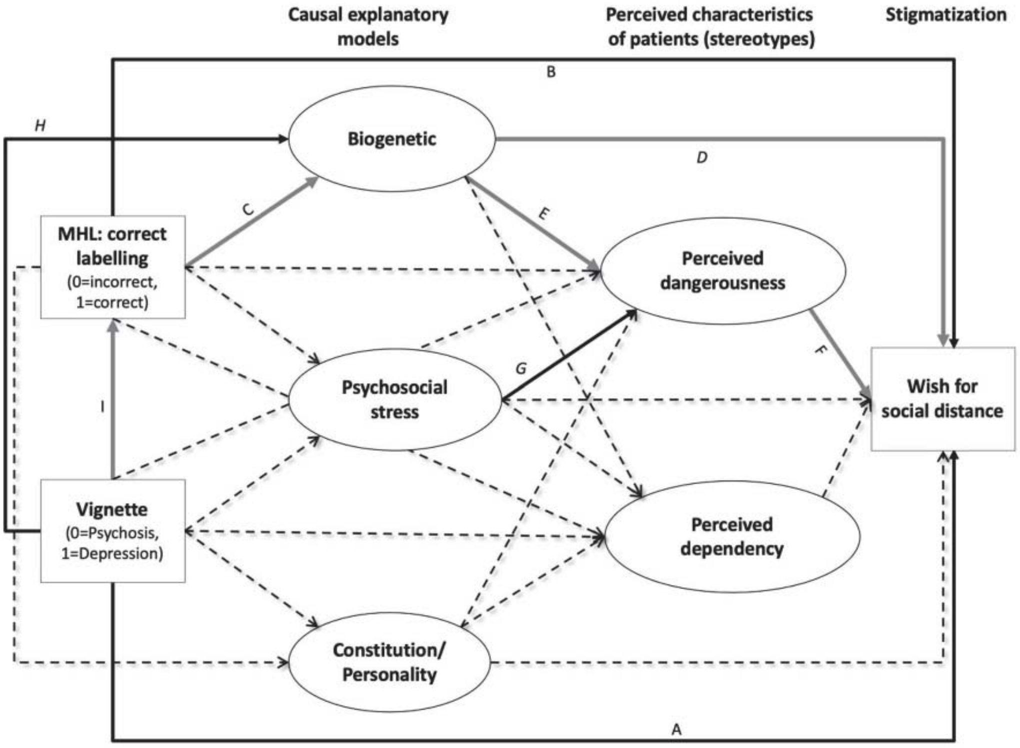

Fig. 1 Illustration of associations between causal explanations, stereotypes and WSD reported in the literature. Manifest variables in our model are represented in rectangles, latent ones in ovals. Solid lines indicate reported significant associations (paths) with grey indicates positive and black negative associations; dashed lines indicate paths with no or insignificant reported associations: **A** Independent of any label, the description of a person with symptoms of psychosis was associated with a stronger WSD compared to the description of a person with symptoms of major depression (Angermeyer, Matschinger, et al., 2013; Angermeyer, Millier, et al., 2013; Schomerus et al., 2012; Von Lersner et al., 2019). **B** Good MHL was associated with less pronounced WSD (Angermeyer et al., 2009; Hanisch et al., 2009; Hinshaw & Stier, 2008). **C** Participants with a good MHL more frequently endorse a biogenetic model (Pescosolido et al., 2010; Schomerus et al., 2012). **D** Endorsing a biogenetic model increases WSD (Haslam, 2015; Kvaale et al., 2013; Larkings & Brown, 2018; Lebowitz, 2019; Rüsch et al., 2010; Von Lersner et al., 2019). **E** Endorsing a biological model increases the perceived dangerousness of people with a mental disorder (Haslam, 2015; Kvaale et al., 2013). **F** Perceived dangerousness increases WSD (Angermeyer & Matschinger, 2004; Norman et al., 2008). **G** Endorsing a psychosocial stress model decreases the perceived dangerousness of people with a mental disorder (Schnyder et al., 2018). **H** Schizophrenia is more likely attributed to a biological model than depression (Angermeyer et al., 2015; Dietrich et al., 2004; Von Lersner et al., 2019). **I** Depression is more often correctly labelled than schizophrenia (Furnham et al., 2009; Jorm et al., 1997)

main residency in the Canton Bern, an identified working telephone number, and availability during the recruitment period. Exclusion criteria included insufficient language skills in German, English, French or Spanish (Schultze-Lutter et al., 2018a, 2018b). Compared to the Canton statistics of 16-to-40-year-olds, the BEAR sample was well representative (Schultze-Lutter et al., 2018a, 2018b).

At the conclusion of the telephone interview, 2539 participants in the BEAR study with sufficient knowledge of German (eligibility rate: 94.6%) were asked to participate in the separate add-on study on MHL and attitudes towards people with mental illness. Of these, 2215 participants agreed to additionally participate in the add-on survey (82.4%) and were mailed the questionnaires (details in Schnyder et al., 2018). After a maximum of three reminder calls, 1526 participants returned the questionnaire. Thus, according to the definitions of the American Association for Public Opinion Research (American Association for Public Opinion Research, 2016), both response and cooperation rates of the add-on study were 60.1%, and the overall refusal/non-responder rate was 39.9%. The minor differences between responders and non-responders/refusers to the add-on study were of small effect size at most (Supplementary material eTable1).

Separate verbal informed consent was obtained and recorded from all subjects prior to assessments in both the

BEAR study and the add-on study. The authors assert that all procedures contributing to this work comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008, and were approved by the ethical committee of the University of Bern (No. 172/09). Furthermore, all authors certify responsibility.

Assessments

Demographic and clinical information was assessed as part of the telephone interview (Schultze-Lutter, Michel, et al., 2018; Schultze-Lutter, Schmidt, et al., 2018). For the assessment of MHL (incl. labelling and causal explanations), attitudes towards and perceived characteristics of people with a mental disorder (stereotypes), we used the well-established German questionnaires of Angermeyer and colleagues (Angermeyer & Matschinger, 1996, 1999; Angermeyer et al. 2001; van Brakel, 2006; Link et al., 2004). The questions on causal explanations resulted from a review of the literature at the time and were further refined by first studies using open questions (Angermeyer & Matschinger, 1996; Angermeyer et al. 2001). Stereotypes were assessed according to the scale "stereotype agreement" from the German version of the "Self-Stigma in Mental Illness Scale" (Corrigan et al., 2006; Rüsch et al., 2006) that was slightly modified in the wording of the instruction. The questionnaire starts with an unlabelled case vignette (Angermeyer et al., 2009; Angermeyer et al., 2001, 2004). The two alternatively presented vignettes describe a hypothetical acquaintance with symptoms fulfilling DSM-III-R criteria for either schizophrenia or depression (Supplementary material eText1); their validity was established by blinded rating of five mental health professionals (Angermeyer et al., 2001). The participants were randomly presented either the psychosis vignette or the depression vignette, and, within an open question, first asked to briefly state what they think the person in the vignette is suffering from. These descriptions were subsequently dichotomized as correct when the description included correct name of the disorder or of its constituting symptoms; all other descriptions were labelled as incorrect (Angermeyer & Matschinger, 1999; see Supplementary material eTable 2 for coding examples). Correct labelling was equalled to good overall MHL. Questions regarding 18 possible causal explanations for the behaviour described in the vignette (Table 2) were presented using a five-point Likert scale from 0 = 'certainly not a cause' to 4 = 'certainly a cause'. Furthermore, for the assessment of stereotypes, the participants were presented nine characteristics (Table 3) to be rated according to the degree that they apply to the person described in the vignette on a five-point Likert scale from 0 = 'definitely not true' to 4 = 'definitely true'.

Stigmatization in terms of WSD was assessed according to the Social Distance Scale (Link et al., 1987), self-rating the participant's willingness to socially interact in seven different situations with the person described in the vignette on a five-point Likert scale from 0 = 'definitely willing' to 4 = 'definitely not willing' (Angermeyer & Matschinger, 1996). Higher sum scores indicate stronger WSD.

Statistical Analyses

First, principal component analyses (PCA) with Varimax rotation and pairwise complete observations to deal with missing values were conducted separately on the 18 items on causal explanations, and on the nine items on stereotypes. Resulting factors were examined for their construct validity in terms of the composite reliability using "lavaan" (Rosseel, 2012). Composite reliability is favored over Cronbach's α when the requirement of t-equivalence (i.e., all items measure the same true value) is violated (Danner, 2015), e.g., in factors composed of items measuring different aspects of a latent construct. However, calculation of the composite reliability requires at least four items per factor (Danner, 2015). Thus, despite the reported biases and limitations of the α coefficient (Cho & Kim, 2015; Revelle & Zinbarg, 2009; Sijtsma, 2009; Sijtsma & van der Ark, 2015), we also calculated Cronbach's α, which, however, can only be regarded an estimation of the lower boundary of reliability as it tends to underestimate the reliability in factors with few items as well as when t-equivalence is not given (Danner, 2015). For the ordinal nature of items, we used Spearman's correlation coefficient to construct the correlation matrix. The Kaiser–Meyer Olkin (KMO) measure was used to check the sampling adequacy for the analyses.

Next, we conducted a SEM, which included all associations reported in previous studies (Fig. 1). Missing items (0.03%) were accounted for by using the estimator 'full information maximum likelihood' (FIML; Kline, 2011). Based on the results of the PCA and of previous studies (Angermeyer et al., 2004; Schnyder et al., 2018), we defined five latent variables for causal explanations ('biogenetic', 'psychosocial stress', 'childhood adversity', 'substance abuse', and 'constitution/personality') and two for stereotypes ('perceived dangerousness' and 'perceived dependency'). The variables 'group' (depression or schizophrenia vignette), 'correct labelling' as a general measure of MHL and 'WSD' were modelled as observed binary variables. The pathways from 'group' and 'correct labelling' via causal explanations and stereotypes to WSD with all possible associations between latent and observed variables were modelled (Fig. 1).

To control for the reported effect of type of mental disorder (Angermeyer et al., 2014; Angermeyer, Matschinger, et al., 2013; Angermeyer, Millier, et al., 2013; McCann et al., 2018; Norman et al., 2012; Sevensson & Hansson, 2016), we included the variable 'vignette' in our analysis. Furthermore, for the reported sex differences in stigmatization and MHL (Dey et al., 2020; Hadjimina & Furnham, 2017), we analysed a model with the control variable 'sex' (see Supplementary material eFigure 3). However, due to our age restriction to 16- to 40-year-olds, the reported age effect in older people of age 65 + was unlikely to work in our younger sample; thus, we did not include age as a control variable (Mackenzie et al., 2019).

In order to test for mediation effects in the final model, we used "lavaan" (Rosseel, 2012). Thereby, we labelled potential variables in the regression as parameters, so that we could use these parameters to create mediation pathways within the model. The statistical analyses were conducted in SPSS 25.0 and in the R language for statistical computing using the packages "lavaan" (Rosseel, 2012) and "psych" (Revelle, 2018). Throughout, we considered a level of significance of $\alpha < 0.05$.

Results

Sample Characteristics

A similar number of questionnaires with a psychosis (n = 784) and with a depression vignette (n = 742) was returned ($\chi^2_{(1)}$ = 1.1.56, p = 0.282). Slightly less males than females returned the questionnaire (Table 1). The average age of participants was 31 years; most of them were Swiss, unmarried, and normally employed, and had a short cycle tertiary education or Master degree (Table 1). Every 8th participant had met criteria for a current non-psychotic axis I disorder in the telephone interview (Table 1), this number

Table 1 Sample characteristics of the responders to the add-on study (N = 1526) according to the case vignette of the questionnaire

	Depression (n = 742)	Psychosis (n = 784)	Total sample (N = 1526)	Statistics U/χ^2(df); Pearson's r/Cramer's V
Sex, n (%) male	353 (47.8)	365 (46.7)	718 (47.2)	$\chi^2_{(1)}$ = 0.162, p = 0.687, V = 0.010
Age: median (mean ± SD)	33.84 (31.10 ± 7.3)	33.91 (31.53 ± 7.22)	33.86 (31.32 ± 7.27)	U = 277 609, p = 0.200, r = − 0.030
Nationality, n (%) Swiss	706 (95.5)	749 (95.9)	1455 (95.7)	$\chi^2_{(1)}$ = 0.126, p = 0.723, V = 0.009
Highest educational level (ISCED 2011)[a], n (%)				$\chi^2_{(6)}$ = 7.452, p = 0.281, V = 0.070
Primary education (1)	0	0	0	
Lower secondary education (2)	24 (3.2)	18 (2.3)	42 (2.8)	
Higher secondary education (3)	13 (1.8)	13 (1.7)	26 (1.7)	
Post-secondary non-tertiary education (4)	4 (0.5)	9 (1.2)	13 (0.9)	
Short cycle tertiary education (5)	405 (54.8)	390 (49.9)	795 (52.1)	
Master's or equivalent level (7)	247 (33.4)	301 (38.5)	548 (35.9)	
Doctoral or equivalent level (8)	12 (1.6)	12 (1.5)	24 (1.6)	
Employment, n (%)				$\chi^2_{(3)}$ = 2.698, p = 0.441, V = 0.042
Unemployed	16 (2.2)	9 (1.2)	25 (1.6)	
Protected employment	1 (0.1)	2 (0.3)	3 (0.2)	
Temporarily/self-employed	9 (1.2)	9 (1.2)	18 (1.2)	
Normal employment, in school/training	713 (96.5)	761 (97.4)	1474 (97.0)	
Marital status, n (%)				$\chi^2_{(2)}$ = 0.259, p = 0.998, V = 0.013
Unmarried	393 (53.2)	406 (52.0)	799 (52.6)	
Married or registered partnership	320 (43.3)	348 (44.6)	668 (43.9)	
Separated/Divorced/Widowed	25 (3.4)	26 (3.3)	51 (3.3)	
Current non-psychotic axis-I disorder[b], n (%)	97 (13.1)	95 (12.2)	192 (12.6)	$\chi^2_{(1)}$ = 0.318, p = 0.573, V = 0.014
Family member with a mental disorder, n (%)				
Affective disorder	185 (25.1)	216 (27.7)	401 (26.4)	$\chi^2_{(1)}$ = 1.238, p = 0.266, V = 0.029
Psychotic disorder	23 (3.1)	25 (3.2)	48 (3.2)	$\chi^2_{(1)}$ = 0.007, p = 0.993. V = 0.002

[a] According to International Standard Classification of Education (ISCED) (UNESCO Institute for Statistics, 2012)

[b] Acording to Mini-International Neuropsychiatric Interview

going down to every 14th participant (n = 108; 7.1%) when excluding specific phobias. Almost half of the sample reported a 1st- or 2nd-degree family member with suspected or diagnosed mental disorder—mostly with an affective, rarely a psychotic disorder (Table 1). Clinical and sociodemographic variables did not differ significantly between responders of the two vignettes (Table 1).

Factors of Causal Explanations and Stereotypes

The KMO measure indicated excellent or "meritorious" (Kaiser, 1974) sampling adequacy for the analyses (KMO = 0.79 and KMO = 0.78), and all KMO values for individual items were > 0.65 in the first and > 0.57 in the second PCA, and therewith above the threshold for acceptability of 0.5 (Schneeweiss & Mathes, 1995). Bartlett's test of sphericity ($\chi^2_{(153)} = 6073.26$, $p < 0.001$ and $\chi^2_{(36)} = 3723.98$, $p < 0.001$) indicated that correlations between items were sufficiently large for PCA (Schneeweiss & Mathes, 1995). In the PCA of the 18 causal explanations items, five independent factors ('psychosocial stress', 'childhood adversity', 'biogenetic', 'substance abuse' and 'constitution/personality') had an eigenvalue over Kaiser's criterion of 1 and explained 55% of the variance (Table 2). In the second PCA, two independent factors ('perceived dangerousness', 'perceived dangerousness') had an eigenvalue over Kaiser's criterion of 1 and explained 53% of the variance (Table 3). With regard to the internal consistency of the factors, the two largest factors, 'psychosocial stress' and 'perceived dangerousness', had satisfactory to good composite reliability values above 0.70 (Hair et al., 2019). The two other factors of four items each, 'constitution/personality' and 'childhood adversity', were well or almost acceptable (Hair et al., 2019; see Table 2). Cronbach's α, for the factors with less than four items, indicated lower estimations within the range of

Table 2 Results of the principal component analysis (PCA) of 18 questions regarding 18 possible causal explanations for the behaviour described in the vignette (n = 1526), and the internal consistency of the factors (composite reliability and Cronbach's α)

Items	Factor 1: Psychosocial stress	Factor 2: Substance abuse	Factor 3: Constitution/personality	Factor 4: Childhood adversity	Factor 5: Biogenetics
Work-related stress	0.80				
Too high self-expectation	0.71				
Problems or sorrows in family	0.68				
Daily hustles	0.67				
Severe or very stressful life event	0.57				
An unconscious conflict	0.50				
Medication or drug abuse		0.81			
Alcohol abuse		0.79			
Weak will			0.74		
Weak constitution			0.68		
Immoral lifestyle			0.59		
God's will			0.42		
Grown up in a broken home				0.80	
Lack of parental affection				0.76	
Little support others				0.43	
Spoiling or over-protective parents				0.57	
Heredity					0.75
Brain disease					0.55
Eigenvalue	2.88	1.89	1.87	1.81	1.50
Composite reliability[a]	0.77	–	0.59	0.67	–
Cronbach's α	0.70	0.60	0.60	0.64	0.55

Only factor loading > 0.40 are displayed in descending order per factor (causal explanations). The instruction this item is as follows "Now, we would like to know your opinion about the cause of problems like the one described above. For your answers, a 5-point response scale is provided. Please, tick for every possible cause to what extent this might be the cause of such a problem." Rating for each characteristic is done on a 5-point Likert scale ranging from "is certainly one of the causes" to "is certainly not a cause"

[a] In empirical research, values between 0.60 and 0.70 are considered "acceptable," values between 0.70 and 0.90 range from "satisfactory" to "good" (Hair et al., 2015)

Table 3 Results of the principal component analysis (PCA) of 9 questions regarding the characteristics of the person described in the vignette (n = 1526), and the internal consistency of the factors (composite reliability and Cronbach's α)

Items	Factor 1: Dangerous/unpredictable	Factor 2: Dependent/needy
Dangerous	0.78	
Lacking self-control	0.76	
Frightening	0.75	
Unpredictable	0.74	
Aggressive	0.70	
Strange	0.67	
Dependent on others		0.82
Helpless		0.73
Needy		0.49
Eigenvalue	3.27	1.50
Composite reliability[a]	0.83	–
Cronbach's α	0.83	0.47

Only factor loading > 0.40 are displayed in descending order per factor (stereotype). The instruction this item is as follows "Now we would like to get to know what characteristics you think apply to this person. Please, tick with each characteristic of the list to what extent it applies or not." Rating for each characteristic is done on a 5-point Likert scale ranging from "certainly applies" to "certainly not applies"

[a] In empirical research, values between 0.60 and 0.70 are considered "acceptable," values between 0.70 and 0.90 range from "satisfactory" to "good" (Hair et al., 2015)

"poor" and "questionable" reliability for 'substance abuse' and 'biogenetic', and just within the "unacceptable" range for 'perceived dependency' (see Tables 2 and 3).

