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Original article

The interplay of etiological knowledge and mental illness stigma on healthcare utilisation in the community: A structural equation model

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ABSTRACT

Background: The stigma of mental illness, especially personal attitudes towards psychiatric patients and mental health help-seeking, is an important barrier in healthcare utilisation. These attitudes are not independent of each other and are also influenced by other factors, such as mental health literacy, especially the public's causal explanations for mental problems. We aimed to disentangle the interrelations between the different aspects of stigma and causal explanations with respect to their association with healthcare utilisation.
Methods: Stigma and causal explanations were assessed cross-sectional using established German questionnaires with two unlabelled vignettes (schizophrenia and depression) in a random-selection representative community sample (N = 1375, aged 16–40 years). They were interviewed through a prior telephone survey for current mental disorder (n = 192) and healthcare utilisation (n = 377). Structural equation modelling was conducted with healthcare utilisation as outcome and stigma and causal explanations as latent variables. The final model was additionally analysed based on the vignettes.
Results: We identified two pathways. One positive associated with healthcare utilisation, with high psychosocial stress and low constitution/personality related causal explanations, via positive perception of help-seeking and more help-seeking intentions. One negative associated with healthcare utilisation, with high biogenetic and constitution/personality, and low psychosocial stress related explanations, via negative perception of psychiatric patients and a strong wish for social distance. Sensitivity analysis generally supported both pathways with some differences in the role of biogenetic causal explanation.
Conclusion: Our results indicate that campaigns promoting early healthcare utilisation should focus on different strategies to promote facilitation and reduce barriers to mental healthcare.

1. Introduction

Mental disorders are treatable and potentially preventable [1–3]. Yet, they continue to be prevalent and to cause significant personal and societal costs and burdens [4–6], because help-seeking is often delayed or absent [7,8]. Therefore, many approaches to improve mental health focus on understanding and improving help-seeking for mental problems on population level [9,10]. Of the multiple barriers towards help-seeking for mental disorders [11–19], negative, stigmatising attitudes as well as knowledge about mental (ill-)health and its treatment, i.e., mental health literacy (MHL), are important interconnected factors [13,19] that, however, have not been studied together for their impact on healthcare utilisation.

The term "stigma" comprises public and personal attitudes and behavioural responses towards people with mental problems and towards help-seeking for mental disorders that are formed by cognition and affect [20,21]. A recent meta-analysis identified two aspects of mental disorder-related stigma associated specifically with actual help-seeking, i.e., healthcare utilisation, in the general population: personal attitudes towards individuals with mental disorders (PersonS) and attitudes towards mental health help-seeking (HelpA) [19]. Both these attitudes consist of a cognitive-behavioural and cognitive-affective component differentially related to help-seeking. The cognitive-behavioural aspect of

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PersonS is often measured as a wish for social distance from persons with a mental disorder (WSD) [22], whereas the cognitive-affective aspect of PersonS is often measured as perceived dangerousness of persons with mental disorder [22,23]. WSD consistently showed negative associations with help-seeking [24,25], while cognitive-affective aspects including perceived dangerousness did not show direct associations with help-seeking [26,27] but mediated the former relationship [28]. The cognitive-affective aspect of HelpA includes assumed feelings such as embarrassment about one's own hypothetic or actual help-seeking or what others might think about one's own hypothetic or actual help-seeking for mental problems [29]. The cognitive-behavioural aspect of HelpA includes help-seeking intentions and people's willingness to seek help in case of mental problems [29,30]. Similar to PersonS and in line with the theory of planned behaviour [31,9], the cognitive-behavioural, but not the cognitive-affective aspect of HelpA, was related to healthcare utilisation [32,33].

The different stigmatising attitudes, however, are neither exclusive nor distinct determinants of help-seeking but interact with other determinants, an important one being MHL [34]. MHL is defined as knowledge about mental disorders, including etiological and help-seeking knowledge [35,36]. The public's causal explanations for mental health problems as part of MHL were associated with stigmatising attitudes toward individuals with mental disorders [37]. Of these, biogenetic causal explanations were repeatedly related to more stigmatisation in terms of perceived dangerousness that, in turn, increased WSD [38,39].

