China–India Mental Health Alliance

Traditional, complementary, and alternative medicine approaches to mental health care and psychological wellbeing in India and China

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India and China face the same challenge of having too few trained psychiatric personnel to manage effectively the substantial burden of mental illness within their population. At the same time, both countries have many practitioners of traditional, complementary, and alternative medicine who are a potential resource for delivery of mental health care. In our paper, part of The Lancet and Lancet Psychiatry’s Series about the China–India Mental Health Alliance, we describe and compare types of traditional, complementary, and alternative medicine in India and China. Further, we provide a systematic overview of evidence assessing the effectiveness of these alternative approaches for mental illness and discuss challenges in research. We suggest how practitioners of traditional, complementary, and alternative medicine and mental health professionals might forge collaborative relationships to provide more accessible, affordable, and acceptable mental health care in India and China. A substantial proportion of individuals with mental illness use traditional, complementary, and alternative medicine, either exclusively or with biomedicine, for reasons ranging from faith and cultural congruence to accessibility, cost, and belief that these approaches are safe. Systematic reviews of the effectiveness of traditional, complementary, and alternative medicine find several approaches to be promising for treatment of mental illness, but most clinical trials included in these systematic reviews have methodological limitations. Contemporary methods to establish efficacy and safety—typically through randomised controlled trials—need to be complemented by other means. The community of practice built on collaborative relationships between practitioners of traditional, complementary, and alternative medicine and providers of mental health care holds promise in bridging the treatment gap in mental health care in India and China.

Introduction

The burden of disease attributable to mental illness in India and China is substantial.1 Trained manpower to provide biomedical care for such disorders in these highly populous countries is insufficient.2 Both nations have many systems of medicine that are either indigenous or have been adapted from elsewhere at different points in each country’s history. Up to 80% of individuals with different health conditions consult practitioners of traditional, alternative, and complementary medicine at one time or another, although this proportion varies by region.3 People with mental illness consider traditional, alternative, and complementary medicine either before or after they have visited a biomedicine provider.4 In this paper, part of The Lancet’s Series about the China–India Mental Health Alliance, we describe and compare types of traditional, alternative, and complementary medicine in India and China and provide a systematic overview of existing evidence assessing the effectiveness of these approaches for mental illness. Furthermore, we discuss the challenges in developing evidence for effectiveness of traditional, alternative, and complementary medicine for the treatment of mental illnesses. Finally, we suggest how practitioners of these alternative methods and public mental health professionals might forge collaborative relationships to provide accessible, affordable, and acceptable mental health care in India and China.

Systems of traditional, alternative, and complementary medicine

Panel 1 describes the most popular types of traditional, alternative, and complementary medicine in China, and panel 2 shows those in India; a discussion of the myriad forms of these approaches in these countries is beyond the scope of our paper. The terms allopathic and biomedical practitioners are used interchangeably to refer to individuals trained in modern biomedicine. Traditional, alternative, and complementary medicine resources should be considered according to the form of training needed, the method of treatment, and the focus of therapy when explanatory models of mental illness could affect the mode of treatment.

Form of training

In both India and China, some systems of traditional, alternative, and complementary medicine have formal course-based institutional training, whereas others have training through apprenticeship, which we refer to as informal training in the sense that it is not codified and subject to a formal examination. Formal or institutional systems are in place for training in Ayurveda, yoga, naturopathy, Unani, Siddha, homoeopathy, Sowa-Rigpa, and traditional Chinese medicine (panels 1, 2). We include in the informal therapy group popular forms of faith-based healing and folk therapies.

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Methods of treatment

Traditional Chinese medicine
Of the many different medical systems that have existed in China’s long history, what is today called traditional Chinese medicine constitutes the most prominent and influential. Its concepts—e.g., qi (or chi), yin and yang, and the five phrases or elements are embedded deeply in Chinese cultures and philosophies. The basic theories of traditional Chinese medicine include: five yin (Zeng) organs and six yang (Fu) organs; the Meridians; and six pathological factors. These theories were established in the Yellow Emperor’s Classic of Medicine, which appeared around the 2nd century BCE. Diagnosis in traditional Chinese medicine takes the whole body into consideration: systemic pathological changes resulting from local pathologies are considered, and both systemic and local pathophysiology are supposed to be treated simultaneously. The four principal diagnostic methods of traditional Chinese medicine are observing or looking, listening and smelling, asking, and touching, with observing the tongue and taking the pulse the two pillars of examination. The predominant therapeutic device of traditional Chinese medicine is medication (herbal and animal substances). Other approaches include massage, acupuncture, and moxibustion.

Acupuncture and moxibustion
Acupuncture has a tradition of more than 2000 years in China. It is an art of healing based on the idea of treating internal diseases externally. Through the conduction of qi along channels known as meridians and acupoints, acupuncture provides treatment throughout the body by inserting needles into the skin to stimulate specific points of the body (acupoints). Moxibustion is a natural treatment using smoking plant products (eg, Artemisia argyi) to stimulate specific acupoints.

Massage
Massage therapy is used widely in many countries, but massage of traditional Chinese medicine is different. Besides body parts such as the head, neck, and back, which are involved in common massage therapy, traditional Chinese medicine massage also includes massage on acupoints to treat specific conditions.

Self-practice
Qi gong and tai chi are closely related to traditional Chinese medicine and religious beliefs such as Buddhism and Daoism, but these are mainly self-practice approaches aimed at health promotion and disease prevention.

