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DISSERTATION

‘Multilevel Assessment of Public Attitudes and Stigma towards Psychiatry and Mental Illness in Vietnam’

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Table of Contents

1. Summary of Publications

Abstract (English)

The overall goal of this dissertation was to investigate the impact of public attitudes, perceptions and associated stigma towards psychiatry and mental illness on different societal levels in Vietnam. Currently, the mental health care infrastructure in Vietnam is on the verge of transformation, exhibiting the demand for access to effective and adequate mental health care services. Additionally, mental illness-related stigmatization and discrimination remain highly prevalent causing impairment in patients' access to adequate, effective and reliable psychiatric care. Furthermore, public attitudes towards mental illness, as well as corresponding treatment options, influence help-seeking behaviours of patients and caregivers, ultimately affecting the course of the treatment. In Vietnam, depression and schizophrenia account for at least 75% of all psychiatric inpatients. The present study aims to assess public attitudes towards psychiatrists and treatment options for depression and schizophrenia in Vietnam. A secondary goal is to analyse the existing restrictions patients with a mental illness and the Vietnamese general publics' desire for social distance from individuals labelled with a mental illness. To that end, for the first time in a Southeast Asian sample, socio-demographic factors will be included to explore their influence within the Vietnamese cultural context. The collected data stems from a general population-based survey that was carried out in the greater Hanoi area using self-report questionnaires. Data was stratified according to the latest Vietnamese census (2009) and micro-census (2013) with regards to socio-demographic factors. Respondents mostly endorsed evidence-based treatment recommendations, such as psychotherapy or psychotropic medication both for schizophrenia and depression. Moreover, negative attitudes towards psychiatrists were associated with religious beliefs and male gender among respondents, while public attitudes towards restrictions of mentally ill people were related to gender and age. Finally, three independent factors were found to influence perceptions regarding the course of mental illness. These include (1) loss of social integration and functioning, (2) lifelong dependency on others and (3) positive expectations towards treatment outcome, out of which two were associated with more desire for social distance. The results of this study will be interpreted in the context of the socio-cultural landscape in Vietnam and give insight into its role in help-seeking behaviour as well as any stigma associated with mental illness giving ground for developments in the mental health system and among care providers. Involving religious institutions in raising awareness about mental health issues while considering socio-cultural factors of the public might pave the way for adequate psychiatric care and destigmatize the mental health system.

Abstrakt (Deutsch)

Das übergeordnete Ziel dieser Dissertationsschrift ist es, die Auswirkungen öffentlicher Einstellungen, Wahrnehmungen und die damit verbundenen Stigmata gegenüber Psychiatrien und psychischen Erkrankungen auf verschiedenen gesellschaftlichen Ebenen in Vietnam zu untersuchen. Derzeit steht die Infrastruktur der psychiatrischen Versorgung in Vietnam am Rande einer Transformation, bedingt durch eine steigende Nachfrage nach Zugang zu effektiven und angemessenen psychiatrischen Versorgungsdiensten. Nichtsdestotrotz sind Stigmatisierung und Diskriminierung im Zusammenhang mit psychischen Erkrankungen nach wie vor in weiten Teilen der Gesellschaft verbreitet und beeinträchtigen den Zugang der Patienten zu einer angebrachten, effektiven und zuverlässigen psychiatrischen Versorgung. Darüber hinaus beeinflusst die Einstellung der Öffentlichkeit gegenüber psychischen Erkrankungen und entsprechenden Behandlungsmöglichkeiten auch das Hilfesuchverhalten von Patienten und Pflegepersonal, was sich letztlich negativ auf den Behandlungsverlauf auswirkt. In Vietnam sind mindestens 75 % aller psychiatrischen stationären Aufenthalte auf Patienten mit Schizophrenien oder Depressionen verteilt. Die vorliegenden Studien zielen somit darauf ab, die öffentliche Einstellung gegenüber Psychiatern und Behandlungsmöglichkeiten bei Depressionen und Schizophrenie in Vietnam zu messen. Ein sekundäres Ziel ist es, bestehende soziale Restriktionen für psychisch Erkrankte sowie den Wunsch der vietnamesischen Bevölkerung nach sozialer Distanz zu Menschen mit psychischen Erkrankungen zu analysieren. Zu diesem Zweck werden erstmals in einer südostasiatischen Stichprobe soziodemographische Faktoren einbezogen um deren Einfluss eingebettet in den vietnamesischen kulturellen Kontext zu untersuchen. Die gesammelten Daten stammen aus einer allgemeinen bevölkerungsrepräsentativ stratifizierten Umfrage, die im Großraum Hanoi auf der Basis von Selbstbeurteilungsfragenbögen durchgeführt wurde. Die Daten wurden gemäß des letzten vietnamesischen Zensuses (2009) und des Mikrozensus (2013) in Bezug auf soziodemografische Faktoren stratifiziert. Die Befragten befürworteten größtenteils evidenzbasierte Behandlungsempfehlungen wie Psychotherapie oder pharmakologische Behandlungen zur Behandlung von Schizophrenie ebenso wie bei Depressionen. Darüber hinaus wurde ein Zusammenhang zwischen negativen Einstellungen gegenüber Psychiatern und religiösen Überzeugungen sowie männlichem Geschlecht festgestellt, während die öffentliche Einstellung gegenüber Einschränkungen für psychisch Erkrankte eher geschlechts- und altersbedingt war. Konklusiv wurden drei unabhängige Faktoren gefunden, die die Wahrnehmungen über den Verlauf einer psychischen Erkrankung beeinflussen: Dazu gehören (1) ein Verlust von sozialer Integration und Funktionalität, (2) eine erwartete lebenslange

Abhängigkeit von Anderen und (3) positive Erwartungen an das Behandlungsergebnis, von denen die ersten zwei Faktoren mit einem stärkeren Wunsch nach sozialer Distanz verbunden waren. Die Ergebnisse dieser Studie werden im soziokulturellen Kontext Vietnams interpretiert und geben einen Einblick in ihre Rolle bei hilfesuchendem Verhalten sowie den vorherrschenden Stigmata gegenüber psychischen Erkrankungen. Darüber hinaus werden Implikationen für die Entwicklung im psychischen Gesundheits- und Pflegesystem in Vietnam diskutiert. Das Einbeziehen religiöser Institutionen und Praktiken hinsichtlich einer Sensibilisierung bezüglich Fragen der psychischen Gesundheit, im Kontext soziokultureller Faktoren der Öffentlichkeit, könnte einen Weg für eine adäquate psychiatrische Versorgung ebnen und die Inanspruchnahme des psychischen Gesundheitssystems langfristig entstigmatisieren.

Introduction

Globally, mental disorders are responsible for the highest number of disability-adjusted life years (DALYs), with more than 180 million affected people (Whiteford et al., 2013). This number accounts for at least 7,4% of the total burden per year worldwide (Ferrari et al., 2013). According to the World Health Organization (WHO, 2017a), depression alone ranks as 'the single largest contributor to global disability' with an estimated 300 million people, approximately 4,4% of the world's population living with it. It is thus no surprise that in 2017 the WHO emphasized the causal effects of depression and schizophrenia on quality of life, disability and economic situation for the individual, as well as the respective society (Ferrari, 2013; Patel, 2017), while highlighting the urgent need for timely, adequate and effective treatment for these prominent mental disorders. The number of mental disorders-related DALYS ranks even higher in low- and middle-income countries (LAMICs), where government expenditure on mental health is less than 1 US$ per capita, whilst more than 80 US$ per capita are being invested in high-income countries (Maramis et al., 2011, Patel et al., 2017, WHO, 2017b). As a consequence of financial shortages in public health systems, an enormous deficit in psychiatric facilities, as well as mental health care delivery is apparent, although LAMICs account for the majority of global disability-adjusted life years due to mental illness (Mascayano, Armijo, & Yang, 2015). In this context, research, legislation and policies merely targeted the lack of appropriate mental health care services and provision which constitute as main potential barriers to adequate and mental health care (WHO, 2011a).