Association Between Correct Labelling, Type of Vignette, Causal Explanations and Personal Attributions on Stigmatizing

In the initial SEM that included all 5 causal models, the factors 'childhood adversity' ($R^2 = 0.01$) and 'substance abuse' ($R^2 = 0.02$) missed crucial thresholds for good model fit because of their low R-square (see Supplementary material eFigure 2). Thus, they were removed, and only three causal models ('psychosocial stress', 'biogenetic', 'constitution/personality') were taken into the final SEM (Fig. 2, Supplementary material eTable 3).

For the final SEM, the fit indices RMSEA and its 90% confidence intervals, and SRMR were in line with recommended values (≤ 0.06, not containing 0.08, and ≤ 0.08, resp.) suggesting good model fit to data (Hooper et al., 2011) (Fig. 2). The PNFI value was 0.705. Yet, the χ^2-statistic became significant. The CFI was below the recommended value of ≥ 0.95 (Hooper et al. 2008; Kline, 2011), suggesting possibly insufficient fit. However, two severe problems limit the use of the χ^2-statistic: (1) severe violations of the assumption of multivariate normality may result in model rejections even of properly specified models; and (2) being essentially a statistical significance test, it is sensitive to sample size and nearly always rejects the model in large samples like ours (Hooper et al., 2008). A problem of the CFI is its assumption of all latent variables being uncorrelated/independent; thus, it is less reliable in models like ours that violate this assumption, as demonstrated by the significant intercorrelations of factors (Supplementary material eTable 4) (Hooper et al., 2008).

Regarding the other fit indices, RMSEA, which measures how well the model, including unknown but optimally chosen parameter estimates, would fit the sample's covariance matrix, is increasingly "regarded as one of the most informative fit indices" (Hooper et al., 2008, p. 54). Despite its sensitivity to the number of estimated parameters in the model and, relatedly, its favouring of parsimonious models, this important fit index indicated good fit of our model even in the face of its complex, non-parsimonious nature. Furthermore, the SRMR also indicated good fit. Because Hu and Bentler's '2-index presentation strategy' suggests that a model should be regarded as well fitting, if both RMSEA and SRMR indicate acceptable fit (Hooper et al., 2008), we considered the fit of our model (Fig. 2) acceptable overall.

In line with earlier reports (Fig. 1), the type of vignette was associated with WSD, whereby the psychosis vignette was related to stronger WSD (Fig. 2). Additionally, the type of vignette was significantly related to correct labelling, all causal models and 'perceived dangerousness' but not 'perceived dependency'. In doing so, the psychosis vignette increased the likelihood to endorse a biogenetic model and to perceive the illustrated person as dangerous, while the depression vignette was more likely correctly labelled, and explained by psychosocial stress or constitution/personality-related causes. Unexpectedly, the path from correct labelling as a general measure of good MHL to WSD was not significant, and neither were those between correct labelling and stereotypes. In order to examine an indirect effect of correct labelling on stereotypes via causal models, we tested the pathway "correct labelling—biogenetic—perceived dangerousness" that, however also remained insignificant ($p = 0.219$). Thus, correct labelling had neither direct nor indirect effects on WSD in our model. Yet, again in line with earlier reports, correct labelling increased endorsement of a biogenetic and non-endorsement of a psychosocial stress or constitution/personality-related causal model. As expected, endorsement of a biogenetic model was related to more perceived dangerousness that intensified WSD. However, contrary to the literature, the biogenetic model was not directly related to WSD. Furthermore, it was also not indirectly related to WSD via perceived dangerousness, as

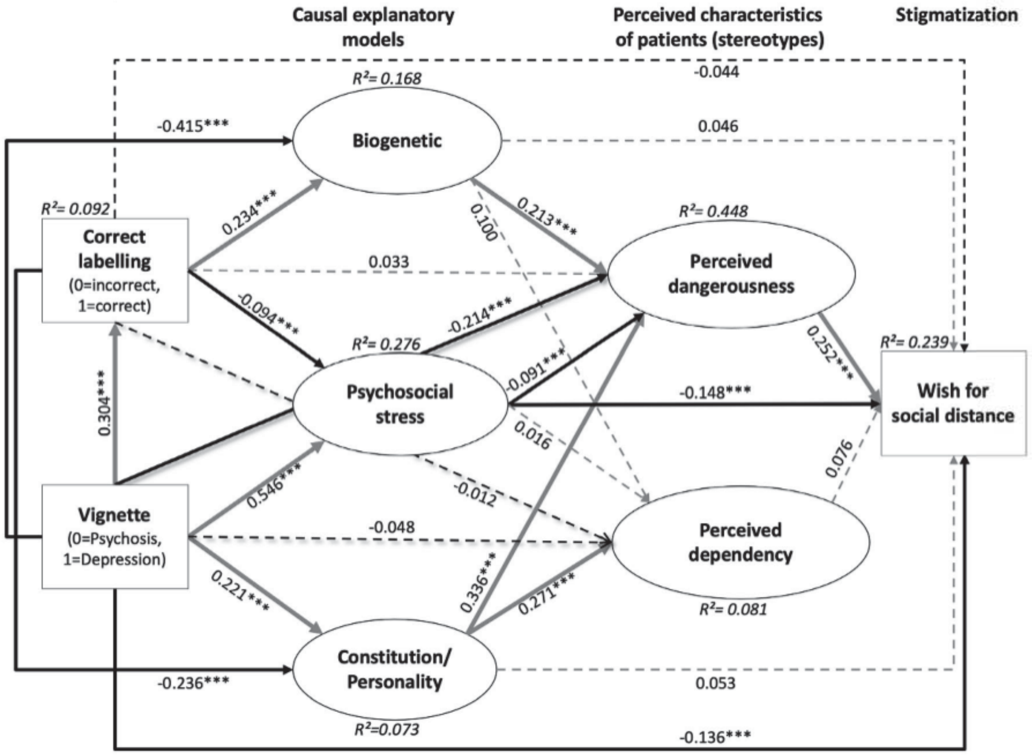

Fig. 2 Final model of associations between causal explanations, stereotypes and WSD (n = 1526) with standardized path coefficients. Model fit indices: $\chi^2_{23(1)}=1427.895$ with $p<0.001$, CFI = 0.864; SRMR = 0.052; RMSEA = 0.058 (90%CIs = 0.055, 0.061); PNFI = 0.705. ***$p \leq 0.001$; explained variance (R^2) for each endogenous variable in italics. Manifest variables are represented in rectangles, latent ones in ovals. Solid lines indicate significant paths, dashed lines indicate non-significant paths; in doing so, grey indicates positive, black negative correlations

this indirect effect also remained insignificant (p = 0.154). Contrary to the biogenetic model, the constitution/personality-related causal model was negatively associated with correct labelling, and its endorsement not only increased perceived dangerousness but also perceived dependency. Like the biogenetic model, the constitution/personality-related model was also not indirectly related to WSD via perceived dangerousness, as this indirect effect on WSD was also not significant (p = 0.756). Of all causal models, the psychosocial stress model was the only one directly and negatively related to WSD. This positive effect of psychosocial stress-related causal models also worked via reducing the likelihood of perceiving patients as dangerous (p < 0.001) (Fig. 2).

With regard to the impact of sex (see Supplementary material eFigure 3), compared to men, women labelled the vignette correctly more often, were more likely to relate the described disorder to a biogenetic or psychosocial stress model, and were less likely to assume constitution/personality as cause for the mental disorder, and to regard the person in the vignette as 'perceived dependency'. Despite these significant sex differences in MHL in particular, no significant sex differences revealed for perceived dangerousness or WSD; and the associations of the overall model (Fig. 2) were replicated.

Discussion

To the best of our knowledge, this study is the first to examine the associations of MHL, stereotypes and stigma in one complex model. While most of its paths had earlier been described, our model sheds light on some of the apparently conflicting results in the literature, in particular the association of good MHL with low WSD as a measure of stigmatization on the one hand (Angermeyer et al., 2009; Hanisch et al., 2016; Hinshaw & Stier, 2008) and, on the other hand, the association of good MHL with endorsement of a biogenetic model (Pescocolido et al., 2010; Schomerus et al., 2012) that, in turn, is associated with a stronger WSD (Haslam, 2015; Kvaale et al., 2013; Larkings & Brown, 2018; Lebowitz, 2019; Rüsch et al., 2010; Von Lersner et al., 2019). Our model now indicates that this apparent contradiction may have resulted from (incorrectly) assuming a direct link between MHL and WSD when important mediators such as stereotypes had not been considered.

In our model, MHL had little effect on WSD as especially evidenced by the non-significant direct paths to WSD from correct labelling and endorsement of a biogenetic causal model. Rather, the symptomatology of the mental illness (i.e., the case vignettes) and the perceived characteristics of the affected person (i.e., the stereotypes) were determinants of WSD.

Anti-stigma and awareness campaigns to improve help-seeking for mental problems and mental health first aid trainings have commonly focused on improving MHL (Angermeyer et al., 2009; Brijnath et al., 2016; Corrigan, 2016; Crisp et al., 2004; Hanisch et al., 2016; Henderson et al., 2013; Hinshaw & Stier, 2008; Larkings & Brown, 2018; Morgan et al., 2018; Sartorius & Schulze, 2005). Yet, although MHL has steadily increased in the community, in particular in terms of increased endorsement of biogenetic causal models, delays in or lack of help-seeking, and stigmatization of people with mental disorder, have improved less- or sometimes even worsened, thus, remaining a serious problem (Angermeyer et al., 2009; Angermeyer, Matschinger, et al., 2013; Angermeyer, Millier, et al., 2013; Corrigan, 2016; Deacon, 2013; Henderson et al., 2013; Larkings & Brown, 2018; Pescosolido et al., 2010; Schomerus et al., 2012). Accordingly, an earlier SEM analysis of our data already demonstrated negative effects of biogenetic and also constitution/personality-related causal models on active help-seeking via a dangerous stereotype and WSD (Schnyder et al., 2018). Yet, this SEM had not studied any direct effect on WSD other than that of the dangerous stereotype (Schnyder et al., 2018). Our study now further supports the unintended effect of improved MHL in terms of correct labelling of the vignette and, relatedly, endorsement of a biogenetic causal model that increased the perception of patients with mental disorder as dangerous and unpredictable. This is in accordance with previous reports of a positive association between endorsement of a biogenetic causal explanation, and the perception of people with a mental disorder as more dangerous (Kvaale et al., 2013; Larkings & Brown, 2018; Pescosolido et al., 2010; Read, 2007; Read & Harré, 2001; Schnyder et al., 2018).

To control for differences related to symptomatology, the vignette was included as a control variable in the model. As in other studies, in the schizophrenia vignette group a biogenetic causal explanation was more likely compared to the depression vignette group (Angermeyer et al., 2015; Dietrich et al., 2004; Von Lersner et al., 2019). The depression vignette group, in turn, more often endorsed a psychosocial explanation. Overall, participants expressed a higher WSD to the person depicted in the psychosis vignette compared to the person in the depression vignette. Thus, in light of the missing direct effect of correct labelling on WSD and with regard to the classic debate of whether behaviours/symptoms or label formed the basis of stigma, our results indicate a major role of symptoms not label (Pescosolido, 2013).

Interestingly, correct labelling was significantly related only to causal explanations but not to stereotypes, having likely a weaker effect on both stereotypes and WSD, compared to symptoms. Hence, our results support earlier findings of psychiatric terminology, i.e., correct labels, not having a direct impact on attitudes toward mental illness (Mann & Himelein, 2004). They also support earlier reports that (illustrated) symptoms play a significant role, with psychotic symptoms being more stigmatized than depressive symptoms (Mann & Himelein, 2004; Norman et al., 2008). Earlier, it was suggested that stigmatization is the worst when the disorder is severe, unfamiliar and, most importantly, socially debilitating, because lay people would focus on visible aspects of social disability (Gaebel et al., 2006). And indeed, the illustrated psychosocial disability was worst in the psychosis vignette compared to the depression vignette (see Supplementary material eText1). This indicates a necessity to prevent development of severe symptoms and psychosocial functional impairment in order to avoid stigmatization, thus reinforcing the view of the WHO that effective prevention of mental disorders can “change the way mental disorders are looked upon by society” (World Health Organization, 2004, p. 3).

Aside from a less severe symptomatology, the only factor with a potential to reduce WSD was endorsement of a psychosocial causal model. This became more apparent in the depression vignette and incorrect labelling of the vignette, mostly of the psychosis vignette (Angermeyer et al., 2009). Furthermore, endorsing a psychosocial causal model reduced perceived dangerousness that increased WSD. Taken together, our findings support critique on awareness campaigns that primarily convey a medical, biological etiological model of mental disorders (Lebowitz, 2019; Longdon & Read, 2017; Schomerus et al., 2014). This critique was based on the “substantial evidence that campaigns based on the "medical model" (such as the "mental illness is an illness like any other" approach) are not only ineffective, but can actually compound the problem” (Longdon & Read, 2017, p. 24). Supporting earlier recommendations, our results support calls for a stronger role of psychosocial explanatory models in MHL-supporting campaigns, in order to promote more positive and tolerant attitudes towards, and inclusion of psychiatric patients (Longdon & Read, 2017; Pescosolido et al., 2010). However, endorsing a biogenetic model was reported to increase help-seeking intentions and support of psychopharmacological and psychotherapeutic treatments (Arboleda-Flórez & Stuart, 2012; Lebowitz & Appelbaum, 2017; Pescosolido et al., 2010), possibly via an underlying fear, reflecting a desire for protection against people with mental illness (Schnyder et al., 2018; Speerforck et al., 2017). Thus, awareness campaigns with a stronger focus on psychosocial causes might bring about the unintended consequence of supporting non-professional help-seeking recommendations (Altweck et al., 2015). In order to escape this vicious circle of unintended consequences, future studies of awareness campaigns should further examine the reported differential effects of biological "brain disease" and genetic "heredity" causal models in relation to different disorders, and their defining and accompanying symptoms, in order to find the most advantageous balance between psychosocial and biogenetic causal models, to optimize beneficial effects on both stigmatization and help-seeking (Speerforck et al., 2014). Such research that cross-sectionally and, importantly, longitudinally examines the interplay of different aspects of MHL and attitudes towards people with mental disorders on both stigmatization and help-seeking using appropriate measures (such as SEM or network analyses) is clearly needed, and might solve the dilemma between the potential stigma-increasing effect of biogenetic models, and the potential help-seeking-reducing effect of psychosocial models.

Strengths and Limitations

Our study has several strengths and limitations. Among the strengths are clearly the large sample size and the use of SEM as a means to simultaneously consider a multitude of direct and indirect associations.