Qi gong
Qi gong has its origins in the Jin Dynasty (266–420 CE) and is a practice of coordinating body, breath, and mind, based on Chinese philosophy. It comprises a diverse set of activities that can be characterised primarily as dynamic and static. Dynamic practice entails fluid movement, whereas static practice involves self-control of mind and breath with holding gestures. Most activities are carried on by using a combination of dynamic and static practices.

Tai chi
Tai chi is a traditional Chinese martial art in accordance with yin and yang and changes in the five elements. It can meet both physiological and psychological requirements of the human body through specific exercises for Yi (mind), Qi (breath), Xing (body gesture and movements), and Shen (spirit). In addition to having general physiological and psychological health benefits, tai chi is helpful for improving relationships between human groups.

Faith-based therapies
Folk therapy in China developed in the context of a mixture of Buddhism, Daoism, animistic belief, superstitious ideas, and other cultural beliefs. The main types of folk therapy include: calling back a lost soul; getting rid of a ghost or evil supernatural being that is believed to cause an illness; getting help from deities to avoid disasters or treat illnesses through rituals; feeding patients with specific substances (eg, sacred water); rituals such as avoiding specific people, locations, or food; and hypnosis. Folk therapy is generally practised by witch doctors, shamans, and religious personnel (eg, monks and Daoist priests). These folk therapies are regarded as superstitious and were forbidden before the 1970s CE. After the reform and opening-up policies in 1978 CE, ideological repressions have loosened and folk therapy has become popular again.
Panel 2: Systems of traditional, complementary, and alternative medicine in India

**AYUSH systems**

Seven systems of medicine are recognised by the Government of India Ministry of AYUSH: Ayurveda, yoga and naturopathy, Unani, Siddha, Sowa-Rigpa, and homoeopathy.

**Ayurveda**

Ayurveda is a health-care science with origins from the Vedas (Indian and Hindu scriptures) reported more than 5000 years ago. The system is based predominantly on the humoral theory of Tridosha (ie, three bioforces, vata, pitta, and kapha). It is the most popular system of traditional, complementary, and alternative medicine in India. Medicinal natural substances, special diets, purifying rituals, and surgeries form the important therapeutic procedures in Ayurveda.

**Yoga**

The Sanskrit word yoga literally means the union of a person’s consciousness with a universal one, which is considered to be an ideal state of health. This system is based entirely on non-pharmacological interventional regimens, including different postures (Asanas), breath control (Pranayama), and meditation (Dhyana).

**Naturopathy**

Although the naturopathic system traces its origins from different parts of the world, in India, naturopathic principles are rooted in Indian systems of medicine. Accordingly, the principles involve judicious therapeutic use of five basic material forms—earth, water, fire, air, and ether (space)—externally and internally, and changes in lifestyle and diet. Pharmacological interventions are not used and spirituality is encouraged.

**Unani**

Unani is a Greco-Arabic (Unan means Greece) system of medicine based on the teachings of Hippocrates and Galen. It evolved in the Middle Ages under Arabian and Persian doctors and was patronised through the Mughal period in India from the 12th century CE onwards. Unani is based on the idea of humours: blood, phlegm, yellow bile, and black bile. Treatment modalities include regimental therapy, special diets, herbal medicines, and surgery.

**Siddha**

The Siddha system of medicine is believed to have originated as a contemporary of Ayurveda in south India (mainly Tamil Nadu). The Siddha literature is in Tamil. Its diagnostics and treatment modalities are similar to those of Ayurveda.

**Sowa-Rigpa**

Sowa-Rigpa means science of healing and is also called Amchi medicine. It has Tibetan and Indian origins and is practised by tribal and Bhot people living in parts of the Himalayan region. The principles of diagnostics and treatment are similar to Ayurveda. Sowa-Rigpa predominantly uses pharmacological (herbal) interventions.

**Homoeopathy**

The homoeopathic system of medicine was systematised by Samuel Hahnemann, a German doctor. It was introduced in India around 1810 CE. The treatment approach is based on the principles of Similia Similibus Curentur (like cures like). Remedies include animal, plant, mineral, and synthetic substances.

**Self-practice**

Yoga is practised by many people as a method of treating common mental disorders and for promotion of mental wellbeing and health.

**Faith-based therapies**

Several faith-based rituals and procedures are done for individuals with mental health problems. The rituals differ based on the religious faith of the practitioner, but it is common for people from one faith to consult practitioners of another. Hindu practices include: incantations of sacred sounds imbued with power (mantra); wearing sanctified gems (mani dharana) or herbs (aushadha dharana) on the body or placing them at the entrance of the house; auspicious rituals (mangala); ritual offerings through sacrificial fire (bali); fasting on religious days (upavasa); measures adopted to overcome sins of this birth or the previous one (prayashchitta); and following a set of religious codes (niyama) giving endowments (dana). Muslim practices include: inculcating positive behaviours (tarbiyah); Sufi practices, such as nafs and ruh (soul) through dhikr (remembrance of Allah); spiritual exercises (shughl) and restraining the desires (nayyadah); recitation of the Quran to ward off afflictions due to evil eye (ruqyah); invoking blessings of the prophet; and seeking forgiveness from Allah. Healers of other religious faiths, including Christianity and Sikhism, also have specific practices related to their religions.

References

(appendix p 1) provide a mix of herbal and biomedical treatments and are immensely popular among poor populations in both rural and urban India. In China, practitioners of traditional Chinese medicine who have not been trained institutionally are allowed to take the medical licensing examination if they can meet specific requirements (eg, they have received continuous apprentice education from a qualified master in traditional Chinese medicine for at least 3 years). Reliable estimates of the number of such practitioners and their clientele are unavailable.