The mental health gap in Vietnam

As a country in transition, Vietnam has been progressing from a lower- to an upper-middle-income country within the last twenty years (World Bank, 2013). With a population of about ninety million people (General Statistics Office of Vietnam, 2013), Vietnam's economy has been thriving within the past two decades, mainly due to the economic liberalization program (Doi Moi) introduced in 1986. However, even though the health sector benefited from the economic growth through the legalization of drug industry and private medical practices (Maramis, Nguyen, & Minas, 2011; Vuong, Van Ginneken, Morris, Ha, & Busse, 2011), the mental health infrastructure does not keep up with the steady economic progress. While national strategies have been developed, and implemented since 1999 in collaboration with the WHO, the National Institute of Mental Health (NIMH) and the Hanoi Medical University (HMU) to improve the mental health care, including the medical education system, there remains a major

lack of personal and financial capacities. Since 2013, the Vietnamese Ministry of Health aims to fully implement the current WHO guidelines as described in the WHO Mental Health Gap Action Plan (mhGAP, 2013-2020). Despite these efforts, uneven, insufficient and limited access to health- and social services remain, particularly for the population in rural geographical regions or for socioeconomically underprivileged groups in Vietnam (Vuong et al., 2011; World Health Organization (WHO, 2014; 2006). Therefore, a persisting gap within multiple mental health provision options, such as professional workforce and civil-society organizations remain, even though mutual programmes and strategies have been implemented. This has resulted in a continues lack of funding narrowing of treatment utilisation as well as a scarcity of treatment options (Maramis et al., 2011; Niemi, Malqvist, Giang, Allebeck, & Falkenberg, 2013; Patel, 2017; The World Bank, 2013; Vuong et al., 2011), even though a high public demand for mental health care persists (Nguyen, Dedding, Pham, Wright, & Bunders, 2013).

The rising demand for mental health care in Vietnam

Concerning this matter, estimations state that approximately 14,9% of the current Vietnamese population suffer from at least one of the ten most prominent mental disorders, thus indicating the need for adequate and effective mental health measures for about 12 million people (Vuong et al., 2011). According to official numbers, the most common mental disorders in the year 2014 were alcohol abuse (5,3%), followed by depression (2,8%), anxiety (2,6%) and schizophrenia ranking at number seven with a lifetime prevalence of 0,5 % (Vuong et al., 2011; Steel et al., 2014). This picture changes fundamentally when the distribution of admission rates and patients treated in psychiatric hospitals are taken into account; here the three most prevalent disorders are schizophrenia with over 60 %, followed by mood disorders (15 %) and neurotic disorders (15 %) (WHO & Ministry of Health Vietnam, 2006). The discrepancy between needed mental health care provision in contrast to the available mental health care delivery in Vietnam becomes particularly apparent when considering that the country only accounts to approximately 0.63 psychiatrists, 0.1 psychologists, and 6.8 psychiatric hospital beds per 100.000 population. In rural regions, the availability of psychiatrists is even lower, with only 0.32 per 100.000 (Maramis et al., 2011; Niemi et al., 2010; WHO, 2014). Furthermore, in Vietnam, there are 2 central mental health hospitals, 31 provincial mental hospitals, and 23 departments in general provincial hospitals. Even when comparing these numbers to other regional LAMICs, such as Thailand and the Philippines, the proportions of psychiatrists among medical doctors in Vietnam is significantly lower (Vuong et al., 2011). The remarkable lack of trained mental health professionals becomes even more evident when comparing to high-

income countries, such as the UK with 11,0, the USA with 13,7 or Germany with 15,23 psychiatrists per 100.00 population (WHO, 2014; 2011b). The gap extends with other mental health professionals, such as psychiatric nurses with only 0.3 per 100.00 compared to 10,4 in the UK and 6,4 in the USA (Henderson & Thornicroft, 2009).

The current Vietnamese mental health care system

In Vietnam, psychiatric healthcare and services are either hospital- or community-based and are offered at four levels: commune, district, provincial and central (Ngo et al., 2014). On the commune level of health care provider, there are more than 700 outpatient mental health facilities which currently only cover up to 60-70% of the populations' need and primarily conduct mental health screenings, referrals to larger hospitals and initial treatments, who offer pharmacological therapy in most cases (Van der Ham, Wright, Van, Doan, & Broerse, 2011; Wagner, Manicavasagar, Silove, Marnane, & Tran, 2006). However, most psychiatric facilities are still located in urban areas and the development and access of community-based treatments are only slowly progressing (Maramis et al., 2011; Niemi, Thanh, Tuan, & Falkenberg, 2010; Vuong et al., 2011). Thus, especially for patients living in rural provinces and districts, the mental health provision remains insufficient (Niemi, Thanh, Tuan, & Falkenberg, 2010). On the provincial and central level, there is an availability of about 54 provincial psychiatric facilities and psychiatric departments with two national hospitals in Hanoi and Ho-Chi-Minh City covering the northern and southern regions of Vietnam (Vuong et al., 2011). These two central mental health hospitals have been authorized in the planning, management, coordination and monitoring of the quality assessment of all mental health systems in Vietnam (Vuong et al., 2011). Under the community-based mental health program (CMH), there was an intention to deliver necessary pharmacological treatment for prioritized and broadly well-known mental disorders, such as epilepsy, schizophrenia and depression, in addition to consultation with medical professionals in community-based health centres monthly *(*Vuong et al., 2011). In the last few years, national policy-makers and program managers established financial and social support mechanisms for patients with severe mental diseases and their caregivers. Although current CMH is acknowledged as a primary national health target, policy-makers and program developers only briefly discussed severe mental disorders, such as schizophrenia and epilepsy in the national report. The need and demand for an adequate mental care provision for further psychiatric disorders such as affective disorders remain as these are the most influential contributors to global disability (Niemi, Malqvist, Giang, Allebeck, & Falkenberg, 2013; WHO, 2017).

Moreover, research has shown (Van der Ham et al., 2011) that within the Vietnamese population evidence-based treatment options, beside family care and community-based approaches, are rarely used. This has been referred to as a lack of mental health literacy as well as biased and stigmatized perceptions towards mental health care providers and available interventions. In addition to structural challenges, the stigmatization of people with mental illness from their caregivers, relatives and the general mental health sector remains highly prevalent in Vietnam (Vuong et al., 2011; 2015). To this end, public stigmatisation and discrimination are common and play a pivotal role in challenging societal structures (Saraceno et al., 2007; Thornicroft, Brohan, Rose, Sartorius, & Leese, 2009).