Among the limitations is a CFI below the recommended value of ≥ 0.95 (Hooper et al. 2008; Kline, 2011), which indicates a possibly insufficient fit. However, the CFI is sensitive to sample size and nearly always rejects the model in large samples like ours (Hooper et al., 2008). Other fit indices (RMSEA and SRMR), however, indicated a good model fit according to Hu and Bentler's '2-index presentation strategy' (Hooper et al., 2008) This strategy suggests that a model should be regarded as well fitting, if RMSEA and SRMR indicate acceptable fit—like they do in our model. Another limitation of the study might be the partly low internal consistency of the factors that, however, seems mostly related to methodological factors, such as inclusion of few items and/or the fact that included items frequently reflect different aspects of an underlying construct, i.e., are not t-equivalent (Danner, 2015). Thus, while the composite reliability had certainly been the method of choice, in factors with less than three items, only Cronbach's α could be calculated as an estimate of the lower boundary of reliability. Thus, the true reliability of the factors that all seem clinically plausible is likely higher and in no case unacceptable. Another limitation is the restriction of the sample to German-speaking people of mainly Middle-European background aged 16 to 40. As cultural and also age-related differences with respect to MHL and stigmatization were reported, conclusions drawn from our results may primarily be relevant to European health care systems and to young adults (Altweck et al., 2015; Angermeyer et al., 2016; Nersessova et al., 2019; Pescosolido, 2013; Von Lersner et al., 2019). Yet, the replication of several well-known findings in a complex modelling set-up might also provide evidence for the generalizability of these associations across the Western culture. And the examined age-group represents that of the highest incidence of mental disorders (Pedersen et al., 2014), and, consequently, the age group in which WSD might have its most adverse effects on first help-seeking for mental disorder.

Furthermore, a number of potential moderators on WSD were not considered in our model, e.g., (level of) familiarity with mental illness (Angermeyer et al., 2004; Kasow & Weisskirch, 2010), personal values (Norman et al., 2008), and perceived social norms (Norman et al., 2008). In regards to familiarity—either by own illness or mental illness of a family member, friend or colleague, we had only assessed family history of first- and second-degree biological relatives and only current mental disorders of the participant. Thus, we would have missed familiarity by mental disorders of other well-known people and by own past mental disorder. To avoid introducing a systematic assessment bias, we therefore refrained from including a latent variable 'familiarity'. A limitation that our study shares with most other interview- or questionnaire-based studies on this topic is the possibility of systematic response biases such as social desirability. Yet, the results are well in line with earlier reported single association between the examined variables, and thus, point towards only minor response biases. Further, in line with the criteria employed by Sastre-Rus et al. (2019), the results indicate that the questionnaires can be assumed to have a strong level of evidence for good quality assessment, supporting earlier notions of them as good-quality instruments to assess attitudes and beliefs about mental illness (Link et al., 2004; van Brakel, 2006).

Overall, our results challenge the view that an improved MHL will unequivocally reduce stigmatization and discrimination of people with mental disorder, especially when biological models are emphasized. Rather, preventive approaches that reduce symptom exacerbation, in combination with education about psychosocial causes, as well as the causes and interplay of symptoms in public campaigns (Schultze-Lutter, Michel, et al., 2018; Schultze-Lutter, Schmidt, et al., 2018), might reduce stigmatizing stereotypes best while still facilitating help-seeking.

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Author Contributions F.S.-L. and B.G.S. designed the study. F.S.-L. and M.C. supervised collection of the data. Under the supervision of F.S.-L., C.M.D made the analyses and wrote the manuscript. L.T.B. critically revised and contributed intellectual content to the statistical analysis. All the authors were involved in discussing the findings. They all approved its final version.

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Data Availability The anonymised data-set is available from the corresponding author on reasonable request.

Declarations

Conflict of interest Drs Michel, Schimmelmann, Schultze-Lutter, MSc Doll, and MSc Betz have declared that there are no conflicts of interest in relation to the subject of this study. Dr. Schimmelmann reports and received honoraria and is on the speakers' board of Takeda (Shire) and Infectopharm.

Ethical Approval All procedures performed in studies involving human participants were in accordance with the ethical standards of the institutional and/or national research committee and with the 1964 Helsinki Declaration and its later amendments or comparable ethical standards. The study was approved by the ethical committee of the University of Bern (No. 172/09).

Informed Consent Informed consent was obtained from all individual participants included in the study.

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eText 1. English translation (Norman, Sorrentino, Windell, & Manchanda, 2008) of the original German vignettes, which were used in our study.

Depression vignette, unlabelled:

Imagine that you know the following about an acquaintance (AB) with whom you occasionally spend your leisure time. Within the past 2 months, AB has changed in nature. In contrast to previously, AB is down and sad without being able to give a concrete reason for feeling low. AB appears serious and worried. There is no longer anything that will make AB laugh. AB hardly ever talks, and if AB says something, AB speaks in a low tone of voice about the worries AB has with regard to AB's future. AB feels useless and has the impression AB does everything wrong. All attempts to cheer AB up have failed. AB lost all interest in things and is not motivated to do anything. AB complains of often waking up in the middle of the night and not being able to get back to sleep. By the morning, AB feels exhausted and without energy. AB says that AB encounters difficulty in concentrating on AB's job. Unlike before, everything takes AB a very long time to do. AB hardly manages AB's workload. As a consequence, AB has already been summoned to AB's boss. AB has now sought professional help and was told AB appears to be suffering from depression.

Psychosis vignette, unlabelled:

Imagine that you know the following about an acquaintance (AB) with whom you occasionally spend your leisure time. In the past months, AB appears to have changed. More and more, AB has retreated from their friends and colleagues, up to the point of avoiding them. If someone managed to involve AB in a conversation, AB would only talk about whether some people have the natural gift of reading other people's thoughts. This question became AB's sole concern. In contrast with AB's previous habits, AB has stopped taking care of their appearance and looked increasingly untidy. At work, AB seemed absent-minded and frequently made mistakes. As a consequence, AB has already been summoned to their boss.

Finally, AB stayed away from work for an entire week without an excuse. Upon their return, AB seemed anxious and harassed. AB now reports being absolutely certain that people cannot only read other people's thoughts but also directly influence them. AB was, however, unsure who would steer ABs thoughts. AB also said that, when thinking, AB was continually interrupted. Frequently, AB would even hear those people talk to AB, and they would give AB instructions. Sometimes, they would also talk to each other and make fun of whatever AB was doing at the time. AB said that the situation was particularly bad at AB's apartment. At home, AB would really feel threatened, and would be terribly scared. Hence, AB had not spent the night at AB's place for the past week, but rather had hidden in hotel rooms and hardly dared to go out. AB has now sought professional help and was told AB appears to be suffering from schizophrenia

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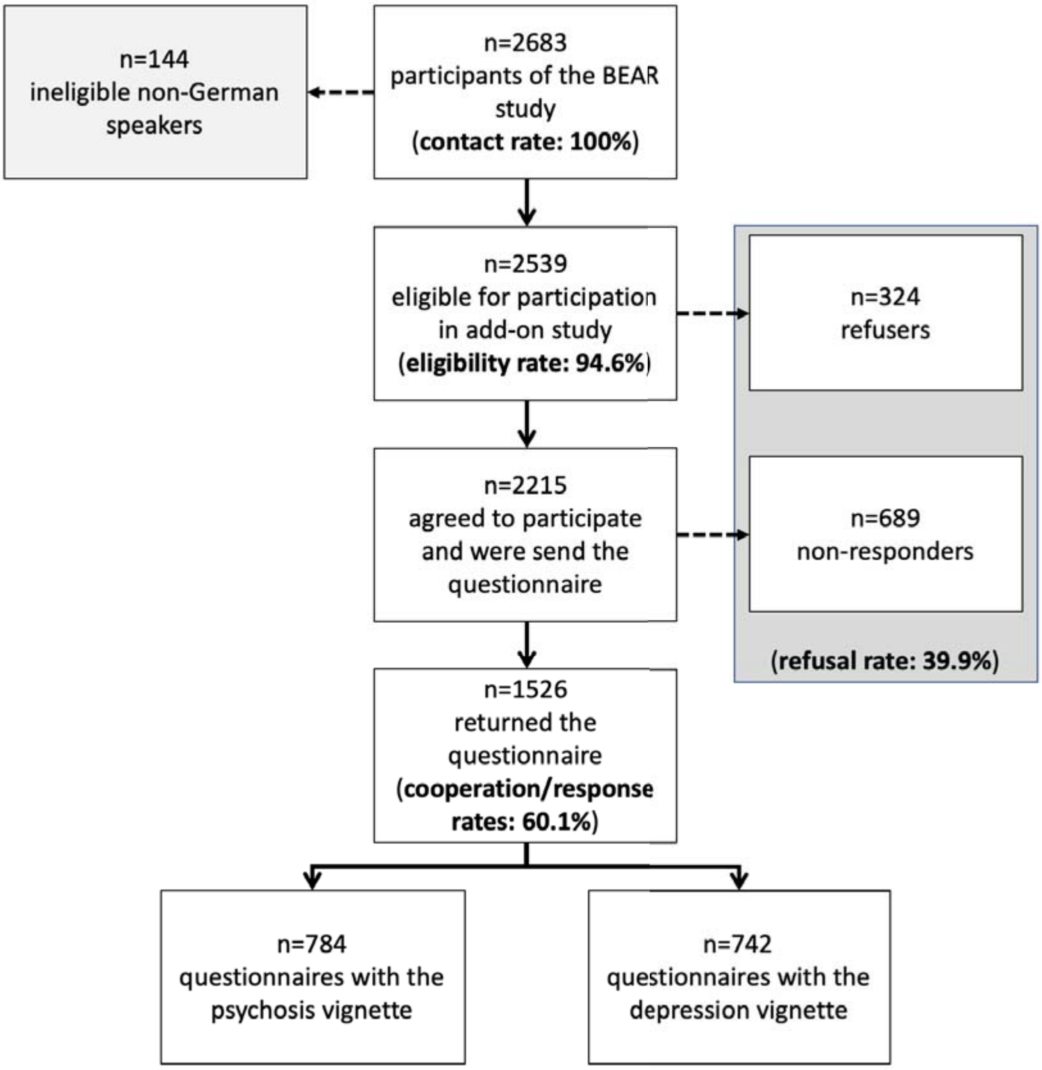
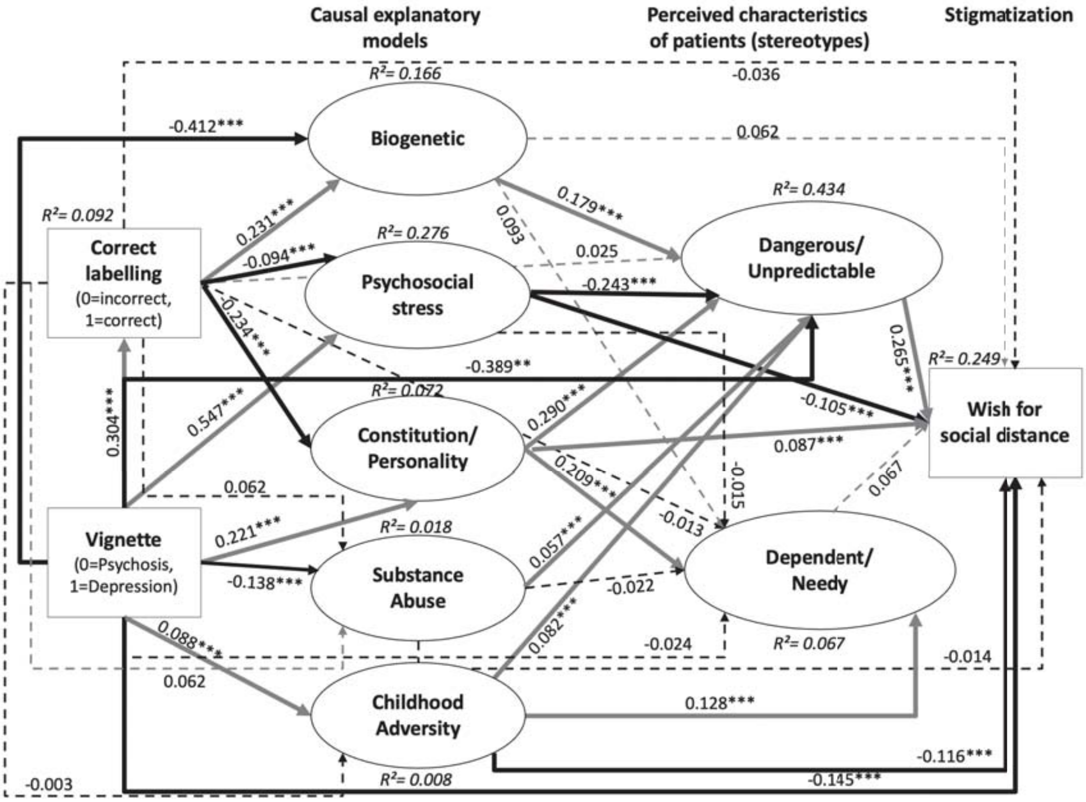


eFigure 1. Recruitment process of the add-on study to the BEAR study according to the AAPOR Outcome Rate Calculator, version 3.1.(AAPOR American Association for Public Opinion Research, 2016)

Reference

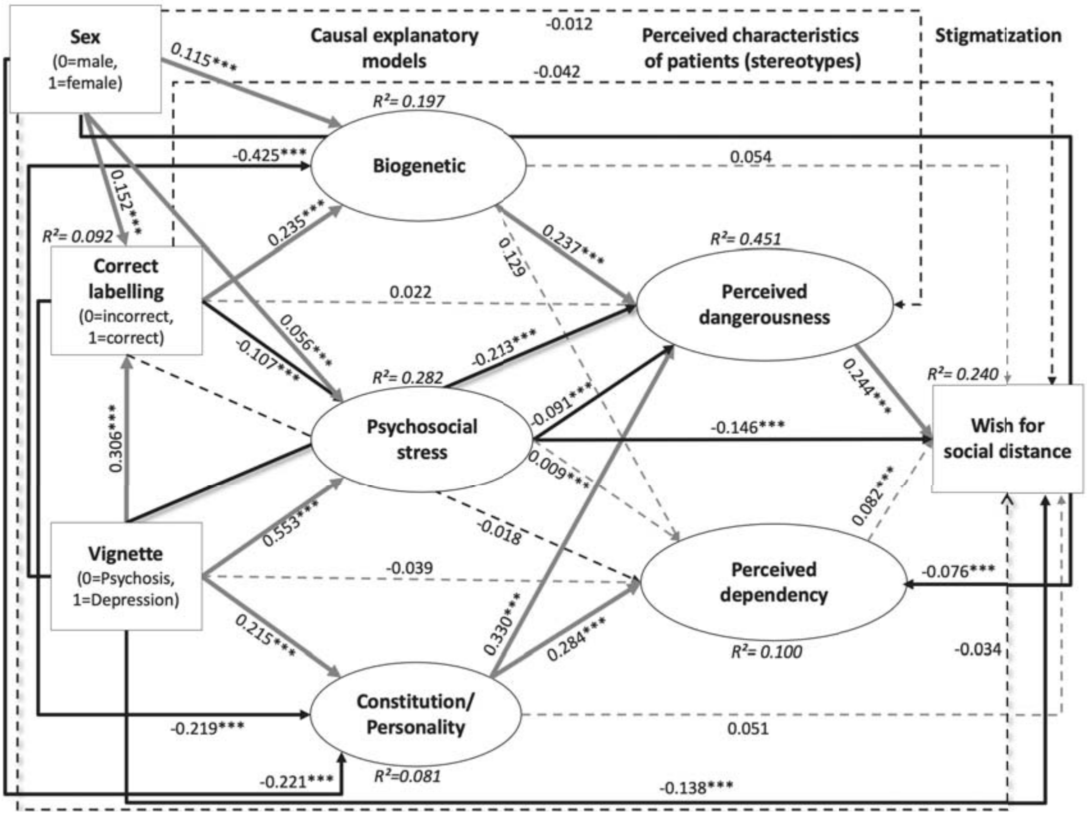
American Association for Public Opinion Research. (2016). Standard Definitions: Final Dispositions of Case Codes and Outcome Rates for Surveys. 9 edition. AAPOR.



eFigure 2. Model of associations between five causal explanation variables, stereotypes and WSD (n=1526).

Model fit indices: $\chi^2_{(376)}$= 2627.016 with p<0.001, CFI= 0.806; SRMR= 0.078; RMSEA= 0.063 (90%CI= 0.060 - 0.065); PNFI= 0.676.

Note: ***p≤0.001; standardized path coefficient; explained variance (R^2) for each endogenous variable in italics. Manifest variables are represented in rectangles. Latent variables are represented in ovals. Solid lines indicate significant paths, dashed lines indicate; in doing so, grey indicates positive, black negative correlations.



eFigure 3. Model of associations between five causal explanation variables, stereotypes and WSD and sex as a control variable (n=1526).

Model fit indices: $\chi^2_{(376)}$= 2627.016 with p<0.001, CFI= 0.860; SRMR= 0.051; RMSEA= 0.057 (90%CI= 0.055 - 0.060); PNFI= 0.692.

Note: ***p≤0.001; standardized path coefficient; explained variance (R^2) for each endogenous variable in italics. Manifest variables are represented in rectangles. Latent variables are represented in ovals. Solid lines indicate significant paths, dashed lines indicate; in doing so, grey indicates positive, black negative correlations.

eTable 1. Sample characteristics of responders and eligible non-responders/refusers to the add-on questionnaire study (N=2539).

