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DISSERTATION

Attitudes of the Vietnamese public towards persons with mental illness using non-labelled vignettes for depression and schizophrenia

zur Erlangung des akademischen Grades
Doctor medicinae (Dr. med.)

vorgelegt der Medizinischen Fakultät
Charité – Universitätsmedizin Berlin

von

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Datum der Promotion: 04.03.2022

Content

Abstract

Research has shown that mental health illnesses are at least as common in Vietnam as in Western countries. It has been proposed that lower mental health literacy in low- and middle-income countries has led to underestimating the prevalence of mental illnesses. Further, due to stronger perceived discrimination, individuals refrain from seeking help. We supposed that in all societies, and especially in Vietnam's socio-centric society, expectations about the course of illness might influence others' willingness to socially interact with a person showing symptoms of a mental illness. However, there remains limited research concerning mental health literacy, labelling, and public stigmatising behaviour in Vietnam.

A population-based survey was carried out in the Greater Hanoi area in 2013 using unlabelled vignettes, which depicted either symptoms of schizophrenia or depression. The following questionnaire elicited illness recognition, treatment recommendations, perceived courses of symptoms, as well as the desire for social distance towards the depicted person. Multiple analyses were performed to explore the interplay between attitudes toward symptoms of schizophrenia and depression.

Overall, respondents more often recognised schizophrenia than depression as a mental illness in a medical sense. Respondents mostly endorsed evidence-based psychiatric treatment options but more frequently preferred social interventions for depression. Illness recognition only correlated with stronger desire for social distance for schizophrenia. The expected course of symptoms influenced respondents' desire for social distance. Yet, only an expected life-long dependency on others was associated with more desire for social distance in both vignette conditions.

The studies were able to show, for the first time, differences in public perception toward symptoms of schizophrenia and depression in Hanoi, Vietnam. The basic mental health literacy in this sample was rather good. Yet, especially depressive symptoms remain often under-recognised, and public awareness of depressive conditions and other common mental illnesses that require professional treatment should be increased. In terms of stigma, in Vietnam, the labelling as 'mentally ill' seems to be more relevant for symptoms of schizophrenia but not for depression. This underlines stronger stigmatisation attitudes towards psychotic symptoms. To reduce stigma attitudes independent of diagnosis, it might be worth focusing on the patient's capacity for reciprocity to reduce expectations of one-sided social relationships and increase public willingness for social interaction.

Abstrakt

Aktuelle Forschung hat gezeigt, dass psychische Erkrankungen in Vietnam mindestens so häufig sind wie in westlichen Ländern. Es wird angenommen, dass eine schwächere Mental Health Literacy in Ländern mit geringen und mittleren Einkommen zu einer Unterschätzung der Prävalenz psychischer Erkrankungen geführt hat. Des Weiteren führt eine stärker wahrgenommene Diskriminierung in diesen Ländern zu geringer aktiver Hilfesuche Betroffener. Neben dem klassischen Labelling könnten auch Erwartungen zum Symptomverlauf die Bereitschaft zur sozialen Interaktion mit einer Person, die psychiatrische Krankheitssymptome aufweist, beeinflussen. Das könnte gerade in der soziozentrierten Gesellschaft Vietnams eine Rolle spielen. Bisher gibt es allerdings nur unzureichend Daten bezüglich Mental Health Literacy, Labelling und allgemeiner Stigmatisierung in Vietnam.

Aus diesem Grund wurde 2013 eine für die Region Hanoi repräsentative Datenerhebung durchgeführt. Anhand unbeschrifteter Vignetten für Schizophrenie und Depression wurden die Teilnehmer zu ihrer Einstufung der Symptome als psychischer Erkrankung, ihren Behandlungsempfehlungen, dem erwarteten Symptomverlauf und ihrem Wunsch nach sozialer Distanzierung befragt. Mehrere statistische Analysen wurden durchgeführt, um Tendenzen innerhalb dieser Stichprobe zu beurteilen.

Insgesamt wurde Schizophrenie deutlich häufiger als psychische Erkrankung eingestuft als Depression. Für beide Vignetten wurden evidenzbasierte Therapieoptionen befürwortet, aber soziale Therapieansätze wurden im Falle der Depression bevorzugt. Die Krankheitszuschreibung führte nur im Falle der Schizophrenie zu einem ausgeprägteren Wunsch nach sozialer Distanz. Auch der erwartete Symptomverlauf war mit dem Wunsch nach sozialer Distanz assoziiert. Besonders eine erwartete lebenslange Abhängigkeit von anderen verstärkte diagnoseübergreifend den Wunsch nach sozialer Distanz.

Die Studien zeigen erstmalig, dass in Vietnam Depression und Schizophrenie grundlegend unterschiedlich wahrgenommen werden. Die Mental Health Literacy in dieser Stichprobe war verhältnismäßig gut. Dennoch blieben vor allem depressive Symptome oft unerkannt. Dementsprechend sollte das Wissen insbesondere zu Depression und anderen häufigen psychiatrischen Erkrankungen, die professioneller Therapie bedürfen, gestärkt werden. Das Label „psychiatrisch erkrankt“ scheint in Vietnam deutlich relevanter für Symptome der Schizophrenie als der Depression zu sein. Das betont Stigmatisierungstendenzen in Bezug auf psychotische Symptome. Ein potenzieller Ansatz zur diagnoseunabhängigen Verminderung von Stigmata könnte ein Fokus auf das Reziprozitätsvermögen von psychiatrischen Patienten

sein. Erwartungen einseitiger sozialer Beziehungen könnten somit geschwächt und die allgemeine Bereitschaft für soziale Interaktion gestärkt werden.

