

ORIGINAL ARTICLE

**PSYCHIATRISTS' PERCEPTIONS OF WHAT DETERMINES OUTCOMES FOR PEOPLE DIAGNOSED WITH SCHIZOPHRENIA IN VIETNAM**

*Seiji H Humphries\* \*\*, Robert J King\*, Michael P Dunne\*\* \*\*\*, Nguyen H Cat\*\*\*\**

*\*School of Psychology and Counselling, Queensland University of Technology, Kelvin Grove, Brisbane, Queensland, 4059, Australia; \*\*Institute for Community Health Research, Hue University of Medicine and Pharmacy, Hue City, Thua Thien Hue Province, Vietnam; \*\*\*School of Public Health and Social Work, Queensland University of Technology, Kelvin Grove, Queensland, 4059, Australia; \*\*\*\*Department of Psychiatry, Hue University of Medicine and Pharmacy, Hue City, Thua Thien Hue Province, Vietnam.*

**Abstract**

**Objectives:** Research about the outcomes of schizophrenia and the factors that determine them in developing countries is still limited. In this study, we interviewed experienced Vietnamese psychiatrists to examine their perspectives on outcome determinants in their country. The qualitative approach aimed to complement existing epidemiological knowledge and contribute to debate around the hypothesis that recovery is better in developing countries. **Methods:** Fifteen Vietnamese psychiatrists working in five leading psychiatric facilities participated in semi-structured interviews. Thematic content analysis of their expressed views identified three themes related to important outcome determinants in Vietnam: access to contemporary treatment, established patient-level prognostic indicators, and sociocultural variables. **Results:** The improving accessibility of modern treatment (including new medications, specialist staff and facilities) and increasing community adoption of a medical perspective on mental illness were seen as factors leading to improved outcomes, particularly in urban areas. However, some psychiatrists also identified the potentially beneficial nature of some aspects of Vietnamese society and culture being eroded by modernization, including traditional family structures, forms of employment and lifestyles. **Conclusions:** The perspectives of psychiatrists in this study suggest that socioeconomic change may be exerting conflicting influences on the outcomes of schizophrenia in Vietnam and other developing countries. Their views have implications in terms of how adequate treatment and support for people with severe mental illness can be provided in the context of limited resources, staffing and formal treatment options. Further research is needed to establish current recovery rates and prospectively explore the impact of modernization on outcomes. *ASEAN Journal of Psychiatry, Vol. 16 (2): July – December 2015: XX XX.*

**Keywords:** Schizophrenia, Developing Countries, Qualitative Research

**Introduction**

Research into the outcomes of schizophrenia and their determinants in low and middle-

income countries (LAMIC) is still relatively limited. However, a surprising hypothesis that has emerged from a number of international longitudinal studies (most notably those by the

WHO) is that recovery rates may be generally more favourable in such countries than in more affluent countries [1-3]. Relatively lower stress and greater social support have generally been proposed to be behind such findings [4-6]. However, a number of researchers have questioned how the data that has led to such conclusions has been interpreted and presented evidence indicating significant gaps in the research [3, 7-9]. Debate around the hypothesis of better outcomes continues, and it is important to explore different approaches to obtaining information about comparative outcomes of schizophrenia and their determinants.

While there is now a growing body of research using epidemiological methods to investigate this topic in developing countries, to our knowledge few published studies have used qualitative methods to draw upon the expertise of people who have ongoing engagement in the treatment of schizophrenia. In this study, we sought the perspectives and interpretations of a group of psychiatrists in Vietnam, with a view to complementing existing knowledge about recovery from schizophrenia and its determinants in LAMIC.

Vietnam is a rapidly industrialising, low-middle income country with a mental health system that has an acknowledged lack of appropriate legislation, human resources, hospital beds and specialized services (10, 11). The year 2000 saw the beginning of some improvements to services for schizophrenia patients when a national government program began providing improved community health services, including free medication, health staff training and public education [12, 13]. However, continuing drawbacks to the system include the dominance of large psychiatric hospitals in the care provision, a lack of treatment interventions other than antipsychotic medications and a continuing shortage of well-trained specialist staff. In fact, in 2005 the WHO reported Vietnam having the greatest shortage of human resources for mental health care among 144 LAMI countries [14]. In 2011, the number of psychiatrists was 1.01 per 100,000 populations [15], with the majority of these having completed only a basic one-year postgraduate orientation course in the profession [16]. The typical pattern of

medical treatment for a person who experiences a severe psychotic episode is acute care in a tertiary psychiatric facility, with ongoing treatment and care as an outpatient or through the local commune health centre.