**Focus of treatment based on perceived cause**

Systems of traditional, complementary, and alternative medicine can also be classified according to the presumed cause of ill health. Practices based on internal causes of mental illness assume that the primary cause of the disorder is a humoral imbalance.
in the body or some obstruction of flow that interferes with an essential bodily process, such as digestion, defecation, or menstruation. Practitioners of Ayurveda, Unani, and Siddha largely focus on treating internal causes of illness, although they recognise that other factors might have rendered an individual vulnerable to illness. Their therapies are generally ingested, applied to, or inserted in the body. Therapeutic practices based on external causes of mental illness assume that the primary cause of an affliction lies outside the body—e.g., stars or celestial bodies, misalignment with directional forces, malevolent spirits, debts to ancestors, sorcery, or land embedded with negative forces. The patient might be treated locally or travel great distances to healing centres. Although associated with particular religions, these healing centres are visited by people who are more interested in the power of the place rather than the ethnic or religious group maintaining the centre. Examples of healing centres for mental disorders and problems associated with psychosis are Chottanikkara, Hindu temple, Vettucaud Catholic church, and Beemapalli mosque in Kerala.8,9

Traditional, complementary, and alternative medicine in formal settings
India and China both have well established systems of training and service provision in traditional, complementary, and alternative medicine. In 2014, the Government of India formed a separate ministry for administration of traditional, complementary, and alternative medicine, referred to as AYUSH systems (Ayurveda, yoga and naturopathy, Unani, Siddha, Sowa-Rigpa, and homoeopathy; panel 2). The Central Council for Indian Medicine (CCIM) sets uniform syllabi and examinations for training in AYUSH systems in India. Trainees who undergo 4-5 years of training and 1 year of internship in institutes recognised by CCIM are eligible to be included in state-level and central-level registries. AYUSH hospitals that maintain specific standards are accredited by CCIM and the National Accreditation Board for Hospitals and Health care Providers (NABH). In 2013, 516 institutes of AYUSH were accredited, of which 127 offered postgraduate courses (table 1). Every year, about 28 300 practitioners are trained at these institutes. However, only a small proportion go on to practise. Some students pursue degrees to improve marriage prospects, for prestige, or as a stepping stone into other professions. Table 1 also shows the number of registered practitioners and government-run hospitals and dispensaries of AYUSH systems. The distribution of India’s 686 319 registered AYUSH practitioners varies widely by region (appendix pp 4, 5): in some northeastern states, no AYUSH practitioners are registered, whereas nearly 20% of all AYUSH practitioners are registered in Bihar alone. The numbers of services and trainees in AYUSH systems have risen considerably over the past 20 years (table 1).

In China, 256 institutions provide medical training, of which 42 are solely universities of traditional Chinese medicine or Chinese herbology; a further 99 universities of modern medicine also provide degree training in traditional Chinese medicine or Chinese herbology. About 408 871 on-campus students are currently enrolled at the 42 institutions that provide training in traditional Chinese medicine; a bachelor degree takes 5 years to achieve, and associate college education takes 3 years. The licensing procedures for modern medicine and traditional Chinese medicine are similar: all graduates with a degree in traditional Chinese medicine must pass the national medical licensing examination to practise legally. In 2012, 356 779 practitioners of traditional Chinese medicine were licensed, accounting for 14% of all licensed doctors (including doctors of modern medicine, dentists, public health clinicians, and practitioners of traditional Chinese medicine). Most licensed practitioners of traditional Chinese medicine work in hospitals in China. In 2012, 2889 hospitals specialised in traditional Chinese medicine, accounting for around 13% of all hospitals: 15% of all outpatient and emergency services and 12% of all inpatient services were provided by hospitals of traditional Chinese medicine.

Although the clinical practice, research, and industry of traditional Chinese medicine is supported by the Chinese Government, it is facing challenges.11 Growth in numbers of doctors and hospitals specialising in traditional Chinese medicine was much slower than that for doctors and hospitals of modern medicine in the past decade. The relative decline in services for traditional Chinese medicine might be accounted for by economic, cultural, and historical evolutions in China.12 Overall, traditional, complementary, and alternative medicine in India and China shares similarities in terms of forms of training and government sponsorship, methods of treatment, and the focus of treatment in keeping with bodily disturbances (e.g., humoral and flow based) and models of illness. The greater diversity in traditional, complementary, and alternative medicine practices in India, compared with in China, might be indicative of the sociocultural, ethnic, and religious diversity in India.

Mental illnesses treated by practitioners of traditional, complementary, and alternative medicine
The Government of India Department of AYUSH maintains a database on disorders treated by practitioners of AYUSH in government hospitals and dispensaries (appendix pp 6–8). In 2013–14, only 1911 (<1%) of 28 749 613 consultations were categorised as being for a mental illness. However, AYUSH systems typically regard symptoms that a psychiatrist might identify as mental illness as signs of deeper humoral disorders. Furthermore, many patients with mental illness experience and communicate their distress in terms of bodily complaints

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Chinese medicine services. Folk therapy is also used, with 40% of individuals with depression having used traditional (10–69%) or formal AYUSH systems (1–6%) varied patients who visited either magical-religious systems suffering from severe mental illness. The proportion of patients who visited either religious healing centres, and in China, a study has investigated outpatients at a hospital in Shenyang specialising in traditional Chinese medicine.

In the Indian studies, most individuals who sought treatment by religious healing had psychoses manifesting as trance or possession disorders. By contrast, the most prevalent mental illnesses among outpatients who visited the traditional Chinese medicine clinic were mood and anxiety disorders. The prevalence of mental illness among outpatients of the traditional Chinese medicine clinic was 21–5%, whereas for outpatients of internal medicine clinics at the same hospital, the prevalence of mental illness was 18–2%.