Cultural perceptions of mental illness and help-seeking behaviour

Within the present context, public stigmatisation describes negative and adverse attitudes as well as mindsets towards people with mental disorders, which in turn form enduring beliefs and perceptions (Angermeyer, Holzinger, & Matschinger, 2009; Corrigan, 2004; Holzinger, Matschinger, & Angermeyer, 2011). Exposure to stigma tends to negatively impact the individual who tends to internalize public stigma, leading to denial or repression of the current situation and hence delaying help-seeking behaviour and treatment initiation, as well as diminishing treatment adherence (Clement et al., 2014; Dockery et al., 2015; Fung, Tsang, & Chan, 2010; Lauber & Rössler, 2007; Schomerus, Matschinger & Angermeyer, 2009). Such processes are known to accelerate the chronification of the diseases (Amminger et al., 2002), impair social functioning, reduce the quality of life, and lead to social isolation (Barnes et al., 2008). Throughout the last years, various sociodemographic factors influencing stigmatization and discrimination towards persons with mental illness in Vietnam were addressed, including religiosity (Huwelmeier, 2013) and urbanity (Komiti, Judd, & Jackson, 2006; Ta et al., 2016). Recent research concerning specific mental disorders such as schizophrenia, recent research (Ta et al., 2017; Vuong, Khanh, Dunne, Thang, & Thang, 2015, Vuong et al., 2011) has highlighted overall high rates of experienced discrimination by the individuals. These were illustrated in comparative studies including cohorts from China (Li et al., 2017) or Western countries (Brohan, Elgie, Sartorius & Thornicroft, 2010). These results are in line with research by Vuong and colleagues (2011) from Vietnam underlining that severe psychiatric disorders are still recognized and perceived as unpredictable, hazardous and deemed as incurable madness. Numerous studies, primarily in Western countries, have pointed towards a further type of stigmatization regarding the publics' attitudes and perception against healthcare delivery and provision in form of mental health care professionals and psychiatric institutions

(Speerforck, Schomerus, Matschinger, & Angermeyer, 2017; Van der Auwera, Schomerus, Baumeister, Matschinger, & Angermeyer, 2017). This, in turn, heavily influences the help-seeking process and treatment recommendations, which in the end boomerang back to the lay publics' perception of a patient with mental illnesses. Hence, when conducting research involving public' attitudes and opinions on stigmatization and discrimination within the context of mental health care structures, it remains crucial to consider multiple aspects, including cultural and societal facets.

The influence of sociocultural barriers and associated stigmatization on mental health service capacity has been displayed in multiple overview articles; however, research in this field is extremely scarce in LAMICs, especially in the context of Vietnam (Maramis et al., 2011; Nguyen et al., 2010). Therefore, studies assessing and evaluating publics' attitudes towards mental health care, treatment options and mental illness related stigma as well as towards an understanding of adequate treatments by the public are urgently needed. This, in turn, may facilitate an improved understanding of publics' needs and demands concerning currently existing mental health care structures. Knowledge from such investigations will help in the implementation of structural and legislative adaptations in the mental health sector, while also enabling the chances of developing cultural-sensitive and appropriate treatment options. (Augsberger, Yeung, Dougher, & Hahm, 2015; Weiss et al., 2011). Furthermore, actions accordingly might intensify and bring light to mental health advocacy, public education, literacy and awareness, which can address the underpinnings of stigma in the culturally specific context of Vietnam and thus help to eliminate the stigmatization and discrimination against persons with mental health conditions.

Aim of the dissertation project

The current dissertation project aims, as the first of its kind, to provide a comprehensive understanding of potential sociocultural barriers surrounding mental health provision and the public mental health awareness and literacy in Vietnam. A further intention of this research is to detect specific processes of mental illness and associated stigma primarily within the context of the most prevalent mental disorders, namely schizophrenia and depression. Therefore, a representative population-based survey was conducted in Vietnam to assess public perceptions and attitudes towards the multifaceted elements within the mental health care and provision, while considering socio-demographic factors to understand their influence on stigmatization and discrimination.

Methods

Participants

A representative population-based survey has been conducted between April and August 2013 in the Hanoi municipality, covering a region of 29 districts (11 urban and 18 rural) with over seven million inhabitants (General Statistics Office of Vietnam, 2013). In collaboration with the Department of Psychiatry of the Hospital 103, Military Academy of Medicine, potential candidates were contacted via the staff's extensive personal network throughout all rural and urban districts of Hanoi. The hospital staff received a structured training, as well as explanations about the study protocol and procedure during a two-day workshop given by two principal investigators. In total, 1100 people were contacted and took part in the study by filling out the attached questionnaires. Not more than one person per household was included in the present study. All participants gave their signed informed consent after receiving written instructions about the study procedures and no monetary or other compensation was given. All collected questionnaires were controlled for systematic errors and missing data by the staff of Hospital 103. Thus, due to partially completed or returned questionnaires by respondents', slightly diverse samples needed to be considered for each specific research question.

Socio-demographic characteristics of each sample and research question in comparison to the total population of Vietnam and Hanoi municipality are reported in each article respectively. Each sample was representative for various socio-demographic characteristics of people living in the greater Hanoi area according to the latest Vietnamese and a more recent micro-census of Hanoi (General Statistics Office of Vietnam, 2013). The study design was reviewed and approved by the Ethics committee of the Military Academy of Medicine, Hanoi.

Assessments

Vignette

In a first step, each participant received an unlabelled vignette describing a person suffering either from symptoms of schizophrenia or major depressive disorder which were exclusively used for research questions analysing treatment recommendations and the impact of the perceived course of illness on the desire for social distance. These symptoms were in line with the diagnostic criteria both disorders according to DSM-IV and ICD-10. Both vignettes have been frequently used and have been reported to be well-established, even cross-culturally (Angermeyer & Matschinger, 2005; Schomerus et al., 2013).

Self-report questionnaires

In addition to a vignette, participants received a detailed self-report questionnaire examining various aspects of stigmatization of mental illness, as well as attitudes towards mental health care and provision.

For the assessment of public attitudes towards *psychiatrist*s, items from three questionnaires were used. These measures were taken from (1) the Attitudes Towards Psychiatry Scale (ATP-30; Burra et al., 1982), (2) an international survey of Gaebel and colleagues (2014) and finally items from (3) a questionnaire published by Stuart and colleague in 2014. In total, the instrument contained eight items including reversed items with an aim to avoid systematic response bias. Items were scored on a balanced five-point Likert scale with responses ranging from 'totally agree' (1) to 'totally disagree' (5). Exemplified items included statements such as "Psychiatrists are real medical doctors" or "Most psychiatrists have mental problems themselves". Overall attitudes were calculated with mean sum scores, with low scores indicating less negative perceptions.

As a second self-report questionnaire, participants were first questioned concerning their treatment measure recommendations for the depicted vignettes. In a second round, they were asked to name from which person, professional or institution, the individual should seek help. Treatment measures comprised of nine items including evidence-based approaches, such as psychotherapy or ECT, as well as possibly culturally-sensitive options such, as feng shui or acupuncture. Personal or institutional help-seeking preferences were covered by thirteen items such as a psychiatrist, a person of trust or a self-help group. Likelihood of recommendation was assessed by using a five-point Likert scale with anchors at "I would strongly advise it" (1) to "I would strongly advise against it" (5). Three responses categories were created for the statistical analysis: Recommend (1/2), Undecided (3), Unfavourable (4/5).

Participants' support of *compulsory admissions* for people with mental disorders to a psychiatric hospital was assessed with the use of nine questions or statements. The items were taken from studies conducted by Angermeyer and colleagues (2014) and asked for respondents' opinion regarding the circumstances in which involuntary admission might be justified, including items such as suicidality, violent behaviour, withdrawal from the environment or producing public disturbances. Another set of six items examined participants' attitudes and endorsements concerning the withdrawal of certain rights, such as to vote in parliamentary elections, sterilization, abortion or possessing a driving license ("Should mentally ill people be sterilized against their will, if necessary? or "If a mentally ill female becomes pregnant, should she abort?"). All items were answered with three response categories including either "Under

certain conditions in favour", "Principally against", "Don't know" or "Yes", No" and "Don't know".

Concerning the measurement of *course of illness* perception, a theory-based approach was applied to selected items. Here, seven items assessed the overall support and agreement of participants concerning the perceived illness progression as well as perceived changes in everyday life social functioning and possible remission of psychopathology ("Would you accept her as your colleague at work?" or "If you would have a room for rent would you offer the room to her?"). All items were answered with the use of a five-point Likert scale ranging from 'totally agree' (1) to 'totally disagree' (5). Answers were grouped together as follows: "Agree" (1/2), "Undecided" (3), "Disagree" (4/5).