	Responders (n=1526)	**Refusers/Non-Responders** (n=1013)	**Statistics** U/χ^2(df); Pearson's r / Cramer's V
Sex, n (%) male	718 (47.2)	628 (61.6)	$\chi^2_{(2)}$=66.945, p<0.001, V= 0.158
Age: median (mean ± SD)	33.9 (31.3 ± 7.3)	31.8 (29.8 ±7.8)	U = 693 553, p < 0.001, r=-0.025
Nationality, n (%) Swiss	1455 (95.7)	927(91.0)	$\chi^2_{(2)}$=25.946, p<0.001, V=0.098
ISCED 2011[a], n (%)			$\chi^2_{(4)}$=53.633, p<0.001, V= 0.100
Primary education (ISCED 1)	17 (1.1)	17 (1.7)	
Secondary school (ISCED 2)	828 (54.5)	694 (68.1)	
High School (ISCED 3)	675 (44.4)	308 (30.2)	
Employment, n (%)			$\chi^2_{(8)}$=52.878, p<0.001, V= 0.099
Unemployed, seeking employment	25 (1.6)	33 (3.2)	
Protected employment	3 (0.2)	2 (0.2)	
Temporary work, self-employed	18 (1.2)	7 (0.7)	
Normal employment	1474 (97.0)	977 (95.9)	
Marital status, n (%)			$\chi^2_{(10)}$=20.316, p<0.001, V= 0.062
Unmarried	799 (52.6)	618 (60.6)	
Married or registered partnership	668 (43.9)	359 (35.2)	
Separated	20 (1.3)	15 (1.5)	
Divorced	29 (1.9)	25 (2.5)	
Widowed	2 (0.1)	1 (0.1)	
Other	2 (0.1)	1 (0.1)	
Current non-psychotic axis-I disorder[b], n (%)	192 (12.6)	134 (13.2)	
Family member with a mental disorder, n (%)			
Affective disorder	401 (26.4)	189 (18.6)	$\chi^2_{(2)}$=22.955, p<0.001, V= 0.093
Psychotic disorder	48 (3.2)	21 (2.1)	$\chi^2_{(2)}$=2.737, p=0.254, V= 0.032

[a] according to International Standard Classification of Education (ISCED) (UNESCO Institute for Statistics, 2012).

[b] according to Mini-International Neuropsychiatric Interview.

eTable 2. Examples for coding the item correct labelling.

Type of vignette	Correct labelling	Incorrect labelling
Depression	Affective disorder Mood disorder Depression Depressive, depressed	Mental disorder Psychiatric disorder Bipolar disorder Anxiety disorder Personality disorder Over-burdened Burn-out Having a personal problem Having a mental problem Sadness, sad Mood swings Midlife or life crisis Stress Low mood Out of touch with reality Madness, mad Disoriented Confused
Schizophrenia	Psychosis, psychotic Psychotic disorder Paranoia, paranoid Schizophrenia Hallucination Delusion	

eTable 3. Standardized factor loadings and their corresponding standard errors of latent variables resulting from the SEM.

Item of latent variable	Standardized factor loading	Standard error [a]
Causal explanations		
Psychosocial stress		
Problems or sorrows in family	0.677***	-
An unconscious conflict	0.375***	0.047
Too high self-expectations	0.618***	0.055
Severe or very stressful life event	0.516***	0.042
Daily hustles	0.785***	0.049
Too high self-expectation	0.618***	0.055
Biogenetic		
Brain disease	0.847***	-
Heredity	0.450***	0.064
Constitution/Personality		
Weak constitution	0.447***	-
Weak will	0.777***	0.155
Immoral lifestyle	0.515***	0.103
God's will	0.256***	0.063
Substance abuse		
Alcohol abuse	0.435***	-
Medication or drug abuse	1.422 ***	1.119
Childhood adversity		
Little support others	0.342***	-
Grown up in a broken home	0.688***	0.196
Spoiling or over-protective parents	0.454***	0.133
Lack of parental affection	0.791***	0.225
Personal attributions		
Dangerous/Unpredictable		
Unpredictable	0.531***	-
Uncontrollable	0.699***	0.042
Aggressive	0.594***	0.038
Strange	0.636***	0.047
Scary	0.713***	0.048
Dangerous	0.700***	0.039
Dependent/Needy		
Needy	0.240***	-
Helpless	0.562***	0.640
Dependent on others	0.704***	0.570

*** $p<0.001$

[a] fixed to 1.0 for the first selected item

2.2 Predictors of help-seeking behaviour in people with mental health problems: a 3-year prospective study, Doll, C.M., Michel, C., Rosen, M., Osman, N., Schimmelmann, B.G., Schultze-Lutter, F., BMC psychiatry, 21: 432, (2021). https://doi.org/10.1186/s12888-021-03435-4

Doll *et al. BMC Psychiatry* (2021) 21:432
https://doi.org/10.1186/s12888-021-03435-4

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RESEARCH ARTICLE

Open Access

Predictors of help-seeking behaviour in people with mental health problems: a 3-year prospective community study

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Abstract

Background: The majority of people with mental illness do not seek help at all or only with significant delay. To reduce help-seeking barriers for people with mental illness, it is therefore important to understand factors predicting help-seeking. Thus, we prospectively examined potential predictors of help-seeking behaviour among people with mental health problems ($N = 307$) over 3 years.

Methods: Of the participants of a 3-year follow-up of a larger community study (response rate: 66.4%), data of 307 (56.6%) persons with any mental health problems (age-at-baseline: 16–40 years) entered a structural equation model of the influence of help-seeking, stigma, help-seeking attitudes, functional impairments, age and sex at baseline on subsequent help-seeking for mental health problems.

Results: Functional impairment at baseline was the strongest predictor of follow-up help-seeking in the model. Help-seeking at baseline was the second-strongest predictor of subsequent help-seeking, which was less likely when help-seeking for mental health problems was assumed to be embarrassing. Personal and perceived stigma, and help-seeking intentions had no direct effect on help-seeking.

Conclusions: With only 22.5% of persons with mental health problems seeking any help for these, there was a clear treatment gap. Functional deficits were the strongest mediator of help-seeking, indicating that help is only sought when mental health problems have become more severe. Earlier help-seeking seemed to be mostly impeded by anticipated stigma towards help-seeking for mental health problems. Thus, factors or beliefs conveying such anticipated stigma should be studied longitudinally in more detail to be able to establish low-threshold services in future.

Keywords: Help-seeking, Mental health problems, Longitudinal, Stigma, Structural equation model

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Background

Worldwide, mental disorders are an immense economic burden for society [1]. On average, 29.2% of adults will develop a mental illness in their lifetime [2]. The majority of people with a mental disorder do not seek help from any health care professional [3], although help-seeking for mental health problems (HSmental) at an early stage is crucial to reduce the burden of mental illness, and social and personal financial costs, to prevent future relapses, and to improve social functioning, and quality of life [4].

Help-seeking for mental health problems and its predictors

HSmental is defined as an adaptive coping process that attempts to obtain external assistance to deal with mental health problems [5], including not only formal (e.g. psychiatrists) but also informal sources of help (e.g. friends) [5]. HSmental is predicted by different sociodemographic factors, such as older age [6, 7], female sex [6, 8], and lack of a current partner [9]. In addition, former positive help-seeking experiences [10], and more severe functional impairments [9], were positively correlated with HSmental. Furthermore, different types of stigma were identified as important barriers to HSmental [3, 10–13]. Thereby, stigma is commonly divided into structural stigma, perceived stigma, self-stigma, personal stigma, and anticipated stigma. While structural stigma is defined on a macro-social level as institutional policies and practices, societal-level conditions, cultural norms, and institutional practices that constrain the opportunities, resources, and well-being for stigmatized populations [14]; perceived stigma that might be perceived as part of structural stigma [14] is expressed on the micro-social level by the community's prejudices and negative stereotypes towards people with a mental illness [15, 16]. Self-stigma is described as the affected persons' internalisation of these stereotypes and prejudices [17], that were learned and hold in terms of personal stigma before developing a mental illness and identifying with the stigmatized group themselves [18]. Similar to this, personal stigma describes the unaffected individual's own prejudice and negative stereotypes and it is often measured as the wish for social distance (WSD), which is basically the wish to avoid a specific group such as persons with a mental illness [19]. Furthermore, anticipated or perceived stigma [20] does not describe the experienced, but the anticipated stigmatization and discrimination by others in case one would become mentally ill oneself. This kind of stigma includes expectations that, for example, it would be embarrassing to get professional help when having a mental illness.

Personal stigma in terms of a wish for social distance (WSD) was negatively associated with help-seeking in a recent meta-analysis [12]. WSD seemed to lower the perceived need for professional help and, therefore, reduced the probability to be aware of one's own illness; as a consequence, WSD minimized the likelihood to seek help [21]. Generally, WSD was more prominent in older than in younger persons with no differences between sexes [19]. Yet, stigma was a lower barrier to HSmental in studies with only female compared to only male participants [3]. In addition, perceived stigma has been negatively associated with help-seeking in adults [3] and with help-seeking intentions in adolescents [22]. In contrast to that, the intention to seek help was positively associated with actual HSmental [13, 23, 24]. Moreover, in a systematic review [11] but not in a longitudinal study [23], embarrassment about HSmental, i.e. anticipated stigma, was identified as a major barrier for HSmental in young people.

Most studies on HSmental were conducted only cross-sectionally [9, 12, 25] and frequently investigated only help-seeking intentions rather than actual help-seeking behaviour [6]. The longitudinal studies on HSmental, and stigma and attitudes have only a short follow-up of 6 months [8, 26, 27], small sample sizes [26], selected samples [28, 29], or, at a large follow-up of 11 years, focussed only on the impact of attitudes toward mental health help-seeking and beliefs about the effectiveness of treatment but not of personal and perceived stigma and low functioning [23]. Thus, longitudinal studies of sufficient sample size of the impact of stigma and attitudes, and their interaction on actual HSmental are clearly needed.

Aims of the study

In order to address the lack of complex longitudinal studies on the impact of age, sex, various types of stigma, assumptions about own HSmental and functional deficit on actual HSmental behaviour within the following 3 years, we examined a complex structural equation model (SEM), which, based on the mainly cross-sectional findings described above, assumes the following effects on HSmental longitudinally:

- Perceived stigma is negatively associated with HSmental [3, 22].
- Personal stigma (WSD) is negatively associated with HSmental [13].
- Help-seeking intentions are positively associated with HSmental [13, 23, 24].
- Anticipated stigma (embarrassment about HSmental) is negatively associated with HSmental [11].
- Psychosocial functioning is negatively associated with HSmental [9].

- Past treatment experiences are positively associated with HSmental [9].
- Compared to male sex, female sex is more positively associated with HSmental [6, 30].
- Older age is positively associated with HSmental [6, 7, 9].

Considering not only direct but also indirect effects in our model, we aimed at detecting what predictors at baseline are linked to future help-seeking behaviour.

Method

Study design

Our study is based on the longitudinal data of an add-on study to the 'Bern Epidemiological At-Risk' (BEAR) study [31, 32]. At baseline, community participants of age 16 to 40 years were randomly drawn from the population register of the Canton Bern, Switzerland, first recruited for a telephone interview (response rate: 63.4%) and, at conclusion of the interview, for a questionnaire add-on study on stigma and mental health between June 2011 and June 2015 ($n = 1519$, response rate: 60.3%) [13]. At three-year follow-up, a preselected sub-sample of participants of the interview study were re-contacted between June 2015 and March 2018 ($n = 1028$, contact rate: 78.8%) [31] (Fig. 1). In the follow-up, 839 participants of the baseline interview study agreed to a second interview (response rate: 66.4%; see Fig. 1). Of these, 542 participants had participated in the add-on study at baseline and, thus, had available data on stigma and attitudes (Fig. 1). Since HSmental was our outcome variable of interest and the absence of HSmental in persons with and without mental health problems has to be evaluated differently – adequate behaviour in those without mental health problems but undesirable behaviour in those with mental health problems, we restricted our analyses to the 307 participants (56.6%) with mental disorders or relevant mental health problems past baseline, i.e., a positive response to any one screening question in the M.I.N.I. interview (Fig. 1).

For more information on recruitment see Additional file 1. For all studies, verbal informed consent

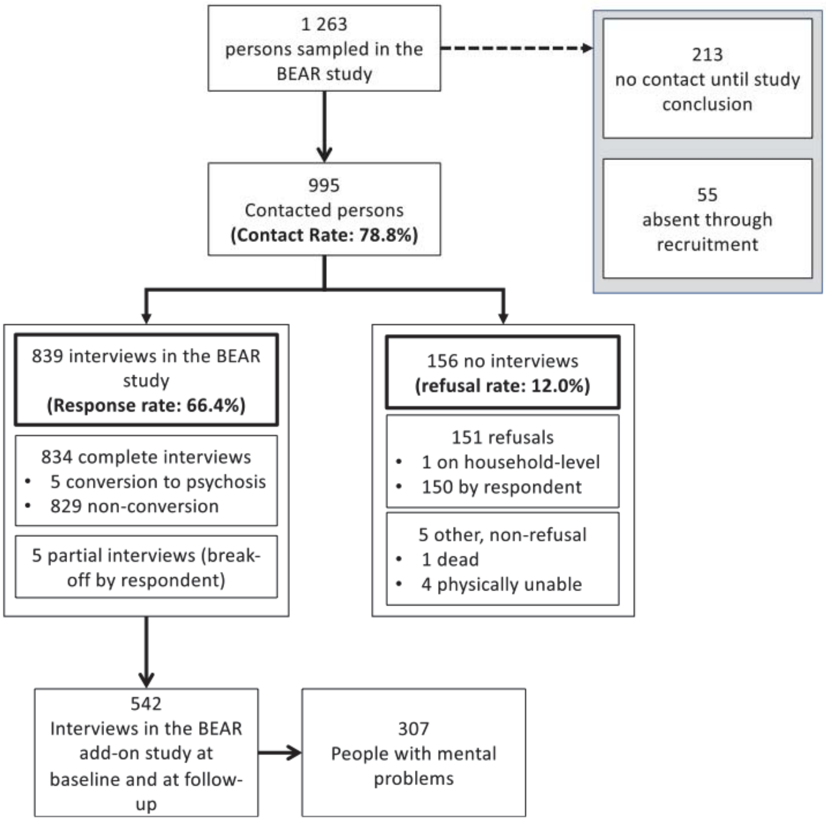

Fig. 1 Recruitment process of the add-on study to the BEAR study according to the American Association for Public Opinion Research (AAPOR) Outcome Rate Calculator, version 3.1 [32]

was obtained and recorded from all subjects prior to both starting the telephone interview and posting the questionnaires. This procedure was chosen to avoid delays between first personal phone contact and posting of written consent that might have led to loosing contact with potential participants, in doing so decreasing recruitment rate and, thereby, generalizability. This procedure of obtaining consent verbally as well as all other procedures contributing to this work and involving human subjects were approved by the independent ethical committee of the University of Bern (No. 172/09) prior to starting the study. Furthermore, all procedures comply with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008.

Assessments

Based on previous studies [33–35], life-time and current help-seeking was assessed by using a modified version of the WHO Pathway-to-Care questionnaire [33].

DSM-IV non-substance-related axis-I disorders were assessed at follow-up with the MINI-International Neuropsychiatric Interview' (M.I.N.I) [36], which was previously used in telephone surveys and considered to be comparable with face-to-face interviews [37]. Thereby, the presence of any subthreshold mental health problems that signal a need of professional assessment and, consequently, help-seeking was assumed when a screening question was affirmed [38].

As a global rating of current functioning at baseline, the 'Social and Occupational Functioning Assessment Scale' (Sofas) [39] with scores ranging from 0 to 100, was used. Thereby, a score ≤ 70 was considered as an indication of deficient functioning [40, 41].

Personal stigma in terms of WSD was assessed at baseline with the adapted social distance scale developed by Link et al. [18]. In this, participants have to rate their willingness to socially interact in seven different situations with the person described in vignettes about patients with mental disorders (depression or schizophrenia) on a five-point Likert scale from 0 = 'definitely willing' to 4 = 'definitely not willing'. Higher sum scores indicated stronger WSD.

Perceived stigma was assessed at baseline by presenting 10 items (Table 1) that describe public opinions about people with a mental illness (e.g. 'Most people see it as an indicator of personal failure, when somebody is in a psychiatric clinic'). The participants had to rate these items on a five-point Likert scale from 1 = 'nobody has this opinion' to 5 = 'everybody has this opinion' according to the degree what they perceive as the public opinion.

In addition, anticipated stigma was measured by the question 'How embarrassed would you be if your friends knew you were getting professional help for an emotional problem?' with answer options 'very embarrassed' (=4), 'somewhat embarrassed' (=3), 'not much embarrassed' (=2), and 'not at all embarrassed' (=1).

Finally, help-seeking intentions were assessed by the question 'If you had a serious emotional problem, would you seek professional help?' with answer options 'definitely' (=4), 'probably' (=3), 'probably not' (=2), and 'definitely not all embarrassed' (=1). Finally, actual help-seeking behavior was binary assessed by the questions 'Have you ever sought help for mental health problems?' (at baseline) and 'Have you sought help for mental health problems since the first interview?' (at follow-up).

Statistical analyses

Categorical data were compared by χ^2-tests, non-normally distributed ratio and ordinal data by Mann-Whitney U tests. Principal component analyses (PCA) with Varimax rotation were conducted on the 10 items on perceived stigma. Thereby, we used pairwise complete observations to deal with missing values. Next, the Kaiser-Meyer Olkin (KMO) measure was used to check the sampling adequacy for the analyses.

