Medicine and Society

Understanding black magic and other systems of belief

K.S. JACOB

I heard about black magic and other supernatural systems of beliefs in my childhood. However, it was only when I joined medical school in 1976 that I was exposed to the range and diversity of cultural beliefs and practices. We, as a class, lived in a village, Kammasamudram, for two weeks during our first year of medical training, to understand and experience rural life.

The Community Orientation Programme involved household surveys, collecting nutrition and anthropometric data, studying water supply, sanitation, contraceptive usage, birth routines, immunization schedules, child-rearing practices, and eliciting caste information and its impact on discrimination.[1] Belief in black magic, sin, punishment, karma, evil spirits, supernatural influences, dietary conventions and religious theories resulted in complex rules, modes of behaviour and ritualistic practice. They seemed to affect all aspects of rural life. Many of us, 17-year-olds, from urban backgrounds found many cultural perspectives, customs and traditions difficult to comprehend.

The faculty and staff of the department of community health discussed many issues and their implications for health and disease. Despite our superficial understanding of the complexities of life, we came away with idealism and a desire to educate people about scientific medical approaches, improve the lives of rural folk, reduce poverty and overcome cultural obstacles to health.

Our training in medical school reinforced the belief that many local and cultural beliefs were unscientific and were an important reason for ill health, delayed help-seeking, poor outcomes, morbidity and mortality. These issues came back into consciousness when I started training in psychiatry. The mental illness was shrouded in mystery and fear for diverse populations who presented for treatment. It resulted in stigma, delayed help-seeking and discrimination.

Although an introductory seminar on anthropology shed a different light on cultural and social approaches to mental health, distress and illness, the discussion by senior faculty suggested a negative attitude to supernatural beliefs about causation and disdain for non-medical treatments and interventions, particularly for severe mental illnesses such as schizophrenia and bipolar disorders.

The 1980s were an exciting time for psychiatry. The new and radical approach to psychiatric diagnosis introduced by the Diagnostic and Statistical Manual of Mental Disorders III, with its use of objective and behavioural criteria focused on increasing diagnostic reliability and identifying homogeneous sub-groups.[2] The early reports of the identification of genes for mental disorders among the Old Order Amish had raised our hopes for a cure from such suffering.[3]

Nevertheless, the department of psychiatry at Vellore generally had a tolerant approach to cultural interventions. Patients and their families who wanted magico-religious cures were allowed to seek such help but were also advised to continue psychotropic medication. While many local faith and traditional healers did refer patients to the psychiatric hospital, the department rarely attempted to understand local beliefs systems or incorporate cultural treatments in their practice. While such beliefs were routinely elicited, there was no serious attempt to understand their role in mental health or engage with such issues.

My early years on the faculty were not without conflicts. Wanting to carve out a niche for myself, I decided to specialize in psychiatric epidemiology. Two and a half years, 36 letters and 3 PhD proposals later, I got an International Fellowship from the Wellcome Trust to train at the Institute of Psychiatry, London. Although I wanted to train in epidemiology, my pragmatic and wise supervisor, Professor Antony Mann, suggested that I also study anthropology. The Wellcome Trust needed to be convinced that I would return to India after training to study local issues related to mental illness. Reading anthropology would strengthen my case; hence, I reluctantly agreed.

My PhD thesis and the resultant papers, part epidemiology and part anthropology, met with much skepticism from examiners and referees. I was caught between epidemiologists, who wanted larger sample sizes and quantitative data, and anthropologists who required longer, detailed and qualitative interviews. My examiners were not happy with my inconsistent numbers; *x* people held particular beliefs while *y* people sought its corresponding intervention; the data did not support logical thought among my patients. After a stressful 3-hour closed-door viva and major revision of my thesis over many months, I was awarded a PhD.