To investigate the lay public's *desire for social distance* towards people with a mental illness in diverse social situations, the seven items from the questionnaire developed by Link (1987) based on the Bogardus Social Distance Scale (Bogardus, 1925) were used. The scale contains questions examining the degree of acceptance towards people with mental illnesses as family member in-law, neighbors or colleagues ("How would you feel having someone like X as a neighbor?" or "How would you feel about recommending someone like X for a job working for a friend of yours"). Responses of each item were rated on a five-point Likert scale rending from 'very likely' (1), over 'varied' (3) to 'very unlikely' (5). All item responses were then added together to a sum score which ranged from 5 (lowest desire for social distance) to 35 (highest desire for social distance).

Similar methodological approaches concerning these measures have been conducted within various studies across countries without modifications, besides the linguistic adaption of the tool (Angermeyer et al., 2016; Angermeyer et al., 2014; Angermeyer & Matschinger, 2005; Schomerus et al., 2013).

Translation procedure

All structured questionnaires, assessment tools and vignettes were primarily translated from German to Vietnamese by a psychiatrist who is a native speaker from Vietnam and possesses German language proficiency at an academic level. As a next step, the Vietnamese translations were adapted, revised and back-translated into German by a certified translator from Vietnamese to German. Finally, all revised instruments were examined and edited by two Vietnamese psychiatrists from the Hospital 103, Military Academy of Medicine in Hanoi. It was also ensured that all translations of the structured questionnaires, assessment tools and

vignettes matched the local dialect in Hanoi, Vietnam and were in line with the contextual and linguistic specificities of Vietnamese living in the Red River Delta.

Statistical analysis

For each research question within the present dissertation project, a different statistical analysis has been performed, as appropriate. Multiple Chi-squared tests were calculated across all subsamples to assess possible socio-demographic differences and to ensure representativeness according to the latest official census.

For the first research question, a multiple linear regression analysis was performed examining the influence of socio-demographic variables on the perception towards psychiatrists. These included gender, urbanity, marital status, school education, employment status, religious beliefs and familiarity with mental illness as categorical variables and age, as well as household size as continuous variables. Furthermore, confidence intervals (95 %), non-standardized regression coefficients and standardized regression coefficients were computed. In a last step, an analysis of variance (ANOVA) was conducted followed an ANOVA with Bonferroni correction to specifically investigate the effect of gender on each item of the questionnaire.

Concerning the second research question, descriptive statistics, confidence intervals (95 %), as well as independent t-tests were calculated for each vignette to determine additional differences in the likelihood of recommendations between both conditions.

Regarding the third research question, multiple multinomial logistic regressions for odds ratios (ORs) and 95% confidence intervals (CIs) were conducted to investigate possible associations between socio-demographic variables and the endorsement of restrictions towards individuals with mental disorders by the public. Here, level of education, gender, age, and urbanity were considered as independent variables, however without a hierarchical specification. Religious beliefs and familiarity with mental illnesses (were put in as a dichotomous categorical variable with (1) “Yes” and (2) “No, never”) using ‘No, never’ as the corresponding reference category.

For the last research question, primarily a factor analysis comprising a principal factor extraction and varimax rotation was calculated to assess possible causal groups in the desire for social distance scale for the perceived course of illness. The Kaiser-Meyer-Olkin measure of sampling adequacy (KMO) was performed, while only factors with an eigenvalue >1 were excluded. In a further step, Anderson-Rubin variables were saved for each case to execute a regression analysis with personal factors as the IV and social distance as the DV.

The level of significance was set at $p < .05$ for all tests. All analyses were performed using the Statistical Package for the Social Sciences (SPSS Version 23) for macOS-X.

Results

Attitudes towards psychiatrists

Overall, the mean displays a moderate stigma of the lay public towards psychiatrists in Vietnam (M = 2.17; SD = 0.63). However, significant associations were found between participants' gender and religious beliefs concerning their attitudes towards psychiatrists. Male respondents showed significantly higher levels of negative attitudes and perceptions towards psychiatrists compared to their female counterparts (B = -0.121, β = -0.095, p = .007). Similarly, participants who reported to follow a religion, regardless of which, showed in comparison to individuals indicating to be irreligious, significantly more negative attitudes and perception towards psychiatrists (B = -0.134, β = -0.095, p = .007). Therewith, sub-analysis revealed no significant differences in between religious affiliations (F (2,231) $M_{Difference}$ = 1.444, p = .238).

Differences of treatment recommendation for symptoms of schizophrenia and depression

Generally, mean response values across both conditions exposed the identical hierarchy of treatment measures recommendations for all nine items. In summary, items, such as psychotherapy, concentration, relaxation exercises, meditation, yoga and psychotropic medication were all equally ranked as the most prominent treatment recommendations in both conditions. In addition, natural medicine, ECT, acupuncture, feng shui and praying were rated as the least favoured treatment modalities for both schizophrenia and depression case vignettes. Multiple t-tests displayed that respondents recommended psychotherapy (M_D = -0.308, p < .001), ECT (M_D = -0.273, p < .05), feng shui (M_D = -0.232, p < .01) and praying (M_D = -0.333, p < .001) significantly more often for people suffering from schizophrenia compared to people with a depression.

Concerning personal or institutional help-seeking treatment options, participants most frequently favoured psychiatrists, closely followed by psychotherapists, general practitioners, a person of trust, rehabilitation facilities, health authorities, and self-help groups for the person described in the schizophrenia vignette. In contrast, participants recommended a person of trust and a psychotherapist most prominently for people with depression followed by psychiatrists, general practitioners, rehabilitation facilities and oneself.

In comparison, t-tests revealed on the one side that psychiatrists (M_D = -0.336, p < .001) and psychotherapists (M_D = -0.149, p < .05) were significantly more suggested for people with schizophrenia than with depression. However, on the other side a person of trust (M_D = 0.158, p < .05) or self (M_D = 0.382, p < .001) were significantly more endorsed for the depression vignette. Respondents discouraged pursuing a natural health healer (M_D = -0.301, p < .001)

significantly more frequently for the schizophrenia vignette compared to the depression condition while in contrast help-seeking using the internet (M_D = 0.206, $p < .05$) was significantly less dissuaded.

Attitudes to restrictions on people with mental illness

Results showed that respondents endorsed the following three items most frequently: compulsory admission to hospital under certain conditions (77.4%), withdrawal of the right to vote in parliamentary elections (74.0%) and revoking of a temporary driving license at least for the duration of mental health treatment (67.7%). In a next step, respondents stated under which precise conditions a compulsory admission to a hospital was legitimised with suicidality (85,7 %), violence toward others (83,3 %) and (3) self-neglect and isolation (76,4 %) ranked among the first three.

Additionally, a multinomial logistic regression was performed to assess the relationship between socio-demographic variables and the endorsement of four restriction types. Results highlighted that (1) men supported significantly less often compulsory admissions than women (OR = 0.45, 95 % CI 0.27–0.75), (b = −0.796, standard error (SE) = 0.259, Wald $\chi2(1) = 9.485$, $p = .002$), (2) men approved significantly less frequently abortions in the case of pregnancy compared to women (OR = 0.53, $p < .001$, 95 % CI 0.36– 0.76) (gender: b = −0.639, SE = 0.19, Wald $\chi2$ (1) = 11.35, $p = .001$) (3) respondents aged between 25 and 49 years in comparison to aged 50+ years approved significantly less often an abortion for a woman with a mental illness (OR = 0.50, $p = .015$, 95 % CI 0.29–0.88) (4) lastly, likewise participants aged 16–24 years supported significantly less often an abortion compared to aged 50+years (OR = 0.24, $p < .001$, 95 % CI 0.13–0.47) (age: 16–24 vs 50+: b= −1.419, SE = 0.336, Wald $\chi2(1) = 17.853$, $p < .001$; age 25–49 vs 50+ years: b = −0.692, SE = 0.286, Wald $\chi2(1) = 5.868$, $p = .015$).

