ISSN: 02537176
Vol 41 • Issue 2 • March/April 2019 • www.ijpm.info

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# Indian Journal of Psychological Medicine

Official publication of Indian Psychiatric Society - South Zonal Branch

Print ISSN 0253-7176
E-ISSN 0975-1564

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## General Information

### The journal

Indian Journal of Psychological Medicine (ISSN: Print-0253-7176, Online - 0975-1564) was started in 1978. It is a peer-reviewed journal published by Indian Psychiatric Society, South Zonal Branch. Dr. Abraham Verghese, then Professor of Psychiatry at Christian Medical college, Vellore, was the first editor. The journal publishes articles on psychiatry, psychology and allied disciplines. It is published bimonthly in January, March, May, July, September and November.

### Abstracting and indexing information

The journal is registered with the following abstracting partners:
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The journal is approved by University Grants Commission (UGC).

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- Institutional : INR 7150.00 for India
  USD 440.00 for outside India
- Personal : INR 4180.00 for India
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*Published by*
Wolters Kluwer India Private Limited
A-202, 2nd Floor, The Qube,
C.T.S. No.1498A/2 Village Marol, Andheri (East),
Mumbai - 400 059, India.
Phone: 91-22-66491818
Website: www.medknow.com

*Printed at*
Nikeda Art Prints Pvt. Ltd.,
Bhandup (W), Mumbai - 400078, India.

INDIAN JOURNAL OF
# PSYCHOLOGICAL MEDICINE
Volume 41 | Issue 2 | March-April 2019
(Volume 9 | Issue 2 as per RNI Registration no. MAHENG/2011/38799)

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# Presidential Address

## Spirituality in Psychiatry Practice

Presidential Address delivered at the 50th annual conference of Indian Psychiatric Society South Zonal Branch on 28th October 2017 at Vythiree Village, Waynad, Kerala

Dear esteemed members, brothers and sisters, and ladies and gentlemen,

It's indeed a long-cherished dream, now realized, to be the president of our association.

At the outset, I wholeheartedly thank you for reposing confidence in me and for electing me to this coveted position, to serve the association. Luckily, it turned out to be the golden jubilee year.

Many great thinkers, teachers, wise men, and stalwarts of Indian Psychiatric community had served as Presidents of our association. I promise to serve to the best of my abilities to take it to further heights. The journal, *Indian Journal of Psychological Medicine*, is abstracted and indexed in EBSCO databases, Expanded Academic ASAP, Indian Science Abstracts, ProQuest, Pubmed Central and Scopus, and actively competing with the national journal. All the past distinguished editors and the present editor Dr. M.S. Reddy had played a big role in accomplishing this great task with such distinction and I wish the future editors would follow their advice and the great tradition.

I started my career in psychiatry, way back in 1979 out of my passion and personal choice rather than by compulsion. Indeed, I am indebted to Prof. N.V. Ramana Rao for his guidance and advice in molding me to be a Psychiatrist and a teacher. I consider him as my first Guru and mentor and thank him from this platform and acknowledge the same as his proud student. He was also instrumental in shaping the careers of many eminent contemporary Psychiatrists in Andhra Pradesh. My namaskarams to him.

On this occasion, I submit that I am born and brought up in the holy city of Tirupati till I left for my postgraduation in 1979 and came back to Tirupati to serve my alma mater from 1985 again till today. It is very apt that hailing from the spiritual capital of Andhra Pradesh, I will talk about Spirituality in Psychiatric practice. This is one of the topics which is neither properly taught nor learnt in PG training in India. Rather one is taught not to be very involved about the religion and spirituality in patients' treatment.

Though the WHO defines health as physical, psychological, and social well-being and not merely the absence of infirmity, the spiritual dimension is always stressed as another dimension. There is no equivalent secular term for Spirituality. It can be different from Religion and has nothing to do with Religiosity. It is more abstract than the common understanding one has about the religion.