On return to India, my attempts at replicating epidemiological work from Vellore met with repeated rejection from British and international journals with advice to publish in local periodicals. Local work in London was considered worthy of international standards while Indian data with its regional variation was only fit for regional consumption. Euro-American standards were the norm while non-western data were, at best, variants. With my attempts at publishing epidemiology taking a beating, I decided to plunge into studying local issues from a cultural perspective.

The cultural data generated in Vellore had the same problems I encountered in London; the correspondence between cultural beliefs, perceived attributions and actions did not strictly match. People who believed that their mental illness was caused by black magic regularly came to the hospital to get their supply of psychotropic medication. Standard interview schedules, which assumed rational thought and logical progression, needed to be modified to capture the nature and complexity of human beliefs and cultural idioms. A nuanced understanding of issues required a sensitive framework and perceptive statistical analysis.

Department of Psychiatry, Christian Medical College, Vellore 632002, Tamil Nadu, India; *ksjacob1959@gmail.com*

One day, when I went to the medical college hospital for the consultation–liaison psychiatry clinic, I chanced to see a poster advertising a talk by Professor Susie Tharu titled 'The cultures of cholera'. She, with her background in humanities, argued that the social dimensions of the disease were much more complex than its biology and that interventions to change the culture within government and society were also more difficult when compared to the ease of using antibiotics to cure the disease.[4] I soon joined the CMC-Anveshi Collective, which was attempting to understand medical practice in India from a multidisciplinary and intersectoral perspective. Weekends discussing health and disease with experts in humanities and social sciences was challenging as they demolished many simplistic medical interpretations and so-called scientific approaches.

EXPLAINING MENTAL ILLNESS

Traditional medical/scientific explanations about mental disorders support brain aetiology and pathology. The biomedical approach also recommends eliciting objective behavioural symptoms, offering differential diagnosis and prescribing psychotropic medication for severe mental illness.[5] Psychological and social interventions are given a supportive role. The universalization of psychiatric diagnoses using symptom checklists sans context meant that cultural issues, while acknowledged as important, were always on the back burner.[6]

Many Masters (Nursing) and doctoral theses (MD, PhD), which I supervised, examined local beliefs about mental illness. We clearly documented that people with mental illness, their families and the community simultaneously held multiple and contradictory beliefs about causation.[7–10] They seemed to be able to compartmentalize the resultant paradoxes with ease. People would regularly come to the hospital for medication and yet when asked about the reasons for their condition would claim that it was due to black magic or some other supernatural cause. They would also seek help for their condition from diverse sources of cure and healing; traditional and faith healers, local places of worship, in addition to modern medical facilities were popular, and people sought help both in sequence and in combination from these diverse institutions.[11]

TESTING STANDARD TEACHING

Explanations about mental illness and its treatment are a crucial part of the clinical assessment. The biomedical model of insight demands an acknowledgement of change, a disease explanation and the need to seek medical treatment as a prerequisite to having insight.[12] Traditional psychiatric thought argued that belief in a biomedical model results in improved treatment compliance and better outcomes.

We decided to test this hypothesis. We followed up people with first-episode schizophrenia over 5 years.[13–15] People who came to the hospital had many non-medical beliefs to begin with. However, with a reduction in psychotic symptoms, the number of non-medical beliefs reduced over time, while the number of those who subscribed to the disease model increased. Nevertheless, as time passed, the number of people who subscribed to the biomedical model plateaued, while those who held non-medical beliefs increased. People with conditions, which responded to treatment and had good outcomes, believed in the disease model of causation and in medical treatment. However, people with residual psychotic symptoms, persistent deficits and livelihood issues despite optimal treatment also held non-medical and supernatural beliefs to explain their situation. More importantly, explanations about causation at baseline did not predict long-term outcomes. Clinical outcomes seemed to be dependent on severity and quality of illness at baseline rather than belief systems arguing that explanations about illness are a result of an interaction between illness trajectories and the sociocultural milieu. People with poor outcomes on optimal treatments found the simplistic medical models difficult to accept and co-opted other explanations for their situation.[13–15] While many continued medical treatments, they also shopped for cure and healing from diverse sources.

