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Pathways to psychiatric care of patients from rural regions: A general-hospital-based study

Xuemei Li,[1*] Weijun Zhang,[2*] Yan Lin,[2] Xiulan Zhang,[2] Zhiyong Qu,[2] Xiaohua Wang,[2] Yurong Zhang,[2] Huiwen Xu,[2] Shuliang Zhao,[2] Yafang Li[2] and Donghua Tian[2]

Abstract

Background: Pathway studies highlight the help-seeking behaviours of patients with physical and mental illness. A number of these studies have been completed in other countries, but there have been few reports from China. Therefore, this study was planned to explore the characteristics of the help-seeking pathways of patients with mental illness from rural regions of China through the mental health professionals and treatment at the General Hospital of the People's Liberation Army (PLAGH).

Methods: The pathway diagrams were documented for 203 subjects with various mental disorders using the translated version of the World Health Organization (WHO) pathway encounter form. The patterns of help-seeking and durations were analysed, and the χ^2 test and Mann-Whitney U test were employed as needed.

Results: On average, each patient consulted 3.6 caregivers. The vast majority of patients first visited local secondary general hospitals (SGHs) (35.5%, $\chi^2 = 41.93$, $p < .0001$) or local tertiary general hospitals (TGHs) (32%, $\chi^2 = 36.21$, $p < .0001$); however, 75.4% of them had not received professional diagnosis and treatment. The patients who first contacted the psychiatric service, finally reached the PLAGH, because of poor treatment or the high cost of medical care.

Conclusion: The subjects first seek the help of various sources before attending PLAGH due to a lack of awareness of the treatment services and the fear of the stigma associated with mental disorders. The primary care, even the local general hospital, did not act as a gatekeeper to psychiatric services.

Keywords

Help-seeking pathway, psychiatric care, mental health professional, rural region

Introduction

The help-seeking behaviour of patients with mental illness is central to the effective planning of psychiatric services (Giasuddin, Chowdhury, Hashimoto, Fujisawa, & Waheed, 2012). Exact knowledge about the help-seeking pathways of patients is pivotal in providing early interventions and, thus, in supplying specialized and focused health care (Platz et al., 2006). The pathways towards mental illness care are diverse and dependent on sociocultural and economic factors, including the conventions governing referral, the relationships that exist among mental health services, and the availability/accessibility of mental health services and other helping agencies (Gater et al., 1991; Patel, Simunyu & Gwanzura, 1997). Currently, China is undergoing rapid economic and social transformation, as well as dynamic changes in all aspects of lifestyle, including mental health services (Gao et al., 2010). One study has estimated that roughly 173 million Chinese suffer from a mental disorder, comprising nearly one in five adults as defined by the Diagnostic and Statistical Manual (DSM)-IV (Phillips et al., 2009), and most of them obtain no professional help and are left to their own devices (Hays, 2008). The overall prevalence of mental disorders was higher in rural than in urban communities. Among individuals with a diagnosable mental illness, 5% had ever seen a mental health professional, and 41% had only been treated by non-mental health professionals, mainly physicians who practise western medicine or traditional Chinese medicine (TCM)

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(Phillips et al., 2009). However, China is poorly equipped to tackle the surge in mental disorders because of a lack of specific efforts to systematically address mental illness, the slow development of specialized training for the treatment of mental illness, and the traditional cultural values placed on mental disorders.

In 2005, there were 19,130 licensed psychiatrists and psychiatric registrars (1.46/100,000 population) and 29,458 licensed psychiatric nurses (2.25/100,000 population) (Ministry of Health, 2006), which is far below the global average mental health workforce (i.e. 4.15 psychiatrists and 12.97 psychiatric nurses per 100,000 population) (WHO, 2005). In 2011, there were 690 psychiatric hospitals, most (394/690) still concentrated in the metropolitan and urban areas (Ministry of Health, 2012). The total number of psychiatric beds was 225,641 (i.e., 1.58/10,000 population) (Ministry of Health, 2012), which is also significantly lower than the global average of 4.36/10,000 population (WHO, 2005). In addition, many mental health institutions might not meet the needs of mental health service because of insufficient or obsolete equipment, a lack of professionals or a shortage of funds (Ministry of Health, 2006). Frankly speaking, the national services in China are under enormous pressure to provide the necessary mental health services for a large population (Phillips et al., 2009), and a successful service development is also a challenge for the concerned authorities.