Spirituality is the individual way of understanding the nature and relate oneself to it and transcendent with the cosmos including everything in existence. The identity of whom I am and what I am is the essence of Spirituality. This is commonly achieved by many forms from religious beliefs and practices, but not always so. An atheist will also have a spiritual dimension.

From Carl Sagan to Neil De gasse Tyson to Stephen Fleming, those who did not believe in the existence of God had been quick to point out, we are part of a bigger cosmic phenomenon and star dust. This star dust spreads all over the universe and one's ability to relate to it to get a sense of belongedness and meaning to life is Spirituality.

One's Spirituality such as physical matter cannot be measured but is dependent on the culture, religion, and inner experiences and the relations that is developed over a period of time, to be part of this creation. It gives meaning to the life and decides the purpose of life. In the practice of Psychiatry over a period, one will start understanding how important it is to understand and accept patients' spiritual reserves as it counts both in analyzing and managing the psychological symptoms of any Psychiatric ailment.

The present narrative concentrated on the relationship of religion, spirituality and their application in Psychiatry practice. Relevant evidences had been quoted from both the international and Indian literature along with personal anecdotes to highlight the importance of incorporating religion, spirituality and cultural aspects into day today practice.

Freud declared Religion and Spirituality as defense against childish helplessness. Surely such infantilism

is destined to be surmounted (The future of Illusion, 1927).[1] He declared that clinging onto Religion is a passive retreat from the problems and outright denial of pain and suffering.

Even in DSM III, there was a mention of religious hallucinations and delusions but no further elaboration (Richardson, 1992).[2] All the major text books of Psychiatry and Psychology had conveniently avoided Religion and Spirituality and its importance in their contents (Weaver *et al.*, 1998)[3]

Religious groups on their part continue to reciprocatetheir negative attitude to psychiatric treatment and prohibited adherence to treatment. This had facilitated an impression to most of the psychiatrists that spirituality and religion are against Science of mental health. Among the American Psychiatrists the religious levels are lower compared with general population and other physicians. This led Psychiatrists' inability to estimate the salience of religion to patients. This naturally resulted in lack of adequate education and training to psychiatrists to understand and address the patients' spiritual needs and reserves.

In the last 20 years, there is a sharp rise in scientific interest in the relationship between the religiosity and psychological functioning and spirituality and health. Many commonly held stereotypes talk about nonreligious approach is better in managing Psychiatric ailments. Now, a significant body of theory and research indicate that religion is a source of strength and resilience for many people including those with serious psychiatric ailments. There is no denial that religion can be problematic, if it is not understood and properly dealt with among the patients. The Religion and Spirituality is a double-edged weapon.

As a leading researcher in this field, Pargament (1997)[4] makes reference to the transactional model of stress and coping (Lazarus and Folkman 1984)[5] as a potential point of departure for understanding and organizing research on religiosity and spirituality. Notably, he has focused on the process of religious coping behavior with some additional emphasis on religious appraisals or attributions in response to various life stressors (e.g., Pargament and Hahn, 1986;[6] Pargament K *et al*., 2002).[7] Pargament continues to expand the application of these religious and spiritual domains in the coping process, most recently addressing the importance of spiritual attachment (connection) to God as a key factor in driving the religious coping process (Belavich and Pargament, 2002).[8] Following Pargament's lead, a handful of researchers have started to apply the transactional model to their investigation of spirituality, coping, and health (e.g., Stolley *et al.*, 1999).[9]

These interactions have to be understood properly by the treating doctor. Sociocultural context is not the only one, but spiritual values play a big role in establishing the therapeutic relation and trust, which would ultimately affect the outcome of many mental health problems.