Perception of course of illness on the desire of social distance

Initially, a factor analysis was performed with seven items measuring the public perception concerning the course of illness of the case illustrated within the vignette, major depression or schizophrenia. Results indicated three independent factors within the perception of the course of illness. Items with an eigenvalue > 1, Kaiser's criterion, were extracted. A total variance of 69,15 % was explainable by the extracted factors. Analysis revealed three main factors, each including two to three items: (1) *loss of social integration and functioning*, (2) *lifelong dependency on others*, (3) *positive attitude towards treatment outcome and course of illness*. Moreover, a linear regression analysis was conducted to assess the impact of these

expectations, illustrating that the overall model was significant ($p < 0.01$). In the last step, two of these three factors specifically displayed a significant, but adverse, effect on the desire for social distance, (1) *loss of social integration and functioning significantly* ($\beta = -0.128$; $p = 0.006$) and (2) *lifelong dependency on others* ($\beta = -0.092$; $p = 0.049$).

Discussion

To the author's knowledge, the present studies are the first large-scaled investigation to examine public attitudes and perceptions towards psychiatry, mental illness and its provision in Vietnam. By exploring treatment recommendations, response behaviour, attitudes towards psychiatrists, as well as the restrictions on persons with mental illness in the context of Vietnam's sociocultural environment, insights were gained regarding the public awareness and causal beliefs about mental illness, help-seeking behaviours and their perceived needs from Vietnam's mental health care system.

Treatment recommendation differences for schizophrenia and major depression

Overall, respondents' treatment recommendations revealed that the Vietnamese most frequently favoured psychotherapy as the primary and initial intervention for the treatment of both depression (79,4 %) and schizophrenia (92,9 %) respectively. Interestingly, these results support and elaborate on findings from a recently published meta-analysis involving different Western and Eastern societies where psychotherapy was universally recommended with a rate of 76 % for depression and 85 % for schizophrenia (Angermeyer, van der Auwera, Carta & Schomerus, 2017). Furthermore, the Vietnamese public showed an awareness of widely acknowledged psychological- and psychiatric treatment interventions, such as concentration and relaxation exercises, medication, psychotherapy, and seeking help at rehabilitation facilities, general practitioners, psychiatrists or psychologists, although several of these measures are not sufficiently available in Vietnam. This was also reflected in how approaches such as Feng-Shui or praying that are not based on current evidence, were mostly not endorsed as primary treatment recommendations. In sharp contrast to these outcomes and the evident demand for professional care, a noticeable treatment gap remains, indicating a lack of mental health care facilities, well-trained professionals and integration of psychotherapeutic options into mental health care. Even though pilot efforts have been made in Vietnam to develop and implement programmes of clinical psychology and psychotherapy (Esther Alliance for Global Health, 2017, Fritzsche et al., 2008), there is still a dire need for a structured psychotherapy curriculum. Another obstacle is that psychotherapy, until this date, has not yet been adopted by national guidelines leading to costs that are not being covered by health insurance (Quốc hội, 2014). The perception of psychotherapists, as humans who are open, trustworthy and mindful listeners seems to be present in society, despite the obvious lack in availability and accessibility of psychotherapeutic services (Angermeyer, van der Auwera, Carta & Schomerus, 2017).

Qualitative approaches may be useful in future research and might allow understanding of public knowledge and awareness of psychotherapy.

Furthermore, the public seems to understand the complex nature of schizophrenia and depression, since the four most recommended treatment providers for both mental disorders were psychiatrists, psychotherapists, a person of trust and a general practitioner. These preferred help-seeking options constitute well-established, reliable and commonly used professional interventions in mental health care systems (Gaebel, Weinmann, Sartorius, Rutz & Yre, 2005; Lehmann et al., 2004, Schulberg, Katon, Simon & Rush, 1998). Moreover, respondents emphasized high-threshold treatment- and help-seeking options, such as electroconvulsive therapy (ECT), psychotherapy, a psychiatrist or psychotherapist significantly more often for the schizophrenia vignette as compared to the depression vignette. This shows the perceived differences in symptom severity. Other studies have confirmed this observation by reporting schizophrenia as perceived to be the more severe mental disorder (Angermeyer et al., 2014; Speerforck, Schomerus, Matschinger, & Angermeyer, 2017; Smith, Reddy, Foster, Asbury, & Brooks, 2011) followed by alcohol addiction, anxiety disorders and lastly depression - a hierarchy that exists in the Vietnamese context (van der Ham et al., 2011). In contrast to schizophrenia, recent research has hinted towards an understanding that within Asian cultures, underlying causes of depression are understood as primarily psychosocial or interpersonal stressors, rather than stemming from a biochemical imbalance in the brain (Chen et al., 2015; Furnham, 2009; Schomerus et al., 2006; van der Ham et al., 2011). These findings seem to be supported by respondents who favoured interpersonal treatment providers, such as person of trust, psychiatrist, psychotherapist or self-help group for the treatment of depression.

One strength of the present investigation is the inclusion of various culturally-embedded treatment approaches. Even though traditional approaches such as Vietnamese traditional medicine (VTM), natural medicine, acupuncture, feng shui, praying, meditation or yoga belong to different religious and cultural backgrounds, these measures constitute an important practise in Vietnam and are frequently suggested by the lay public. Research by Woerdenbag and colleagues (2012) indicates that VTM medicine represents a vital part of the formal health care system as it is received by approximately 30% of all patients in Vietnam. Treatment approaches including traditional, complementary and alternative medicine seems to play an important role in the health care prevention and treatment of chronic disease conditions, such as stomach and intestinal complaints or musculoskeletal conditions while in contrast, only 2,1% of participants received complementary and alternative medicine in the treatment of their

mental disorders in further Southeast Asian countries displaying its cultural relevance (Peltzer, Saydara & Pengpid, 2016).

Interestingly, participants clearly stated traditional treatment approaches, such as the use of natural health healer, priest, feng shui master, contacting ancestors via medium or acupuncture as an unfavourable option for treatment of either schizophrenia or major depressive disorder. Only meditation and yoga have been endorsed for both conditions, which have proven to be reliable, evidence-based treatment options in recent years. Even though the current sample considered traditional treatment options primarily as unfavourable, traditional healthcare providers such as VTM are deeply-rooted within various cultures (Woerdenbag et al., 2012). Hence, in those countries where professional human resources are lacking, mental health care provision by traditional providers might act as additional treatment options within the mental health system (Kovess-Masfety et al., 2017). From a different perspective, the utilization of traditional approaches might be a symptom of the persistent treatment gap combined with substantial barriers to adequate treatment options, rather than an expression of distrust towards medical psychiatry (Kovess-Masfety et al., 2017; Peltzer, Sydara, & Supa, 2016). Nonetheless, participants understanding of natural health healers remains unclear in the current investigation as these cover a broad field of treatment approaches in the national healthcare system of Vietnam and has been widely accepted in the Vietnamese culture as it can coexist with modern and conventional Western medicine approaches (Nguyen, Miller & Dingel, 2010; O'Callaghan & Quine, 2007).