Secondly, we conducted a theoretically grounded SEM, which was based on the mainly cross-sectional findings described in the aims section. Within the SEM, we had 2% missing items. Based on the results of the PCA and previous studies, we formed one latent variable for 'perceived stigma'. The variables 'WSD' [19], 'help-seeking intention' [13, 23, 24], 'anticipated stigma [11], 'age' [7], 'sex' [30], 'functional deficit' [9], 'help-seeking at baseline' [9, 10, 13] were modelled as observed variables. The pathways from stigma via own help-seeking assumptions (i.e., help-seeking intentions) to help-seeking behaviour including all likely associations between latent and manifest variables were modelled in a SEM. To examine the bivariate relationships between the variables, we calculated Spearman's correlation coefficients. To test also for indirect effects, we built mediation pathways within the model by labelling potential parameters in the regression as parameters. The statistical analyses were conducted in SPSS 25.0 and in the R language for statistical computing using the packages "lavaan" [42] and "psych" [43], respectively. Throughout, we considered a level of significance of $\alpha < .05$.

Results

Power analysis and sample characteristics

The calculation of the model was performed with $N =$ 307 participants with mental health problems or disorders. A power analysis of the final model, which contained 12 variables and df = 27 degrees of freedom,

Table 1 Sociodemographic and clinical characteristics of the sample ($n = 307$), and comparison of those who had sought help for mental health problems at follow-up and those who had not

	No help-seeking ($n = 238$; 77.5%)	**Help-seeking ($n = 69$; 22.5%)**	**Total sample ($n = 307$)**	**Statistics U/χ^2(df); Pearson's r/ Cramer's V**
Male sex, n (%)	91 (38.2)	17 (24.6)	108 (35.2)	$\chi^2_{(1)} = 4.337$, $p = 0.037$, V = 0.119
Age, median (mean ± SD)	33 (31.25 ± 7.21)	31 (30.53 ± 7.72)	33 (31.09 ± 7.32)	U = 7936.500, $p = 0.672$, r = − 0.041
Nationality, n (%) Swiss	230 (96.6)	66 (95.7)	296 (96.4)	$\chi^2_{(1)} = 0.151$, $p = 0.698$, V = 0.022
ISCED 2011[a], n (%)				$\chi^2_{(3)} = 0.628$ $p = 0.731$, V = 0.045
Primary education (ISCED 1)	2 (0.8)	1 (1.4)	3 (1.0)	
Secondary school (ISCED 2)	132 (55.5)	35 (50.7)	167 (54.4)	
High school (ISCED 3)	104 (43.7)	33 (47.8)	137 (44.6)	
Employment, n (%)				$\chi^2_{(3)} = 11.658$, $p = 0.020$, V = 0.195
Unemployed	5 (2.1)	3 (4.3)	8 (2.6)	
Protected employment	0 (0.0)	2 (2.9)	2 (0.7)	
Temporary work, self-employed	3 (1.3)	1 (1.4)	4 (1.3)	
Normal employment, in school	230 (96.6)	62 (89.9)	292 (95.1)	
Marital status, n (%)				$\chi^2_{(5)} = 11.477$, $p = 0.043$, V = 0.193
Unmarried	115 (48.3)	37 (53.6)	152 (49.5)	
Married or registered partnership	117 (49.2)	25 (36.2)	142 (46.3)	
Separated/divorced/widowed	2 (0.8)	3 (4.3)	5 (1.6)	
Current non-psychotic axis-I disorder at baseline[b], n (%)	55 (23.1)	30 (43.5)	85 (27.7)	$\chi^2_{(1)} = 11.085$, $p < 0.001$, V = 0.190
Current non-psychotic axis-I disorder at follow-up[b], n (%)	42 (17.6)	28 (40.6)	70 (22.8)	$\chi^2_{(1)} = 15.982$, $p < 0.001$, V = 0.228
Current functional deficit at baseline[c]	7 (2.9)	20 (29.0)	27 (8.8)	$\chi^2_{(1)} = 45.234$, $p < 0.001$, V = 0.384
Current functional deficit at follow-up[c]	10 (4.2)	23 (33.3)	33 (10.7)	$\chi^2_{(1)} = 47.318$, $p < 0.001$, V = 0.393
Help-seeking at baseline, n (%)	63 (26.5)	45 (65.2)	108 (35.2)	$\chi^2_{(1)} = 35.218$, $p < 0.001$, V = 0.339
Intention to seek help[d], n (%)	199 (83.6)	61 (88.4)	260 (84.7)	$\chi^2_{(1)} = 0.948$, $p = 0.330$, V = 0.056

[a] according to International Standard Classification of Education (ISCED) (UNESCO Institute for Statistics, 2012)[39]

[b] according to Mini-International Neuropsychiatric Interview

[c] defined as SOFAS score < 71

[d] intention to seek help is dichotomized (0 = no or improbable intention to seek help, 1 = probable or definite intention to seek help)

resulted in a power of 0.901 with an RMSEA = 0.06 and an $\alpha = 0.05$. Of the 307 participants, 238 (77.5%) participants had not and 69 (22.5%) participants had sought help past baseline (Table 1). The average age was around 33 years with no difference between help-seekers and non-help-seekers. Revealing a small effect of sex, more female than male participants had sought help (Table 1). The majority of the participants were Swiss, frequently unmarried, and had a secondary school education (Table 1). There was a small effect towards help-seekers being more frequently unemployed or working in protected employment (Table 1). In addition, help-seekers had more frequently functional deficits at baseline or follow-up, and had more frequently reported HSmental already at baseline; all these differences revealed moderate effect size (Table 1). Help-seekers also had more often any current non-psychotic axis-I disorder at baseline or follow-up; yet, differences only revealed small-to-moderate effects (Table 1). Help-seekers, however, had not more frequently reported help-seeking intentions at baseline; this difference showed a moderate effect size (Table 1).

Table 2 Results of the principal component analysis (PCA) of the 10 items asking about perceived stigma ($N = 307$). Only factor loadings > 0.40 are displayed

Items	Factor 1: no perceived stigma	Factor 2: perceived stigma
Most people have no problems to be the friend of a former psychiatric patient.	0.40	
Most people believe that somebody who was in a psychiatric clinic is just as intelligent as the average population.	0.62	
Most people have the opinion that one can trust a former psychiatric patient just like other people.	0.61	
Most people agree that a psychiatrically treated person, who is totally recovered, can be a teacher for little children.	0.44	
Most people see it as an indicator of personal failure, when somebody is in a psychiatric clinic.		0.68
Most people do not allow former psychiatric patients to look after their children, even if they are doing well for some time.		0.63
Most people think less of somebody who was in a psychiatric clinic.		0.78
Most employees hire a former psychiatric patient when he or she is qualified for the job.	0.62	
Most people treat former psychiatric patients just like other people.	0.63	
Most people do not take the opinion of somebody who was in a psychiatric clinic seriously.		0.55
Eigenvalue	2.00	1.88

Factors of perceived stigma

In the PCA of the 10 perceived stigma items, the KMO measure indicated excellent or "meritorious" [44] sampling adequacy for the analyses (KMO = .85), and all KMO values for individual items were > .80 in the PCA, and thus above the acceptable limit of .5 [45]. Bartlett's test of sphericity ($\chi^2_{(45)} = 857.186$, $p < 0.001$) indicated that correlations between items were sufficiently large for PCA [45]. Two independent factors ('perceived stigma, 'no perceived stigma') had an eigenvalue over Kaiser's criterion of 1 and explained 50% of the variance (Table 2).

Association between stigma, assumptions about own help-seeking, and healthcare utilization

The fit indices of our longitudinal model (Fig. 2), CFI (guide value ≥0.95), RMSEA (guide value ≤0.06), SRMR (guide value ≤0.08) and 90% confidence intervals not containing 0.08) suggested good fit of our model to data [46, 47]. As previously recommended [48, 49], no post-hoc modifications were conducted but, for better overview, a model with only significant paths is displayed in the Additional file 2.

In our model (Fig. 2), HSmental at follow-up was mostly related to functional deficit and HSmental at baseline but also, though to a lesser degree, to younger age and lower anticipated stigma at baseline. Furthermore, age exerted several other influences on other baseline variables: Older age was related to both stronger WSD and more help-seeking intentions, while younger age was related to more anticipated stigma. Sex did not influence HSmental at follow-up, but anticipated stigma was higher in males and help-seeking intentions were higher in females. Yet, unexpectantly, both baseline help-seeking intentions and baseline personal stigma in terms of WSD were not significantly related to HSmental at follow-up, yet, WSD decreased help-seeking intentions and increased anticipated stigma. In order to examine an indirect effect of personal stigma on HSmental at follow-up via anticipated stigma, we tested the pathway "personal stigma – anticipated stigma – HSmental at follow-up"; however, this also remained insignificant ($p = 0.438$). Perceived stigma at baseline was completely unrelated to any other variable in the model (Fig. 2).

Model fit indices: $\chi^2_{(27)} = 32.174$ with $p = 0.226$, CFI = 0.985; SRMR = 0.047; RMSEA = 0.025 (90%CIs = 0.000, 0.054).

$^*p \le 0.05$; $^{**}p \le 0.01$; $^{***}p \le 0.001$; explained variance (R^2) for each endogenous variable in italics. In brackets, Odds Ratios for the endogenous variable "help-seeking within 3 years past baseline" are provided. Manifest variables are represented in rectangles, latent ones in ovals. Solid lines indicate significant paths, dashed lines indicate non-significant paths; in doing so, grey indicates positive, black negative correlations.

The bivariate correlations of the variables of the model are given in Table 3. Contrary to the SEM, they indicated small to moderate correlations between HSmental at follow-up with help-seeking intentions and with female sex but not age. In line with the model, functional deficits and earlier HSmental as well as anticipated stigma, but not personal or perceived stigma were significantly related to subsequent HSmental. Personal and perceived stigma were also uncorrelated to HSmental at baseline (Table 3).

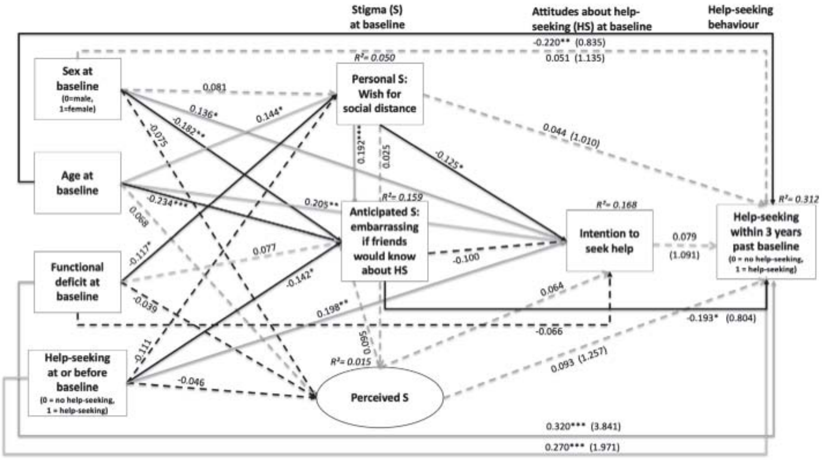

Fig. 2 Final model of associations between stigma, assumptions about help-seeking and healthcare utilization with standardized path coefficients ($N = 307$)

Discussion

Our unique longitudinal study examined the complex associations of various types of stigma (personal, perceived and anticipated), help-seeking intentions, functional deficit and health care utilization in a community sample of persons with mental health problems using structural equation modelling. Contrary to the longitudinal studies with 3- and 6-month follow-ups [8, 26, 27], our follow-up period of 3 years, was sufficiently long to allow for the new emergence of mental health problems and related help-seeking. While in comparison to a study with 11-year follow up of persons with and without mental health problems [23], our study was still short enough to rule out significant recall bias and significant change in attitudes and did not confuse the interpretation of non-help-seeking by mixing persons with and without mental health problems. Furthermore, our sample was randomly selected from the general population of, at baseline, 16–40-year-olds, i.e., in an age range in that many mental disorders develop first [50] and sufficiently large to ensure good power. Thus, our results are likely more generalizable to Middle-European samples in an age range of highest risk to develop a first episode of mental illness than the ones reported from the much smaller, rather old convenience sample ($N = 188$; mean age: 50 years) of the 3- and 6-month follow-up studies that was also preselected for symptoms of depression only [8, 26].

Our longitudinal analysis revealed expected associations of functional deficits and of earlier help-seeking for mental health problems with subsequent help-seeking that were similar to those cross-sectionally reported earlier from a larger baseline sample of the BEAR study [9]. Furthermore, it supported the negative effect of anticipated stigma on help-seeking for mental health problems [11]. With regard to age, the reported association of

Table 3 Spearman-correlations of variables used in the model ($n = 307$)

	1.	2.	3.	4.	5.	6.	7.	8.
1. Sex	1.0							
2. Age at baseline	.04	1.0						
3. Functional deficit	.04	.00	1.0					
4. Help-seeking at baseline	.14*	.22***	.33***	1.0				
5. Personal stigma (WSD)	.04	.11*	−.13*	.09	1.0			
6. Perceived stigma	−.03	.05	−.07	.01	.07	1.0		
7. Anticipated stigma	−.16**	−.22***	−.02	.20***	.16**	.02	1.0	
8. Intention to seek help	.16**	.24***	.02	.25***	.09	.06	.22***	1.0
9. Help-seeking after 3 years	.12*	−.04	.38***	.34***	−.08	.02	−.14*	.12*

* $p < .05$; ** $p < .01$; *** $p < .001$

older age with help-seeking [6, 7, 9] was not supported by our study, in which the contrary effect, an association with younger age, was found. Other direct effects on help-seeking reported from cross-sectional studies could not be replicated longitudinally, such as the help-seeking reducing effect of perceived and personal stigma [3, 13, 22], which also did not show on the level of bivariate correlations, or the help-seeking increasing effect of earlier help-seeking intentions [13, 23, 24], and of female sex [6, 8].

In line with previous results [9], our results indicated that functional deficits had the strongest effect on help-seeking for mental health problems at follow-up in both bivariate correlations and the model (Fig. 2). This indicates that persons with mental health problems are more likely to seek help, when they already experience functional impairments in some areas of life. These, however, only develop over the course of the disorder and/or when problems of multiple domains of mental disorder have already developed [9]. This important role of functional impairments in help-seeking for mental health problems is unfortunate in light of the fact that early help-seeking for mental health problems, in particular, is a prerequisite not only for preventing mental disorder but also for preventing impairments in functioning and quality of life [4].

The second most important predictor of help-seeking for mental health problems at follow-up was help-seeking for mental health problems at baseline, which is in line with other studies [9, 19]. This might reflect an effect of familiarity and previous positive experience with mental health services that counteracts negative beliefs towards mental health services and professionals, which were found to be the most cited barriers to help-seeking in a recent review focussing on adolescents [10]. Thus, future longitudinal studies in even larger samples should also focus on the interplay between these variables and their predictors, including for example the type of mental health problems that help was sought for. This might be important in light of reports that help-seeking is predominately reported because of depressiveness, anxiety and interpersonal problems [51], possibly because these symptoms were reported to impact most strongly and persistent on self-perceived health status and quality of life [52], which might also affect help-seeking.

Contrary to some cross-sectional studies [3, 22], but in line with a recent meta-analysis on the impact of various stigma types on help-seeking [12], perceived stigma had no significant effect on help-seeking or assumptions about own help-seeking. In the meta-analysis [12], only personal attitudes towards mental illness or help-seeking were significantly associated with active help-seeking, in particular own negative attitudes towards help-seeking (including anticipated stigma in terms of embarrassment about help-seeking) and personal stigma (including WSD). In our model, these effects were not independent of each other; rather, contrary to our hypotheses, personal stigma had no direct effect on help-seeking for mental health problems at follow-up, but increased anticipated stigma at baseline. Furthermore, anticipated stigma significantly decreased help-seeking for mental health problems at follow-up. This finding is contrary to that of another longitudinal study [23], in which anticipated stigma had no influence on future help-seeking for mental health problems. However, this study was an 11-year follow-up and, thus, this particular assumption about help-seeking might have changed over the 11 years, because anticipated stigma about help-seeking was more prominent in younger people in our model.

Despite the weak but significant correlation that is in line with earlier reports on a positive association between help-seeking intentions and help-seeking [13, 23, 24], help-seeking intentions were not related to help-seeking for mental health problems at follow-up in our model. This might be due to factors that might influence the association between help-seeking intentions and help-seeking differently over time, such as the perceived need for help-seeking [24], perceived accessibility, spatial and temporal distance from mental health services, treatment efficacy beliefs, and anticipated self-stigma [8] that should be studied in more detail in future studies. The impact of the perceived need for help-seeking, however, might be partially reflected in the independent role of functional deficit, the strongest predictor of help-seeking for mental health problems at follow-up, whereat the association between perceived need for help-seeking and functioning might be further moderated by aspects of autonomy and underestimation of symptoms [53]. Yet, the gap between intention and behaviour is well known [54] and clearly observable in our study, in which 84.7% of the persons with mental health problems stated an intention to seek professional help for a serious mental problem, but only 19.9% actually sought help. Thus, future research should carefully differentiate between help-seeking intention and behaviour, and focus more on the latter.

In line with previous findings [6], women had higher intention to seek help; yet, a sex effect on help-seeking for mental health problems could not be detected, albeit frequent report of more help-seeking for mental health problems in women [6, 55] and the significant positive correlation between female sex and help-seeking for mental health problems. This indicates that the frequently reported sex effect on help-seeking for mental health problems may rather be mediated by other factors such as anticipated stigma about help-seeking, which was less severe in females.