1. Introduction

Accurate and comprehensive data concerning the prevalence of mental illnesses in Vietnam is rare (Nguyen et al., 2019a; Vuong et al., 2011). Research that screened for incidences of mental illness in the general Vietnamese population has indicated that mental health problems are as common in Vietnam as in Western countries (Nguyen et al., 2013; Richardson et al., 2010). A recent review indicated even a higher point prevalence of clinically significant mental health symptoms in Vietnam than in high-income countries (HIC) (Nguyen et al., 2019b). Also, suicide rates were reported to be higher in low- and middle-income countries (LAMIC) from South East Asia compared to suicide rates in HICs (Knipe et al., 2019; WHO, 2014). It has been proposed that lower common knowledge about mental health led to the earlier assumed incidences of mental health issues in LAMICs, such as Vietnam (Nguyen et al., 2019a; Vuong et al., 2011). One fundamental aspect of mental health literacy is the awareness and recognition of symptoms of mental illnesses (Furnham and Swami, 2018). This is fundamental, as vignette-based studies from Europe and Asian countries have shown that professional help of any kind is more often recommended by those respondents who correctly recognised the given symptoms as part of mental illness (Picco et al., 2018; Speerforck et al., 2016). Hence, lower awareness of mental health issues may delay treatment-seeking (van der Ham et al., 2011; Wang et al., 2007). There is only limited research about mental health literacy in Vietnam (Dang et al., 2020). One vignette-based study from Vietnam has shown that illness recognition of depressive symptoms as being a mental illness was rather low (Nguyen Thai and Nguyen, 2018). Also, health care professionals in Vietnam still estimate that general mental health literacy needs improvement (Dang et al., 2020). Researchers have identified the spread of incorrect or misleading information regarding mental illnesses, their symptoms, and treatment options (Dang et al., 2020). Several countrywide campaigns have been launched to address this issue, and discussions concerning mental health have been printed in newspapers and disseminated on social media. Especially in cooperation with the WHO on the international ‘Mental Health Day’ programs were broadcasted under the theme ‘Depression: let's talk’ in 2017 (WHO, 2017), and in 2019, a similar campaign focused on suicide prevention that included public distribution in the daily press and social media (WHO, 2019). Yet, the public’s awareness for symptoms of mental health problems that need professional help is still insufficient (Dang et al., 2020; Nguyen et al., 2019b).

Apart from broadening and deepening the mental health knowledge of the common public, the aforementioned WHO campaigns also aim to tackle existing taboos and stigmatisation

attitudes in society. According to Link and Phelan's definition, stigma arises if an individual or group holds specific attributes or stereotypes that are marked as unfavourable by the public and lead to public discrimination. At the same time, discrimination is manifested in disadvantages resulting from society's reaction (Link and Phelan, 2001). One well-studied tool of stigmatisation throughout the last decades is the labelling process (Link, 1987). Terms such as 'mentally ill' and their impact on social rejection have been discussed thoroughly and in different cultural contexts (Abdullah and Brown, 2020; Angermeyer and Matschinger, 2005; Bruce G. Link et al., 1987). Fear of public discrimination and stigmatisation, if a person is displaying symptoms of mental illnesses or becoming labelled as 'mentally ill', bears the risk that the affected person refrains from seeking professional help and thus leads to a high risk of developing a chronic course of illness (Amminger et al., 2002; Dockery et al., 2015). New terms have been introduced into the Vietnamese language to avoid labelling when raising awareness of mental health symptoms. For example, instead of the expression 'benh tam than' (mental illness), the term 'benh tam ly' (literally. psychological disorder) has been proposed into the Vietnamese language (WHO, 2017).

Stigmatisation attitudes, for example, through labelling, strongly influence individuals' behaviour. These behavioural reactions can be observed, for example, in the form of social rejection or direct discrimination (Link et al., 1987; Rüsch et al., 2005). While it is challenging to evaluate internal stigmatisation attitudes directly, public behaviour towards persons that hold stigmatised attributes can be studied by measuring the indicated desire for social distance in different forms of social interaction (Link et al., 2004; Rüsch et al., 2005).

In research of public attitudes, a broadly established method is to use vignettes and survey respondents' reactions towards people with mental illness (Angermeyer et al., 2009; Kirmayer and Ban, 2013). It makes sense to use vignettes for depression and schizophrenia because, on the one hand, these disorders are commonly treated mental illnesses in all psychiatric systems, and, on the other hand, they can be usually distinguished from each other also by non-professionals (Angermeyer et al., 2009; Furnham and Swami, 2018). Apart from that, depression is one of the most common mental illnesses with a global social impact (Liu et al., 2020). Schizophrenia belongs to the most challenging mental illnesses and can be seen as representative of the group of primary psychotic disorders (Millan et al., 2016; Owen et al., 2016).

In various cultural backgrounds, a stronger social rejection in terms of symptoms typical for schizophrenia than depression was reported (Angermeyer and Matschinger, 1997; Griffiths et al., 2006; Kermode et al., 2009; Reavley and Jorm, 2011). Explanatory models and emotional

reactions with their impact on desire for social distance has been widely addressed in earlier research in different cultural settings (Chen et al., 2015a; Kirmayer and Ban, 2013; Kvaale et al., 2013; Schomerus et al., 2014; Speerforck et al., 2014). A medical or bio-medical understanding of mental illness may even reduce social acceptance by the public (Kirmayer and Ban, 2013; Kvaale et al., 2013). On the contrary, an understanding of mental health symptoms and illness as a continuum with an imprecise line between healthy and ill was associated with less negative emotional reactions and increased willingness to interact with the person showing symptoms of mental illness (Corrigan et al., 2017; Schomerus et al., 2016, 2013). This is further supported by the social science theory that individuals tend to choose their close social contacts based on similarity or shared attributes (Altenburger and Ugander, 2018; Laursen, 2017; McPherson et al., 2001).

While these aspects have been discussed broadly, only a few studies included expectations towards the course of illness and their impact on social rejection (Angermeyer and Matschinger, 2003; Angermeyer and Matschinger, 2005). These few studies hint that lay beliefs concerning the effectiveness of treatment impact social distance, as low faith in treatment success increased negative emotions towards an affected person (Angermeyer and Matschinger, 2003; Angermeyer and Matschinger, 2005).