The role of allied health professionals (nurses, psychologists, social workers, occupational therapists) in the mental health setting in Vietnam is highly limited [12]. While the number of nurses is 75.34 per 100,000 [15], they currently occupy virtually a sub-professional status and generally lack specialist education and training. Very few members of the other allied health professional groups work in mental health, meaning that psychiatrists are effectively the only highly-trained staff engaged in the treatment and care of people with schizophrenia in significant numbers.

This study aimed to explore in some depth how Vietnamese psychiatrists viewed factors likely to influence outcomes for people with schizophrenia, with an emphasis on those factors specific to Vietnam as a developing country. In this way, we aimed to draw implications for the treatment and support of individuals in LAMIC and complement existing population-level data. We expected that the views of participants would be shaped by clinical experience and professional culture factors. We were therefore, also interested to learn to what extent and in what ways the views of psychiatrists were consistent with scientific evidence as to factors that influence outcomes for people with schizophrenia in a country such as Vietnam. We expected that this analysis would yield some preliminary conclusions that could usefully inform further research.

## **Methods**

Experienced Vietnamese psychiatrists working in public hospitals across four cities (Danang, Hanoi, Ho Chi Minh City and Hue) were identified using a purposive snow-balling technique, employing the contact networks of the research team. In semi-structured interviews, the study's first author, a mental health social worker, asked the psychiatrists to identify clinical and non-clinical factors that

they perceived as significant determinants of the clinical and social outcomes of people with schizophrenia, based on their professional experience. Emphasis in questioning was placed on factors pertaining specifically to the Vietnamese context. Participants were asked about their views on how Vietnam's rapid socioeconomic development may impact on outcomes.

All interviews were conducted individually, either with the assistance of a bilingual interpreter (n=9) or directly in English (n=6). They were audio recorded and transcribed in full. The bilingual interpreter transcribed the interviews in which he/she was engaged and translated the Vietnamese text into English. Participants were provided with transcripts for review and advice of any corrections if they detected errors or omissions.

Transcripts were analysed jointly by the first author and the second author, an experienced clinical psychologist and researcher, using a thematic content analysis approach [17]. Key themes were identified by the first author, based on commonalities between the transcripts. Extracted themes were cross checked by the second author, who acted as auditor. A final decision on themes was based on consensus between the two researchers [18].

## Results

### Sample

Participants consisted of 15 psychiatrists working in five Vietnamese public hospitals across four cities (Danang, Hanoi, Ho Chi Minh City and Hue). Selected characteristics of the sample are displayed in Table 1. Note that the minimum qualification that all but one participant possessed was a two-year diploma of Specialist Level I in Psychiatry or equivalent. (In 2012, there were approximately 200 psychiatrists in Vietnam accredited with a Level I qualification [16].) Three possessed a four-year diploma of Specialist Level II qualification (there were 35 Level II practising psychiatrists in the country in 2012), and two possessed a PhD (there were 20 PhD-qualified psychiatrists in Vietnam). The organisational position of participants varied from the director to treating doctor and included two university department heads, three university lecturers, four facility directors and two vice-directors. However, regardless of their position, all were currently involved in treating people with schizophrenia, and their patients were from both rural and metropolitan areas due to the centralised nature of psychiatric services.

Sufficient interviews were conducted to reach a saturation point where no further significant variations in responses to the main interview questions were detected.

**Table 1. Key Characteristics of psychiatrists interviewed for present study**

Characteristic	Detail
Highest psychiatric qualification completed *: <ul style="list-style-type: none"><li>- Orientation level + 18 months of Diploma Level I</li><li>- Diploma of Specialist Level I (2-year course)</li><li>- Masters</li><li>- Diploma of Specialist Level II (4-year course)</li><li>- PhD</li></ul>	n=1 n=8 n=1 n=3 n=2
Age range (years)	33-58
Years practising psychiatry (range in years)	8-35
Current position in organisation: <ul style="list-style-type: none"><li>- director/head of department</li><li>- vice director/deputy department head</li><li>- university lecturer</li><li>- treating doctor</li></ul>	n=5 n=3 n=3 n=4

\* In Vietnam, medical graduates must complete a 1-year Orientation level course to practise as a psychiatrist. They can then complete a 2-year Diploma of Specialist Level I in Psychiatry, and subsequently a 4-year Diploma of Specialist Level II in Psychiatry.