Strengths and limitations

Besides the strengths of our well-powered study of being one of the very few longitudinal community studies and of observing multiple factors and their interrelations in one model of help-seeking in persons of the community with mental health problems, some limitations have to be discussed. First, our sample was restricted to German-speaking persons because of the language of the questionnaires and to persons between 16 to 40 years at baseline because of the study focus of the BEAR study on psychosis-risk symptoms; additionally, it was of mainly Middle-European background. Due to existing cultural differences regarding help-seeking [56] and stigma [3], our study may thus only generalize to the Western, Middle-European culture. Another limitation, which interview- or questionnaire-based studies usually have in common, is the probability of systematic response bias due to social desirability. Furthermore, as already discussed above, our model did not include all possible moderators of help-seeking for mental health problems itself as well as of some of the significant factors in the model.

Conclusion

With only 22.5% of persons with mental health problems seeking any help for these, our study confirmed a prominent treatment gap. Functional deficits, which may introduce a perceived need for help, had the strongest impact on help-seeking for mental health problems longitudinally. In doing so, younger men showed more anticipated stigma towards help-seeking at follow-up, which decreased help-seeking for mental health problems at follow-up. Surprisingly, personal and perceived stigma had no direct effect on help-seeking for mental health problems, nor had help-seeking intentions or sex. At a non-help-seeking rate of more than 75%, our study raises the questions, whether the health care system is offering enough low-threshold help-seeking opportunities for persons with emerging mental health problems, and how to design mental health care systems that are not associated with anticipated stigma, i.e., that identify features conveying anticipated stigma.

Abbreviations

AAPOR: American Association for Public Opinion Research; BEAR: Bern Epidemiological At-Risk; HSmental: Help-seeking for mental health problems; WSD: Wish for social distance; SEM: Structural equation model

Supplementary Information

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Additional file 1.

Additional file 2.

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Not applicable.

Authors' contributions

F.S.-L. and B.G.S. designed the study. F.S.-L. and M.C. supervised collection of the data. Under the supervision of F.S.-L., C.M.D. made the analyses and wrote the manuscript. M.R. contributed intellectual content to the manuscript. N.O. aided in revising the manuscript. All the authors were involved in discussing the findings. They all approved its final version.

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Availability of data and materials

The datasets used and/or analysed during the current study are available from the corresponding author on reasonable request.

Declarations

Ethics approval and consent to participate

Verbal informed consent was obtained and recorded from all subjects prior to both starting the telephone interview or posting the questionnaires. All procedures contributing to this work and involving human subjects complied with the ethical standards of the relevant national and institutional committees on human experimentation and with the Helsinki Declaration of 1975, as revised in 2008, and were approved by the ethical committee of the University of Bern (No. 172/09).

Consent for publication

Not applicable.

Competing interests

Drs Michel, Rosen, Schimmelmann, Schultze-Lutter, MSc Doll, and have declared that there are no conflicts of interest in relation to the subject of this study. Dr. Schimmelmann reports and received honoraria and is on the speakers' board of Takeda (Shire) and Infectopharm.

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Publisher's Note

Additional information file

for

Predictors of help-seeking behaviour in people with mental health problems: a 3-year prospective community study

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eText 1 Details on study design

To increase response rates, contact was initially established using a one-page information letter at both baseline and follow-up. First telephone contact was attempted within two weeks of sending the letter. After detailed explanation of goals and proceedings of the study, participation in the telephone interview was considered as giving informed consent.

At baseline, inclusion criteria were being of eligible age (16-40 years) and being a main resident of Canton Bern (i.e. having a valid address and not being abroad during the assessment period). At follow-up, inclusion criteria were participation in baseline interview and consent to be re-contacted. In addition. an available telephone number was required for eligibility at both baseline and follow-up. We called participants up to 100 times over several months at various times and days, including Saturdays. Potential participants that were not reached within this time were considered as unknown eligible. Moreover, interviews at both baseline and follow-up were aborted prematurely when respondents had (i) a lifetime diagnosis of psychosis (1) or, at baseline, (ii) insufficient language skills in German, French, or English.

The semi-structured interviews lasted 43 minutes on average (SD: 20 minutes; range: 20–225 minutes) at baseline, and 52 minutes on average (SD: 26 minutes; range: 24-248 minutes) at follow-up.

The BEAR study was carried out in accordance with the latest version of the Declaration of Helsinki. Further details on recruitment and sample at baseline and follow-up are provided in Schultze-Lutter and colleagues [2,3].

Details on recruitment of sample and representativeness

Baseline assessment

At baseline, from the 4,471 eligible participants, 2,857 interviews were conducted [2]. However, 125 (4.4%) of the 2,857 interviews were aborted prematurely by the interviewer for insufficient language skills; 41 (1.4%) were aborted for a lifetime diagnosis of psychosis, in which 19 were not diagnosed/treated; [1] and 8 (0.3%) were terminated prematurely by the participants themselves. Lack of time or interest was the main reason given by the 1,350 (29.5%) refusers.

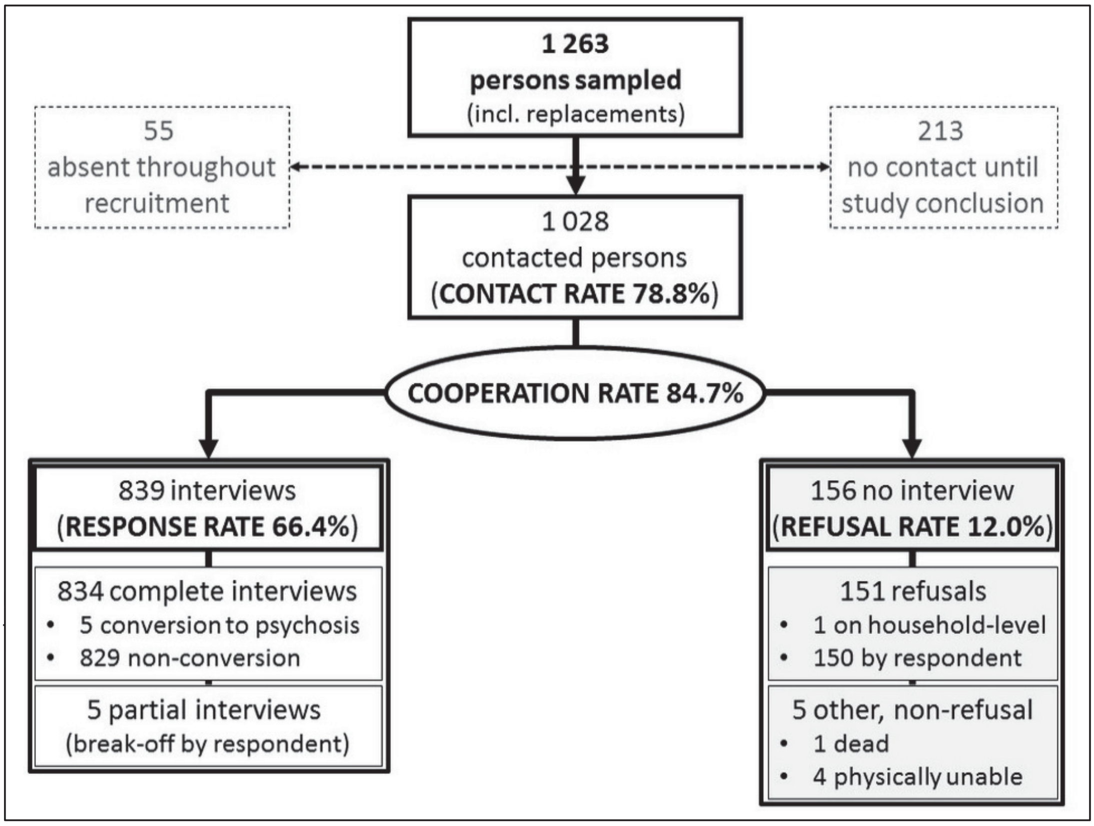
The contact rate was 94.8%, and the response rate, 63.4% with 2,683 completed interviews. The eligible sample was negligibly older than the 16- to 40-year-old general population of Bern, mainly because a non-significant higher number of available telephone numbers (landlines) was found for 36- to 40-year-olds. Similar to the observation for the eligibility sample, the 2,683 interviewees differed negligibly, i.e., at less than small effect size, from the 16- to 40-year-old general population of Bern in age distribution, but not in sex, nationality, and marital status. Consequently, as no response bias was detectable beyond the extremely small age-related inclusion bias, the interviewees were regarded as representative of their age group [2].

Of the 2,683 interviewees, 2,539 were sufficiently fluent in German to be eligible for the add-on questionnaire study of mental health literacy and stigma. Of these, 324 refused to participate. Of the 2,215 interviewees who agreed to the add-on study, 689 did not returned the questionnaire after a maximum of three reminder calls, while 1,526 returned the questionnaire. Thus, according to the definitions of the American Association for Public Opinion Research [4], the contact rate of the add-on study was 72.9%, the cooperation rate 82.5%, the refusal rate 12.8%, and the response rate 60.1%.

Follow-up assessment

Originally, the follow-up recruitment period was planned to span over 36 months. However, due to the PI (FSL) leaving Switzerland, funding stopped slightly earlier, and the study was concluded two months earlier. Thus, during the abbreviated 34 months of recruitment (June 2015-March 2018), the original recruitment aims of n=500 persons who had reported at least one lifetime clinical high risk (CHR) symptom (RISK) at baseline and n=500 matched persons who had not reported any CHR symptom (CONTROL) were not fully reached, and the contact rate was only 78.8% (eFigure 3). Furthermore, until conclusion of the study, contact with the target person could only be re-established in 995 persons, resulting in a cooperation rate of 84.7% (eFigure 3). Of these 995 persons, 151 refused to participate again in the study (eFigure 3). The main reasons for refusal given by the n=86 (57.0%) refusers who agreed to participate in a non-responder interview were similar to those given by refusers of the baseline [2]. In descending order and with multiple answers possible, reasons for refusal at follow-up were: 46 (53.5%) lack of time, 37 (43.0%) lack of interest, 11 (12.8%) interview too long, 10 (11.6%) too intimate and/or private questions, 6 (7.0%) no personal gain, 3 (3.5%) irrelevant topic.

Of the 834 interviewees with a full interview [3], 434 had been sampled as RISK subjects (52.0%) and 400 as CONTROL subjects (48.0%). Thus, slightly more sampled RISK than sampled CONTROL had participated until early study termination ($\chi^2_{(1)}$=6.832, p=0.009, Cramer's V=0.074). However, interviewed RISK and CONTROL did not differ in baseline age (RISK: 30.4±7.7 yrs., Mdn=32.2 yrs.; CONTROL: 30.2±7.7 yrs., Mdn=32.4 yrs.; U=85384.5, p= 0.684, Rosenthal's r=0.014), sex (RISK: 46.5% male, CONTROL: 47.3% male; $\chi^2_{(1)}$=0.042, p=0.838, Cramer's V=0.007), baseline nationality (RISK: 96.3% Swiss, CONTROL: 96.3% Swiss; $\chi^2_{(1)}$=0.002, p=0.961, Cramer's V=0.002), baseline highest educational level (RISK: 86.3% ISCED 5 or higher, CONTROL: 86.1% ISCED 5 or higher; $\chi^2_{(1)}$=4.549, p=0.715, Cramer's V=0.074), and baseline partnership (RISK: 56.9% single, CONTROL: 56.8% single; $\chi^2_{(1)}$=0.002, p=0.962, Cramer's V=0.002) [3]. Thus, despite the pre-term conclusion of the study and the negligible bias towards recruitment of RISK, matching was sufficient and both samples were well comparable.



eFig. 3. Survey outcome rates of the first follow-up of the BEAR study according to the definitions of the American Association for Public Opinion Research, AAPOR [4].

Of the 834 participants with a complete follow-up interview, 542 (65.0%) had participated in the add-on study at baseline and returned the questionnaire. They formed the sample of the analyses in the present study.

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Additional information file
for
Predictors of help-seeking behaviour in people with mental health problems: a 3-year prospective community study

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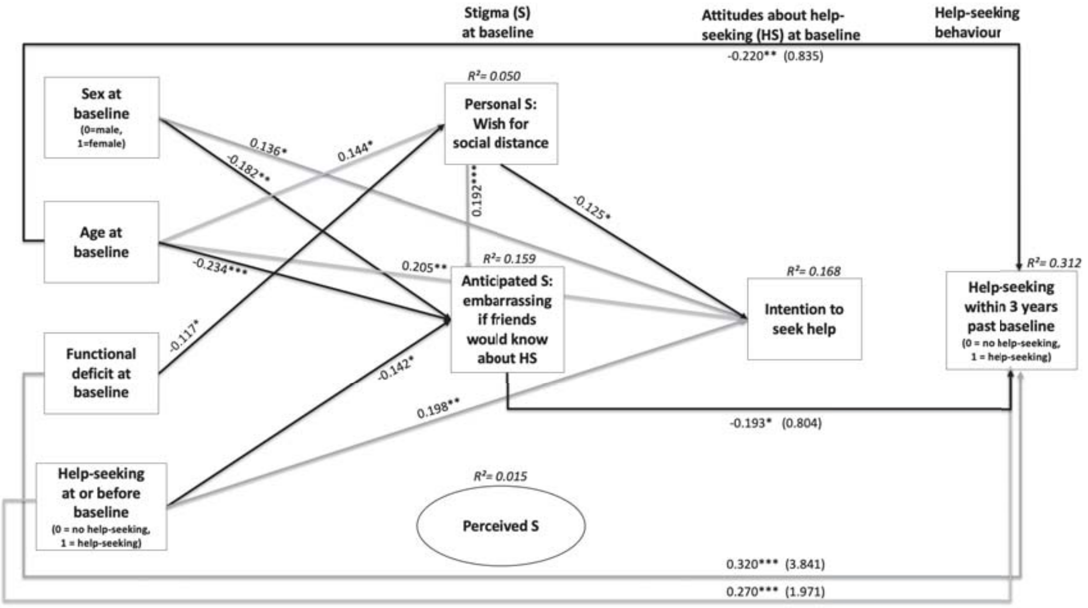

eFig. 2.

Final model of only significant associations between stigma, assumptions about help-seeking and healthcare utilization with standardized path coefficients (N=307).

Model fit indices: $\chi^2_{(27)}$=32.174 with p=0.226, CFI=0.985; SRMR=0.047; RMSEA=0.025 (90%CIs=0.000, 0.054). *p≤0.05; **p≤0.01; ***p≤0.001; explained variance (R^2) for each endogenous variable in italics. In brackets, Odds Ratios for the endogenous variable "help-seeking within 3 years past baseline" are provided. Manifest variables are represented in rectangles, latent ones in ovals. Solid lines indicate significant paths, dashed lines indicate non-significant paths; in doing so, grey indicates positive, black negative correlations.

3 Diskussion

In der vorgelegten Arbeit konnten mithilfe von Strukturgleichungsmodellen wichtige Erkenntnisse in Hinblick auf den Einfluss von MHL auf Stigmatisierung sowie prädizierende Faktoren von Hilfesuchverhalten gewonnen werden. In der Querschnittsstudie des ersten Papers hatte MHL, welches anhand der korrekten Erkennung der Diagnose gemessen wurde, keinen Einfluss auf Stigmatisierung. Allein das psychosoziale Erklärungsmodell hatte einen reduzierenden Effekt auf Stigmatisierung. Im Gegensatz dazu steigerte die wahrgenommene Gefährlichkeit den WSD gegenüber Personen mit einer psychischen Erkrankung. In der Längsschnittstudie des zweiten Papers reduzierte die antizipierte Stigmatisierung das Hilfesuchverhalten, während persönliche und wahrgenommene Stigmatisierung keinen Einfluss auf das Hilfesuchverhalten hatte. Funktionales Defizit, gefolgt von früherer Hilfesucherfahrung, prädizierte in einem Nachuntersuchungszeitraum von drei Jahren das Hilfesuchverhalten von Personen mit psychischen Problemen am besten.

3.1 Einflussfaktoren von Stigmatisierung und Hilfesuchverhalten

Im ersten Paper wurden Einflussfaktoren auf die persönliche Stigmatisierung, gemessen anhand des WSD, untersucht. Hierbei zeigte sich, dass die Faktoren wahrgenommene Gefährlichkeit und die Fallvignette mit den beschriebenen psychotischen Symptomen hypothesenkonform einen signifikanten positiven Einfluss auf den WSD hatten, während ein psychosoziales Erklärungsmodell hypothesenkonform den WSD signifikant reduzierte. MHL, gemessen an der korrekten Benennung des Störungsbildes, sowie ein biologisches Erklärungsmodell hatten hypothesenkonträr keinen Einfluss auf Stigmatisierung

3.1.1 MHL und Stigmatisierung

In der ersten Studie zeigte MHL in Hinblick auf die verschiedenen Fallvignetten Unterschiede. StudienteilnehmerInnen konnten anders als in der Fallvignette mit den beschrieben psychotischen Symptomen häufiger die Symptome der depressiven Fallvignette dem richtigen Störungsbild korrekt zuordnen. Dieses Ergebnis deckt sich mit den anderer Studien, in denen eine Depression im Vergleich zu einer Schizophrenie häufiger korrekt benannt wurde (Furnham et al., 2009, Jorm et al., 1997). Eine Erklärung hierfür könnte sein, dass Depressionen weltweit am häufigsten auftreten (Wittchen et al., 2011), und Personen daher eventuell schon Kontakt zu dieser psychischen Erkrankung im Freundes- oder Familienkreis hatten. Da Psychosen seltener auftreten, fiel den StudienteilnehmerInnen daher die Einordnung dieser Symptome schwerer.