In Indian understanding, the influence that had been for many generations of the effect of Sri Madbhagavadgitha on the philosophy of life cannot be denied. As one envisages, spirituality in Indian context means the abstracts of one's belief systems and value systems – which may be equated to Antharathma. The concept of Athma and its divine relationship is like an undercurrent in the lives of many Indians. The very fact that Athma is only part of Larger Paramathma and its eternal wish for fusion with Paramathma dictates the behavior of Indian mind. The mind has Indriyas, both Gnana (sensory) and Karma (motor), the Gunas (emotions), the Medhas (intellect), and the Buddhi (discretionary capacity) all constitute Antarathma (the inner soul), which decides how to react to various pleasures and pains. If the reaction results in the well-being of the creation and good of the universe, it is dharma and whichever is not dharma is adharma. The dharma as decided by Antharathma could be relative but that the one decided and accepted by the nature. It is the real truth.

The act of Dharma results in Punya and what is not Punya is papa (sin). There is no equivalent word for Punya in western vocabulary. The punya and papa that s accumulated in the previous birth results in all the good and bad that happens in the present birth. It does not mean that it is all predetermined. One can change the destiny with good deeds, thoughts, and emotions. These concepts actually make an individual an Indian in general and a Hindu in particular. This has been reflected in the acceptance of stress better in Indians. This probably explains why guilt is less common among Hindu patients. This aspect can be better utilized in making the mentally ill patients to work with their difficulties more meaningfully.

This gives meaning and purpose and holds out hope and healing in events of subjective loss, connects with the beyond (The Ultimate truth) and leads to better coping and resilience.

Even in western countries, the recent studies have found that spirituality may serve as a physiological and psychological resource for coping with stress (Koeing, 2001).[10]

A persons' sense of spirituality informs his/her awareness of self in relation to the society and reminds

one about the social responsibilities. This is one of the essence of mental health well-being (Swinton, 2012).[11]

All along, the majority position of psychiatry even in India has been that psychiatry has nothing to do with spirituality. Religious beliefs and practices have long been thought to be having pathological basis and were understood in that light. Probably one has to understand the importance of spirituality not in the context of the causation of the illness rather in the management (Verghese 2008).[12]

The detailed review about and of the Indian mind and traditional medicine and the relevance of incorporating these methods into the contemporary psychiatric practice had been deliberated (Avasthi, 2017)[13]

These are about 724 studies of association between religious involvement and mental health.

Out of this 66% (about 476) showed a positive associations (Koeing, 2001).[10] Altruism, gratitude, and forgiveness – have been associated with positive outcome both in health and disease (Berry *et al.*, 2001).[14]

World Psychiatric Association's section on religion, spirituality and psychiatry, the spirituality and psychiatry special interest group in Royal College of psychiatrists, and majority of APA members have endorsed the incorporation of spirituality in the psychiatric treatment (see the respective websites and blogs).

The psychiatrist has to value the spiritual concepts of patients' life and enlarge that for getting positive outcomes.

Mindfulness, Yoga, and Meditation all have become important not only in the treatment of mental health problems but also in maintaining the positive mental health. Various regions of the brain, particularly the prefrontal and anterior cingulate cortex, are observed to undergo changes during different religious spiritual practices. The neurobiology, neurochemistry and neurophysiology of meditation have been studied and evidence of its usefulness in psychiatry had been established beyond doubt.

The Yoga science has been accepted worldwide as a procedure to get better physical and psychological well-being,

The UN general assembly had accepted June 21 to be considered as "World Yoga Day" to get all the benefits of yoga for the people around the world.

In fact, June 21 is the longest day of the year in the northern hemispheres; the summer solstice in northern hemispheres marks the transition into Dakshinayana.

There is broad variety of yoga schools, practices, and goals in Hinduism, Buddhism, and Jainism. Hatha yoga and Raja yoga are well known in the Orient. Yoga entered the west following the success of Swami Vivekananda deliberations with the western scholars in 19$^{th}$ and early 20$^{th}$ centuries.

Yoga, though was clearly considered as a physical exercise in Indian traditions, has meditative and spiritual components. Many studies have tried to determine the effectiveness of yoga as a complimentary intervention for cancer, schizophrenia, asthma and heart disease; the results have been mixed and inconclusive. But many studies pointed that yoga may reduce the risk factors and aid in patients' psychological healing process.