When screening for social distance, respondents are often asked how willing they would be to get in contact with the depicted person. The social distance scale, which was also applied in this research project, covers thereby more distant relationships including subtenants or work colleagues, as well as more intimate relationships such as a family members or someone who takes care of one's children (Bogardus, 1925; Link et al., 2004). Following the social exchange theory, individuals are more willing to invest in social relationships that are at least in the long-term perceived as balanced or in accordance with equity (Kolm, 2008). However, social science has shown, that the expected extent of exchange and equity varies in different social relationships. Commonly, relationships are categorised into two groups, communal (closer) and exchange or transactional (more distant) relationships (Braun et al., 2018; Kolm, 2008). Perceived reciprocity or equity is more important in such exchange relationships, whereas in communal relationships, e.g. in close family relationships, more asynchrony in exchange is tolerated (Braun et al., 2018; Väänänen et al., 2005). In vignettes an unknown, still distant, person is described, and respondents rate their willingness to engage into new relationships. So, it can be assumed that the prospect of reciprocity is relevant for all those given social situations of the social distance scale at least to some extent (Kolm, 2008).

In terms of schizophrenia spectrum disorders as well as major depression, there is a correlation between the ability for social reciprocity and the severity of illness (Bora and Berk, 2016; Hajdúk et al., 2018). This led to the assumption that perceptions about the course of illness and symptoms directly influence the willingness for social interaction. This theory might be cross-culturally interesting, yet in Vietnam, with its more socio-centric society where social relationships and networks play an even more central role in everybody's life, the expectation of balanced relationships might even be more important (Nguyen, 2015; Nyitray, 2008; Yum, 1988).

In this vignette-based research project, we focused on the possible effect of the lay public's expectations concerning the course of illness on the desire for social distance. We expected that trust in treatment success reduces expressed desire for social distance. On the contrary, negative expectations about the course of symptoms lead to more expressed desire for social distance. Further, recognition of symptoms indicative of a mental illness and treatment recommendation were evaluated to outline the mental health literacy in the sample. Due to a possible dilemma between recognising symptoms and labelling, we tested if the general label 'mentally ill' influenced social distance.

A German-Vietnamese research team addressed these study questions. Results have been published in various separate research articles, some of which are part of this dissertation project (Böge, 2020; Böge et al., 2018; Martensen et al., 2020, 2018; Ta, 2020). These analyses help design and implement future campaigns on mental health literacy in terms of whom to target and which aspects concerning aetiology, treatment possibilities, and course of illness should be emphasised to avoid stigmatisation attitudes (World Bank Group, 2018; World Health Organization, 2013).

2. Material and methods

General study design

The present dissertation project used a large quota sample from the common public of Hanoi. The survey used unlabelled vignettes that depicted either a person with symptoms of schizophrenia or severe depression. These unlabelled vignettes were followed by an extensive questionnaire eliciting the respondent's perception of the described person with a focus on the endorsement of medical illness, endorsed desire for social distance, expected course of symptoms, and recommendations of treatment options (Böge, 2020; Böge et al., 2018; Martensen et al., 2020, 2018; Ta, 2020). This study design has been revised and accepted by the local ethics committee of the Military Academy of Medicine, Hanoi (Böge, 2020; Böge et al., 2018; Martensen et al., 2020, 2018; Ta, 2020).

This research is funded in part by the German research foundation (DFG) within a subproject of the Collaborative Research Centre 'Affective Societies' (CRC 1171).

Setting and recruitment of participants

The survey was performed in the year 2013. It was conducted in the greater Hanoi area, the capital of Vietnam. At this time, the entire population of Hanoi consisted of about 7,000,000 inhabitants (General Statistics Office of Vietnam, 2013a). The sample included participants from all districts of Hanoi (Böge, 2020; Böge et al., 2018; Martensen et al., 2020; Ta, 2020).

The recruitment of potential participants was undertaken in cooperation with the Department of Psychiatry and Psychological Medicine, 103 Military Hospital, as part of the Military Medical Academy of Vietnam. The recruited were invited to participate through the staff's widespread social network. All assisting staff members attended a structured training concerning the aims of the study, the study protocol, and its execution (Böge, 2020; Böge et al., 2018; Martensen et al., 2020, 2018; Ta, 2020). The recruited participants received written information concerning the study and its aims. All who participated gave their consent. No compensation was offered or granted for their participation. Additionally, only one person per household was accepted for the survey. In total, 1100 volunteers participated in this study and filled in the questionnaire (Böge, 2020; Böge et al., 2018; Martensen et al., 2020, 2018; Ta, 2020). The quota sample was adjusted to the sociodemographic data of Hanoi taken from the micro census 2013 and Hanoi census 2009 regarding gender, age group, urbanity, household size, and marital status (General Statistics Office of Vietnam, 2013b, 2009). The stratifications

of the sample that were used for analyses differed in sample size due to varying completeness of answers in different sections of the questionnaire. Further information on the samples can be obtained from the attached publications (Böge et al., 2018; Martensen et al., 2020, 2018).

Questionnaire

At the beginning of the survey, everyone received randomly an unlabelled vignette that described either a person with typical symptoms of major depression or schizophrenia. These depicted symptoms met the diagnostic criteria of the ICD-10 and DSM-IV. Both vignettes were adopted from prior research in this field (Angermeyer and Matschinger, 1997; Schomerus et al., 2013) and translated for this survey. An identical questionnaire followed the vignettes (Böge, 2020; Böge et al., 2018; Martensen et al., 2020, 2018; Ta, 2020).

Respondents were first asked to indicate if they believed that the depicted person had a mental illness in a medical sense. Options for answers were 'yes', 'no' or 'undecided' (Martensen et al., 2020).