### ***Interview Themes***

The factors identified by psychiatrists as influencing outcomes of people with schizophrenia in Vietnam fell into three broad domains: access to contemporary treatment; established prognostic indicators; and sociocultural influences.

#### ***Access to Contemporary Treatment***

Almost all psychiatrists expressed the view that timely access to various aspects of contemporary treatment—including medications, staff, facilities and psychosocial interventions—was an important determinant of outcomes for schizophrenia patients. The most consistently mentioned treatment factor was the type of antipsychotic medication. A number of doctors said that the emergence of relatively cheap generic second generation antipsychotics (SGAs) in Vietnam in the past decade had led to significantly better outcomes for many patients. Interviewees generally reported that these medications were associated with fewer side effects, could ameliorate negative symptoms and that the greater range of products now available allowed better matching to individual needs.

Social factors such as location (rural vs. urban), income and beliefs around illness were viewed as having an important impact on timely access to and use of SGAs. While generic SGA drugs were now available for free via the National Mental Health Program, their availability was generally limited to major urban psychiatric facilities. Rural patients needed to travel long distances to obtain them. Thus, they were more likely to discontinue treatment and/or rely upon first-generation antipsychotics (FGAs), available at local health centres.

“...if the patient is in the big city, they have a chance to see the good doctor, they can try the new medicine. But if the patient (lives) far from here, they maybe cannot come here and when they have problem, no one helps them. And if they get the free medicine, only typical (antipsychotics are available).”

City-dwellers had far greater access to not only newer medications but also to well-educated doctors and other health staff and services. Some large hospitals and other government and non-government programs were now providing psychotherapy and/or rehabilitation activities. However, case management and other such as community-based social services for people with schizophrenia were mostly absent throughout the country. Some psychiatrists commented that their patients would benefit significantly from the introduction of such services. Furthermore, concerns were expressed that the shortage of psychiatrists in much of the country could, in fact, worsen in the future as the profession was experiencing great difficulty recruiting new doctors.

#### ***Established Prognostic Indicators***

When prompted to name clinical factors that determined outcomes, the majority of psychiatrists spoke about a number of well-established patient-level prognostic factors. By far, the most frequently identified of these was the sub-type of schizophrenia, with those forms of illness dominated by negative symptoms reported to be difficult to identify and treat, and associated with poorer recovery.

“...in the case they have negative symptoms, it's very difficult, because the parents cannot recognise that. And because some people in the community, they don't identify that case. So there is some delay in the time. Especially when they have some symptoms that look like depression or anxiety, so they may try to deal with like that before they go to my hospital.”

Other indicators identified by a number of the psychiatrists were age of onset and gender, with an older onset age and being female associated with a better prognosis. Note that interviewees' perspectives on these factors will not be reported in further detail here because the aim of the study was to focus primarily on outcome determinants specific to Vietnam as a developing country. However, this should not be interpreted as diminishing the importance that psychiatrists placed on these indicators.

### ***Sociocultural Influences***

Most participants cited community attitudes and stigma as having a major impact of the outcomes of their patients. Family members of a person exhibiting symptoms might delay seeking medical services in order to avoid the social stigma, which could be attached to the entire family. This led to a longer duration of untreated psychosis and poorer outcomes.

“...people still don't want to accept their relative, their family member have schizophrenia... And to their knowing, if they say a patient has schizophrenia...it's the end of their life. So they tend to hide. They hide the symptoms, they hide the patient, until they couldn't do anything else to hide. So (only then) they bring the patient to us... Because in the family, if they have some people...like that...then the Asian people tend to say that family did something wrong. So that person will suffer, or will repay on the crime, on the debt, that that family did, in the past or in the past life.”

According to some participants, traditional beliefs attributing mental illness symptoms to spiritual causes lead many families in rural areas to initially seek traditional treatments. This generally involved visiting Buddhist temples or other spiritual centres/practitioners to engage in worship and related practices. However, psychiatrists perceived community attitudes towards schizophrenia to have changed significantly in recent years, particularly in urban populations. Thus, city-dwellers may still engage in traditional treatments but not to the exclusion of seeking medical assistance.

“For some people, worship is just a religious ceremony that helps the patient's family to feel secure. Most people (still) go to receive the medical treatment. For some cases, their illness is discovered and healed in community, not everyone develops the illness and goes to this hospital... About 70% of people know that schizophrenia is not caused by evil spirits.”