The pathways to psychiatric care have been studied in psychiatric or tertiary care hospitals located in urban areas of India (table 2). Few studies have used modern systems to diagnose patients seeking help from traditional, complementary, and alternative medicine systems. In India, some studies have been done to assess people who seek help by visiting religious healing centres, and in China, a study has investigated outpatients at a hospital in Shenyang specialising in traditional Chinese medicine.

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Findings from Shenzhen City in China indicated that 6% of participants had sought help from traditional, complementary, and alternative medicine because of mental health issues, whereas 3% had used mental health services. In the World Mental Health Survey done in Beijing and Shanghai, of people seeking help from medical professionals, 14% had used traditional Chinese medicine services, and use of these services was ranked third after other allopathic doctors and mental health professionals. Findings of a community-based survey in rural Hunan province showed that folk therapy was the first choice for 147 (67%) of 220 patients with schizophrenia.

No studies from India were identified that investigated systematically the proportion of people with mental illness in the community who sought the services of traditional, complementary, and alternative medicine. However, individuals with behavioural afflictions—ranging from common mental illnesses such as anxiety, unwanted possession attacks, and dissociative states, to severe mental illnesses such as psychoses—are more likely to seek help from practitioners who treat disorders with an external cause, whereas those with bodily complaints (eg, somatisation associated with depression) are more likely to seek treatment from practitioners who treat conditions with an internal cause. For example, in south India, exorcists (Mantravadis) are consulted frequently for psychosocial stress manifesting as anxiety states, fear, and social isolation, and for antisocial behaviour, dissociative states, psychosis, and unwanted possession states (possession states not tied to planned religious activities). Ayurvedic practitioners (Vaidyas), on the other hand, more commonly treat disorders encompassing depression and anxiety neurosis and involving somatic idioms of distress, which entail complaints such as chronic indigestion and gastritis, body aches, sexual problems, or weakness.

Individuals with mental health problems in India and China not only frequently use the services of traditional,
complementary, and alternative medicine but also show similar patterns in doing so. Patients with common mental illnesses (e.g., mood and anxiety disorders) are most likely to consult AVUSH practitioners or doctors of traditional Chinese medicine, whereas individuals with behavioural afflictions are most likely to seek help from practitioners who treat conditions with an external cause, faith healing centres, or folk therapists. Accurate estimation of the proportion of individuals with mental illness who consult practitioners of traditional, complementary, and alternative medicine is difficult. People who use these services do so for several reasons: their easy approachability; the perception that the methods are less expensive; because of stigma associated with psychiatric centres; as an explanation for the individual’s abnormal behaviour (i.e., to be due to an external cause rather than blamed on their own self); because of belief that these treatments have fewer adverse effects; dissatisfaction with allopathic treatment, either because of slow or no improvement or adverse effects; perception that non-allopathic systems are less authoritarian and give personal autonomy and control over health-care decisions; and a shared ethos between healers and their patients. \(^{5,16}\)

Studies on the pathways to psychiatric care reflect these ideas (table 2); however, systematic research attempting to profile patients who use the services of traditional, complementary, and alternative medicine is sparse.

**Evidence for usefulness of traditional, complementary, and alternative medicine in psychiatric disorders**

**Systematic reviews and randomised controlled trials**

Randomised controlled trials have been done of traditional, complementary, and alternative medicine practices in different health conditions, including psychiatric disorders, and systematic reviews and meta-analyses based on such trials have been published. We did a systematic overview of these reviews to evaluate current evidence on the effectiveness of traditional, complementary, and alternative medicine in treating major mental illnesses (panel 3). We included 94 systematic reviews published in English and 19 in Chinese in our analysis (figure). The characteristics of these 113 reviews are listed in the appendix (pp 9–77).

Table 3 summarises the results of 79 reviews that focused on one traditional, complementary, and

<table>
<thead>
<tr>
<th>Setting</th>
<th>Methods used</th>
<th>Diagnostic categories (n)</th>
<th>Proportion using TCAM practitioners before psychiatric consultation</th>
<th>Comments</th>
</tr>
</thead>
<tbody>
<tr>
<td>Campion and Bhugra (1998)(^{24})</td>
<td>Private clinic in a town in Tamil Nadu, south India</td>
<td>Semi-structured proforma, checked only for religious healing</td>
<td>All psychiatric disorders (198)</td>
<td>50% consulted religious healers</td>
</tr>
<tr>
<td>Chadda et al (2001)(^{25})</td>
<td>Institute of Human Behaviour and Allied Sciences, Delhi</td>
<td>Semi-structured proforma</td>
<td>All psychiatric disorders (78)</td>
<td>30% consulted faith healers, 1% consulted alternative system of medicine</td>
</tr>
<tr>
<td>Gater et al (2001)(^{26})</td>
<td>Rural community in Karnataka, south India</td>
<td>Encounter form</td>
<td>Psychosis (4), other psychiatric disorders (72)</td>
<td>12% consulted native or religious healers, of whom 61% were prescribed religious treatment and 31% were prescribed herbal or native medicine</td>
</tr>
<tr>
<td>Mishra et al (2011)(^{27})</td>
<td>All India Institute of Medical Sciences, New Delhi</td>
<td>Semi-structured questionnaire</td>
<td>Neurotic disorders (86 [43%]), mood disorder (36 [18%]), schizophrenia (22 [11%]), other (58 [28%])</td>
<td>8% consulted faith healers, 3% consulted practitioners of alternative medicine as their first consultation, 51% met faith healers and 8% met practitioners of alternative medicine at some time during their illness</td>
</tr>
<tr>
<td>Pradhan et al (2001)(^{28})</td>
<td>Five centres across India</td>
<td>Modified encounter form</td>
<td>Diagnostic details not provided (384)</td>
<td>7% consulted practitioners of alternative medicine, 26% consulted faith healers</td>
</tr>
<tr>
<td>Lahanya et al (2010)(^{29})</td>
<td>Gwalior Psychiatric Institute</td>
<td>Encounter form</td>
<td>Psychosis (128 [43%]), bipolar disorder (126 [41%]), depression (29 [10%]), other (12 [4%])</td>
<td>69% consulted faith healers, 4% consulted practitioners of alternative medicine</td>
</tr>
<tr>
<td>Thirthalli et al (2009)(^{30})</td>
<td>National Institute of Mental Health and Neurosciences, Bangalore</td>
<td>Encounter form</td>
<td>Schizophrenia (556)</td>
<td>41% consulted religious or faith healers, 6% consulted practitioners of alternative medicine</td>
</tr>
</tbody>
</table>