The questionnaire further screened for treatment recommendations of the lay public. At first, the respondents were asked what kind of therapy they would advise the depicted person. Among established treatment options, e.g., psychotherapy, psychopharmacology, and concentration and relaxation exercises, the questionnaire also included options regarding the cultural background of Vietnam, keeping life in balance with Feng Shui rules, praying, and natural medicine. Additionally, respondents were asked whom or which institution they would recommend as caregivers to the depicted person. Besides professional caregivers such as a psychiatrist or a general practitioner, optional answers were informal caregivers such as self-help groups or a person of trust. All answers had to be indicated on a five-point Likert scale reaching from (1) 'I would strongly advise it' to (5) 'I would strongly advise against it' (Böge, 2020; Böge et al., 2018; Ta, 2020).

The respondent's willingness to socially interact with the person in seven different situations was elicited to estimate the desire for social distance as a cross measure for public stigma attitudes. For example, participants were asked if they would accept the depicted person as a colleague or family member. This scale was established by Link et al. 1987, as a modification of the initial version of the Social Distance Scale by Bogardus (Bogardus, 1925). Answers were again given on anchor points of a 5-point-Likert scale (Martensen et al., 2020, 2018).

Next, respondents were asked about their expectations towards the course of illness. The items, which cover expectations towards progress and remission of symptoms and its effect on

the person's social life and level of social functioning, were theoretically derived from the questionnaire. Items included, for example, the assumption 'that the person will never be able to make important decisions on his or her own',' that the person will neglect him- or herself' or 'that the person will be able to live a normal life' (Martensen et al., 2020, 2018).

Statistical analysis

Descriptive statistics were carried out to estimate the percentage of respondents agreeing that the depicted person in the vignette had a mental illness in a medical sense. Furthermore, to evaluate the differences between the perception of depression and schizophrenia, a Pearson chi-square test was used. To compare treatment recommendations and recommended caregivers for depression and schizophrenia, the frequencies in percentage for each item were estimated, merging answers to 'recommend', 'undecided' and 'unfavourable' (Böge, 2020; Böge et al., 2018; Ta, 2020). Next, the means based on the 5-point-Likert scale were compared using separate independent sample t-tests to find significant differences between schizophrenia and depression. (Böge, 2020; Böge et al., 2018; Ta, 2020).

To measure the overall endorsement of desire for social distance, the given scores on the seven items were counted up to a total score. A score of '7' indicated the lowest possible desire for social distance and a score of '35' indicated the strongest possible desire for social distance. The sum score representing the desire for social distance proved high internal consistency with a Cronbach's alpha of 0.82 for depression and 0.99 for schizophrenia. This allowed for the usage of this sum score in the performed statistical analyses (Martensen et al., 2020, 2018).

An analysis of variance (ANOVA) with a subsequent post hoc analysis (Tukey HDS) was used to search for a statistical correlation between illness recognition and endorsement of social distance (Martensen et al., 2020).

The seven items asking about the presumed course of illness were grouped using separate principal factor analyses with varimax rotation for the depression and schizophrenia condition. A Kaiser-Meyer-Olkin (KMO) value of 0.576 for depression and 0.599 for schizophrenia confirmed that both samples were sufficient for factor analysis. Only factors that matched the criteria of an eigenvalue greater than one were extracted. The individual factor score of each extracted factor was saved as Anderson-Rubin variable. These factor scores were used in the following regression analysis to search for a correlation between expectations on the course of illness and desire for social distance, using the sum score for social distance as the dependent variable (Martensen et al., 2020, 2018).

For all statistical analyses, a $p < .05$ was assumed as the level of significance. For this research, all the performed statistical analyses were carried out with IBM SPSS Software Versions 22 and 23.

3. Results

In the survey, 85% of respondents assigned a mental illness in a medical sense to the person described in the schizophrenia vignette. While for the depression condition, only 60% agreed on this question. A chi-square test showed these differences statistically significant (X^2 (2, N = 757) = 69.41, $p < .001$,) (Martensen et al., 2020).

For respondents' treatment recommendations, descriptive statistics revealed that independently of the vignette, participants favoured the same four treatment methods: psychotherapy, followed by concentration and relaxation exercises, meditation and yoga, and psychotropic medication (Böge, 2020; Böge et al., 2018; Ta, 2020).

In terms of recommendations of possible caregivers, within the schizophrenia condition, a psychiatrist was the most often recommended caregiver. He/she was followed by a psychologist, a general practitioner, a person of trust, and a rehabilitation facility. Within the depression condition, respondents most often recommended to seek help from a person of trust or psychotherapist, followed by a psychiatrist, general practitioner, or rehabilitation facility. Furthermore, the respondents recommended that the depicted person had to do something him- or herself (Böge, 2020; Böge et al., 2018; Ta, 2020). Seeking help from a person of trust (M_D = 0.158, CI 0.033; 0.283, p < 0.05), doing something by oneself (M_D = 0.382, CI 0.180; 0.583, p < .001) or help-seeking via the internet (M_D = 0.206, CI 0.027; 0.385, p < .05) were significantly more often recommended to the person depicted in the depression vignette. (Böge, 2020; Böge et al., 2018; Ta, 2020).

An ANOVA revealed that within the schizophrenia condition there was a statistically significant correlation between endorsement of mental illness and increased longing for social distance (F (2, 441) = 3.42, p = .03), there was no relevant correlation in the depression condition (F (2,309) = 0.921, p = .4) (Martensen et al., 2020).

Regarding the general public's expectations about the course of illness, in separately ran factor analyses, the included items grouped consistently. Three factors met the precondition of an eigenvalue greater than one. The explained variance of all three factors reached 69% for schizophrenia and 67% for depression. Based on the clustering of the items, the three factors were named as 'loss of social functioning and integration' (factor 1), 'expected life-long dependency on others' (factor 2), and overall 'positive attitudes towards treatment outcome and course of illness' (factor 3) (Martensen et al., 2020, 2018).

The relationship between these consistent factors and the desire for social distance was investigated using separate linear regression analyses. In both cases, the model was statistically significant (schizophrenia $R^2 = 0.03$, F (3,448) = 3.85, $p = .01$; depression $R^2 = 0.03$, F (3, 312) = 3.38, $p = .019$). Regarding single factor, in the case of depression the second factor, representing the factor 'expected life-long dependency' was significantly correlated with more endorsement of social distance ($\beta = -0.12$, t (312) = -2.13, $p = .03$) and positive attitudes compromised in the third factor correlated with less endorsement of social distance ($\beta = 0.12$, t (312) = 2.22, $p = .03$). No statistically significant correlation was found for the first factor (Martensen et al., 2020).