Some participants observed that in recent years, there had been substantial increases in the numbers of people bringing unwell family members to their facilities due to information about mental illness becoming widely available via the Internet, mass media and community-level public campaigns.

In terms of family support, most participants reported this to be vital for patient recovery, especially given the lack of formal services. Family members facilitated better outcomes by encouraging medication adherence, monitoring symptoms and assisting with daily living tasks and community reintegration. Several psychiatrists viewed the traditional extended family structure as offering greater support for recovery because it allowed greater sharing of the burden of care. They suggested that the trend toward smaller families due to modernisation and urbanisation could thus be detrimental.

“In Ho Chi Minh City, because they are so busy with their job...they forget to prompt patients to take medications or the patients feel so sad and lonely that they drink alcohol...In developed countries, it may be similar to that...”

However, some participants noted that low-income families with a large number of children were likely to have limited time and resources to devote to the support to an individual with schizophrenia. Others also pointed out that the dynamics of large extended families could be quite complex and not necessarily helpful for patient recovery, especially as more senior family members may favour seeking traditional treatments.

“...the involvement of the family is very complicated I think... If the family is big, so there is a lot of arguments in the family about how to treat the patient...sometimes it is hard to give the patient the...right treatment because the more senior (family members), they tend to go the alternative methods rather than the mainstream.”

When considering other important social determinants of outcomes, several participants suggested that the relatively greater availability of unskilled non-market based

work in Vietnam may allow people with schizophrenia to find employment and hence may assist their recovery. While only a minority of people who previously held high-skill positions was likely to return to them, those who were engaged in relatively undemanding work before the onset of their illness were seen as more easily able to return to their former positions and adapt to their condition.

“Once they suffer from a mental illness like schizophrenia, (it) will affect their future, and their career, their income, everything, but in comparison to other citizens in a rich society, it won't cost them much... it is easier for the patient in developing countries to go back to the position they were having, and income they were having.”

Nevertheless, some participants pointed out that significant numbers of their patients were unemployed because suitable jobs were difficult to find in urban areas. In contrast, rural areas were viewed as offering more employment opportunities, as well as a less stressful, healthier environment. Similarly, some psychiatrists commented that the rapid pace of Vietnam's development and increasingly stressful nature of modern urban life could represent risk factors in terms of the onset and course of schizophrenia.

“The number of new cases in developing countries, the rate is very high, like in Vietnam in some big cities, with workers from small provinces...they go to Ho Chi Minh City to work, and there the number of those who get ill is very high... Development is so fast so people can't adapt... and it's one factor that causes stress.”

However, the majority of interviewees highlighted the positive effects of modernisation in terms of increased access to contemporary treatment and improved public knowledge. One participant captured many of the points outlined above as follows:

“The awareness and education level(s) of people have developed, so that they have the...understanding about the illness; it is

easier for them to access the information through mass media. Many good facilities, medications are available. When the economy develops, people are richer and have more money to buy good medication. The network is better than before, commune health worker(s) are formally trained and get payment from government; therefore they will help patients more effectively. The recovery is (in) direct proportion to the development of the country.”

## **Discussion**

The views among the participants with respect to each of the three themes identified for this study provide a window into the professional culture of Vietnamese psychiatry. While we cannot claim that study participants are adequately representative of psychiatrists in Vietnam, we think it is likely that the range of views expressed is broadly indicative of the range of views on the profession as the participants included individuals occupying strategically important and influential roles in major regions and services.

To evaluate the validity and implications of the three emergent themes, we reviewed the literature concerning outcome determinants of schizophrenia. This indicated that the theme of patient-level prognostic indicators reflects previous longitudinal research findings in a relatively straightforward manner [19, 20]. In contrast, the research evidence in relation to the other two themes presents a more complex picture.

In terms of access to contemporary treatment, most participants in the study said that increased availability of SGAs had resulted in significantly improved recovery for their patients; however studies relating to this topic have produced somewhat mixed evidence. Specific SGAs appear to have greater efficacy than specific FGAs in domains such as overall symptom reduction, relapse and treatment persistence [21-24]. Atypical medications also appear less likely to cause extrapyramidal side effects than high-potency older drugs (although they have a greater risk of adverse metabolic effects) [21-23]. A number of Vietnamese clinicians reported favouring

SGAs due to their side effect profile, which they felt led to improved medication adherence, a significant issue in their practice. On the other hand, research concluding that there is an association between SGAs and meaningful real-world improvement in overall social and cognitive functioning remains inconsistent and modest [21]. This topic warrants closer examination, given the importance of assessing the relative cost-effectiveness of different treatment options in places with limited resources [25] and given the current lack of formal non-medication based treatments. It is possible that the emphasis that psychiatrists placed upon the benefits of SGAs may reflect not only their clinical experience but also the role of pharmaceutical companies in ongoing professional education.