The Yoga world comes from Sanskrit, meaning to "connect." Yuj samardhan means – to concentrate. Yoga include Gnana yoga, Bhakthi yoga, Karma yoga, Laya yoga, and Hatha yoga. Pathanjali described Asthanga yoga (raja) the ultimate goal being sandhi, attaining bliss or joining the universal consciousness. The tantric practices is a matter of debate and is difficult to practice. Mahavatar Babaji` kriya yoga mentally directs one's life energy to revolve upward and downward around six spinal centers (medullary, cervical, dorsal, lumbar, sacral, and cocccygeal complexes). It may look unscientific as neither anatomy nor physiology can identify – this life energy or chakras in a rationalistic and scientific view.

Yoga invariably gives an opportunity to the person to look into something, which is beyond imagination and connects to the bigger version of self. Looking into one's self or introspection can slowly generate lot of insights and liberate us from and show an answer to much ongoing stress.

Most of the patients try to practice it and find varying degrees of solace from it. At least it makes them more

disciplined, in their habits, schedules, and offers a short lasting relaxation and recreation for individual.

In many anxiety disorders, dysthymias, and stress-related disorders, psychiatrists cannot deny the importance of these symptom reducing strategies.

Probably Maharshi Mahesh Yogis "Transcendental meditation" is one of the most scientifically studied Yoga techniques in other countries which had shown at least significant improvement in stress-related and anxiety disorders. Some tall claims made in some of the studies conducted in intellectual disability, restricted their acceptance even by Indian psychiatrists.

I shall conclude by narrating two incidents related to respecting the culture and spirituality of the populations whom we treat. I thought, the psychiatry students should be properly taught on this issue during their training.

There was an episode of mass pseudoseizures (which was later diagnosed as Disassociation disorder under ICD 9) in a village primary school students – about 60 km from Tirupati and the Department of Psychiatry was asked to investigate and treat them. There were about 80 students in the school who one after the other would lose consciousness, fell on ground, and made multiple bizarre body movements for varying periods, once the class teacher entered the class. Locals were under the impression that the school building was haunted because of a death in the neighborhood and afraid that they attempted to exorcise the school building itself by collecting some funds.

The students were examined and many of them could be suggested to go into a trance and only one patient who first fell down in the class unconscious had generalized tonic-clonic seizure. He was investigated and was put on anticonvulsant medication. The remaining students were individually given strong suggestions and aversion therapies after inducing a seizure by suggestion in the school itself. About 10 resistant cases were shifted to hospital as in patients and were dealt with in detail. The Education Department and the Department of Psychiatry held a few parent teacher meetings in the school and the whole mechanism was explained with some documentaries on pseudoseizures; it took almost 3 months to bring back the situation to total normalcy.

After 3-months follow-up, only one student continued to get the pseudoseizures and was taken to Chennai by the family for further management. In this incident, unless the Psychiatrist understands the belief systems and religious flavor it would have been difficult to manage the problem. Confrontational attitude would have resulted in revolt among the parents and possibly they could have boycotted the visit by the team. Very careful handling was needed satisfying everybody's belief system. This was crucial for the success of the intervention (SVMC – Journal 2nd issue 1991).

In another incident, the district collector ordered the department to look into a case where local faith healer was beaten up for exorcism, as one of his client died with a mysterious illness. After assessment, the faith healer himself was found to be suffering from paranoid schizophrenia and because of his grandiosity, he claimed that he was responsible for the death. He was removed to the Psychiatry ward and was treated. But a group of faith healers and tantric practitioners were requested to participate in a crash course of sensitizing them in recognizing the common psychotic illnesses (in that Mandal of the district with about 80,000 population). This was done to prevent any future incidents of this sort.

The result was the number of patients attending the department from that catchment area was doubled in the following year compared to the previous year. This incident again showed that people were ready to cooperate if the psychiatrist understands their sensitivities.