Pathway studies highlight the help-seeking behaviours of patients with physical and mental illnesses. A number of studies in this field have been completed in various parts of the world (Chadda, Agarwal, Singh & Raheja, 2001; Chong, Mythily, Lum, Chan & McGorry, 2005; Gater et al., 2005; Kilic, Rezaki, Ustun, & Gater, 1994), but there have been few reports from Asian countries, especially from China. Therefore, this study was planned to investigate the characteristics of the pathways to care adopted by psychiatric patients from rural China, as well as to analyse the durations and previous diagnoses for CCMD-3 diagnostics groups. The study examined biomedical care providers grouped into eight categories according to the present health system in China, including rural doctor, essential health care centre (EHC), secondary general hospital (SGH), tertiary general hospital (TGH), traditional Chinese medicine (TCM), psychiatric hospital, private clinic and the direct pathway to the General Hospital of the People's Liberation Army (PLAGH).

Methods

Study setting

In China, EHC in rural areas is provided through a three-tiered system, including rural doctors (barefoot doctors before 1980), township health care centres (THCs) and county-level hospitals (equivalent to SGHs). To ensure a higher quality of medical care, China has also established many large and comprehensive hospitals integrating medical service, scientific research, teaching and emergency services in different regions (Hesketh & Zhu, 1997). In addition, there are many other types of health care, such as TCMs (including the tertiary TCMs and below), psychiatric hospitals (including tertiary psychiatric hospitals and below) and private clinics. However, mental health care is still in a weaker state than general medical care, as its availability is virtually non-existent in rural areas and is accessible only to the insured and/or wealthy urban populations (Park, Xiao, Worth & Park, 2005).

Study design

This was a hospital-based study performed from October 2010 to September 2011 in the outpatient department of neurology at PLAGH, which is one of the best medical centres in China, integrating medical care, health care, education and research across all disciplines, and an excellent medical care environment. This study adopted the methodology of the WHO pathway study (Gater et al., 1991) and the multi-centre pathway study conducted in Eastern Europe (Gater et al., 2005). The pathways to care were defined by the path that a psychiatric patient travels during his/her referral process to a mental health professional (MHP). Taking into consideration the actual conditions in China, PLAGH was regarded as the final caregiver and MHP in this study. The approval of the ethical committee of the concerned hospital was obtained prior to the beginning of the study. Convenience sampling was used this study, and all those who were newly referred to MHP and agreed to participate were enrolled in the study. The newly referred patients were defined as those who had not sought care from the mental health service during the previous year; there were no other exclusion criteria.

Each eligible patient was interviewed using a semi-structured questionnaire that was prepared based on the encounter form developed in the WHO collaborative study (Gater et al., 1991). Specifically, we translated and back-translated the encounter form to and from Chinese (Mandarin), and then compared the original and back-translated versions, calling on help from linguistics experts and also from qualified persons working in the mental health field to revise the Mandarin translation for the situation in Chinese. Finally, the questionnaire gathered information on the socio-demographic characteristics of the participants and their sources of care before reaching the MHP. For subjects who were unable to answer the questions due to a diagnosis of severe mental illness, the family members or relatives who had accompanied them to hospital were interviewed; for respondents under 18 years old, their parents were interviewed. The informed written consent of the participants was obtained prior to the interview.

For further treatment, the confirmed diagnoses were made by at least three psychiatrists independently according to the latest version of the Chinese Classification of Mental Disorders (CCMD-3) (Chen, 2002), which was published by the Chinese Psychiatric Association in 2001. Its descriptive definitions and diagnostic criteria were based on the clinical descriptions and diagnostic guidelines of the WHO International Classification of Disease (ICD-10) and the Diagnostic and Statistical Manual of Mental Disorders (DSM-IV), issued by the American Psychiatric Association, respectively (Chen, 2002). Ten psychiatrists in charge completed the questionnaire after the diagnosis, a process that took 10–15 minutes per subject. An instruction and coding manual was supplied to each psychiatrist who took part in this study.

Sample

Accounting for feasibility issues in the participating mental health care system and previous studies using the pathways method, which had included 50 subjects at each centre (Gater et al., 1991; Gater et al., 2005; Giasuddin et al., 2012), a sample size of 203 was considered sufficient to explore the characteristics of the pathways to care adopted by psychiatric patients. All those eligible were interviewed until the target 203 participants were recruited using convenience sampling.

Data analysis

The routes taken by the participants were compiled into a pathway diagram that was marked with proportions. The time intervals between the onset of the problem, the first time seeking care and the arrival at the MHP were analysed among diagnostic groups. Categorical data were analysed using the χ^2 test. Continuous variables (such as the duration of the problem) were highly skewed; therefore, average values are presented as medians, and the Mann-Whitney U test was employed as needed.