Influence of gender and religion on public attitudes towards psychiatrists

Considering public attitudes towards professional mental health providers, such as psychiatrists, the Vietnamese population in the Greater Hanoi area, display moderate levels of stigma and discrimination towards psychiatrists. Within the study sample, results explicitly indicate an influence of gender and religion. While male participants showed higher values of stigma, their female counterparts did not. This observation has been reported in previous studies, where women have exhibited less mental health-related stigma than men (Clement et al., 2014; Judd et al., 2008). The role of men's masculinity remains characterized by being powerful, dominant and in control persist to be prevalent in many cultures (Seidler et al., 2016); this is also the case for the Vietnamese culture and the existence of traditional gender roles (Huwelmeier, 2013; Nguyen, 2015). In the Vietnamese culture, women are still perceived as the "weaker" gender ('phái yếu') (Nguyen 2015). This is even observable in linguistic proverbs, such as 'Đàn ông xây nhà, đàn bà xây tổ ấm ('Men build houses, women build a nest'),

characterizing the alleged traditional gender roles till the present day. This phenomenon may contribute to the reluctance and hesitation of men in approaching mental health professionals, as it might be seen by others as a sign of weakness. In contrast, the willingness of Vietnamese women, who are already perceived as the "weaker" gender, to seek help and support might be higher, resulting in more positive and open attitudes towards seeing a psychiatrist. This rationale is supported by research, which underlines that men compared to women showed greater barriers and difficulties in talking with professionals (Brohan, Elgie, Sartorius, & Thornicroft, 2010). Future research should aim at targeting men's perspectives, primarily through qualitative approaches to shed light into their reasoning and give insight into more deepened sociocultural dynamics that can prevent Vietnamese men from seeking mental health care services. Therefore, specific psycho-education programs and tailored awareness-raising campaigns about mental disorders are needed to improve the help-seeking behaviour in Vietnam. Besides educational actions, political and legislative support would also be useful for enhancing the mental health care infrastructure by increasing human resources in the mental health field.

Besides the influence of gender, the present study revealed that participants with religious beliefs showed more stigma and negative attitudes towards psychiatrists than respondents who reported having no religious affiliation. In contrast, a recent study reported lower levels of perceived stigma towards patients with a mental disorder for people who were following a religion compared to participants without religious beliefs in Vietnam (Ta et al., 2016). These contrasting observations might be explained by the tendency of religious people to experience and express more interpersonal caring and empathy towards people with a mental disorder - as a form of in-group collectivism. Moreover, this could lead to varying help-seeking behaviours as individuals living with mental illness might seek religious guidance or spirituality as the primary treatment option when managing and coping with their psychological problems (Baetz et al., 2006; Koenig, 2009). In accordance with that, numerous studies have highlighted strong associations between religiosity and reduced utilization of mental health services (Lukachko, Myer & Hankerson, 2015; Park, Hong, Park & Cho, 2012). As the public seems to recommend evidence-based approaches, there remains a considerable amount of people suggesting traditional healing and religious practices, such as Feng-Shui or praying as adequate treatment options for severe disorders like schizophrenia and major depression. The propensity of negative attitudes and stigmatization towards the different facets of mental health systems, including psychiatrists, psychiatric institutions and psychopharmacology might be especially represented by religious people because the construct of psychiatry does not fit into their rather

monotheistic religious belief system (Giglio, 1993; Youssef & Deane, 2013). Here, international epidemiological surveys have illustrated that in LAMICs, 20.9% of people with a severe mental disorder had contact with a religious advisor, while only 12.3% in upper-middle income countries and 9.5% in high-income countries (Kovess-Masfety et al., 2017). Furthermore, it has been stressed by 16.2% of respondents in LAMICs that religious providers were the only available resource (Kovess-Masfety et al., 2017). Besides tackling human resource scarcity and the treatment delivery gap, previous experiences from high-income countries dealing with stigma emphasize a collaborative approach between psychiatric institutions and religious organizations through the facilitation of dialogue. Altogether, a process of de-stigmatization of mental health should occur and emerge allowing religious communities to act as additional support to the existing psychiatric structure in a synergetic coexistence.

Public attitudes towards restrictions on persons with mental illness

In recent years, there appears to be a rising awareness regarding patients' human rights when involuntary and compulsory admissions into psychiatric institutions occur. Legal regulations concerning restrictive measures have been advocated by various organisations including the United Nations Convention on the Rights of Persons with Disabilities and the European Commission (European Commission, 2015; United Nations, 2006). Until today, no explicit law concerning mental health has been implemented, except the Law on Protection of People's Health (1989), which intends to protect psychiatric patients' rights by clarifying the conditions of involuntary admission and treatment, such as the obligations to ask a close relative for consent before beginning psychiatric treatment (Vuong et al., 2011). As the first study of its kind incorporating and assessing the Vietnamese attitudes towards restrictions on persons with mental illness, the results in this study display high acceptance of compulsory hospital admissions (77%) under certain conditions. These findings are in line with previous investigations from high-income countries indicating that 70% of Swiss participants (Lauber, Nordt, Falcato & Rössler, 2002), as well as 98.9% of specialists and 72.2% of non-specialists endorsed compulsory admissions (Zogg et al., 2003). Similar results were demonstrated in former East German states where more than 70% of respondents accepted involuntary admissions in the years 1993 and 2001 (Angermeyer et al., 2014). However, in contrast to that study, another investigation with a European cohort showed no associations between gender and the support of restrictions (Lauber, Nordt, Falcato & Rössler, 2002), while in the present study, Vietnamese men showed lower endorsement when compared to their female

counterparts. Furthermore, the majority of Vietnamese respondents declined abortions of mentally ill females, even though differences among gender and age were detected. Overall, these results are comparable with other trails in Western societies, where changes in attitudes, specifically a lack of endorsement of abortion, has been observed over decades (Angermeyer et al., 2014; Lauber et al., 2000; Zogg et al., 2003). Although the economic and political representation of women in Vietnamese society is analogue its surrounding countries, gender differences remain highly prevalent in the socio-cultural context of Vietnam. Recently, it has been reported that females still perceive themselves as inferior to men, demanding their need for protection (Nguyen & Simkin, 2017; Schuler et al., 2006). This alleged self-concept might, in turn, lead to more defensive and safety-seeking behaviours and attitudes resulting in higher endorsement towards compulsory admissions. Here, strengthening the image of women through political and legislative measures should change the self- as well as the societal concepts of females in Vietnam, which is currently still undergoing multiple economic and cultural transformations. Furthermore, opening psychiatric hospitals, as well as strengthening patients' legal rights, might evoke even further awareness in the public regarding their personal rights.

Impact of the perceived course of illness

As a last step, the present investigation evaluated factors, which impact the perceived course of illness, as well as its influence on the desire for social distance towards people with a mental illness. The three key factors were evident here, (1) loss of social integration and functioning, (2) lifelong dependency on others and (3) positive attitude towards treatment outcome and course of illness, all correlate with an enhanced desire for social distance in the Vietnamese public towards people with schizophrenia. In Vietnam, where the society endorses sociocentric values and behaviours, the importance of fulfilling a social role and value for the community and society is of great importance. Therefore, social exclusion, when certain expectations cannot be accomplished, would lead to further isolation in the long run. Patients diagnosed with schizophrenia are particularly prone and vulnerable to these factors, as many are not able to maintain certain lifestyles, including their own level of autonomy and redeeming their social status after illness onset and symptom exacerbation (Huber et al., 1975; Owen et al., 2016). This vicious cycle goes on with insufficient psychiatric and psychosocial coverage, as well as high social and institutional barriers for adequate treatment provision inhibiting symptom control for the individuals with psychiatric conditions and worsening the overall course of illness. A recent systematic review (Schnyder et al., 2017) about the association between mental health-related stigma and active help-seeking behaviours highlighted this

hazardous process, as high rates of stigma in the public were negatively influencing the help-seeking process. The second factor addressing the lifelong dependency on someone else that occurs during a mental health diagnosis directly displays the reluctance demonstrated by individuals who are responsible. The resulting loss of social status and value in the primarily community-based Vietnamese culture might further enhance social isolation (Yum, 1988). Besides cultural factors, the research literature suggests that even in Western countries, a perceived long-lasting expected dependency negatively effects the desire for social distance (Angermeyer & Matschinger, 2003). As the third and last factor, positive expectations towards treatment outcome indicated that despite using unlabelled vignettes, the depicted symptoms might have elicited a label of severe mental disorder. However, in the Vietnamese context, the long-lasting dependency on others and reduced social competence paired with the perceived symptom's severity might play a more crucial role. In contrast to individualistic attitudes in Western societies (Lauber & Rössler, 2007), the concept of a social face which is highly associated with respect, pride, dignity and social capital remains an integral and essential value within the Vietnamese culture (Nguyen, 2015). Therefore, the overall improvement of psychiatric services, as well as extending the current psychiatric focus and use of human resources from merely symptom control towards the enhancement of personal social functioning and collective integration, remains highly relevant. Whilst in Western countries integrative treatment approaches, such as occupational therapy, are common in psychiatric facilities, similar community-based psychosocial interventions should be implemented in Vietnam as well, in order to strengthen social skills and everyday life competencies and enable individuals to contribute to the community effectively and overcome the perceived failure of reciprocity.