Going with the tide for the benefit of the community should be the aim of any agency. The proper education and sensitization would go a long way in gaining the confidence of the populations rather than confronting them not to practice such things. The help of some of the missionaries and NGOs in promoting integration of religion into therapeutics may not be a bad idea unless it is done with no other ulterior motive. The collective spiritual strength if utilized properly can enhance the number of patients seeking the interventions and maintaining compliance to a high level.

Definitely the present-day society in many parts of the country had moved away from what had been quoted. Still, it may not be bad ideas to take these faith healers into confidence teach them to identify psychotic illnesses at an

early stage and get these patients referred for treatment as early interventions always result in better outcomes.

In the same way, encouraging the patient to participate in all spiritual discourses and religious rituals as long as they do not hamper their involvement in the psychiatric interventions would probably result in better quality of life both for the family and the patient.

It is better to introduce these concepts into young trainees' mind that will help them cultivate a positive attitude toward the religion and spirituality of their patients. This would also help them to have an insight in the limitations of our ability to treat various mental health problems.

When Hippocrates said Medicine is more of an art than a science, it was definitely true in those days. But even today, it is definitely true to say that Psychiatry in its toddler stage is definitely an art, more than a science.

I should end quoting Sadguru of Isha foundation Sri Jaggi vasudev,

"Our lives become beautiful not because we are perfect.

Our lives become beautiful because we put our heart into what we are doing."

So, let us put our hearts into our endeavor to help the suffering populations by understanding them in holistic manner.

Long live IPS,

JAI HIND.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

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## REFERENCES

1. Freud, Sigmund [1927] from Starcery, James (1961) ed: The Future of an Illusion. Norton-ISBN 978-0-393-00831-9.
2. Richardson JT, editor. Regulating Religion: Case studies from Around the Globe. Springer Science and Business Media; 2012. Social science-578 pages.
3. Weaver AJ, Samford JA, Larson DB, Lucas LA, Koenig HG, Patrick V. A Systematic review of research on religion in four major psychiatric journals: 1991-1995. J Nerv Ment Dis 1998;186:187-90.
4. Pargament KL. The Psychology of Religion and Coping: Theory, Research and Practice. Guilford Press; 1997. doi: 10:2307/3512468.
5. Lazarus RS, Folkman S. Stress, Appraisal and Coping. New York: Springer pub. co.
6. Pargament KI, Hahn J. God and the just world-casual and coping attributions to God in health situations. Journal of scientific study of religion 1986;25:193-207.
7. Pargament K. God Help Me: Advances in the Psychology of Religion and Coping. Archiv Für Religionspsychologie/ Archive for the Psychology of Religion 2002;24:48-63. Available from: http://www.jstor.org/stable/23912399.
8. Belavich TG, Pargament KL. The role of attachment in practising spiritual coping with a loved one in surgery. J Adult Develop 2002;9:13-29.
9. Stolley JM, Katheim CB, Harold GK. Prayer and religion coping for caregivers of persons with Alzheimers disease and related disorders. Am J Alzheimres Dis Relat Disord 1999;14:181-91.
10. Koeing HG, Cohen HJ, Blazer DG, Pieper C, Meador KG, Shelp F, *et al.* Religious coping and depression among elderly, hospitalised medically ill men. Am J Psychiatry 1992;149:1693-700.
11. Swinton J. From inclusion to belonging-a practical theology of community disability and humanness. J Relig Disabil Health 2012;16:172-90.
12. Verhese A. Spirituality and mental health. Indian J Psychiatry 2008;50:233-7.
13. Avasthi A, Kate N, Grover S. Indianisation of Psychiatry, utilizing mental concepts. Indian J Psychiatry 2013;55:S136-44.
14. Berry JW, Worthington EL Jr., Parrot L. Dispositional forgivrness: Development and construct validity of transgression narrative narrative test of forgiveness (TNTF). Pers Soc Psychol Bull 2001;27:1277-90.



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**How to cite this article:** Thatikonda PS. Spirituality in psychiatry practice. Indian J Psychol Med 2019;41:103-7.