TCAM=traditional, complementary, and alternative medicine.

**Table 2: Studies on pathways to psychiatric care in India**
alternative medicine approach (eg, needle acupuncture, electro-acupuncture, and auricular acupuncture) and one category of mental illness (appendix pp 78–80). Our analysis was done according to result type (ie, positive, mixed, or negative) and quality of evidence (ie, high or low). Positive results were defined as either consistent positive results for traditional, complementary, and alternative medicine across individual clinical trials or pooled estimates that showed at least one of the following: traditional, complementary, and alternative medicine was as good as or superior to a previously established treatment; traditional, complementary, and alternative medicine was superior to placebo, wait-list control, or no treatment; or a combination of traditional, complementary, and alternative medicine and an established treatment was better than the established treatment alone. Mixed results were defined as either inconsistent results for traditional, complementary, and alternative medicine across individual clinical trials, with no pooled estimates provided, or pooled estimates showing inconsistent findings for different outcome measures, for various comparisons (ie, traditional, complementary, and alternative medicine superior to placebo but not as good as an established treatment), or at alternate timepoints. Systematic reviews were judged high quality if the individual clinical trials, based on the final conclusions reached, were of high quality (ie, had a Jadad score ≥3). One of the 79 studies did two comparisons: one was based on randomised controlled trials irrespective of quality; the other was based on high-quality trials only. Therefore, 80 results based on 79 reviews are summarised in table 3.

More than half the reviews (n=53) yielded positive findings, whereas seven reported negative results. However, most reviews (n=75) included low-quality clinical trials (table 3). Hence, no firm conclusion can be drawn about the effectiveness of any category of traditional, complementary, and alternative medicine for treatment of any specific mental illness. The most frequently investigated traditional, complementary, and alternative medicine approach was acupuncture (n=41) and the disorder studied most often was depression (n=33). 16 reviews assessed the efficacy of acupuncture to treat depressive disorders: two positive results were based on high-quality studies; nine positive and five mixed results were based on low-quality studies. Of ten reviews on the use of Chinese herbs to treat depression, positive findings were reported in nine; one review was based on high-quality data and eight included low-quality studies. Four reviews on yoga to treat depression consistently showed positive findings based on low-quality studies. Thus, potentially, the most effective traditional, complementary, and alternative medicine approaches are acupuncture, Chinese herbs, and yoga, for treatment of depression.

Scientifically rigorous clinical trials assessing the efficacy of traditional, complementary, and alternative medicine practices for treatment of mental illnesses are scarce. Several reasons could account for this shortage. First, researchers of traditional, complementary, and alternative medicine approaches might not have been trained in the conduct of methodologically rigorous randomised controlled trials. Second, impetus to do randomised controlled trials is low because government regulation of drugs and practices is confined to new products, not those deemed traditional or classical. Third, the major driver for pharmaceutical companies to do randomised controlled trials is to achieve state approval for drugs as safe and

Panel 3: Search strategy and selection criteria

We did a search for systematic reviews and meta-analyses published in English or Chinese between Jan 1, 1995, and Dec 31, 2014. We searched PubMed, EBSCO, the Cochrane Library, PsycINFO, Web of Science—core collection, CINAHL, and Embase for papers published in English, with the following terms: (“systematic review” OR “meta-analysis”) AND (“non-allopathic” OR “non-traditional” OR “traditional medicine” OR “complementary medicine” OR “alternative medicine” OR “CAM” OR “T-CAM” OR “TCM” OR “Ayur” OR “Yog” OR “unani” OR “homeopath” OR “naturopath” OR “meditati” OR “traditional Chinese Medicine” OR “acupuncture” OR “Chinese herbs” OR “Tai Ji” OR “Tai chi” OR “Qi Gong”) AND (“mental” OR “psychia” OR “schizoph” OR “depres” OR “anxi” OR “somati” OR “dement” OR “alcohol use” OR “alcohol abuse” OR “alcohol dependence” OR “alcoholism” OR “drug use” OR “drug abuse” OR “drug dependence” OR “addiction” OR “conversion” OR “dissoci” OR “complementary medicine”). We searched the China National Knowledge Infrastructure Project (CNKI), China BioMedical literature Database (CBM), and the digital journal of Wanfang Data (Wanfang) for papers published in Chinese, with the same search terms.

We included systematic reviews and meta-analyses that had a comprehensive search strategy and explicit inclusion and exclusion criteria; at least one study in the review had to focus on the effectiveness of one or more Indian or Chinese traditional, complementary, and alternative medicine approach for treatment of either anxiety disorder, mood disorder, schizophrenia, substance use disorder (including nicotine), or dementia and cognitive impairment disease, or a combination of these mental illnesses.