Results

Sample characteristics

A total of 203 participants were included in this study; the average age of the participants was 44.59 years (SD = 13.29), with a range of 13-73. Of the total sample, females comprised nearly three-quarters (72.4% vs 27.6%, χ^2 = 40.79, $p < .0001$); 63.7% came from North China; 87.2% were married and living with their partners; 11.4% were single; 79.8% had read up to a primary education level (junior middle school level and below); 14.8% completed technical/secondary/high school; and only 5.4% were junior college graduates (Table 1). It is noteworthy that the number of unemployed subjects is 45.3%, with the highest ratio out of all subjects, followed by farm worker (24.1%), self-employed worker or merchant (15.3%), and business/service personnel (6.4%) (Table 1).

Table 1. Socio-demographic data.

Number of subjects	203
Age *M* (SD)	44.59 (13.29)
Gender *n* (%)	
Male	56 (27.6)
Female	147 (72.4)
Marital status *n* (%)	
Married	177 (87.2)
Widowed	4 (2.0)
Single	19 (9.4)
Occupation *n* (%)	
Unemployed	92 (45.3)
Farming worker	49 (24.1)
Self-employed workers or merchants	31 (15.3)
Business/service personnel	13 (6.4)
Student	6 (3.0)
Others	12 (5.9)
Educational level *n* (%)	
Junior middle school and below	162 (79.8)
Technical (secondary) school/high school	30 (14.8)
Junior college	11 (5.4)
Region *n* (%)	
North China	128 (63.1)
North-East China	11 (5.4)
East China	27 (13.3)
Central China	13 (6.4)
South China	3 (1.5)
South-West China	4 (1.9)
North-West China	17 (8.4)

Presenting features and diagnoses in PLAGH

At the stage of the final caregiver, the most frequent diagnoses for all patients were depression (F32), neurosis (F40–F49, excluding the anxiety disorder, generalized anxiety disorder, and somatoform disorders in this study), and anxiety (F41 and F41.1), accounting for 35.5%, 18.7% and 14.3%, respectively. In addition, 17.2% had symptoms of depression and anxiety, but the symptoms were milder and not diagnosed as depression or anxiety by the diagnostic standards (Table 2). These respondents have been not excluded from the study in view of their seeking behaviour for mental health problems, and the psychological service and essential prescription medications were provided by the psychiatrists to control the development of conditions. Altogether, 32 patients (15.8%) reported that they had a previous family psychiatric history, but higher rates were found in the depression group (43.75%) and in the anxiety group (21.9%) (Table 2). However, this distribution should not be interpreted as the difference in the prevalence of mental illness. In

Table 2. Previous history and current diagnosis.

CCMD-3 diagnostic group		Previous psychiatric history *n* (%)
Depression (F32) *n* (%)	72 (35.5)	14 (43.75)
Neurosis[a] (F40–F49) *n* (%)	38 (18.7)	4 (12.5)
Anxiety[b] (F41+F41.1) *n* (%)	29 (14.3)	7 (21.9)
Somatoform disorders (F45) *n* (%)	10 (4.9)	1 (3.13)
Insomnia (F51.0) *n* (%)	4 (2.0)	2 (6.25)
Schizophrenia (F20) *n* (%)	4 (2.0)	4 (12.5)
Organic mental disorders[c] (F00+F01) *n* (%)	5 (2.4)	0
The status of depression and anxiety[d] *n* (%)	41 (20.2)	0
Total	203	32

[a]Neurosis does not cover the Anxiety disorder, Generalized anxiety disorder, and Somatoform disorders in this study.
[b]Anxiety includes Anxiety disorder and Generalized anxiety disorder.
[c]Organic mental disorders mainly include Mental disorders due to Alzheimer's disease (F00) and Mental disorders due to vascular disease (F01).
[d]Participants have symptoms of depression and anxiety, but the symptoms were milder and were not diagnosed as depression or anxiety by the diagnostic standard.

addition, the statistical analysis was not performed on other groups whose sample size was less than 10.

Pathways to care

Over 80% of the sample took indirect pathways to care, whereas less than 20% took direct pathways (83.3% vs 16.7%, $\chi^2 = 89.78$, $p < .0001$) (Figure 1). It is frankly astonishing that only 4.2% of patients had their first contact with a psychiatric service (Figure 6), while the vast majority of patients first visited SGHs (35.5%, $\chi^2 = 41.93$, $p < .0001$; Figure 4) or TGHs (32%, $\chi^2 = 36.21$, $p < .0001$; Figure 5). This tendency continued in later help-seeking behaviours. Compared to the psychiatric service, patients were also more likely to visit TCMs (7.7%, $\chi^2 = 1.8$, $p = .18$; Figure 7), village clinics (7.1%, $\chi^2 = 1.3$, $p = .25$; Figure 2), private clinics (7.1%, $\chi^2 = 0.89$, $p = .346$; Figure 8) and THCs (6.8%, $\chi^2 = 0.89$, $p = .346$; Figure 3); however, there were no significant differences among them. The direct pathway was the third most common pathway.