People with chronic illness and psychosis attempt to construct coherent accounts of themselves and their condition. The presence of residual symptoms, persistent deficits and incapacitating adverse effects of medication, despite good treatment compliance, demand the need to reconcile the simplistic biomedical model of disease and treatment with the patient's complex reality.[16]

UNDERSTANDING CULTURAL BELIEFS

Explanations about diverse aspects of illness, its causation, impact, social meaning, expectations and interventions by all those involved in the process have been called explanatory models (EMs).[17] These are divided into emic and etic EMs; emic EMs elicit patient, family and community perceptions; while etic EMs are based on perspectives outside the person's culture and include scientific and medical models. As most societies are pluralistic, EMs are often a mixture of etic and emic approaches, are not fixed and are dynamic and changeable.

Patients and their families employ multiple EMs to cope with the unexplained reality of disabling illnesses. EMs about illness are based on sociocultural belief systems prevalent in the local culture and region. However, pluralistic societies offer a wide range of beliefs including biomedical explanations (e.g. disease, degeneration and deficiency) on the one hand to supernatural ideas on the other (e.g. consequence of sin, punishment by God, black magic, evil spirits and karma). These belief systems interact with the trajectory of the person's illness to produce a unique set of EMs of illness for the particular individual and their family.[13] The choice of EMs is dependent on a complex interaction between the person's persistent symptoms, current deficits, adverse medication effects, social relations, livelihood issues and response to treatment on the one hand and available biomedical and cultural explanations on the other hand.

Multifactorial aetiology of chronic illnesses with their complex and dynamic relationship between stress and vulnerability, biology and environment, individual resilience and community supports has resulted in an inadequate comprehension of health and disease. Nevertheless, uncertainties of outcomes and variable trajectories of chronic illness are recognized by ordinary people; such knowledge seems to exist as cultural idioms in local communities. Knowledge about heterogeneity within clinical medical and psychiatric syndromes (on aetiology, pathology, clinical features, treatment response, illness trajectories, course and outcome) is metaphorically labelled as luck, karma, fate, evil spirits, black magic and punishment by God.

People tend to choose EMs/perspectives, which are non-stigmatizing explanations and which seem to rationalize their individual concerns and contexts and are suited to their personality.[13–15] These perspectives seem to provide support and even offer worldviews. However, the frequent presence of multiple and contradictory EMs, often held simultaneously, suggest their pragmatic role in coping with the effects of chronic illness.

Pluralistic societies employ multiple approaches to health and illness; they embrace multiple EMs. People with chronic illness

commonly combine modern medicine with complementary and alternative therapies for relief of symptoms and distress. Patients and their families seem to be comfortable with compartmentalizing their contradictory EMs and seek diverse forms of cure and healing.

Much of this knowledge about uncertainties of chronic illness and its course and outcome are available in the cultural commons and local collectives. However, medicine and psychiatry's obsession with evidence makes their practitioners blind to wisdom about health, distress, illness and disease distilled over the years and freely available in the commons. If medicine and psychiatry can understand cultural idioms and metaphors, then they would not dismiss available cultural knowledge.

Despite major advances in medicine and psychiatry and our understanding of different aspects of chronic physical and mental illnesses, available knowledge and expertise has not demonstrated the ability to predict individual trajectories of illness nor alter the course of those with severe disease allowing for the emergence of cultural explanations and beliefs. Such beliefs written in cultural idioms and metaphors that physical and mental health is a lottery and depends on luck and fate, help people cope with the complex realities of life.

It suggests that ordinary people and local cultures have technical knowledge without which they would not have survived. While the search for biological substrates and psycho-socio-economic and cultural risk factors for many chronic mental and physical illnesses continues, the wait suggests that we can fall back on locally available folk wisdom. While academic objectivity and impartial scholarship have their place in the study of health and illness, an empathetic understanding of cultural idioms and metaphors, often frozen in local wisdom, will also provide insights.