The low availability of psychosocial interventions may also be a factor affecting recovery of patients in developing countries, given the proven efficacy of such interventions as community case management, vocational rehabilitation and psychotherapy [26, 27]. A number of this study's participants expressed the view that their patients' chances of achieving a good outcome were reduced by the lack of community-based psychosocial services in Vietnam. When such interventions are implemented in low-resource settings, support exists for their ability to improve outcomes [28]. Also, a longer DUP and a negative relationship between it and recovery had been reported in LAMIC, consistent with perspectives reported in this study [29-31]. Lack of services, and treatment costs have been identified as barriers to early intervention. Furthermore, psychiatrists' comments regarding the negative impact of stigma on help-seeking and outcomes are also supported by research from Vietnam and the Asian region [32, 33].

In terms of the protective effects of traditional work, family structures and lifestyles identified by some of the Vietnamese psychiatrists, this premise appears to have mixed evidence within the research literature from LAMIC. It has been proposed that rural developing economies may offer a greater variety of tasks and competencies that are accessible to people experiencing impaired

functioning than is the case in more developed societies [34, 35]. In addition, there may be significant financial pressure on people with a psychiatric disorder to contribute to family income [36]. Thus it is possible that social and occupational skills and functioning may be maintained or regained through patients engaging in productive work. However, we think these conclusions should be interpreted with caution, given that some LAMIC schizophrenia cohorts have been found to have low employment rates [7]. Furthermore, having employment does not necessarily translate into better longer-term outcomes, particularly in the absence of adequate treatment. For example, a rural Chinese cohort with relatively high employment levels despite not receiving treatment was found to have a four times higher mortality rate compared with the general population at 10 year follow-up [37].

Many Vietnamese psychiatrists emphasised the protective influence of the traditional Vietnamese family, paralleling conclusions of a number of studies conducted in other Asian countries [38-40]. For example, in India, Nunley [40] observed that ill individuals remained highly integrated into the family social setting throughout the treatment process, with family members taking on roles that professionals would generally play in developed countries. Lee and colleagues [39] proposed that one factor behind the relatively high recovery rates they found in their Hong Kong population was the stable family support provided due to traditional Chinese values, despite the country's rapid economic development. A further aspect of traditional family structures proposed to result in better outcomes are lower levels of expressed emotion (EE), i.e. expressions of criticism, hostility or over-involvement by family members towards the individual with schizophrenia [41, 42]. Research on developing country cohorts have reported lower average EE levels, while high levels of EE in various domains have consistently been found to predict relapse among a variety of cultural and clinical populations [43, 44].

On the other hand, family variables such as type of household (nuclear vs. extended family) and frequency of contact with relatives

have generally not been identified as significant outcome predictors in LAMIC longitudinal studies (36, 45-47). Indeed, a number of participants in the current study recognised the complex dynamics of extended families. Similarly, Asian research has recognised that people with schizophrenia are at elevated risk of neglect, harsh criticism and even abandonment by their families [7, 32, 48, 49].

### **Study Limitations**

The major limitation of this study is that the sample of psychiatrists who participated in this study was small and not selected randomly. This means that we cannot be sure that the views expressed can be generalised to those of all psychiatrists in Vietnam. The fact that we obtained saturation of themes with this sample increases confidence that the views are broadly representative, but it remains possible that the degree of prominence of specific factors would have changed with a larger sample. Also, seeking the perspectives of patients, their family members and alternative treatment providers would make a valuable contribution to research into this topic. Finally, it is possible that some degree of miscommunication may have resulted from the fact that the interviews were conducted either through an interpreter or not in the interviewee's first language. Thus, there would be merit in testing the findings for this study using a survey of all psychiatrists in Vietnam.