Des Weiteren könnte es Personen aus der Allgemeinbevölkerung aufgrund der Heterogenität der klinischen Erscheinungsbilder schwergefallen sein, die in der Fallvignette beschriebenen Symptome korrekt zu benennen (Cocchi et al., 2013, Dwyer et al., 2020, Picardi et al., 2012, Fried und Nesse, 2015). Obwohl bei beiden Störungsbildern eine Heterogenität des klinischen Erscheinungsbildes nachgewiesen werden konnte (Cocchi et al., 2013, Dwyer et al., 2020, Picardi et al., 2012, Fried und Nesse, 2015), könnte diese insbesondere bei Laien das Benennen einer korrekten Diagnose bei psychotischen Symptomen erschwert haben. Bei psychotischen Symptomen können der Verlauf als auch Behandlungserfolg von PatientInnen variieren und Symptome stimmen nicht oder nur teilweise überein (Andreasen et al., 1999, Fried und Nesse, 2015).

In den vergangenen Jahren versuchten Anti-Stigma- und Gesundheitskampagnen mithilfe einer verbesserten MHL Stigmatisierung zu reduzieren und das Hilfesuchverhalten von Personen mit einer psychischen Erkrankung zu verbessern (Brijnath et al., 2016, Henderson et al., 2013, Hanisch et al., 2016, Morgan et al., 2018). Diese Anti-Stigma-Kampagnen stützen sich auf die Annahmen, dass eine erhöhte MHL zu einer Reduzierung von stigmatisierenden Einstellungen führt (Rüsch et al., 2005, Angermeyer et al., 2013b). In unserer ersten Studie wiesen konträr dazu weder MHL, noch die biogenetische Ursachenzuschreibung der psychischen Erkrankung einen direkten signifikanten Zusammenhang mit dem WSD bei Personen mit einer Depression oder einer Psychose auf.

Eine Erklärung hierfür könnte sein, dass in der vorgelegten Studie 1 eine gute MHL zu einem stärkeren Befürworten von biogenetische Ursachenzuschreibung führte und diese wiederum zu einer stärkeren Wahrnehmung von Gefährlichkeit von Patienten verursachte (Schomerus et al., 2014, Haslam, 2015, Kvaale et al., 2013a, Doll et al., 2021a), aber letztendlich die Wahrnehmung von Gefährlichkeit den WSD am stärksten negativ beeinflusste. Die Ergebnisse stimmen mit einer anderen Studie überein, die ebenfalls keinen Zusammenhang zwischen einer biogenetischen Ursachenzuschreibung und WSD fand (Von Lersner et al., 2019). Aufgrund der Tatsache, dass ein Großteil dieser Studien Stigmatisierung im Sinne von WSD gemessen haben, wurde ebenfalls in der ersten Studie WSD als Ergebnisvariable verwendet (z.B. Von Lersner et al., 2019, Schomerus et al., 2015b, Angermeyer et al., 2009, Angermeyer et al., 2015, Lee et al., 2014, Kvaale et al., 2013a, Schnyder et al., 2018, Angermeyer und Matschinger, 2003, Jorm und Oh, 2009, Dey et al., 2020). Da in Studie 2 die antizipierte Stigmatisierung als alleinige Stigmatisierungsvariable einen Einfluss auf Hilfesuche hatte, wäre es rückblickend interessant gewesen, MHL im Kontext von antizipierter Stigmatisierung zu untersuchen und herauszufinden, ob andere Formen von Stigmatisierung von MHL und einer biologischen Ursachenzuschreibung beeinflusst werden.

Bisherige Studienergebnisse deuten darauf hin, dass eine genetische Ursachenerklärung vermutlich dazu führt, dass Betroffenen keine Kontrolle über ihre Symptome zugeschrieben wird und Außenstehende die Erkrankung als unberechenbar wahrnehmen (Lebowitz, 2019, Angermeyer et al., 2011). Doch auch für den Betroffenen selbst führt die Ursachenerklärung einer psychischen Erkrankung anhand ausschließlich genetischer Prädispositionen zu einer signifikant geringeren Überzeugung in die eigenen Fähigkeiten, depressive Symptome zu bewältigen (Lebowitz und Ahn, 2018).

Auf der anderen Seite führte das Befürworten eines biologischen Erklärungsmodells aber auch zu einer Reduzierung der eigenen Schuldzuweisung in Hinblick auf die psychische Erkrankung (Lebowitz, 2019). Es verbesserte darüber hinaus die Medikamentenadhärenz und trug dazu bei, Drogenkonsum zu vermeiden, der eine psychische Erkrankung eventuell begünstigt (z.B. Konsum von Marihuana bei Schizophrenie) (Lebowitz et al., 2021, Lebowitz, 2019).

Im Gegensatz zu einem biologischen Erklärungsmodell konnten Studien zeigen, dass insbesondere die psychosozialen Erklärungsmodelle psychotherapeutische Annäherungen fördern und Stigma reduzieren (Carter et al., 2017, Kvaale et al., 2013b). Auch in unserer ersten Studie führte das Befürworten eines psychosozialen Erklärungsmodells nicht nur zu einer Reduzierung der wahrgenommenen Gefährlichkeit von Personen mit einer psychischen Erkrankung, sondern auch zu einer Reduzierung von Stigma. Dies wiederum würde auch den stärkeren WSD gegenüber den Personen mit psychotischen Symptomen in unserer ersten Studie erklären, bei denen in unserer Studie die Probanden ein biologisches Erklärungsmodell häufiger als Ursache nannten, im Gegensatz zu den Personen mit depressiven Symptomen, denen häufiger ein psychosoziales Ursachenmodell zugeordnet wurde.

Eine andere Studie legte dar, dass im Laufe der letzten Jahre in der deutschen Allgemeinbevölkerung vermehrt biologische Erklärungen für die Ursache von Schizophrenie als wahrscheinlich empfunden wurden. Hingegen sah die Allgemeinbevölkerung negative Lebensereignisse vermehrt als Entstehungsgrund einer

Depression an (Angermeyer et al., 2013a). Im Gegensatz dazu zeigten Studien, dass Personen mit einer Psychose und auch deren Familienangehörige eher psychosoziale Ursachen, wie stressreiche und traumatische Lebenserfahrungen, den psychotischen Symptomen zuordneten (Dudley et al., 2009, Lobban et al., 2005, Magliano et al., 2001).

3.1.2 Auswirkungen von Erklärungsmodellen auf die Behandlung

Aufgrund der Fortschritte in den Neurowissenschaften und in der Genetik in den 90er Jahren, verbesserte sich das Verständnis der biologischen Ursache von psychischen Erkrankungen und führten zu einer Fokussierung auf biologische Ursachen in der Behandlung (Insel und Quirion, 2005, Sartorius et al., 2002). Wenn man die Rolle von biologischen Erklärungsmodellen in Hinblick auf die Behandlung näher betrachtet, zeigt sich, dass mithilfe von psychopharmarkologischer Behandlung Rückfälle innerhalb eines Jahres und eine Hospitalisierung reduziert werden können (Ceraso et al., 2020). Jedoch erleiden 24% der Betroffenen trotz psychopharmakologscher Behandlung innerhalb eines Jahres einen Rückfall (Ceraso et al., 2020). Außerdem zeigte sich eine Nicht-Adhärenz mit der Psychopharmakotherapie bei 56% der PatientInnen mit einer Schizophrenie und bei 50% der PatientInnen mit einer Majoren Depression (Semahegn et al., 2020). Erst 2002 wurde in England neben einer pharmakologischen Behandlung zusätzlich eine kognitive Therapie bei Psychose empfohlen (NICE, 2014). Manche Länder, wie beispielsweise Deutschland, nahmen erst 2014 eine psychotherapeutische Behandlungsempfehlung in die Leitlinien für die Behandlung von Psychose auf (Bundes Psychotherapeuten Kammer, 2014). Seitdem werden die Kosten von der Krankenkasse übernommen (Bundes Psychotherapeuten Kammer, 2014). Die Tatsache, dass eine psychotherapeutische Behandlung für Personen mit einer Schizophrenie im Vergleich zu Personen mit einer Depression deutlich später in die Leitlinien aufgenommen und dadurch auch erst in den letzten Jahren empfohlen und durchgeführt wurde, könnte dazu geführt haben, dass in unserer ersten Studie ein biologisches Ursachenmodell eher in der Fallvignette mit den psychotischen Symptomen als wahrscheinlich erachtet wird. Die Vermittlung eines psychosozialen Erklärungsmodelles in Anti-Stigma-Kampagnen würde Personen mit einer psychotischen Erkrankung bei ihrem eigenen Erklärungsmodell abholen und die Bereitschaft für eine Psychotherapie erhöhen. Dies könnte helfen, die Medikamentenadhärenz, den Umgang mit Ängsten, Schamgefühlen und Stresssituationen zu verbessern und einen Rückfall zu verhindern oder hinauszuzögern (Bechdolf und Klingberg, 2014, Bighelli et al., 2021). Des Weiteren würde ein psychosoziales Erklärungsmodell die Angst vor Stigmatisierung als Barriere für das Hilfesuchverhalten reduzieren und dadurch die Behandlungslücke minimieren (Doll et al., 2021b, Clement et al., 2015).

3.1.3 Wahrgenommene Gefährlichkeit und Stigmatisierung

Personen mit einer Psychose leiden häufig unter Stigmatisierung (Angermeyer et al., 2013b, Von Lersner et al., 2019, Schomerus et al., 2012b, Angermeyer et al., 2015). Auch in der vorgelegten Arbeit wurden in der ersten Studie auch ohne Benennung einer Diagnose die beschriebenen Symptome von Personen mit einer Psychose mit einem stärkeren WSD assoziiert, als von Symptomen von Personen mit einer Major Depression. Dies könnte damit zusammenhängen, dass in der Studie Personen mit psychotischen Symptomen auch als gefährlicher wahrgenommen wurden und die wahrgenommene Gefährlichkeit in Übereinstimmung mit anderen Studien (Norman et al., 2008b, Angermeyer und Matschinger, 2004), wie bereits oben beschrieben, den WSD steigerte.

Das Bild, dass Personen mit einer Schizophrenie gefährlich sind, wird teilweise auch von Medien vermittelt, in denen häufig Verbrechen von Personen mit einer Schizophrenie berichtet werden und diese daher von der Allgemeinbevölkerung als besonders gefährlich wahrgenommen werden (Klin und Lemish, 2008). Obwohl in den letzten Jahren eine Stigmatisierung in der Berichterstattung von psychischen Störungen allgemein abgenommen hat, wurden psychotische Erkrankungen und bipolare Erkrankungen in den Medien im Vergleich zu anderen psychischen Erkrankungen häufiger stigmatisiert (Grandón et al., 2021, Li et al., 2021, Hildersley et al., 2020). In einer Studie konnte auch gezeigt werden, dass die Konfrontation mit medialen Berichten zwar die Wahrnehmung, dass bestimmte Personengruppen gefährlich seien, beeinflusst, jedoch andere Faktoren, wie beispielsweise persönlichen Kontakt zu dieser Personengruppe, diesen Effekt wieder aufheben (Reavley et al., 2016). Eine Anzahl von Studien belegte auch, dass psychosoziale Gesundheitsfachkräfte durch den regelmäßigen Kontakt zu Betroffenen, psychische Erkrankungen im Vergleich zur Allgemeinbevölkerung als weniger gefährlich einstuft (Jorm et al., 2012). Aufgrund der höheren Prävalenzrate bei depressiven Erkrankungen ist daher davon auszugehen (Wittchen et al., 2011), dass eine mediale Beeinflussung bei psychotischen Erkrankungen eher wahrscheinlich ist, und dass Personen mit einer Depression im Vergleich zu Personen mit einer Psychose als weniger gefährlich wahrgenommen werden. So nahmen Probanden nach der medialen Berichterstattung über den Germanwings Flugabsturz, verursacht durch den Suizid eines depressiven Co-Piloten, Personen mit depressiven Symptomen zwar als unberechenbarer, nicht aber als gefährlicher wahr (Schomerus et al., 2015a).

3.1.4 Der Einfluss von Stigmatisierung auf das Hilfesuchverhalten

In den vergangenen Jahren legten einige Studien stigmatisierende Einstellungen gegenüber psychischen Erkrankungen als eine der Hauptbarrieren für Hilfesuchverhalten offen (z.B. Mojtabai, 2010, Schnyder et al., 2017, Aguirre Velasco et al., 2020, Clement et al., 2015, Coleman et al., 2017, Corrigan et al., 2014). Anders als in vorangegangenen Querschnittsstudien hatte wahrgenommenes (öffentliches) Stigma bei Personen mit psychischen gesundheitlichen Problemen keinen signifikanten Einfluss auf das Hilfesuchverhalten oder Annahmen bzgl. des Hilfesuchverhaltens (Clement et al., 2015, Schnyder et al., 2018, Nearchou et al., 2018).

Das Ergebnis stimmt mit einer Metaanalyse über aktives Hilfesuchverhalten bei psychischen Erkrankungen überein (Schnyder et al., 2017). Bei dieser wurde ebenfalls kein Zusammenhang zwischen wahrgenommener (öffentlichen) Stigmatisierung und aktivem Hilfesuchverhalten gefunden. Allerdings zeigte sich hier, dass persönliche Stigmatisierung die Hilfesuche bei psychischen gesundheitlichen Problemen reduzierte (Schnyder et al., 2017). Obwohl in Studie 2 persönliche Stigmatisierung keinen signifikanten Einfluss auf das Hilfesuchverhalten hatte, verstärkte es die antizipierte Stigmatisierung zu Studienbeginn signifikant (Doll et al., 2021b).

Antizipierte Stigmatisierung reduzierte in Studie 2, wie bereits auch schon in einer anderen Studie beschrieben (Rüsch et al., 2014), Hilfesuchverhalten und war bei jüngeren Personen stärker vorhanden. In einer anderen longitudinalen Studie (Mojtabai et al., 2016) hatte antizipierte Stigmatisierung keinen Einfluss auf das Hilfesuchverhalten von Personen mit einer psychischen Erkrankung. Diese longitudinale Studie hatte jedoch ein Nachverfolgungszeitraum von 11 Jahren, sodass Annahmen über Hilfesuchverhalten sich in dieser Zeit auch verändert haben könnten, zumal die antizipierte Stigmatisierung auch stärker bei jüngeren Personen stärker ausgeprägt war. In zukünftigen Anti-Stigma-Kampagnen wäre es daher wichtig antizipierte Stigmatisierung zu berücksichtigen und eventuell im Gesundheitssystem nicht-stigmatisierende niedrigschwellige Hilfesuchangebote zu etablieren.

3.2 Weitere Prädiktoren von Hilfesuchverhalten

Da Stigmatisierung und deren Einflussfaktoren nicht allein ausschlaggebend für das finale Hilfesuchverhalten sind, haben wir in einer zweiten Studie weitere Einflussfaktoren in das SEM mit aufgenommen. Bisherige Studien untersuchten Hilfesuchverhalten häufig in einem Querschnittsdesign (Michel et al., 2018, Schnyder et al., 2018, Ruud et al., 2020), deshalb wurde in der zweiten Studie die Prädiktoren von Hilfesuchverhalten in einem Zeitraum von drei Jahren analysiert.

Hierbei konnte gezeigt werden, dass Stigmatisierung nicht als einziger Faktor das Hilfesuchverhalten bei psychischen Gesundheitsproblemen beeinflusst. Vielmehr beeinflusste ein höheres funktionales Defizit das Hilfesuchverhalten stärker als Stigmatisierung. Je stärker die funktionalen Defizite waren, desto eher suchten die Betroffenen Hilfe auf. Diese Beobachtung ist auch konform mit unserer Hypothesen. Denn bereits in einer vorangegangenen Querschnittsanalyse der BEAR-Studie konnte der Einfluss von funktionalen Defiziten auf Hilfesuchverhalten als Mediator aufgezeigt werden (Michel et al., 2018). Dies bedeutet, dass Personen oftmals erst Hilfe suchen, wenn sie bereits Beeinträchtigungen in einigen Lebensbereichen erfahren. Unglücklicherweise würde jedoch gerade die frühzeitige Behandlung von psychischen Problemen oder Erkrankungen, wenn die funktionelle Beeinträchtigung noch nicht so stark ausgeprägt ist, helfen, schwere Verläufe und Verluste (z.B. Jobverlust) zu vermeiden (Campion et al., 2012, Murru und Carpiniello, 2018).

Weitere positive Auswirkungen auf das Hilfesuchverhalten hatten konform unserer Hypothesen bereits frühere Hilfesucherfahrungen zum Zeitpunkt des Studienbeginns. Durch eine frühere Hilfesuche machten Personen eventuell bereits eine positive Erfahrung mit dem Gesundheitssystem. Sie sind vertraut mit dem System und können möglicherweise ihre Symptome und Probleme besser erkennen, sodass sie wissen, wann sie wieder Hilfe benötigen (Aguirre Velasco et al., 2020). Aufschlussreich könnte in zukünftigen longitudinalen Studien mit großen Stichproben auch die Forschungsfrage sein, für welche Art mentaler Gesundheitsprobleme Personen Hilfe suchen. In einer vergangenen longitudinalen Studie kristallisierte sich heraus, dass Betroffene überwiegend bei Depression, Angst und interpersonellen Problemen Hilfe wahrnahmen (Schultze-Lutter et al., 2014).