Within the schizophrenia condition, no statistically significant relationship between positive attitudes concerning the course of illness and longing for social distance could be shown in either direction. Yet, factors 1 and 2, which both represent more negative expectations with more awaited loss of social functions and integration and perceived life-long dependency on others, correlated with more endorsed social distance ((1) $\beta = -0.13$, t (448) = -2.74, $p = .01$; (2) $\beta = -0.9$, t (448) = -1.97, $p = .049$) (Martensen et al., 2020, 2018).

4. Discussion

The current dissertation project aimed to assess the level of mental health literacy and stigmatization attitudes among the common public of Hanoi, Vietnam. A special focus was set on how expectations of the general public about the course of symptoms influence the public's willingness for social interaction.

The level of mental health literacy

The schizophrenia vignette condition was more often identified than the depression condition (85% compared to 60%) as a mental illness in a medical sense by the Vietnamese public (Martensen et al., 2020). In Vietnam, where according to the WHO, about 60% of all patients, who are admitted to a psychiatric hospital, were diagnosed with schizophrenia, schizotypal, or delusional disorder (WHO and Ministry of Health Viet Nam, 2006), delusional symptoms more accurately resemble the typical psychiatric patient in a psychiatric care. This may explain why delusional symptoms were more often perceived as an illness in a medical sense (Martensen et al., 2020) and that the most often recommended caregiver in this sample was a psychiatrist (Böge, 2020; Böge et al., 2018; Ta, 2020). As the mental health services in Vietnam improve and offer a broader spectrum of treatment possibilities for a broader range of diagnoses, this perception might reduce over time. However, psychiatric services, especially at a community level, are still in the early phases of their development and face structural difficulties concerning bureaucracy, human resources, as well as funding (Minas et al., 2017; Ngo et al., 2014; Nguyen et al., 2019c; Vuong et al., 2011).

Further, different concepts about the origin of the described symptoms might have influenced their recognition as a mental illness. Published literature remains sparse concerning this research field in Vietnam. Nevertheless, one study published in 2011 conducted in central Vietnam showed that participants were more likely to endorse biological causes to explain symptoms of schizophrenia, while social difficulties were more often endorsed explanations for a depressive condition (van der Ham et al., 2011). That data is in line with findings from other cultural backgrounds. In particular, social explanatory models seem to be endorsed in countries with a socio-centric background (Chen et al., 2015b; Nguyen, 2003; Schomerus et al., 2014). Commonly reported reasons for depression by the lay public were interpersonal or family conflicts resulting in disharmonious relationships or personal weakness (Chen et al., 2015b; Kolstad and Gjesvik, 2014; Park and Bernstein, 2008; van der Ham et al., 2011). Such social

understanding of depression in this sample is implied by the fact that most respondents recommended consulting a person of trust as a primary help-seeking option, and other self-help options were more often recommended than for the schizophrenia condition (Böge, 2020; Böge et al., 2018; Ta, 2020). A person of trust might be perceived as more capable of resolving difficulties within a person's social network than a medical professional. (Böge, 2020; Böge et al., 2018; Martensen et al., 2020; Ta, 2020). This tendency to explain severe depressive symptoms may hinder their identification as a medical condition with a need for professional help, thereby restraining the affected person from seeking adequate help (Epstein et al., 2010; Evans-Lacko et al., 2012; Park and Bernstein, 2008).

Based on the lower recognition of depression in this study, it can be assumed that depression as a medical condition often remains unrecognised within Hanoi and Vietnam in general. To address these problems, public awareness of depressive symptoms must be raised and taboos to talk about depressive moods reduced (Martensen et al., 2020). This could be done by promoting the concept of health with its interplay between social, psychological, and biological factors (Singer et al., 2017). This concept seems to be preferred in this sample as the most recommended treatment options included psychotherapy and relaxation therapies as psychological treatment options as well as psychotropic medication as biological treatment approaches (Böge, 2020; Böge et al., 2018; Ta, 2020).

However, in international comparison, both recognition rates can be considered as rather good (Angermeyer et al., 2009; Furnham and Swami, 2018; Lo et al., 2018), and the ranking of the most commonly recommended treatment options hint at an overall good basic mental health literacy in the present sample (Böge, 2020; Böge et al., 2018; Ta, 2020).

The impact of labelling on the desire for social distance

In terms of labelling, there was no correlation between illness recognition of major depression and desire for social distance in this sample (Martensen et al., 2020). This finding is not specific to Vietnam. The label 'depression' seems to have a less negative impact in several cultural backgrounds than the label 'schizophrenia' (Kermode et al., 2009; Reavley and Jorm, 2011). Angermeyer and Matschinger, 2003 also reported that the label 'depression' basically did not influence the public's desire for social distance in Germany. This discrepancy hints that the labelling theory alone is insufficient to explain the origin of stigma elsewhere as well as in Vietnam. Indeed, the general public in Hanoi seems to ascribe different attributes to different

mental health symptoms. To explain the origin of stigma, a more complex understanding of the common perception of people with symptoms of mental illnesses is needed (Martensen et al., 2020).

On the plus side, this finding also implies that raising awareness of depressive symptoms as part of a mental illness does not worsen stigmatisation attitudes by the public. This is encouraging for future campaigns on mental health literary for depression. However, in the case of schizophrenia, the label 'mentally ill' correlated with social distance (Martensen et al., 2020) and mental health literacy campaigns have to be sensitive about the possibility that improved awareness of delusional symptoms may strengthen public stigmatisation.