Social network for patients

On the whole, the symptoms of onset were always noticed at first by the individuals themselves (97.0%). Furthermore,

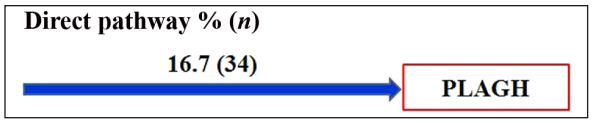

Figure 1. The direct pathway to mental health professionals.
Note: Among all of the patients, 34 (16.7%) took the direct pathway with a median delay of 95.85 weeks (*M* = 145.5).

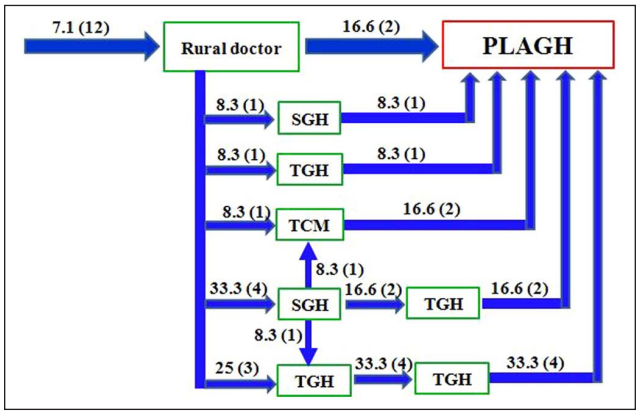

Figure 2. The rural doctor pathway.
Note: Twelve patients (7.1%) first visited the local village clinics. Afterwards, most patients visited the SGH and TGH and eventually arrived at the PLAGH.

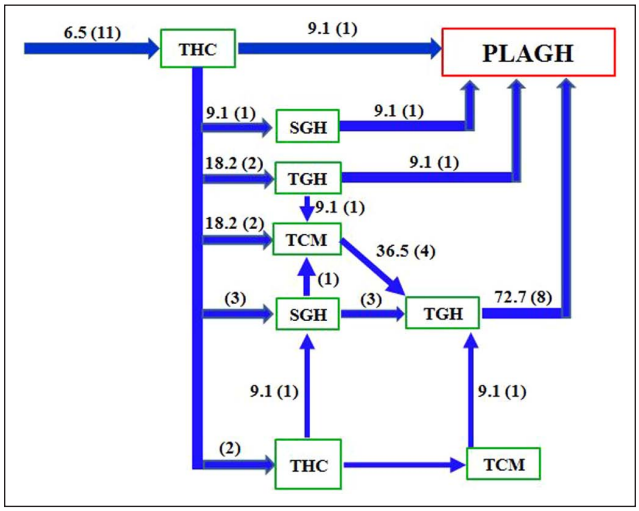

Figure 3. The primary hospital pathway.
Note: Eleven patients (6.5%) first visited the local township health care centres. Afterwards, most visited the SGH and TGH and eventually arrived at the PLAGH.

the majority of the participants (55.7%) sought help from the local hospital, private clinics or a rural doctor for consultation; 14.4% took some medication without consulting any doctors; 23.9% did not seek any help about the relative consultation service and treatment. The decision to initial care giver was mostly made by the individual themselves

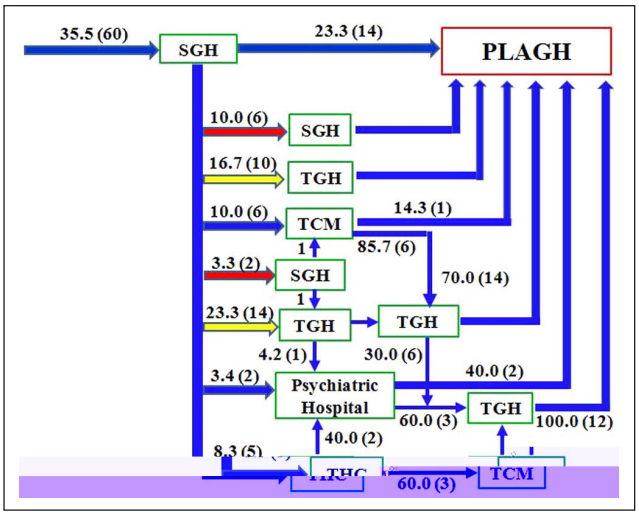

Figure 4. The secondary hospital pathway to mental health professionals.
Note: Sixty patients (35.5%) first visited the local secondary general hospital. Afterwards, most also visited the SGH again and TGH and eventually arrived at the PLAGH.