3.2.1 Die Rolle von soziodemografischen Faktoren in Hinblick auf Stigmatisierung und Hilfesuchverhalten

Ein bedeutender soziodemografischer Faktor im Kontext von Stigmatisierung und Hilfesuchverhalten ist das Lebensalter. Hierbei zeigte sich in der zweiten Studie, dass mehr jüngere als ältere Erwachsene Hilfe für psychische Gesundheitsprobleme in einem Zeitraum von drei Jahren suchten, obwohl ältere Erwachsene eher eine Hilfesuchintention angaben. Diese Erkenntnisse decken sich mit denen anderer Studien (Klap et al., 2003, Mackenzie et al., 2019). Ein Grund für eine geringe Inanspruchnahme durch ältere Probanden könnte sein, dass die wahrgenommene Notwendigkeit ein entscheidender Faktor für Hilfesuchverhalten ist (Schomerus et al., 2019) und ältere Erwachsene psychische Gesundheitsfürsorge, insbesondere der Psychotherapie, weniger wahrscheinlich als notwendig erachteten (Forbes et al., 2017).

In Hinblick auf Stigmatisierung zeigten in der zweiten Studie ältere im Vergleich zu jüngeren Probanden einen stärkeren WSD in Hinblick auf Personen mit einer psychischen Erkrankung. Der stärkere WSD bei älteren Probanden könnte, wie auch bereits in anderen Studien gezeigt (Angermeyer und Matschinger, 2004, Jorm und Oh, 2009, Schomerus et al., 2015b), auf eine schlechtere MHL zurückzuführen sein (Farrer et al., 2008, Hadjimina und Furnham, 2017). Allerdings wurde in der Analyse der ersten Studie kein Zusammenhang zwischen MHL, im Sinne von korrekter Benennung der Diagnose, und WSD gefunden (Doll et al., 2021a). Eine Alters-Kohorten-Analyse mit einer deutlich breiteren Altersspanne von 18 bis 93 Jahren ergab, dass unabhängig von der Kohorte der Wunsch nach sozialer Distanz gegenüber Personen mit einer Depression oder Schizophrenie mit höherem Lebensalter zunahm (Schomerus et al., 2015b).

Als mögliche Erklärung wurde in der Studie von Schomerus et al. (2015b) die sozio-emotionale Theorie in Erwägung gezogen (Carstensen et al., 1999). Sie besagt, dass ein reduzierter sozialer Kontakt von älteren Personen nicht auf ein allgemeines Desinteresse zurückzuführen ist, sondern vermehrt auf die selektive Kontaktierung von Mitmenschen, die positive Emotionen auslösen. Dies würde im Umkehrschluss bedeuten, dass ältere Erwachsene vermehrt diejenigen meiden, die möglicherweise negative Emotionen auslösen (Fredrickson und Carstensen, 1990).

Darüber hinaus wäre es interessant herauszufinden, ob das ‚Alter' auch die wahrgenommene Gefährlichkeit, und somit auch deren Einfluss auf Stigmatisierung beeinflusst. Da bisherige Studien jedoch eher Alterseffekte ab 65 Jahren erwähnten

(Mackenzie et al., 2019, Klap et al., 2003) und in unserer Studie eine jüngere Altersrange von 16 bis 40 Jahren vorhanden war, hatten wir in der ersten Studie keinen Alterseffekt erwartet.

Neben dem Lebensalter wurden im SEM der zweiten Studie geschlechtsspezifische Unterschiede in Hinblick auf Stigmatisierung und Hilfesuchverhalten untersucht. Im Gegensatz zu anderen Studien (Calear et al., 2014, Tomczyk et al., 2020a) hatte der Faktor Geschlecht in der vorgelegten Arbeit langfristig gesehen keinen signifikanten Einfluss auf das Hilfesuchverhalten (Doll et al., 2021b). Interessanterweise zeigten jedoch Frauen im Vergleich zu Männern, wie bereits schon in anderen Studien nachgewiesen (Nam et al., 2010), eine stärkere Intention Hilfe zu suchen (Doll et al., 2021b). Eine Erklärung hierfür könnte sein, dass Schamempfinden die Einstellung gegenüber Hilfesuchverhalten bei Männern stärker negativ beeinflusst als bei Frauen (Doherty und Kartalova-O'Doherty, 2010). Dies wäre auch in Übereinstimmung mit dem Ergebnis, dass Männer eine stärkere antizipierte Stigmatisierung (Schamempfinden) in Hinblick auf das Hilfesuchverhalten zeigten (Doll et al., 2021b). Anders als bei antizipierter Stigmatisierung gab es keine Hinweise auf geschlechtsspezifische Unterschiede bei persönlicher und wahrgenommener (öffentlicher) Stigmatisierung. Im Nachhinein wäre es noch aufschlussreich gewesen, den Faktor ‚Geschlecht' in Hinblick auf Stereotypen und MHL zu untersuchen, um herauszufinden, ob das erhöhte Schamempfinden gegenüber dem Hilfesuchverhalten bei Männern möglicherweise auf eine niedrigere MHL zurückzuführen sein könnte.

3.3 Intention und tatsächliches Hilfesuchverhalten

Unabhängig von den untersuchten soziodemografischen Faktoren konnte in der zweiten Studie kein signifikanter Einfluss von Hilfesuchintentionen bei Studienbeginn auf das tatsächliche Hilfesuchverhalten in der Nachuntersuchung nachgewiesen werden. Dies deutet, wie bereits in der Forschung schon gezeigt, auf eine Intentions-Verhaltenslücke hin (Clement et al., 2015, Wang et al., 2007b, Thornicroft, 2007, Tomczyk et al., 2020b). In unserer zweiten Studie suchten 77,5% der Personen trotz psychischer gesundheitlicher Probleme keine Hilfe auf, im Vergleich zu den 22,5%, die Hilfe in Anspruch nahmen. Dies widerspricht der Annahme der Theorie des geplanten Verhaltens, welche postuliert, dass das Verhalten durch die Intention prädiziert werden kann (Ajzen, 1991). Eine Erklärung hierfür könnte sein, dass eine Intention eventuell vorlag, diese aber aufgrund von externen Faktoren (z.B. keine freien Therapieplätze, keine Anlaufstellen) nicht in das geplante Verhalten umgesetzt werden konnte.

Die Diskrepanz zwischen Intention und tatsächlichem Hilfesuchverhalten könnte auch dadurch erklärt werden, dass Intentionen basierend auf antizipierten affektiven Reaktionen Verhalten besser vorhersagen (Conner et al., 2016). Antizipierte Stigmatisierung im Kontext der Entwicklung von Schamempfinden gegenüber Freunden bei einem zukünftigen Hilfesuchverhalten, könnte durch die affektive Komponente einen stärkeren Einfluss auf das tatsächliche Hilfesuchverhalten gehabt haben als die Intention, Hilfe zu suchen. Zukünftig wäre es interessant, verschiedene affektive Komponenten im Zusammenhang mit Hilfesuch-Intention und Hilfesuche zu untersuchen.

3.4 Implikationen

Unter Berücksichtigung der vorliegenden Ergebnisse ergeben sich Implikationen für das Gesundheitssystem, für die Prävention von Stigmatisierung sowie für zukünftige Studien.

Da das biologische Erklärungsmodell in der ersten Studie keinen Einfluss auf Stigmatisierung hatte, sollten zukünftige Anti-Stigma-Kampagnen neben biologischen Erklärungsmodellen zusätzlich psychosoziale Erklärungsmodelle berücksichtigen, da diese einen reduzierenden Einfluss auf Stigmatisierung haben kann. Psychosoziale Modelle können die Therapiemotivation und das Selbstwirksamkeitsverhalten erhöhen und Hilfesuchverhalten eventuell begünstigen. Anti-Stigma-Kampagnen sollten auch die Professionen des Gesundheitssystems adressieren, da diese in der Vermittlung von Erklärungsmodellen eine entscheidende Rolle spielen. Das Befürworten eines bestimmten Erklärungsmodells kann auch positive Auswirkungen auf die Behandlung und die Beziehung zu PatientInnen haben (Carter et al., 2017, Kvaale et al., 2013b, Lebowitz, 2019).

Des Weiteren könnte der negative Effekt von antizipiertem Stigma auf das Hilfesuchverhalten reduziert werden, indem durch eine aktive Informationsvermittlung und Aufklärung das Hilfesuchverhalten bei psychischen Erkrankungen normalisiert wird. Durch das Gleichsetzen von beispielsweise Hilfesuche bei psychischen Erkrankungen (z.B. Kontaktierung eines Arztes aufgrund von depressiven Symptomen) mit Hilfesuche bei körperlichen Beschwerden (z.B. Kontaktierung eines Arztes aufgrund von Erkältungssymptomen) könnte eventuelles Schamempfinden bzgl. der Hilfesuche abgebaut werden. Dieser Ansatz wäre in Übereinstimmung mit dem Konzept, dass es ein

Kontinuum von psychischer Gesundheit bis zur psychischen Erkrankung gibt, sowie beispielsweise alltäglicher Stress zu chronischem Stress und weiter zu einer psychischen Erkrankung führen kann (Schomerus et al., 2013, Speerforck et al., 2019). Der Glaube an ein Kontinuum psychischer Gesundheit könnte zudem den WSD reduzieren (Angermeyer et al., 2016).

Ein weiterer Prädiktor für Hilfesuche ist das funktionelle Defizit, welches sich als stärkster Prädiktor für Hilfesuchverhalten zeigte. Je stärker die funktionalen Einschränkungen sind, desto eher waren die Probanden in Studie 2 geneigt, Hilfe zu suchen (Doll et al., 2021b). Diese Erkenntnis stellt das Gesundheitssystem zudem vor eine schwierige Aufgabe, da insbesondere eine späte Hilfesuche mit chronischen und schweren Verläufen assoziiert wird (Boonstra et al., 2012, Dell'Osso et al., 2013). Zukünftige Studien sollten untersuchen, wie Betroffene früher erreicht werden können, noch bevor funktionelle Einschränkungen, die eventuell zu einem Arbeitsstellenverlust führen, eintreten. Dies könnte zudem helfen, die Kosten im Gesundheitssektor zu reduzieren, indem beispielsweise die Allgemeinbevölkerung schon frühzeitig über Frühsymptome und die Folgen von später Hilfesuche aufgeklärt wird. Außerdem würde die Etablierung eines niedrigschwelligen Angebotes Betroffenen eine Anlaufstelle bei psychischen Gesundheitsproblemen ermöglichen. Niedrigschwellige Angebote, die einen einfachen Zugang ermöglichen, benutzerfreundlich und nicht stigmatisierend sind (Rickwood et al., 2015), würden die Hilfesuch Barrieren reduzieren und den frühen Zugang zu dem Gesundheitssystem erleichtern.

Aufgrund der Tatsache, dass die Intention Hilfe zu suchen keinen signifikanten Einfluss auf das tatsächliche Hilfesuchverhalten hatte, sollten zukünftige Studien zudem darauf achten, Hilfesuchintentionen nicht mit tatsächlichem Hilfesuchverhalten gleichzusetzen.

Zusammenfassend zeigt die vorliegende Arbeit, dass folgende Punkte wichtig sind:

- Anti-Stigma-Kampagnen sollten Betroffene motivieren bereits frühzeitig Hilfe zu suchen, wenn noch keine funktionalen Defizite da sind.
- Neben biologischen Erklärungsmodellen sollten Anti-Stigma-Kampagnen vermehrt auf psychosoziale Erklärungsmodelle fokussieren, welche antizipiertes Stigma reduzieren können.

- Die Aufklärung über psychische Erkrankungen im Rahmen eines Kontinuitätskonzepts könnten helfen, antizipierte Stigmatisierung als Barriere für das Hilfesuchverhalten abzubauen.
- Das Gesundheitssystem sollte nach Möglichkeiten für die Etablierung eines niedrigschwelligen Angebots für psychische Gesundheitsprobleme suchen.
- Zukünftige Studien sollten darauf achten, tatsächliches Hilfesuchverhalten zu untersuchen, da dieses mit Hilfesuchintentionen nicht gleichzusetzen ist.

3.5 Stärken und Limitationen

Eine Stärke der vorgelegten Arbeit ist die relativ große Stichprobengröße in der ersten (n=1226) und in der zweiten Studie (n=307), sodass eine Untersuchung der Zusammenhänge von MHL und Stigma mithilfe von Strukturgleichungsmodellen möglich war. Strukturgleichungsmodelle haben den Vorteil, dass sowohl gemessene Variablen als auch latente Variablen im Modell analysiert werden können (MacCallum und Austin, 2000). Zudem konnten anders als in den häufig verwendeten Regressionsanalysen (Angermeyer et al., 2009, Pescosolido et al., 2010, Norman et al., 2008b) in den Strukturgleichungsmodellen neben direkten Effekten auch indirekte untersucht werden.

Eine weitere Stärke ist, dass MHL, Stigmatisierung und Hilfesuchverhalten in der Allgemeinpopulation untersucht wurden, und somit eine Verzerrung durch die Erhebung von Patientenstichproben oder spezifischen Stichprobengruppen vermieden wurde.

Eine Limitation der vorgelegten Arbeit ist die Einschränkung auf eine deutschsprachige Bevölkerung im Alter von 16 bis 40 Jahren, sodass die Ergebnisse beider Arbeiten überwiegend für das europäische Gesundheitssystem in der entsprechenden Altersgruppe relevant sind. Da in anderen Studien bereits von kulturellen als auch Unterschieden bzgl. des Alters berichtet werden konnte (Altweck et al., 2015, Angermeyer et al., 2016, Nersessova et al., 2019, Pescosolido, 2013, Von Lersner et al., 2019), sind regionale Untersuchungen jedoch unabdingbar, um Anti-Stigma-Kampagnen optimal anzupassen.

Eine weitere Limitation, die häufig Interview- und Fragebögenstudien betrifft, sind eventuelle Antwortverzerrungen, wie sie sich zum Beispiel bei Voreingenommenheit von Personen in Hinblick auf die soziale Erwünschtheit zeigen. Jedoch stimmen die vorliegenden Ergebnisse auch mit bereits berichteten Zusammenhängen zwischen einzelnen Variablen überein, sodass von einer geringen Antwortverzerrung ausgegangen werden kann.

Außerdem beinhaltet unser Modell nicht alle möglichen Moderatoren von Hilfesuchverhalten oder Stigmatisierung, beispielsweise wurden persönliche Werte (Norman et al., 2008a), wahrgenommene soziale Normen (Norman et al., 2008b), die Wahrnehmung der strukturellen Zugänglichkeit von Hilfsangeboten (Tomczyk et al., 2020a), die wahrgenommene Notwendigkeit Hilfe zu suchen (Schomerus et al., 2012a) oder die Vertrautheit mit psychischen Erkrankung durch die eigene Erkrankung oder die Erkrankung durch Familienmitgliedern oder Freunde nicht erhoben (Angermeyer et al., 2004, Kasow und Weisskirch, 2010).

Die vorliegende Studie erfasste in Hinblick auf Vertrautheit mit der psychischen Erkrankung zwar auch familiäre Krankheitsgeschichten von Verwandten ersten und zweiten Grades, allerdings berücksichtigte sie nicht andere Faktoren, wie wichtige Begegnungen mit psychischen Erkrankungen im Freundes- und Bekanntenkreis sowie Erfahrungen, die auf eine eigene psychische Erkrankung zurückzuführen waren. Wir beschlossen daher, diese Variable nicht in unsere Studie miteinfließen zu lassen.

3.6 Schlussfolgerung

In unserer ersten Studien konnte nicht nachgewiesen werden, dass eine verbesserte MHL Stigmatisierung und Diskriminierung von Personen mit einer psychischen Erkrankung, insbesondere wenn ein biogenetischen Ursachenmodell zugrunde gelegt wird, reduziert. Vielmehr sollten künftig Anti-Stigma-Präventionen und -Kampagnen, neben biologischen Erklärungsmodellen, auch psychosoziale Erklärungsmodelle berücksichtigen, um Stigmatisierung zu reduzieren und Hilfesuchverhalten zu verbessern. Überraschenderweise beeinflusste bei psychischen Problemen in der Längsschnittstudie weder persönliche noch wahrgenommene Stigmatisierung das Hilfesuchverhalten. Allein antizipierte Stigmatisierung zeigte sich als Barriere für Hilfesuchverhalten in der Nachuntersuchung. Im Gegensatz dazu führten funktionelle Einschränkungen zu einer Zunahme des Hilfesuchverhaltens und prädizierten langfristig das Hilfesuchverhalten am besten.

Angesichts des Ergebnisses, dass nur 22,5% der Personen mit psychischen Gesundheitsproblemen in einem Zeitraum von 3 Jahren tatsächlich Hilfe suchten, wurde die häufig beschriebene Behandlungslücke bestätigt. Die hohe Anzahl an Personen (77,5%), die trotz psychischer Gesundheitsprobleme keine Hilfe aufsucht, lässt vermuten, dass das psychische Gesundheitssystem nicht genügend Möglichkeiten für eine niedrigschwellige Hilfestellung zur Verfügung stellt. Es fehlen Angebote, die nicht mit antizipierter Stigmatisierung assoziiert werden.

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