The impact of perceived course of illness on the desire for social distance

The results regarding the perceived course of illness and endorsed desire for social distance were in line with the expectations for the depression vignette. Endorsed confidence about improvement or remission of depressive symptoms went along with lower hesitation for social interaction (Martensen et al., 2020). The social understanding of the origin of depressive symptoms with its perceived need to reinforce interpersonal relationships has been described earlier. Such a social explanatory concept of depressive symptoms may likewise strengthen the willingness to interact with the person, especially if trust in improvement is robust (Martensen et al., 2020). The depression vignette was also less often recognised as a medical illness (Martensen et al., 2020), so remission of symptoms might seem more likely.

On the other side, a perceived lifelong dependency correlated with increased reluctance for social interaction in the depression condition (Martensen et al., 2020). Perceived persistent dependency, as the second factor represented, implies the expectation of a one-sided relationship. In other words, it incorporated the perception that the respondent would benefit less from the social relationship than the depicted person would. From a social exchange point of view, it means that acts of reciprocity and equity in the theoretically possible relationship are not expected. Because perceived loss of social functioning and integration had no direct influence on social distance for depression, the importance of the phrase 'lifelong' has to be stressed because it rules out the possibility of repaying social obligations or indebts at any time in the future (Martensen et al., 2020). For the schizophrenia vignette, only the two factors representing unfavourable expectations concerning the course of illness were associated with increased longing for social distance (Martensen et al., 2020, 2018). It follows that perceived

life-long dependency was the only factor that, independently from the diagnosis or depicted symptoms, seems to increase hesitation to engage in social relationships (Martensen et al., 2020). So, the public's willingness for social interactions seems independently to be based on expected reciprocity. In Vietnam, the principle of reciprocity is profoundly anchored into society and social relationships, as the culture has been influenced mainly by Confucian values and social practices (Nguyen, 1985; Nyitray, 2008; Yum, 1988). Personal exchange in human relationships is perceived as essential. Specifically, reciprocity is understood as permanent and asymmetrical, focusing on the common good and not as a short-termed symmetrical exchange with a focus on individual benefits (Yum, 1988). In this context, the prospect of lifelong dependency and thereby the perceived inability to contribute to the principle of reciprocity and the common good at no time may especially reduce the willingness to reach out to the affected person (Martensen et al., 2020).

Perceived loss of social functioning and integration only seems to increase reluctance for social interactions with a person having symptoms of schizophrenia (Martensen et al., 2020, 2018). It might be that the symptoms depicted in the schizophrenia vignette firmly conflict with social standards in Vietnamese culture, or more specifically, are perceived as inappropriate behaviour such as neglecting oneself and thereby more strongly imply perceived loss of social functioning (Martensen et al., 2020, 2018). The relevant cultural concept that matters in this context is the concept of 'face' and the troubles to restore it. Shortly outlined, 'face' comprehends a person's social image with regard to respect, pride, status, and dignity (Ho, 1976; Yang and Kleinman, 2008). Keeping one's face requires living by social norms and social expectations; losing one's face leads to social exclusion, while restoring one's face is challenging (Ho, 1976; Nguyen, 2015; Yang and Kleinman, 2008). The finding that positive expectations towards the course of illness do not lessen the reluctance for social interaction in the schizophrenia condition highlights this challenge to diminish stigma connected to schizophrenia even after recovery or remission of delusional symptoms (Martensen et al., 2020, 2018). This aligns with prior research from Vietnam, where schizophrenia is commonly not perceived as a passing phase or episodic illness but rather as a lasting characteristic trait (van der Ham et al., 2011). In terms of reciprocity, respondents might perceive that the depicted person, if symptoms improve, can live a basic life yet will not fulfil appropriate social obligations and engage in reciprocal behaviours inside his or her social network or community.

The findings add a new aspect to future anti-stigma campaigns, especially in more socio-centric societies. Particularly, perceived life-long dependency with little prospect of reciprocity in relationships seems to increase hesitation for social relationships generally. It should be

stressed that in many cases, especially in less severe ones, social abilities are not or only mildly or episodically impaired, and that a meaningful life concerning reciprocity in social interactions is indeed possible, despite with a diagnosis of mental illness (Bora and Berk, 2016; Hajdúk et al., 2018; Karpouzian et al., 2016; Ladegaard et al., 2016).

However, the impairment of social abilities in patients varies broadly and is a relevant aspect in terms of treatment planning and rehabilitation (Bora and Berk, 2016; Hajdúk et al., 2018; Halverson et al., 2020; Knight et al., 2018; Ladegaard et al., 2016; Weightman et al., 2019). Therefore, one essential goal of therapy should be to strengthen the self-sufficiency of patients with respect to their social capabilities (Martensen et al., 2020). Psychosocial interventions or occupational treatment showed positive effects on the level of social functioning, self-esteem and autonomy in various settings (Bejerholm and Eklund, 2005; De Silva et al., 2013; Huang et al., 2015). However, such complementary treatment options still need to be integrated into the Vietnamese mental health system, as they are neither covered by health insurance nor available at this moment (Nguyen et al., 2019c).

The presented findings of this survey must be interpreted with caution regarding several limitations. The sample included the rural and urban areas of Hanoi, Vietnam's capital. Notably, the rapidly changing metropolitan area with its generally high levels of education and available psychiatric services differs hugely from other mainly rural regions of Vietnam. Therefore, the reasonably good mental health knowledge in this sample is not representative of more rural areas of Vietnam. Future studies should investigate mental health knowledge in these parts of the country. Also, a second survey would be needed to evaluate possible changes over time.

This approach used a self-report questionnaire, mainly using a 5-point Likert scale. A qualitative treatment approach might bring interesting new insights to future research as it holds the possibility to reflect on answers. The items eliciting attitudes towards perceived prognosis were theoretically derived from the questionnaire instead of using psychometrically tested scales. The social distance scale used in this study focuses on the willingness to engage in new relationships. Future research would be of interest to evaluate the impact of perceived reciprocity on already existing relationships. Such studies could be helpful to identify factors that could help people with symptoms of mental illness to maintain their already existing social networks. This study used unlabelled vignettes for depression and schizophrenia were used. They are distinguishable from each other, yet, throughout the entire questionnaire, responses might have been influenced by the strong and often negative association of mental illness and schizophrenia in the Vietnamese language.