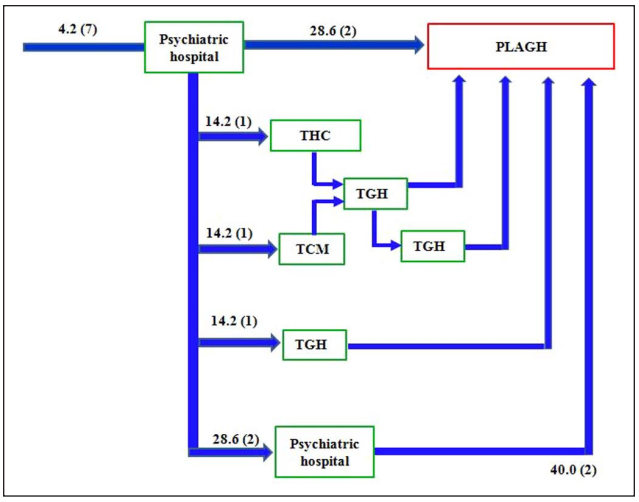

Figure 6. The psychiatric hospital pathway.
Note: Seven patients (4.2%) first visited the local psychiatric hospital. Afterwards, most patients also visited the SGH and TGH and eventually arrived at the PLAGH.

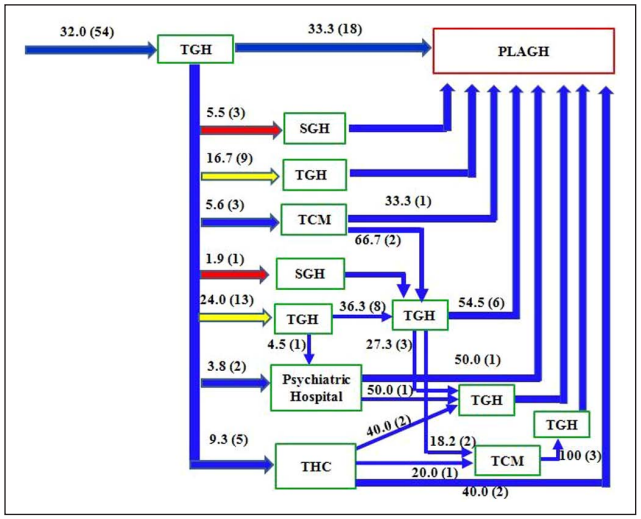

Figure 5. The tertiary hospital pathway.
Note: Fifty-four patients (32.0%) first visited the local tertiary general hospital. Afterwards, most patients also visited the SGH and TGH again and eventually arrived at the PLAGH.

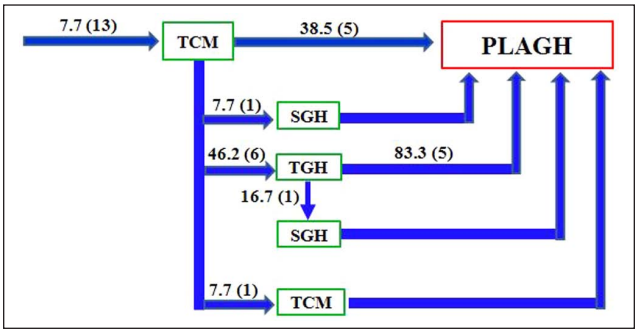

Figure 7. The TCM pathway.
Note: Thirteen patients (7.7%) first visited the local TCM hospital. Afterwards, most patients also visited the SGH and TGH and eventually arrived at the PLAGH.

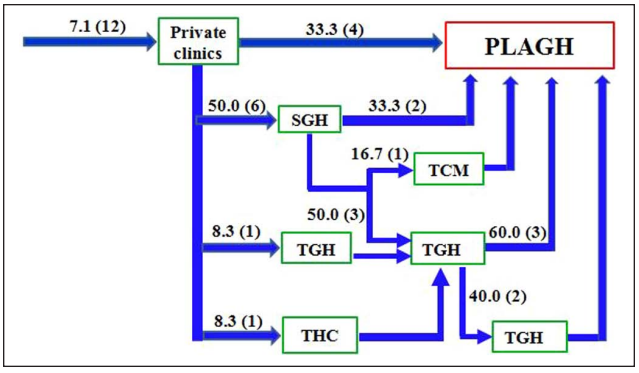

Figure 8. The private clinic pathway.
Note: Twelve patients (7.1%) first visited local private clinics. Afterwards, most patients also visited the SGH and TGH and eventually arrived at the PLAGH.