We excluded reviews if they were overviews of systematic reviews or meta-analyses (ie, they did not review original research papers); if diagnosis of mental illness was not done or mentioned in all included individual studies; if no trial was included in the systematic review; if trials of only one herb were included; if the included studies were solely of childhood mental illnesses and behavioural problems; or if an updated systematic review was available at a later date.

HL and HV decided independently on the eligibility of systematic reviews and meta-analyses, based on titles and abstracts. Those rated as relevant or possibly relevant by either HL or HV were included in full-text analyses. HL and HV assessed the full text of all included papers and used inclusion and exclusion criteria to evaluate eligibility. Systematic reviews and meta-analyses published in Chinese were checked by HL and GW. Disagreements were resolved through discussion and final decisions were made by LZ. JT and GW assessed independently the quality of systematic reviews and meta-analyses published in English using AMSTAR (A Measurement Tool to Assess Systematic Reviews). 30 Systematic reviews and meta-analyses published in Chinese were evaluated by HL and GW. Reviews with an AMSTAR score of 3 or lower were classified as low quality and were excluded. Disagreements were resolved through discussion. Data from systematic reviews and meta-analyses published in English were extracted by JT and LZ using a predesigned table. Data from systematic reviews and meta-analyses published in Chinese were extracted by HL and LZ.
effective, for the indications they are marketed. Because most traditional, complementary, and alternative medicine methods are already on the market and highly popular, the need to convince the public or health professionals about their effectiveness is diminished. Furthermore, evidence to support insurance coverage is not needed, because the costs of outpatient medicine in India and China are not covered by most insurance schemes and, particularly in India, only a very small proportion of the population has health insurance. Fourth, with respect to out-of-pocket expenditure, the high popularity and level of user satisfaction for traditional, complementary, and alternative medicine reduces public demand for proof of effectiveness. Therefore, the results of clinical trials might have little effect on real-world behaviour.

What types of studies are needed and which methods are applicable?

The assumption that randomised controlled trials are the gold standard of treatment effectiveness is disputed by providers of traditional, complementary, and alternative medicine, who point out that many characteristics of their practice challenge the appropriateness of randomised controlled trials to assess treatment effectiveness. First, practitioners of traditional, complementary, and alternative medicine frequently use a combination of treatments rather than one therapy alone. Second, providers of traditional, complementary, and alternative medicine frequently use a combination of treatments rather than one therapy alone.
complementary, and alternative medicine approaches are highly individualised and tailored based on patient’s feedback. Finally, some treatments are presumed to depend on the unique characteristics of the healer and healer–patient relationship. Alternatives to randomised controlled trials suggested by an Institute of Medicine taskforce, which was convened to investigate methods for assessing the effectiveness of traditional, complementary, and alternative medicine, include pragmatic studies, factorial designs, preference trials, n-of-1 trials, and

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Data are number of systematic reviews. TCAM=traditional, complementary, and alternative medicine.

Table 3: Data from systematic reviews of the effect of TCAM approaches for treatment of mental illness in India and China.
observational trials. Moreover, outcome measures used in studies of biomedicine might not accord with the expectations and perceptions of effectiveness of traditional, complementary, and alternative medicine. Verhoeef and colleagues\(^6\) suggest use of qualitative methods not only to better understand the meaning of intervention to patients but also to ascertain their expectations from the intervention, and then to develop different outcome measures. In a US study, a method to measure patient-reported outcomes, which could be adapted culturally to ascertain outcomes of traditional, complementary, and alternative medicine approaches, was developed based on analysis of the patient’s narrative.\(^{4,6}\) Such studies complement the set of Good Clinical Practice guidelines for randomised controlled trials that the department of AYUSH in India published in 2013 to guide trials for Ayurveda, Siddha, and Unani.\(^6\) This development is likely to spur more research into AYUSH systems in India.

**Harm avoidance**

Although traditional, complementary, and alternative medicine systems are widely believed to be free of adverse effects, this notion is not always correct. Direct harm has been reported from heavy metals, impurities, and possible adulteration of Ayurvedic preparations\(^6\) and Chinese herbs.\(^6\) Although controversial, some mental health experts have identified a disorder induced by the practice of Qigong and have included this culture-related psychiatric syndrome in the third version of the Chinese Classification of Mental Disorders.\(^6\) Consistent evidence shows that a delay in starting effective treatment is associated with a poorer outcome for patients with severe mental illnesses such as schizophrenia.\(^{15,16}\) Because evidence is scant for the effectiveness of traditional, complementary, and alternative medicine practices, particularly in individuals with severe mental illness, potential indirect harm because of either a delay in beginning or denial of evidence-based treatment cannot be ignored. Another form of harm results from serious human rights violations and cruelty towards people with psychiatric problems at some faith-healing centres.\(^11\)

Finally, contrary to the popular belief that traditional, complementary, and alternative medicine services are inexpensive, anecdotal evidence suggests some patients and families have incurred substantial expenses, sometimes having to sell their assets or even being indebted, in pursuit of relief through traditional, complementary, and alternative medicine.

**Encouraging interprofessional collaboration between biomedicine and traditional, complementary, and alternative medicine**

In view of the popularity of traditional, complementary, and alternative medicine, it is likely that even if sufficient biomedical mental health services were available, people would continue to access other therapeutic systems.\(^7,20\) In India, outreach efforts by the National Mental Health Programme, which have focused almost exclusively on biomedical care, have proven largely unsuccessful.\(^2,5\) Thus, investigating ways of encouraging collaboration and triage between biomedicine and traditional, complementary, and alternative medicine, to reduce the gap in mental health care, seems a prudent course of action.