### **Conclusion**

The rapid socioeconomic change currently being experienced by Vietnam may be exerting both positive and negative influences on the outcomes of people with schizophrenia. Leading Vietnamese psychiatrists viewed the increased access to contemporary treatment and changing community attitudes associated with their country's development as positive factors for recovery. On the other hand, many expressed concerns over the erosion of potentially protective aspects of traditional Vietnamese society and culture, such as family structures, lifestyles and forms of employment. While contradictory evidence and viewpoints on this topic abound, this, nevertheless, raises questions about how Vietnam and countries

like it can respond to the challenges of providing adequate support for people with severe mental health disorders for the future. As potentially protective traditional factors diminish and the pace of life and pressures in society change, the country must find ways to overcome its current limitations in resources for disability support and psychosocial rehabilitation.

Further rigorous research, both quantitative and qualitative, is needed to more fully understand the impact of the sociocultural change occurring in LAMIC due to globalisation and urbanisation. The views of mental health professionals can produce useful insights into the complex interaction of factors that influence recovery, potentially revealing important implications for treatment and rehabilitation worldwide. Furthermore, irrespective of the validity of clinicians' perspectives, their beliefs significantly influence the delivery of services and are therefore, important targets for critical examination.

Finally, another profitable avenue for research into this field may be further exploration of the sociocultural diversity that exists within the grouping of "developing" countries. Within the Asian region itself, for example, while countries share a number of sociocultural commonalities, they also demonstrate significant variation in domains such as level of ethnic diversity and social stratification. Careful epidemiological and anthropological studies applying culturally-appropriate methodologies are needed to investigate whether such variation results in different rates of recovery from schizophrenia and the mechanisms by which this may occur.

### **Acknowledgements**

We would like to thank Queensland University of Technology for providing the funding for this study and the Institute for Community Health Research at Hue University of Medicine and Pharmacy and its staff for providing in-kind support. We would also like to thank all the psychiatrists who generously gave of their time to participate in the study and their associated institutions.



**References**

1. Kulhara P, Shah R, Grover S. Is the course and outcome of schizophrenia better in the 'developing' world? *Asian Journal of Psychiatry*. 2009;2(2):55-62.
2. Hopper K, Harrison G, Wanderling J. An overview of course and outcome in ISoS. In: Hopper K, Harrison G, Janca A, editors. *Recovery from Schizophrenia : An International Perspective : Results from the WHO-Coordinated International Study of Schizophrenia (ISoS)*. Cary, NC, USA: Oxford University Press; 2007. p. 23-38.
2. Kalra G, Bhugra D, Shah N. Cultural aspects of schizophrenia. *International Review of Psychiatry*. 2012;24(5):441-9.
4. Lefley H. Mental Health Systems in a Cross-Cultural Context. In: Scheid T, Brown T, editors. *A Handbook for the Study of Mental Health: Social Contexts, Theories and Systems*. 2nd ed. New York: Cambridge University Press; 2010. p. 135-62.
5. Lin K-M, Kleinman AM. Psychopathology and Clinical Course of Schizophrenia: A Cross-Cultural Perspective. *Schizophrenia Bulletin*. 1988 January 1, 1988;14(4):555-67.
6. Bresnahan M, Menezes P, Varma V, Susser E. Geographical variation in incidence, course and outcome of schizophrenia: a comparison of developing and developed countries. In: Murray R, Jones PB, Susser E, van Os J, Cannon M, editors. *The Epidemiology of Schizophrenia*. West Nyack, NY: Cambridge University Press; 2002.
7. Cohen A, Patel V, Thara R, Gureje O. Questioning an Axiom: Better Prognosis for Schizophrenia in the Developing World? *Schizophrenia Bulletin*. 2008 March 1, 2008;34(2):229-44.
8. Burns J. Dispelling a myth: developing world poverty, inequality, violence and social fragmentation are not good for outcome in schizophrenia. *African journal of psychiatry*. 2009 Aug;12(3):200-5.
9. Rangaswamy T, Greeshma M. Course and outcome of schizophrenia. *International Review of Psychiatry*. 2012;24(5):417-22.
10. Vuong DA, Van Ginneken E, Morris J, Ha ST, Busse R. Mental health in Vietnam: Burden of disease and availability of services. *Asian Journal of Psychiatry*. 2011;4(1):65-70.
11. Niemi M, Malqvist M, Giang KB, Allebeck P, Falkenberg T. A narrative review of factors influencing detection and treatment of depression in Vietnam. *Int J Ment Health Syst*. 2013;7(1):15.
12. Niemi M, Thanh HT, Tuan T, Falkenberg T. Mental health priorities in Vietnam: a mixed-methods analysis. *BMC health services research*. 2010;10:257.
13. Ng CH, Than PT, La CD, Van Than Q, Van Dieu C. The national community mental health care project in Vietnam: a review for future guidance. *Australas Psychiatry*. 2011 Apr;19(2):143-50.
14. Kakuma R, Minas H, van Ginneken N, Dal Poz MR, Desiraju K, Morris JE, et al. *Global Mental Health 5: Human resources for mental health care: current situation and strategies for action*. *The Lancet*. 2011 Nov 5-Nov 11, 2011;378(9803):1654-63.
15. WHO. *Mental Health Atlas 2011-country profiles* 2011 12 November, 2014. Available from: [http://www.who.int/mental\\_health/evidence/atlas/profiles/vnm\\_mh\\_profile.pdf?ua=1](http://www.who.int/mental_health/evidence/atlas/profiles/vnm_mh_profile.pdf?ua=1).