Limitations

The present investigation should be interpreted in the light of several limitations which, however, suggest considerable possibilities for future research. First, although the overall sample characteristics mostly matched up the general population, the study was conducted in the rural and urban areas of Hanoi leading to results which cannot be considered representative for the whole Vietnamese population. Here, a national survey might potentially produce more heterogeneous results. Secondly, the collected data was assessed cross-sectionally limiting any implications of causality. As a third point, the primary use of self-report questionnaires may have caused some respondents to answer questions with less diligence and accuracy compared to a face-to-face interview. In contrast, this procedure may also encourage respondents to

answer more honestly, as perceived anonymity liberates respondents from social pressure and socially desirable response patterns. Even though the questionnaires were not validated in Vietnamese, they have been used in other countries beforehand, which opens the opportunity for future cross-cultural comparisons. Fourth, a priori determined answer options, including theoretically derived items and non-psychometrically tested instruments, might account for bias as further answer possibilities are narrowed by this approach. Although, the present study aimed at including sociocultural sensitive treatments, such as acupuncture, seeking feng shui masters or contacting ancestors via a medium. For future research designs, qualitative approaches might give insight into novel explanatory patterns of respondents. Fifth, socio-demographic variables, like religious beliefs, only assessed confession, however, did not measure the degree of religiosity or active pursuing thereof, limiting causal associations. Finally, public acceptance of restrictions towards people with mental illness (bệnh nhân tâm thần - patients with a psychiatric illness) was determined without prior definition of the initial concept of 'mental illness' for the Vietnamese public. On the long run, systematic investigations of the emic concepts of 'mental illness' in different areas and social contexts of Vietnam would be of important interest. According to current knowledge, the term 'bệnh nhân tâm thần' (patients with a psychiatric illness) in the public understanding remains most frequently linked to people showing psychotic symptoms within the scope of schizophrenia.

Conclusion

To summarize, the current dissertation displays the first large-scale population stratified investigation exploring the public perception and attitudes towards various features of mental illness, psychiatry and mental health care in Vietnam. Findings certify an advanced mental health literacy and awareness from the Vietnamese public concerning reliable, evidence-based treatment measures and help-seeking options for major mental disorders, the severity of mental illnesses as well as treatment need. The lack of psychiatric and psychotherapeutic personnel and facilities remains a pressing barrier for sufficient and effective mental care provision, even though first legal and structural changes have been initiated. Besides focusing on an increase of human resources, the large demand of the public for psychotherapy implies that legal regulations and psychotherapy curriculums are urgently needed. Because stigma and negative attitudes towards mental health care professionals and affected people still exist, awareness and educational programs, paired with de-stigmatisation campaigns, while integrating religious institutions might explicitly target these attitudes and lead to structural and interpersonal changes within the public sphere. Since sociodemographic factors, such as religious affiliation,

gender and age all seem to influence the public attitudes and perception, other negatively, socio-cultural dimensions, such as prominent gender roles need to be explored in further studies. The results show that in a predominantly socio-centric society in transition as in Vietnam, the capability of reciprocity and social participation might still maintain a crucial function in the desire for social distance. Therefore, the current findings might allow and support a new perspective and transition from a currently constituted treatment focus approach on symptoms control of affected persons towards psychosocial interventions strengthening general social functions as well as human rights of affected psychiatric patients to ultimately reinforce their social integration in Vietnam.

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2. Statement of authorship

Eidesstattliche Versicherung

„Ich, Kerem Böge, versichere an Eides statt durch meine eigenhändige Unterschrift, dass ich die vorgelegte Dissertation mit dem Thema: **‚Multilevel Assessment of Public Attitudes and Stigma towards Psychiatry and Mental Illness in Vietnam'** selbstständig und ohne nicht offengelegte Hilfe Dritter verfasst und keine anderen als die angegebenen Quellen und Hilfsmittel genutzt habe.
Alle Stellen, die wörtlich oder dem Sinne nach auf Publikationen oder Vorträgen anderer Autoren beruhen, sind als solche in korrekter Zitierung kenntlich gemacht. Die Abschnitte zu Methodik (insbesondere praktische Arbeiten, Laborbestimmungen, statistische Aufarbeitung) und Resultaten (insbesondere Abbildungen, Graphiken und Tabellen werden von mir verantwortet.

Meine Anteile an etwaigen Publikationen zu dieser Dissertation entsprechen denen, die in der untenstehenden gemeinsamen Erklärung mit dem/der Betreuer/in, angegeben sind. Für sämtliche im Rahmen der Dissertation entstandenen Publikationen wurden die Richtlinien des ICMJE (International Committee of Medical Journal Editors; www.icmje.og) zur Autorenschaft eingehalten. Ich erkläre ferner, dass mir die Satzung der Charité – Universitätsmedizin Berlin zur Sicherung Guter Wissenschaftlicher Praxis bekannt ist und ich mich zur Einhaltung dieser Satzung verpflichte.

Die Bedeutung dieser eidesstattlichen Versicherung und die strafrechtlichen Folgen einer unwahren eidesstattlichen Versicherung (§156,161 des Strafgesetzbuches) sind mir bekannt und bewusst."

20.05.2019 _____
Datum Unterschrift

3. Share declaration

Publication 1, page 40-50

Böge, K., Hahn, E., Cao, T.D., Fuchs, L.M., Martensen, L.K., Schomerus, G., Dettling, M., Angermeyer, M.C., Nguyen, V.T., Ta, T.M.T. (2018). Treatment recommendation differences for schizophrenia and major depression: A population-based study in a Vietnamese cohort. *International Journal of Mental Health Systems*, 12(1).doi:10.1186/s13033-018-0247-6

Contribution: Conceptualization and design of research idea. Literature research. Preparation of a database. Coordination of data maintenance. Implementation of all data analyses including tables 1,2 and 3. Drafting and writing the manuscript. Revision work based on the comments of the reviewers. Responsibility for the communication regarding the publication

Publication 2, page 51-56

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 Journal of Psychiatry*. 32:44-49. doi: 10.1016/j.ajp.2017.11.031. **Shared authorship*

Contribution: Conceptualization and design of research idea. Literature research. Together with the first author drafting and writing the manuscript. Preparation of a database. Coordination of data maintenance. Implementation of the data analyses including tables 1,2 and 3. Revision work based on the comments of the reviewers. Responsibility for the communication regarding the publication.

Publication 3, page 57-65

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 attitudes towards restrictions on persons with mental illness in greater Hanoi area, Vietnam. *International Journal of Social Psychiatry*. 64(4): 335-343. doi: 10.1177/0020764018763685 **Shared authorship*

Contribution: Preparation of a database. Coordination of data maintenance. Implementation of the data analysis resulting in tables 1,2 and 4. Supporting the writing of the manuscript. Supporting the revision work based on the comments of the reviewers.