(70.4%), then followed by family members (28.1%), relatives/friends (0.5%) and colleagues (0.5%). In addition, the knowledge about mental disorders was investigated by the question 'How much do you know about mental health or mental illness?' and the answer 'a. Don't know; b. Know a little; c. Know quite well'. Among all participants, 77.8% selected the answer 'Don't know' and 20.7% chose 'Know a little'. This means that the overwhelming majority (98.5%) of patients or caregivers had poor knowledge of mental illness, which may be one of the reasons that patients

Table 3. Median delay from onset to PLAGH between different pathways.

Diagnoses group	Direct pathway		Indirect pathway		
	Patients *n*	Median (*M*)	Patients *n*	Median (*M*)	Mann-Whitney U test
Depression episode	12	128.5 (135.6)	60	286.6 (137.2)	$p = .218$
Neurosis*	7	34.86 (81.2)	31	91.5 (247.4)	
Anxiety*	8	82.8 (141.8)	21	139.4 (301.1)	
Insomnia*	0	0	4	450.9 (442.2)	
Somatoform disorders*	0	0	10	47.9 (80.4)	
Organic mental disorders*	0	0	5	183 (277.5)	
Schizophrenia*	4	42.3 (57.4)	0	0	
The status of depression or anxiety*	7	100 (192.3)	34	130.7 (250.5)	
Total	38		165		

*Statistical analysis was not performed because sample size is too small (< 10 patients).

with mental illness often diverge from traditional health care. In addition, the majority of the patients went to their initial health care giver accompanied by their spouse (43.8%), relatives (27.8%) or parents (8.9%), while 19.5% subjects went to the hospital unescorted.

Durations, diagnoses and steps in the pathway

Among all patients, the median total duration of time from the onset of symptoms to the arrival at the MHP was 122 weeks ($M = 240.7$), with a range of 2–2,052 weeks. Although the total duration of time from the onset of symptoms to the MHP tended to be shorter for the direct pathway than for the indirect pathway, there was no significant difference (Mann-Whitney U test, $p = 0.218$; Table 3). For the indirect pathway, the median duration from the onset of symptoms to the arrival at the initial health care was nine weeks ($M = 91.98$), with a range of 2–1,268 weeks. On average, each patient consulted 3.6 caregivers for a median of three consultations and a range of one to eight consultations. In addition, we compared the median delay from onset to meeting the initial caregiver and the median delay from the initial caregiver to the MHP among the most frequent diagnoses groups (sample size > 10). The depression group ranked first, with the longest median delay from onset to the first caregiver (12.5 weeks) (Table 4). However, the median delays from the first caregiver to the MHP presented different tendencies across all patients; the status of depression or anxiety topped the list with the largest median delay (104 weeks), and the somatoform disorder group was at the bottom with the shortest median delay (eight weeks; Table 4). Generally speaking, the median duration of time from the initial health care to the MHP was longer than that from the onset to the initial caregiver for all patients (Mann-Whitney U test $p < .005$), except for the insomnia group. From their first caregiver, 75.4% of the patients did not receive an accurate diagnosis (e.g. normal or no abnormal findings were observed etc.) and 20.7% of the patients were diagnosed with other diseases, such as cardiovascular disease, digestive diseases, and so on. Only the patients (3.9%), who visited the psychiatric hospitals, were diagnosed with mental disorders. The investigation into why patients selected the PLAGH as their medical caregiver revealed that the professional health services, including the high-quality health care and experienced doctors, was the most common reason (37.3%), followed by recommendations from their relatives and friends (25.8%), the medical insurance-designated hospital (12.3%), its location close to home (5.1%), and other reasons (13.7%). However, referral from their doctor was the last reason, accounting for only 2.2%.

Discussion

Of all participants, 63.1% came from North China, which might be over-represented as a region in the sample, possibly due to location of the study centre in the metropolis of Beijing. Although the previous study (Phillips et al., 2009) showed that alcohol abuse had a prevalence greater than 0.5%, no subjects were diagnosed with alcohol abuse or dependence in this study. This result is most likely connected with the objective and methods of the current study, which was a general-hospital-based study rather than an epidemiological survey. In comparison, depression ($\chi^2 = 12.58$, $p < .0001$), anxiety ($\chi^2 = 7.759$, $p = .005$), neurosis ($\chi^2 = 8.53$, $p = .004$) and a combined state of depression and anxiety ($\chi^2 = 40.793$, $p < .0001$) were more prevalent in females than in males (Table 5); this disparity may also reflect the results of the nationwide epidemiological study (Phillips et al., 2009).