It requires wisdom to realize that cultures and communities have an innate understanding of the complexity of health and illness. Medicine and psychiatry with its current unidimensional medical approach to physical and mental health, distress, illness and disease offers perspectives, which are simplistic and naïve, which do not seem to explain the diversity, complexity and heterogeneity within illness in general, and specific physical and mental illness categories in particular.

SCIENTIFIC BASIS OF BELIEFS

Humans hold diverse beliefs. All beliefs, including medical, religious and superstitious, stem from the brain's ability to spot patterns and intent. Humans can see patterns in noise and in important data. The ability to perceive patterns, even in random phenomena, coupled with its readiness to nominate a causal agency for natural events allows for such thinking. They fashion particular beliefs from subjective, personal and emotional cues aided by social and historical contexts. They form beliefs and then look for supportive evidence. The brain has been described as a 'belief engine' and is always seeking to find meaning in perceived data.

Cognitive neuroscience recognizes similarities across beliefs.[18] People with milder and briefer forms of physical illness or psychosis, which improve and recover with psychiatric treatment, easily accept biomedical models of illness. However, many people with chronic and relapsing physical or mental illness, persistent symptoms, disability, severe adverse effects and difficult livelihood challenges, while accepting the usefulness of medication and treatment, also adopt supernatural beliefs over the course of illness; non-medical beliefs offer more nuanced explanations to their complex reality and provide for emotional homeostasis and healing. The failure to recover despite optimal medical treatment demands much more than simplistic biochemical and disease explanations to give meaning to their life.

Science now embraces the complexity of the cultural and biological contexts in which humans and their genes operate.[18] Culture transmits complex behaviours; cultural evolution allows us to distinguish good and evil, sacred and profane, meaningful and worthless. While scientific insights are understood as the best fit of data under the current limits of observation and enquiry, they do not explain many aspects of health and illness.

ROLE OF MYTH

Myths are universal and enduring stories that reflect, inspire and influence our lives.[18] They explore our desires and fears; provide narratives, which give meaning and suggestions to cope with problematic human predicaments. Humans are meaning-seekers thrown into a world seemingly devoid of intrinsic meaning.

Myths were never regarded as historically accurate, rational or factual; their purpose was therapeutic.[18] While science has invalidated many myths, it has been much less successful in providing meaning and significance to chronic medical illness, meaningless suffering and to the complexities of life. The devastation caused by many chronic and disabling illnesses demand understanding and comprehension. Medical and scientific explanations, while emphasizing *naturalistic* causes, fail to provide *personalistic* explanations for illness. 'Why me?' is never answered by science.

Science argues for chance and probability, and the fact that randomness of disease is influenced by genetic, environmental or personal factors. Science differs from other human activities in its belief in the provisional nature of all conclusions.[18] Science is not about a collection of beliefs. It is about the methods involved in acquiring beliefs: logic, observation and experimentation. It is the methods, and not doctrine that distinguish science.

Nevertheless, naturalistic and universal explanations seem impersonal and devoid of meaning to those who suffer from serious diseases and chronic illnesses, who seem to prefer personalistic and nuanced explanations for their complex reality. On the other hand, modern religions offer a package that integrates the seemingly disparate elements of morality, ritual, metaphysics and social identity. All these elements are woven into a single doctrine, within each religion, with its corresponding practice. It is difficult to match the simplicity and scope of religious and supernatural concepts, their overarching nature, their apparent synthesis and communicability, and their ability to characterize and classify, all on the basis of a single metric.[18]

The realization that we all seek meaning for our lives implies that we accept the diversity of approaches to maintaining individual mental health. Acknowledging the validity of varied points of view will lead to a broad-based approach to health, healing and wholeness. Religion and supernatural beliefs as a personal approach help resolve the contradictions of life. They provide support in reconciling irreconcilables, living with paradox and finding equilibrium. While medicine has made considerable advances in understanding human health, illness and disease, the persistence of chronic afflictions, continued suffering, persistent disability, and livelihood issues mean that people use diverse forms of beliefs to give meaning to their life.