# Guest Editorial

# Legal and Ethical Aspects of Mental Health Care

The Mental Healthcare Act 2017 (MHCA 2017),[1] explicitly talks about the rights of patients with mental illness (PWMI) and lays down the ethical and legal responsibilities of mental health professionals and the government. The rights of PWMI are at par with the fundamental rights of human beings and need to be clearly talked about as they belong to a vulnerable group from evaluation, treatment, and research perspectives. Such rights translate into the ethics of psychiatric care that relate to respect for autonomy; the principle of non-maleficence, beneficence, and justice; confidentiality (and disclosure); boundary violations; informed consent (and involuntary treatment); etc.[2,3] I will discuss the ethical, legal, and related issues pertaining to the manuscripts published in this issue of the journal.

## THE MENTAL HEALTHCARE ACT 2017

In their article pertaining to MHCA 2017, the authors,[4] critically evaluate the pros and cons of the new ACT. They commend the act for endorsing the rights (especially insurance) of PWMI and recommending decriminalization of suicide and the *lesbian, gay, bi-sexual, transgender, questioning/queer (LGBTQ) community*. They also mention the non-representation of the Indian Psychiatric Society and inadequate address of the burden of care experienced by the caregivers. The caregivers of PWMI are the real ambassadors of mental health; they sincerely understand the genuine service that psychiatrists have provided in this country over many decades. No doubt, human rights of PWMI have to be protected at all times; however, it cannot be one-sided. There is an equal and strong need to involve the caregivers in framing mental health policies that are ethically and legally sound and at the same time tailoring to their needs and the ground realities of this developing country, such as poverty, illiteracy, unawareness regarding mental illness, stigma, discrimination, etc. In view of the new challenges thrown by MHCA 2017, such as mental health capacity assessment, advance directive, nominated representative, etc., the authors stress regarding the need to actively collaborate with "the media, police, NGOs, human rights activists … and police."[4]

## ETHICAL ISSUES

Ethic is defined as "a set of moral principles, especially ones relating to or affirming a specified group, field, or form of conduct."[5] Technically, ethics talk about morality and desirable way of behaving but may not be binding on an individual. However, when it comes to medical ethics, these are essential (not desirable) requirements based on which a physician is mandated to act. The legal aspects of patient care are determined by country-specific regulations, which in turn are governed by medical ethics. For instance, when an Indian psychiatrist is alleged of "wrongdoing," it is determined whether he acted contrary to "medical ethics,"[6] *or to the pertaining laws in the country*.[1] Thus, the ethical and legal responsibilities of a psychiatrist are intertwined.

### Confidentiality and disclosure

The patient–physician relationship is bound by the moral and ethical sanctity of confidentiality, more so in mental health. This is one of the fundamental responsibilities of the psychiatrist.[1,6] In clinical practice, however in certain situations, the PWMI themselves waive-off this confidentiality clause. In India, PWMI are mostly accompanied by caregivers. Few PWMI wants their information and diagnosis to be disclosed to such caregivers. Considering this as implied consent, till some time back, such disclosure was done in the absence of an explicit written informed consent. A typical scenario would be a lady under treatment for psychiatric illness for the previous 10 years suddenly turns up to the treating psychiatrist and discloses that she got married around a month back and now plans to conceive. Her spouse also wants to discuss regarding the diagnosis, treatment, and the need for and the safety of psychotropics in pregnancy. The spouse may, unfortunately, use the disclosed information for any purpose (including divorce) and the lady may sue the treating doctor for breaching the confidentiality. Hence, as the lady herself wants her information to be shared with her spouse and the confidentiality clause is going to being breached, written informed consent should mandatorily be obtained from her, including permission as to how much can be disclosed and this should be documented in the patient's notes. Such written authorization from the patient may protect the psychiatrist in the Court of Law.

It is interesting to know the sociodemographic variables that determine such disclosure. Gupta *et al*.[7] conducted a study on remitted psychiatric patients. Younger age,

female gender, and higher educational status were more significantly associated with the patients' unwillingness to disclose their concerns with others. The authors recommend that these factors may be considered when making ethical decisions.