Publication 4, page 66-70

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 Research*, *268*, 206-210. doi:10.1016/j.psychres.2018.05.046

Contribution: Preparation of a database. Coordination of data maintenance. Implementation of the data analysis resulting in table 1 and 2. Supporting the writing of the manuscript. Supporting the revision work based on the comments of the reviewers.

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Unterschrift des Doktoranden

4. Peer-reviewed Articles

Böge, K., Hahn, E., Cao, T. D., Fuchs, L. M., Martensen, L. K., Schomerus, G., Dettling, M., Angermeyer, M. C., Nguyen, V. T., Ta, T. M. T. (2018). Treatment recommendation differences for schizophrenia and major depression: A population-based study in a Vietnamese cohort. *International Journal of Mental Health Systems,* 12(1). https://doi.org/10.1186/s13033-018-0247-6

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5. Curriculum Vitae

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

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6. Publications

Articles

2019

1. **Böge, K.***, Karnouk, C.*, Hahn, E., Schneider, F., Habel, U., Banaschewski, T., Meyer-Lindenberg A., Joachim-Salize, H., Kamp-Becker, I., Padberg, F., Hasan, A., Falkai, P., Rapp, M.A., Plener, P.L., Stamm, T., Elnahrawy, N., Lieb, K., Heinz, A., Bajbouj, M. (2019). Mental health in refugees and asylum seekers (MEHIRA): study design and methodology of a prospective multicentre randomized controlled trail investigating the effects of a stepped and collaborative care model. *European Archives of Psychiatry and Clinical Neuroscience*. doi:10.1007/s00406-019-00991-5 **Shared authorship*

2. **Böge, K.**, Mouthaan J., Krause-Utz, A. (2019). Effects of Dialogical Mindfulness on Psychopathology: A Pilot Study's Results From a Seven-Day Psychosynthesis Course About the Inner Child. *The Humanistic Psychologist.* May 02, 2019. Advance online publication. doi:http://dx.doi.org/10.1037/hum0000134

3. Franke, M.L., Lersner, U.V., Essel, O.Q., Adorjan, K., Schomerus, G., Gómez-Carrillo, A., Ta, T.M.T., **Böge, K.**, Mobashery, M., Dettling, M., Diefenbacher, A., Angermeyer, M.C., Hahn E. (2019). The relationship between causal beliefs and desire for social distance towards people with schizophrenia and depression: results from a survey of young Ghanaian adults. *Psychiatry Research*, *271*, 220-225. doi:10.1016/j.psychres.2018.11.030

2018

4. **Böge, K.**, Hahn, E., Cao, T. D., Fuchs, L. M., Martensen, L. K., Schomerus, G., Dettling, M., Angermeyer, M.C., Nguyen, V.T., Ta, T.M.T. (2018). Treatment recommendation differences for schizophrenia and major depression: A population-based study in a Vietnamese cohort. *International Journal of Mental Health Systems*, 12(1). doi:10.1186/s13033-018-0247-6

5. **Böge, K.***, Zieger A.*, Mungee, A., Tandon, A., Fuchs, L. M., Schomerus, G, Ta, T.M.T., Dettling, M., Bajbouj, M., Angermeyer, M.C., Hahn, E. (2018) Perceived stigmatization and discrimination of people with mental illness: A survey-based study of the general population in five metropolitan cities in India. Indian J Psychiatry **Shared first authorship*

6. 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 Journal of Psychiatry*, *32*, 44-49. doi:10.1016/j.ajp.2017.11.031 **Shared first authorship*

7. 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. *International Journal of Social Psychiatry*, 002076401876368. doi:10.1177/0020764018763685, **Shared first authorship*

8. 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 Research*. doi:10.1016/j.psychres.2018.05.046

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9. Dreher, A., Hahn, E., Diefenbacher, A., Nguyen, M. H., **Böge, K**., Burian, H., Dettling, M., Burian, R., Ta, T. M. T. (2017). Cultural differences in symptom representation for depression and somatization measured by the PHQ between Vietnamese and German psychiatric outpatients. *Journal of Psychosomatic Research*, *102*, 71-77. doi:10.1016/j.jpsychores.2017.09.010

10. Zieger, A., Mungee, A., Schomerus, G., Ta, T. M. T., Weyers, A., **Böge, K**., Dettling, M., Bajbouj, M., von Lersner, U., Angermeyer, M. C., Tandon, A., Hahn, E. (2017). Attitude toward psychiatrists and psychiatric medication: A survey from five metropolitan cities in India. *Indian Journal of Psychiatry*, *59*(3), 341. doi:10.4103/psychiatry.indianjpsychiatry_190_17

Selected abstracts, oral and poster presentations

1. **Böge, K.**, Karnouk, C., Hahn, E., Schneider, F., Habel, U., Plener, P., Padberg, F., Kamp-Becker, I., Banaschewski, T., Falkai, P., Hasan, A., Meyer-Lindenberg, A., Rapp, M., Salize, H.J., Heinz, A., Bajbouj, M. (2018) Mental health in refugees and asylum seekers (MEHIRA): Study design and methodology of a prospective multicentre randomized controlled trail investigating the effects of a stepped and collaborative care model. Congress of the Innovationsfonds. 20. Feb. 2017

2. Burian, H., **Böge, K.**, Burian, R., Diefenbacher, A. (2018). Do elderly pain patients with comorbid psychiatric diagnoses regain quality of life in a multimodal ACT-based group treatment? *Journal of Psychosomatic Research, 109*, 92-93. doi:10.1016/j.jpsychores.2018.03.030

3. **Böge, K.** (2018). Metacognitive Training (MCT) and Mindfulness-based Interventions (MBI) for Psychosis. Winter-Symposium, BMZ / EKFS Clinical Partnership HMU – Charité, December 2018 Frontiers in Psychiatry, Psychology, and Psychotherapy. Hanoi, Vietnam 21.12.2018

4. Burian, R., **Böge, K.**, Burian, H., Diefenbacher, A. (2018). Can a multimodal ACT-based group therapy improve quality of life in psychiatric patients with somatic comorbidity? Congress of the Deutsche Gesellschaft für Psychiatrie und Psychotherapie, Psychosomatik und Nervenheilkunde (DGPPN). 28. Nov. 2018

5. **Böge, K.**, Karnouk, C., Hahn, E., Bajbouj, M. (2018). Balsam - A smartphone-based intervention for refugees and asylum seekers with depressive symptoms. Congress of the Deutsche Gesellschaft für Psychiatrie und Psychotherapie, Psychosomatik und Nervenheilkunde (DGPPN). 29. Nov. 2018

6. Grove, M., Padberg, F., Bajbouj, M., Falkai, P., Alkomiet, H., **Böge, K.**, Jobst-Heel, A., Burger, M., Karnouk, C., Strupf, M., Übleis, A. (2018). Empowerment – Entwicklung einer ressourcenorientierten, gruppentherapeutischen Intervention für Menschen mit Fluchterfahrung und affektiven Erkrankungen. Congress of the Deutsche Gesellschaft für Psychiatrie und Psychotherapie, Psychosomatik und Nervenheilkunde (DGPPN). 30. Nov. 2018 **DGPPN poster price winner 2018*

7. **Böge, K.** (2018). Cognitive Behavioural Therapy in Schizophrenia. Winter-Symposium, BMZ / EKFS Clinical Partnership HMU – Charité, December 2018 Frontiers in Psychiatry, Psychology, and Psychotherapy. Hanoi, Vietnam 20.12.2018

8. **Böge, K.**, Hahn, E. (2017). Implementation of Mindfulness-based group therapy for inpatients with schizophrenia spectrum disorders. Congress of the Deutschsprachige Gesellschaft für kontextuelle Verhaltenswissenschaften e.V. (DGKV). 12. Nov. 2017

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