However, truth and belief are uncomfortable words in scholarship, and scientific insights are understood as the best fit of data under the current limits of observation and enquiry; they do not as yet explain many aspects of life.[18] On the other hand,

religion and supernatural beliefs occupy and exploit the space between science and the public; thus, religious and cultural ideas carry more influence than is otherwise possible. Universal ideas are used to rationalize the existence of an afterlife, and they form a part of the concept of the self. Science would argue that these are cognitive illusions; which, however, science cannot prove.

Over the past few decades, the revolutions in psychiatric classification, genetics, neuroscience and pharmacology have resulted in the rise and dominance of biomedicine and biomedical psychiatry. Other worldviews and disciplines such as the social sciences and humanities (e.g. psychology, sociology and anthropology) have been forced to retreat. However, many now acknowledge that the biological psychiatry revolution has failed to deliver and that mental illness is much more complex than imagined. Many geneticists and neuroscientists argue that the current diagnostic categories[2] result in heterogeneous grouping making the quest for aetiology and specific treatment difficult. They suggest newer strategies such as the Research Domain Criteria,[19] which champion a paradigm shift with a multi-dimensional framework, and use diverse methodologies, and include psychological constructs, developmental contexts and environmental influences.

Nevertheless, current approaches to psychiatric diagnosis and management such as the DSM-5 emphasize the need to understand the impact of culture on mental illness and recommends the Cultural Formulation Interview to elicit patient and family beliefs about mental illness. However, social and cultural context and patient beliefs are never systematically elicited, as they were not essential to diagnosis and classification. Some studies have examined local beliefs about mental illness, its causation, impact, consequences and help-seeking. They employ qualitative and semi-quantitative methods to study EMs of illness. Standardized instruments to asses patient beliefs include the EM Interview Catalogue[20] and the Short EM Interview.[21] Studies using these instruments have documented multiple and contradictory EMs about illness, and the simultaneous and sequential use of different methods of healing and cure, with people visiting diverse centres of modern, traditional, folk and religious facilities for relief from distress.[7–11,13–16] Clinicians would argue that the need to elicit patient perspectives, evaluate local reality, assess culture, educate patients about possible interventions and negotiate a shared plan of management between patient and physicians is cardinal for clinical success.[6]

CONCLUSION

Arguing for a purely medical/scientific approach to health and healing is not only reductionist but does not seem to address the complexity of clinical presentations, varied responses to treatment and variable outcomes. Yesterday's path-breaking medical explanations are frequently given a quiet burial with new and more fashionable, albeit evidence-based justifications, taking their place. Medicine and psychiatry should acknowledge the usefulness of diverse and contradictory beliefs as coping strategies and encourage apparently disparate approaches to health and healing.

The biomedical model of illness should be presented without dismissing or devaluing patent beliefs. People with chronic illness, their families and communities seem to simultaneously employ varied beliefs about causation and treatment. They seem to cope with the inherent contradictions of diverse and incompatible beliefs; medicine and psychiatry should also acknowledge and accept the role of such beliefs in mental health, homeostasis and healing.