16. Hospital NP. National Annual Report on Community Mental Health Project: Result for Community Mental Health Project of Vietnam 2011 and Plan for 2012. Hanoi: National Psychiatric Hospital, 2012.
17. Mason J. Qualitative Researching. 2nd ed. Thousand Oaks, Calif, London: Sage Publications; 2002.
18. Hill CE, Knox S, Thompson BJ, Williams EN, Hess SA, Ladany N. Consensual qualitative research: An update. *Journal of Counseling Psychology*. 2005;52(2):196-205.
19. Hafner H, an der Heiden W. Course and outcome of schizophrenia. In: Hirsch SR, Weinberger DR, editors. *Schizophrenia*. Hoboken: Wiley-Blackwell; 2008. p. 101-35.
20. Jablensky A. Epidemiology of schizophrenia: the global burden of disease and disability. *European Archives Of Psychiatry And Clinical Neuroscience*. 2000;250(6):274-85.
21. Tandon R, Nasrallah HA, Keshavan MS. Schizophrenia, "just the facts" 5. Treatment and prevention. Past, present, and future. *Schizophrenia research*. 2010 Sep;122(1-3):1-23.
22. Zhang J-P, Gallego JA, Robinson DG, Malhotra AK, Kane JM, Correll CU. Efficacy and safety of individual second-generation vs. first-generation antipsychotics in first-episode psychosis: a systematic review and meta-analysis. *The International Journal of Neuropsychopharmacology*. 2012;FirstView:1-14.
23. Leucht S, Corves C, Arbter D, Engel RR, Li C, Davis JM. Second-generation versus first-generation antipsychotic drugs for schizophrenia: a meta-analysis. *The Lancet*. 2009;373(9657):31-41.
24. Kishimoto T, Agarwal V, Kishi T, Leucht S, Kane JM, Correll CU. Relapse prevention in schizophrenia: a systematic review and meta-analysis of second-generation antipsychotics versus first-generation antipsychotics. *Molecular Psychiatry*. 2013 2013/01//;18(1):53+.
25. Chisholm D, Gureje O, Saldivia S, Villalon Calderon M, Wickremasinghe R, Mendis N, et al. Schizophrenia treatment in the developing world: an interregional and multinational cost-effectiveness analysis. *Bulletin of the World Health Organization*. 2008 Jul;86(7):542-51.
26. van Os J, Kapur S. Schizophrenia. *Lancet*. 2009 Aug 22;374(9690):635-45.
27. Mueser KT, McGurk SR. Schizophrenia. *Lancet*. 2004 Jun 19;363(9426):2063-72.
28. Chatterjee S, Pillai A, Jain S, Cohen A, Patel V. Outcomes of people with psychotic disorders in a community-based rehabilitation programme in rural India. *The British Journal of Psychiatry*. 2009 November 1, 2009;195(5):433-9.
29. Chiliza B, Asmal L, Emsley R. Early intervention in schizophrenia in developing countries: Focus on duration of untreated psychosis and remission as a treatment goal. *International Review of Psychiatry*. 2012;24(5):483-8.
30. Large M, Farooq S, Nielssen O, Slade T. Relationship between gross domestic product and duration of untreated psychosis in low- and middle-income countries. *The British Journal of Psychiatry*. 2008 October 1, 2008;193(4):272-8.
31. Farooq S, Large M, Nielssen O, Waheed W. The relationship between the duration of untreated psychosis and outcome in low-and-middle income countries: a systematic review