Despite the wealth of knowledge on single associations between stigma, MHL and help-seeking from predominately cross-sectional studies, at present, little is known about the interplay of the various effects of stigma, biogenetic, and other causal explanations with respect to their influence on healthcare utilisation for mental problems. Furthermore, to the best of our knowledge, studies of the interrelations between causal explanations and help-seeking attitudes, as well as between help-seeking intentions and healthcare utilisation are still missing. A better integration and extension of these different cross-sectional findings, however, is needed to advance the development of combined information and anti-stigma campaigns and avoid unexpected adverse effects. This will help overcome the two important barriers to adequate and timely mental healthcare utilisation for mental problems [41–44].

Using structural equation modelling (SEM) that enabled us to account for potential correlations and associations between these constructs [40], we therefore aimed to disentangle these various interrelations between aspects of stigma and causal explanations, as possibly the most influential aspect of MHL on stigma, on hypothetical help-seeking intentions and, finally, healthcare utilisation for any mental problem at population level.

2. Method

2.1. Study design

Our study is based on the cross-sectional data of an add-on to the 'Bern Epidemiological At-Risk' (BEAR) study, a random-selection representative population telephone study in the semi-rural Canton Bern, Switzerland [45]. Between June 2011 and June 2015, we recruited participants between 16 and 40 years. We chose this age range because most axis-I mental disorders have their onset after 15 and before 41 years [46]. Besides appropriate age, eligibility criteria were main residency in Canton Bern (i.e. having a valid address in Canton Bern, and not abroad during the assessment period) and an available telephone number. Exclusion criteria included past or present psychosis, and insufficient language skills in German, French, English, or Spanish. To increase response rate, we sent an information letter prior to the first telephone contact with study details and goals.

After each interview, we asked German-speaking participants to enrol in the add-on study and complete a questionnaire on MHL and attitudes. The questionnaires focussed on either depression or schizophrenia and were randomly posted in turn within two days at most after the phone interview. To increase response rate, we reminded participants thrice to complete the questionnaire and offered help in case of difficulties.

The ethics committee at the University of Bern approved the studies. All participants gave informed consent for both studies.

2.2. Measures

In the telephone interview, we assessed socio-demographic variables and current axis-I disorders with the Mini-International Neuropsychiatric Interview (M.I.N.I, [48]). Past and/or present healthcare utilisation for mental problems not restricted to mental health professional bodies and irrespective of the intensity of the contact, along with the spontaneously named problems leading to it, was assessed with the WHO Pathways-to-Care questionnaire [47].

Adapted from Angermeyer et al. [49], the questionnaire of the add-on study started with an unlabelled vignette (see Appendix to Angermeyer et al. [49]) on either schizophrenia or major depression referred to in subsequent questions. For assessment of causal explanations, participants were asked to rate the 18 causes on a five-point Likert scale from 0 = 'certainly not a cause' to 4 = 'certainly a cause'. For assessment of the cognitive-affective aspect of PersonS, participants were asked to rate 11 stereotyping attributes about the described person on a five-point Likert scale from 0 = 'certainly not agree with' to 4 = 'certainly agree with'. For assessment of the cognitive-behavioural aspect of PersonS, participants were asked to rate their willingness to engage in seven social relationships with the described person (adapted social distance scale developed by Link et al. [50]) on a five-point Likert scale from 0 = 'definitely willing' to 4 = 'definitely not willing'. Higher values on the PersonS scales indicated stronger stigmatising attitudes. The cognitive-affective aspect of HelpA was assessed based on the response of the participants to the following two questions: 'how comfortable would you feel talking with a specialist about your personal problems' (four-point Likert scale from 0 = 'not at all comfortable' to 3 = 'very comfortable') and 'how embarrassed would you feel if your friends knew that you seek help for an emotional problem' (four-point Likert scale from 0 = 'very embarrassed' to 3 = 'not at all embarrassed'). We assessed the cognitive-behavioural aspect of HelpA (i.e., help-seeking intentions) based on the participants potential willingness to seek help from a specialist for an emotional problem (four-point Likert scale from 0 = 'definitely not' to 3 = 'definitely yes'). For both HelpA concepts higher values indicate positive HelpA.

2.3. Statistical analyses

For group comparisons of categorical or non-normally distributed continuous data, we computed χ^2-tests or Mann-Whitney U tests, respectively. Prior to the structural equation models (SEM), we computed orthogonal exploratory factor analyses (EFA) with varimax rotation on the basis of polychoric correlation matrices for participant's causal explanations and PersonS, to obtain independent factors. We computed SEMs with the weighted least squares and variance adjusted estimator (WLSMV, [51]) based on diagonally weighted least squares (DWLS) for categorical variables [52]. Missing data were deleted listwise. We assessed the model fit with four commonly used indices that were as follows: the χ^2 test,