Conflicts of interest. None declared

REFERENCES

1 Joseph A, Abraham S. Community-oriented medical education in Vellore, India. *Acad Med* 1993;**68:**336–9.
2 American Psychiatric Association. *Diagnostic and Statistical Manual of Mental Disorder, 5th ed*. Arlington, VA:APA; 2013.
3 Egeland JA, Gerhard DS, Pauls DL, Sussex JN, Kidd KK, Allen CR, *et al.* Bipolar affective disorders linked to DNA markers on chromosome 11. *Nature* 1987;**325:** 783–7.
4 Tharu S. Medicine and government: Histories in the present. In: Zachariah A, Srivatsan R, Tharu S, (eds). *Towards a critical medical practice: Reflections on the dilemmas of medical culture today on behalf of the CMC-Anveshi collective*. New Delhi:Orient Blackswan; 2010:69–92.
5 Jacob KS. The cultures of depression. *Natl Med J India* 2006;**19:**218–20.
6 Jacob KS. DSM-5 and culture: The need to move towards a shared model of care within a more equal patient-physician partnership. *Asian J Psychiatr* 2014;**7:**89–91.
7 Saravanan B, Jacob KS, Johnson S, Prince M, Bhugra D, David AS, *et al.* Belief models in first episode schizophrenia in South India. *Soc Psychiatry Psychiatr Epidemiol* 2007;**42:**446–51.
8 Joel D, Sathyaseelan M, Jayakaran R, Vijayakumar C, Muthurathnam S, Jacob KS, *et al.* A biomedical educational intervention to change explanatory models of psychosis among community health workers in South India. *Indian J Psychiatry* 2006;**48:**138–42.
9 Shankar BR, Saravanan B, Jacob KS. Explanatory models of common mental disorders among traditional healers and their patients in rural South India. *Int J Soc Psychiatry* 2006;**52:**221–33.
10 Das S, Saravanan B, Karunakaran KP, Manoranjitham S, Ezhilarasu P, Jacob KS, *et al.* Effect of a structured educational intervention on explanatory models of relatives of patients with schizophrenia: Randomised controlled trial. *Br J Psychiatry* 2006;**188:**286–7.
11 Jacob KS. Mental disorders across cultures: The common issues. *Int Rev Psychiatry* 1999;**2:**111–15.
12 Amador XF, David S. *Insight and psychosis*. Oxford:Oxford University Press; 1998.
13 Johnson S, Sathyaseelan M, Charles H, Jeyaseelan V, Jacob KS. Insight, psychopathology, explanatory models and outcome of schizophrenia in India: A prospective 5-year cohort study. *BMC Psychiatry* 2012;**12:**159.
14 Johnson S, Sathyaseelan M, Charles H, Jacob KS. Predictors of disability: A 5-year cohort study of first-episode schizophrenia. *Asian J Psychiatr* 2014;**9:**45–50.
15 Johnson S, Sathyaseelan M, Charles H, Jeyaseelan V, Jacob KS. Predictors of insight in first-episode schizophrenia: A 5-year cohort study from India. *Int J Soc Psychiatry* 2014;**60:**566–74.
16 Jacob KS. Insight in psychosis: Standards, science, ethics and value judgment. *Int J Soc Psychiatry* 2017;**63:**345–51.
17 Kleinman A. *Patients and healers in the context of culture: An exploration of the borderland between anthropology, medicine, and psychiatry.* Berkley:University of California; 1981.
18 Jacob KS. Religion from a science perspective. *Natl Med J India* 2012;**25:**294–5.
19 National Institutes of Mental Health. Research Domain Criteria. Available at *www.nimh.nih.gov/research-priorities/rdoc/definitions-of-the-rdoc-domains-and-constructs.shtml* (accessed on 9 Mar 2018).
20 Weiss MG, Doongaji DR, Siddhartha S, Wypij D, Pathare S, Bhatawdekar M, *et al.* The Explanatory Model Interview Catalogue (EMIC). Contribution to cross-cultural research methods from a study of leprosy and mental health. *Br J Psychiatry* 1992;**160:**819–30.
21 Lloyd KR, Jacob KS, Patel V, St Louis L, Bhugra D, Mann AH, *et al.* The development of the short explanatory model interview (SEMI) and its use among primary-care attenders with common mental disorders. *Psychol Med* 1998;**28:** 1231–7.