**Communication and collaboration between systems**

Collaboration between traditional Chinese medicine and biomedicine is well established in China. Biomedical doctors receive about 6 months of training in traditional Chinese medicine in medical schools and prescribe Chinese medicine in their routine practice. General hospitals hire doctors of traditional Chinese medicine and provide outpatient and inpatient services in this area. Similarly, in most schools of traditional Chinese medicine, about 40% of the curriculum focuses on biomedicine, including basic sciences and clinical medicine. Biomedical approaches in diagnosis and treatment are common in hospitals of traditional Chinese medicine. Although few historical documents are available on emotional therapies and talking cures, the approaches to treat patients with mental illnesses have not been developed fully in the history of traditional Chinese medicine.\(^7\) Thus, efforts to integrate traditional Chinese medicine and biomedicine in mental health care are sparse compared with other disciplines of medicine.

In India, biomedical doctors do not get any training in AYUSH. Undergraduates of AYUSH courses are trained in the basics of biomedicine, particularly anatomy, physiology, pathology, surgery, and obstetrics, but receive very little training in biomedical approaches to mental health.\(^7\) Under the National Rural Health Mission, steps have been taken to integrate AYUSH and biomedicine,\(^18\) which include involving practitioners in national health programmes, incorporation of AYUSH modalities into primary health care, and providing infrastructural support for AYUSH. However, little has been done about the treatment of mental illnesses. A few non-governmental organisations and innovative practitioners have piloted the feasibility of offering biomedical mental health care at faith-healing centres.\(^39\) One such programme is at a Muslim healing shrine in Gujarat attended by people of all religious denominations (appendix p 2). In both China and India, practitioners of biomedicine are restricted in their use of traditional, complementary, and alternative medicine systems, and vice versa. In China, the Mental Health Law, which came into effect in May, 2013,\(^40\) precludes the biomedical diagnosis and treatment of mental health disorders by professionals other than trained psychiatrists. Although, by law, practitioners of traditional Chinese medicine cannot prescribe allopathic drugs, they are legally allowed to treat patients with mental disorders with their own diagnostic and therapeutic methods. By contrast, although no published data are available, observations
offering spiritual protection and divine intervention. and managing symptoms with drugs and the temple are complementary, with biomedical practitioners treating. Treatment is not seen as integrated, but rather by AYUSH practitioners is at the discretion of different state governments. In practice, doctors trained in one system of medicine commonly prescribe treatments of the other.

How would the general public in both India and China respond to referral and collaborative efforts to treat mental health problems? People in these countries do not view healers, doctors, and healing spaces as mutually exclusive but rather as alternatives. Individual practitioners—irrespective of the therapeutic system—are regarded as having the power to treat specific types of ailments. Pragmatism over-rides cognitive dissonance. For example, at healing temples, where doctors hand out medicines to devotees, people commonly believe that the medicine will be effective only with the deity’s blessing. Treatment is not seen as integrated, but rather complementary, with biomedical practitioners treating and managing symptoms with drugs and the temple offering spiritual protection and divine intervention.

Creating a mental health community of practice Little systematic research has been done on what type of working relationship might be forged between doctors of biomedicine and practitioners of traditional, complementary, and alternative medicine, towards the common goal of better management of mental health disorders in India and China. Establishing a loosely structured mental health community of practice is a productive first step for investigation of collaborative relationships between types of practitioners who do not ordinarily interact or problem solve together. A community is formed through engaging in joint activities, discussion, information sharing, referral, and mutual assistance. Even though collaborative relationships can be formed around weak ties, mutual respect is established when each individual recognises what other members contribute to a common agenda. For example, practitioners in traditional, complementary, and alternative medicine can be trained to recognise the benefit of managing some patients with drugs and to advise patients taking these drugs not to stop taking them abruptly when they consult them. Mental health experts can be trained to better appreciate the work of culture underlying healing rituals, the psychosocial effect of local forms of treatment, and the potential benefits of specific herbal medicines or yoga.

Institutionally trained practitioners in traditional Chinese medicine and AYUSH might be more willing to participate in this community of practice initially than might religious and faith healers who work outside of formal settings. However, role models from these healing traditions could be invited to participate in the community of practice and become exemplars for others once the benefits of collaboration and mutual respect can be shown. Professional bodies of biomedical doctors and practitioners of traditional, complementary, and alternative medicine, and the participation of a few esteemed religious institutes, could help build such collaborations. It is worth noting that cross healing tradition partnerships have long existed in parts of India between Ayurvedic practitioners, astrologers, and exorcists. Successful communities of practice involving practitioners of biomedicine, systems of complementary and alternative medicine, and traditional healers have already been established and proven successful in both North America and Africa. For example, findings of a study funded by the US National Institutes of Health showed that addiction specialists, practitioners of Chinese medicine, chiropractors, and massage therapists could form a community of practice to address smoking cessation. In Cameroon, a community of practice involving traditional healers, community health workers, and hospital staff has been established and is proving effective in managing the neglected tropical disease Buruli ulcer.

Limitations and concluding remarks Our review has several limitations. First, we did not include relatively infrequently used practices of traditional, complementary, and alternative medicine (eg, Pranic healing, Marma therapy). Second, child psychiatric conditions—eg, attention-deficit hyperactivity disorder—were excluded from the systematic overview. Finally, a large part of our review was narrative rather than systematic.