This may be the first pathway study in rural China. An overwhelming majority of patients selected non-psychiatric resources as their caregiver. Eight major pathways were represented as follows: SGHs, TGHs, psychiatric hospitals,

Table 4. Durations according to main features at initial cares and PLAGH.

Main diseases/features diagnosed by PLAGH	Total *n*	PLAGH *n* (%)	First care (patients)						Delays and steps		
			TGH *n* (%)	SGH *n* (%)	THC *n* (%)	TCM *n* (%)	Rural doctor *n* (%)	Private clinics *n* (%)	Psychiatric hospital *n* (%)	Onset to first carer median (*M*)	First care to PLAG Hmedian (*M*)	Steps needed *M* (SD)
Depression episode	72	12 (16.7)	20 (27.8)	23 (31.9)	2 (2.8)	4 (5.6)	3 (4.2)	5 (6.9)	3 (4.2)	12.5 (111.86)	68.6 (185)	3.78 (1.52)
Neurosis	38	7 (18.4)	11 (28.9)	10 (26.3)	2 (5.3)	3 (7.9)	2 (5.3)	3 (7.9)	0	9 (93.6)	55.7 (155.9)	3.4 (1.28)
Anxiety	29	8 (27.6)	5 (17.2)	9 (31.0)	3 (10.3)	0	2 (6.9)	1 (3.4)	1 (3.4)	9 (96.7)	94 (199.8)	3.7 (1.55)
Insomnia	4	0	3 (75%)	1 (25%)	0	0	0	0	0	174.5 (224.5)	75 (225.3)	2.75 (1.5)
Somatoform disorders	10	3 (30.0)	2 (20.0)	3 (30.0)	1 (10.0)	0	1 (10.0)	0	0	2 (17.68)	8 (75.7)	3.5 (3.5)
Organic mental disorders	5	0	3 (60%)	2 (40%)	0	0	0	0	0			4 (4.1)
Schizophrenia	4	4 (100)	0	0	0	0	0	0	0	42.3 (57.4)	0	1
The status of depression or anxiety	41	7 (17.1)	11 (26.8)	11 (26.8)	2 (4.9)	5 (9.7)	2 (4.9)	1 (2.4)	2 (4.9)	94.1 (8.4)	104 (234.5)	3.55 (1.55)

TCMs, THCs, rural doctors, private clinics and direct pathways. The following findings may provide some explanation for the complex forms of the help-seeking pathways and for the under-utilization of mental health services. First, the recognition of mental disorders is poor among the general public, and some of the beliefs about treatment, particularly among rural Chinese populations, contend that mental illness is a result of evil spirits invading one's body (Phillips, Li, Stroup & Xin, 2000) or a form of punishment for the 'wrongdoing' of an individual or one's ancestor. This perspective results in a strong stigma being attached to mental illness (Yeung, Irvine, Ng & Tsang, 2012). Second, the development of psychiatry has been interwoven with the Chinese emphasis on social order; persons with mental illness have always been seen as potential sources of social instability because it was feared that they could behave in an out-of-control manner (Park et al., 2005). This stigma that is perceived to be associated with mental illness by the Chinese community workers constituted a major barrier to seeking professional help in an English study (Li & Logan, 1999). Third, the overwhelming majority (98.5%) of patients and their family members had poor knowledge about mental illness in this study; this also may be one of the reasons that patients with mental illness often divert from the care of health professionals.

The suggestion to seek initial help came mostly from the individuals themselves or from family members, but only infrequently from relatives/friends or colleagues. This affirms that the Chinese family is the base of all social support networks. It also shows that a mentally ill person may always face the socially awkward situation of the absence of a social network and social support in China. Unlike the situation in western countries, where large proportions of patients with mental disorders live on their own or in various institutional settings (e.g. hospitals, nursing homes, etc.), over 90% of Chinese persons with major mental illness live with their families (Chang & Kleinman, 2002; Phillips, 1993). Previous research has shown that social networks become smaller in individuals with severe mental illness than in the general population (Albert, Becker, McCrone & Thornicroft, 1998; Eklund & Hansson, 2007). One study has shown that only families and close family friends were involved in the early stages of help-seeking among Chinese Canadians suffering from mental illness (Lin & Lin, 1981). Another study shows that patients' social networks and social support may impact their utilization of psychiatric services (Albert et al., 1998). So the potential positive role of families should be fully realized as the mental health programme in China is further designed.