5. Conclusion

In summary, Vietnamese respondents from the Hanoi region perceived symptoms of major depression and schizophrenia differently. Participants correctly recognised schizophrenia more often than depression as a medical condition based on the descriptions in the vignettes. The narrative of schizophrenia might be easily associated with the typical psychiatric inpatient in Vietnam. Also, the Vietnamese public might more often endorse social-relational explanations in the origin of depressive symptoms and interpret the condition rather as a social misbalance, as social treatment options were favoured for the depression condition. Overall, the findings imply a rather good mental health literacy in Hanoi, Vietnam, but public awareness for depressive symptoms and indication for professional treatment must be raised.

In terms of stigma, mental illness attribution alone was insufficient to explain the desire for social distance. Recognition of symptoms as an illness in a medical sense was only associated with increased reluctance for social interaction in the schizophrenia condition. This highlights the impact of the stereotypical label associated with schizophrenia, not depression. Prognostic expectations of the respondents were associated with the desire for social distance, yet again differently for schizophrenia and depression. Consistently, fear for lifelong dependency on others, ruling out the possibility of reciprocity actions at any time, seemed to increase unwillingness for social contact. A shift towards a focus on the capabilities of people with mental health issues might help to reduce this public perception.

Future research should focus on a broader region of Vietnam to get more insight into the challenges of rural areas and on changes over time to evaluate achievements of anti-stigma campaigns as well as the possible influence of a more globalised youth.

In conclusion, this study emphasises challenges that Vietnam should address, including strengthening mental health knowledge, particularly concerning depression and fighting deeply anchored stigmatisation attitudes, especially towards schizophrenia. As an opportunity to reduce stigma attitudes among the lay public, anti-stigma efforts should emphasise the possibility for reciprocity in relationships. This goes along with developing a mental health system that offers a multi-professional treatment approach focusing on patients' social abilities in Vietnam.

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7. Statutory declaration

"I, Lara Kim Martensen, by personally signing this document in lieu of an oath, hereby affirm that I prepared the submitted dissertation on the topic “Attitudes of the Vietnamese public towards persons with mental illness using non-labelled vignettes for depression and schizophrenia” / “Einstellungen der vietnamesischen Allgemeinbevölkerung gegenüber Personen mit Symptomen der Depression und der Schizophrenie”, independently and without the support of third parties, and that I used no other sources and aids than those stated.
All parts which are based on the publications or presentations of other authors, either in letter or in spirit, are specified as such in accordance with the citing guidelines. The sections on methodology (in particular regarding practical work, laboratory regulations, statistical processing) and results (in particular regarding figures, charts and tables) are exclusively my responsibility.

Furthermore, I declare that I have correctly marked all of the data, the analyses, and the conclusions generated from data obtained in collaboration with other persons, and that I have correctly marked my own contribution and the contributions of other persons (cf. declaration of contribution). I have correctly marked all texts or parts of texts that were generated in collaboration with other persons.

My contributions to any publications to this dissertation correspond to those stated in the below joint declaration made together with the supervisor. All publications created within the scope of the dissertation comply with the guidelines of the ICMJE (International Committee of Medical Journal Editors; www.icmje.org) on authorship. In addition, I declare that I shall comply with the regulations of Charité – Universitätsmedizin Berlin on ensuring good scientific practice.

I declare that I have not yet submitted this dissertation in identical or similar form to another Faculty.

The significance of this statutory declaration and the consequences of a false statutory declaration under criminal law (Sections 156, 161 of the German Criminal Code) are known to me."

Date Signature

Declaration of own contribution to the publications

Lara Kim Martensen contributed the following to the below-listed publications:

Publication 1: p. 31-38

Martensen, L.K., Hahn, E., Cao, T.D., Schomerus, G., Böge, K., Dettling, M., Angermeyer, M.C., Nguyen, V.T., Ta, T.M.T., 2020. Impact and differences of illness course perception on the desire for social distance towards people with symptoms of depression or schizophrenia in Hanoi, Vietnam. Asian J. Psychiatr. 50. doi:10.1016/j.ajp.2020.101973

Impact factor: 2.529

Contribution:

Reading up on background information and priorly published data concerning the research theme. Conceptualisation of the paper's research question. Preparation and stratification of the database. Execution of all statistical analysis resulting in the results presented in tables 1, 2, 3, 4 and 5. Accomplishment of literature research. Designing and writing of the article. Incorporation of comments given by the research team. Accomplishment of the revision work during the publishing process. Management of the communication regarding the paper in the research group and while publication.

Publication 2: p. 39-43

Martensen, L.K., Hahn, E., Cao, T.D., Schomerus, G., Nguyen, M.H., Böge, K., Nguyen, T.D., Mungee, A., Dettling, M., Angermeyer, M.C., Ta, T.M.T., 2018. Impact of perceived course of illness on the desire for social distance towards people with symptoms of schizophrenia in Hanoi, Vietnam. Psychiatry Res. 268, 206–210. doi:10.1016/j.psychres.2018.05.046

Impact factor: 2.118

Contribution:

Reading up on background information concerning the research theme. Conceptualisation of the paper's research question. Preparation and stratification of the data base. Execution of all statistical analysis resulting in the results presented in tables 1, 2 and 3. Accomplishment of literature research. Designing and writing of the article. Incorporation of comments given by the research team. Accomplishment of the revision work during the publishing process. Management of the communication regarding the paper in the research group and while publication.

Publication 3: p. 44-54

Böge, K., Hahn, E., Cao, T.D., Fuchs, L.M., **Martensen, L.K.**, Schomerus, G., Dettling, M., Angermeyer, M., Nguyen, V.T., Ta, T.M.T., 2018. Treatment recommendation differences for schizophrenia and major depression: a population-based study in a Vietnamese cohort. Int. J. Ment. Health Syst. 12, 70. doi:10.1186/s13033-018-0247-6

Impact factor: 2.193

Contribution:

Assisting in the preparation of the database. Designing the statistical analysis performed, leading to the results presented in table 2 and 3. Supporting and revising the writing of the manuscript.