A substantial proportion of individuals with general medical and mental health disorders seek treatment from various traditional, complementary, and alternative medicine practices in India and China. Some of these treatment methods have gained formal recognition by the Indian and Chinese Governments. Religious practices, self-practices, and folk therapies are also widely used by individuals with mental health disorders. Evidence suggests the effectiveness of acupuncture, traditional Chinese medicine, and yoga therapy for the treatment of depression. Although extensive research has investigated the usefulness of traditional, complementary, and alternative medicine for other psychiatric disorders, the quality of much of this work is poor. The contemporary, evidence-based standard of using randomised controlled trials to assess efficacy of drugs and treatment strategies does not seem to be appropriate in the setting of traditional, complementary, and alternative medicine. Other study choices have been proposed and need to be used systematically. Because the biomedical system alone is inadequate in filling the wide mental health gap in India and China, there is a need to investigate public health approaches involving collaboration between biomedicine and traditional, complementary, and alternative medicine.
Contributors
JT and LZ planned and prepared the review. KK, MN, J-BN, JG, AH, and BNG contributed to writing from the perspectives of yoga, Ayurveda, traditional Chinese medicine, psychiatry, and anthropology. HL, GW, MN, HV, LZ, and JT did the literature search, assessed the quality of retrieved articles, and extracted and analysed data (panel 3). HL, GW, LZ, and JT prepared the figure and tables.

Declaration of interests
We declare no competing interests.

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The China–India Mental Health Alliance, which is coordinated jointly by the Shanghai Jiao Tong University and the Public Health Foundation of India, supported by multinational collaboration that made this paper possible. The activities of the Alliance have been supported by a grant from the China Medical Board and by technical assistance from WHO, Emory University, the London School of Hygiene & Tropical Medicine, and Harvard University.

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Reforming mental health in China and India

In The Lancet, Fiona J Charlson and colleagues1 use data from the Global Burden of Disease Study 2013 to show the substantial disease burden associated with mental, neurological, and substance use disorders, as well as the probable health service and workforce challenges that will continue to emerge in the coming decades for both China and India. According to their new analysis, the two most populous nations in the world, India and China, account for 32% of the disease burden of global mental, neurological, and substance use disorders, which is greater than that in all developed countries combined. China accounts for 17% and India accounts for 15%, with depressive disorders and anxiety disorders being the most common.

The effects of mental, neurological, and substance use disorders in these countries extend far beyond the individual. The stigma associated with mental health impacts on employment opportunities and thus material circumstances and the social economic status of the family, compounding social inequities for those with mental, neurological, and substance use disorders. These wider implications have not been addressed in the generally descriptive analysis by Charlson and colleagues,1 which they acknowledge. Thus, the burden of mental, neurological, and substance use disorders described in China and India is very likely an underestimate of the true effect of such disorders in these populations. The analysis also overlooks the likely large regional differences in the burden of such disorders across both countries. We know, for example, that there is substantial geographical variation across non-communicable disease outcomes in China generally,2,3 including suicide,4 which reflects the heterogeneity in social, economic, demographic, cultural, and health service factors that are likely determinants of mental health outcomes. More geographically specific estimates can provide a detailed understanding of local context, and health and social service needs in addressing the disease burden associated with mental, neurological, and substance use disorders. We also know there are substantial barriers to mental health care in both China and India—most individuals with mental illnesses do not access psychiatric health services.5–7

In recent years in China there has been the development of a series of national mental health policy reforms relating to the expansion of acute and community-based mental health care.8–10 The recently implemented national mental health laws in China in 20129 are helping to develop capacity in acute and community-based care for severe mental disorders, regulating the diagnosis and treatment of mental disorders, and establishing health institutes and institutional capacity for health professionals in the diagnosis and treatment of mental disorders. The integration of mental health care with community-based services for early detection and treatment and rehabilitation is also prominent in these national reforms, with the aim to develop integrated models of management of mental disorders incorporating primary health, judicial administration, and public security sectors of government.10 Evaluating the impact of these reforms as they are implemented and as geographic coverage widens across China is a current priority for mental health researchers and policy makers in China.

In India, national mental health-care frameworks have been in place since the 1980s;7 however, substantial challenges remain. Such challenges include the absence of availability of mental health services (both facilities and workforce) to address substantial unmet need and to help with the integration of mental health with existing primary health-care practice in early detection and treatment, as well as expanded community-based care in the reintegration and recovery of people with ongoing mental disorders.7,11

See Online/Articles http://dx.doi.org/10.1016/S0140-6736(16)30590-6
Both China and India have a much lower per capita number of mental health professionals compared with other countries,\textsuperscript{7,11,12} and these workforces are most likely insufficient to respond to the emerging burden of mental, neurological, and substance use disorders—particularly in rural populations. Fortunately, workforce capacity is a focus of national mental health reforms for acute and community-based care in both China and India. For example, in the Chinese context, greater prominence and financial support for professional training in mental health for students in medical colleges and universities is being rolled out. There is a planned nationwide increase of mental health professionals to 40 000 with a target to manage 80% of registered cases of severe mental disorder, and to have 70% of counties implementing integrated approaches to mental health care (involving primary health, judicial, and public security agencies) and community rehabilitation services by 2020.\textsuperscript{10}

What is crucial for subsequent planning is a detailed understanding of local context at provincial or district levels of service provision in both countries. The development of sound, geographically specific epidemiological data for mental health outcomes is needed to inform local area needs assessment and workforce requirements, as is the need for the monitoring and evaluation of mental health services implemented under the ongoing national mental health policy reforms—in both China and India.

The challenge for policy makers in China and India is to ensure that the recent recognition and interest in mental, neurological, and substance use outcomes are sustained, in order to develop adequate and fulsome responses to the major and growing burden of mental, neurological, and substance use disorders.

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We declare no competing interests.