The median duration of time from initial care to the PLAGH was longer than that from onset to initial care. This shows that primary care, even the local general hospital, did not act as a gatekeeper to psychiatric services, and there was no effective referral system in China, unlike in Western Europe (Gater et al., 1991), East Europe (Gater et al., 2005)

Table 5. Distribution of each diagnostic feature between male and female.

CCMD-3 diagnostic group	Male *n* (%)	Female *n* (%)	χ^2	df	*p*
Depression	21 (29.1)	51 (70.9)	12.58	1	< .0001
Neurosis	10 (26.3)	28 (73.7)	8.53	1	.004
Anxiety	7 (24.1)	22 (75.9)	7.76	1	.005
Somatization	4 (40.0)	6 (60.0)			0
Insomnia	1 (25.0)	3 (75.0)			0
Schizophrenia	1 (25.0)	3 (75.0)			0
Other mental disorders	2 (40.0)	3 (60.0)			0
State of depression and anxiety	12 (29.3)	29 (70.7)	40.79	1	< .0001
Total	58	145			

Note: 0 indicated that the statistical analysis was not performed because sample size is too small (< 10 patients).

and Africa (Abiodun, 1995; Temmingh & Oosthuizen, 2008). The patients who went to non-psychiatric hospitals had not received accurate diagnoses, professional treatment or timely referrals. Three factors help to account for these circumstances. First, doctors working in rural-based primary care or clinics, even in the THCs, have little or no education about the detection, diagnosis and management of mental disorders, especially in rural settings (Chen et al., 2012). Second, the mental health system suffers from a severe lack of resources and a low quality of care in China. There were 1.99 psychiatric nurses, 1.29 psychiatrists and 10.60 'mental health' beds per 100,000 persons, compared to Japan where the respective numbers are 59.0, 9.4 and 284.0 per 100,000 persons (Jacob et al., 2007). Another survey reported that most mental health practitioners had degree majors related to psychology, medicine or education, although a substantial number had training in majors less directly related to mental health (Gao et al., 2010). Less than half of the sample was certificated, and nearly 40% was not currently affiliated with a professional association (Gao et al., 2010). In fact, the concentration of mental health facilities in urban areas alongside the decline of rural social welfare service in the 1980s has produced a situation of alarming disparity in access and quality of care along the urban/rural divide (Chang & Kleinman, 2002). For example, 80% of the country's total health budget goes to funding hospital-based treatment in urban areas, despite the fact that urban residents account for just 30% of the country's population (Zhang, 2001). As a result, the majority of rural patients with severe and persistent mental illness received no professional care at all (Chang & Kleinman, 2002). Third, China still has no existing mental health legislation at the national level, although the formalization of reform in municipal legislation marks a very positive step in the wider effort to improve mental health care (Shao, Xie, Good & Good, 2010). The rights of patients to receive adequate medical treatment and services and to prohibit discrimination on the basis of mental illness were uncertain. In addition, even those patients who visited psychiatric hospitals and were diagnosed accurately during their help-seeking process, finally reached the PLAGH for the poor treatment or high-cost medical care. This result also reflects that shortages of treatment resources and poor quality of help are still points of concern for the future. Patients with mental disorders also expected the counsellors to be highly knowledgeable, skilful, affable, experienced, talkative and ethical (Gao et al., 2010; Ning, Qijun & Guiyong, 2001).

The pathways study has posed many questions, including the most effective and efficient target disorders for specialist mental health services and the balance among hospital and community care in rural settings, which should be fully considered in the development of the mental health care system. If mental health is to be integrated into primary care in rural areas, then an education approach is more likely to succeed in shortening the duration above, so the policy maker should consider this issue in developing the national programme for mental health in future.

Limitations

This study is based on the patients from one outpatient department only, and the sample size of 203, which was not representative of China at large, may have been insufficient to conclusively discuss the pathways of the individual diagnostic category. Hence, other systematic studies of this field should be planned in future in China. In addition, the willingness and ability of the subjects to acknowledge their previous sources of care might also have affected the findings. Some people may not have been able to recall the details of their pathway.

Conclusion

In conclusion, the subjects first seek the help of various sources before attending PLAGH due to a lack of awareness of the treatment services and the fear of the stigma

associated with mental disorders. The primary care, even the local general hospital, did not act as a gatekeeper to psychiatric services, and most of patients had not received professional treatment services. This study has also highlighted the important role of family and friends and suggests a significant impact of the stigma associated with mental disorders. These factors affirm the importance of developing a public mental health strategy in China and exploring the best ways to collaborate with families.

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The authors declare that they have no competing interests.

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