- and meta analysis. *Schizophrenia Research*. 2009 Apr;109(1-3):15-23.
32. Lauber C, Rössler W. Stigma towards people with mental illness in developing countries in Asia. *International Review of Psychiatry*. 2007;19(2):157-78.
  33. Vuong DKD, Dunne M, Thang VV. Stigma experiences and its impact among people with schizophrenia and their relatives in central Vietnam. manuscript under review. 2014.
  34. Hopper K, Wanderling J. Revisiting the Developed Versus Developing Country Distinction in Course and Outcome in Schizophrenia: Results From ISoS, the WHO Collaborative Followup Project. *Schizophrenia Bulletin*. 2000 January 1, 2000;26(4):835-46.
  35. Warner R. Recovery from Schizophrenia: Psychiatry and Political Economy. 3rd ed. New York: Brunner-Routledge; 2004.
  36. Ran M-S, Chen S, Chen EY, Ran BY, Tang CP, Lin FR, et al. Risk factors for poor work functioning of persons with schizophrenia in rural China. *Social Psychiatry and Psychiatric Epidemiology*. 2011 Nov;46(11):1087-93.
  37. Ran M-S, Chen EY-H, Conwell Y, Chan CL-W, Yip PSF, Xiang M-Z, et al. Mortality in people with schizophrenia in rural China: 10-year cohort study. *The British Journal of Psychiatry*. 2007 March 1, 2007;190(3):237-42.
  38. Ran M-S, Xiang M-Z, Huang M-S, Shan Y-H. Natural course of schizophrenia: 2-year follow-up study in a rural Chinese community. *The British Journal of Psychiatry*. 2001 February 1, 2001;178(2):154-8.
  39. Lee PW, Lieh-Mak F, Wong MC, Fung AS, Mak KY, Lam J. The 15-year outcome of Chinese patients with schizophrenia in Hong Kong. *Canadian journal of psychiatry Revue canadienne de psychiatrie*. 1998 Sep;43(7):706-13.
  40. Nunley M. The involvement of families in Indian psychiatry. *Culture, medicine and psychiatry*. 1998 Sep;22(3):317-53.
  41. Jenkins JH, Karno M. The meaning of expressed emotion: theoretical issues raised by cross-cultural research. *The American Journal of Psychiatry*. 1992 Jan;149(1):9-21.
  42. Kymalainen JA, Weisman de Mamani AG. Expressed emotion, communication deviance, and culture in families of patients with schizophrenia: a review of the literature. *Cultural Diversity & Ethnic Minority Psychology*. 2008 Apr;14(2):85-91.
  43. Kurihara T, Kato M, Tsukahara T, Takano Y, Reverger R. The low prevalence of high levels of expressed emotion in Bali. *Psychiatry Research*. 2000;94(3):229-38.
  44. Leff J, Wig NN, Bedi H, Menon DK, Kuipers L, Korten A, et al. Relatives' expressed emotion and the course of schizophrenia in Chandigarh. A two-year follow-up of a first-contact sample. *The British journal of psychiatry : the journal of mental science*. 1990 Mar;156:351-6.
  45. Jablensky A, Sartorius N, Ernberg G, Anker M, Korten A, Cooper JE, et al. Schizophrenia: manifestations, incidence and course in different cultures. A World Health Organization ten-country study. *Psychological medicine Monograph supplement*. 1992;20:1-97.
  46. Kurihara T, Kato M, Reverger R, Tirta IGR. Eleven-year clinical outcome of schizophrenia in Bali. *Acta*

- Psychiatrica Scandinavica.  
2005;112(6):456-62.
47. Teferra S, Shibre T, Fekadu A, Medhin G, Wakwoya A, Alem A, et al. Five-year clinical course and outcome of schizophrenia in Ethiopia. Schizophrenia Research. 2012;136(1-3):137-42.
48. Srinivasan T, Thara R. How do men with schizophrenia fare at work? A follow-up study from India. Schizophrenia Research. 1997;25(2):149-54.
49. Thara R, Srinivasan TN. Marriage and gender in schizophrenia. Indian journal of psychiatry. 1997 Jan;39(1):64-9.

**Corresponding author: *Seiji Humphries, Room OB404, School of Psychology and Counselling, Queensland University of Technology, Kelvin Grove, Brisbane, Queensland, 4059, Australia.***

**Email:** sh.humphries@connect.qut.edu.au

Received: 24 May 2015

Accepted: 5 July 2015