_____

Signature of doctoral candidate

8. Peer-reviewed articles

Martensen, L.K., Hahn, E., Cao, T.D., Schomerus, G., Böge, K., Dettling, M., Angermeyer, M.C., Nguyen, V.T., Ta, T.M.T., 2020. Impact and differences of illness course perception on the desire for social distance towards people with symptoms of depression or schizophrenia in Hanoi, Vietnam. Asian J. Psychiatr. 50. https://doi.org/10.1016/j.ajp.2020.101973

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9. Curriculum Vitae

"Mein Lebenslauf wird aus datenschutzrechtlichen Gründen in der elektronischen Version meiner Arbeit nicht veröffentlicht."

10. List of Publications

2020 IF 2019

1. **Martensen, L.K.**, Hahn, E., Cao, T.D., Schomerus, G., Böge, K., Dettling, M., Angermeyer, M.C., Nguyen, V.T., Ta, T.M.T., 2020. Impact and differences of illness course perception on the desire for social distance towards people with symptoms of depression or schizophrenia in Hanoi, Vietnam. Asian J. Psychiatr. 50. doi:10.1016/j.ajp.2020.101973 2.529

2018

2. **Martensen, L.K.**, Hahn, E., Cao, T.D., Schomerus, G., Nguyen, M.H., Böge, K., Nguyen, T.D., Mungee, A., Dettling, M., Angermeyer, M.C., Ta, T.M.T., 2018. Impact of perceived course of illness on the desire for social distance towards people with symptoms of schizophrenia in Hanoi, Vietnam. Psychiatry Res. 268, 206–210. doi:10.1016/j.psychres.2018.05.046 2.118

3. Böge, K., Hahn, E., Cao, T.D., Fuchs, L.M., **Martensen, L.K.**, Schomerus, G., Dettling, M., Angermeyer, M., Nguyen, V.T., Ta, T.M.T., 2018. Treatment recommendation differences for schizophrenia and major depression: a population-based study in a Vietnamese cohort. Int. J. Ment. Health Syst. 12, 70. doi:10.1186/s13033-018-0247-6 2.193

4. Laqua, C., Hahn, E., Böge, K., **Martensen, L.K.**, Nguyen, T.D., Schomerus, G., Cao, T.D., Dettling, M., von Poser, A., Lanca, J.C., Diefenbacher, A., Angermeyer, M.C., Ta, T.M.T., 2018. Public attitude towards restrictions on persons with mental illness in greater Hanoi area, Vietnam. Int. J. Soc. Psychiatry 64, 335–343. doi:10.1177/0020764018763685 1.439

5. Ta, T.M.T., Böge, K., Cao, T.D., Schomerus, G., Nguyen, T.D., Dettling, M., Mungee, A., **Martensen, L.K.**, Diefenbacher, A., Angermeyer, M.C., Hahn, E., 2018. Public attitudes towards psychiatrists in the metropolitan area of Hanoi, Vietnam. Asian J. Psychiatr. 32, 44–49. doi:10.1016/j.ajp.2017.11.031 2.529

2017 Published abstract

Martensen, L.K., Hahn, E., Cao, T.D., Schomerus, G., Dettling, M., Nguyen, M.H., Angermeyer, M.C., Diefenbacher, A., Ta, T.M.T., 2017. Impact of illness course perception on desire for social distance towards people suffering from schizophrenia in Hanoi, Vietnam. Eur. Psychiatry 41, S515–S515. doi:10.1016/j.eurpsy.2017.01.671

11. Acknowledgements

Throughout this dissertation project I have experienced support and assistance from my supervisors, my research team, as well as from close family and friends in many ways. It is of high importance to me to express my gratitude in the following section.

My great appreciation goes to my research supervisors, Priv.-Doz. Dr. med. Thi Minh Tam Ta and Dr. med. Eric Hahn, for sharing their enthusiasm for the research project. I would like to thank them for their guidance, helpful critiques and reviews throughout the entire writing and publishing process.

A special thanks I want to give to Dr. med. Eric Hahn for wakening my interest in psychiatry through a transcultural perspective in the first place, and for encouraging me to actively participate in research life and conferences. For the rest of my medical career I will be grateful for the clinical experience in psychiatry that I gained under his supervision.

I am further grateful for the support I received from our research team, especially Dr. Kerem Böge, whose comments helped to clarify the line of argumentation in the manuscripts. For his assistance with the dataset, I want to thank Aron Zieger. The statistical advice given by Main Huong Nguyen has been a great help in the early steps of this research project. For their valuable comments and critiques in the final stages of the manuscripts, I would like to express my appreciation to Prof. Dr. Georg Schomerus and Prof. Dr. Matthias Claus Angermeyer.

This study was carried out in cooperation with Dr. Tien Duc Cao from the Military Medical University in Hanoi, and I want to thank him for this valuable partnership in conducting the first studies on public attitudes towards mental illness in Vietnam. Furthermore, I want to take the chance to thank the staff of the "103 Medical Hospital" for their support and supervision of the assessment. I want to express a special thanks to every volunteer; without their willingness to participate, this research project and data collection would not have been possible. For their assistance and correction of the language used I would like to thank Rachel Bryant.

I am deeply indebted to my closest friends Talitha Ringer and Sönke Nissen, who kept up my spirits, gave me the possibility to share and sharpen my thoughts, and repeatedly reassured me in the most challenging phases of this dissertation. Additionally, I want to thank Lisa Walther for her critical view of the final work. Furthermore, I am more than grateful for the kind, patient, and loving support and understanding that I have experienced from my partner Samuel Kaila.

Lastly, I want to express my utmost gratitude to my parents Monika Martensen and Kay-Uwe Martensen, who encouraged me to question the world and strike out into an academic career, and to Claus Martensen, whose affinity for planning enabled me to meet the timetable despite different travel obstacles.