### Lack of adequate information regarding forensic patients with mental illness

Diagnosis is of paramount importance to manage psychiatric patients effectively which rests on adequate history from significant others, as psychiatrists cannot rely solely on mental status examination. When individuals are admitted involuntarily through Honorable courts and prisons into tertiary level public hospitals, there is a lack of adequate history. This is more common with those referred from prisons. Attempts are made to discuss with the prison medical officer and caregivers. The caregivers are either untraceable or unwilling to discuss. Also, because of unawareness regarding mental disorders, the only history obtained from the medical officer is of the patient being irritable or displaying suicidal threats. This is not enough to arrive at a diagnosis. Thus, the lack of adequate history is a major problem in a forensic psychiatric setting. The management of such patients, thus, is mostly based on inpatient observation. In recent times, in India, there is an increased focus on training of judiciary and prison medical officers which is a welcome step. There is also a dire need to have a judicial policy that mandates caregiver's and/or family member's presence while referring such individuals to psychiatry hospitals.

With this background, a retrospective chart review was conducted on female forensic inpatients.[8] About 73.9% of the sample was referred from prisons and 26.1% from the Honorable courts. In view of the alleged crime, 21.7% of subjects were referred for assessment of fitness to stand trial. Majority of them (30.43%) were charged with the killing of close family members, such as husband or child. On retrospective evaluation, approximately half of the study sample had an illness at the time of occurrence of the crime. About 30.4% of the individuals were diagnosed as having psychotic disorders, and 47.8% had a mood disorder. A significant clinical improvement was reported in 87% of patients which is encouraging. It remains to be seen whether the improvement gained persist in the long term, especially those referred from prisons. Also, how such patients fare after discharge from the psychiatry hospital and after release from prisons, because of treatment nonadherence and other prognostic factors? This study focused only on female gender; do male forensic patients fare differently?

## LEGAL ISSUES IN PSYCHIATRIC CARE

### Psychiatrist appearing in the Court

In their article, "Psychiatrist in Court: Indian scenario,"[9] the authors discuss the legal aspects of psychiatric care when psychiatrists are summoned as an expert witness. They opine that the "psychiatry residents often do not get first-hand exposure to the Court proceedings." The reason for this may be threefold. First, many residents get trained in General Hospital Psychiatry Units (especially, private colleges) that are not directly attached to forensic psychiatry units. They have a peripheral posting of just around 2–4 weeks to such centers. Second, the residents, being doctors-in-training, work under the supervision of faculty; hence, the Honorable courts do not consider them competent to give evidence. Third, the faculty members may not involve them in legal aspects of patient care, believing it is not their responsibility. In my place of work, which is a tertiary level teaching public hospital, the psychiatry residents are routinely involved in legal aspects of patient care. The faculty should make sure that the residents are actively involved in the legal aspect of patient care, such as medical boards, discharge committee meetings, certification, etc. Only when they are exposed at this stage of their career, once out of residency, they would be in a position to manage such issues independently.

### Outcome of insanity pleas

The psychiatrists appear in Honorable courts as an expert witness and give evidence but are unaware as to what happens later. I commend the investigators for researching a hitherto underresearched topic in Indian scenario,[10] relating to insanity pleas.[11] If an accused has a proof that he was under treatment prior to the crime, the treating psychiatrist is likely to be summoned; in 32 out of 67 cases (47.76%), the treating psychiatrist was asked to appear. The time interval between the "visit to a psychiatrist" and the subsequent "date of crime" ranged from 1 to 1800 days, which is alarming in the sense that a PWMI may commit crime immediately following the consultation. More so, if there is a documentary evidence of mental illness, there is a higher chance ($P < 0.012$) of acquittal on the grounds of mental illness. Both in those cases where the Honorable Court did not feel the need for psychiatrist's evidence (24 cases) or in those six cases where the psychiatrist opined that there was no mental illness, the accused was not acquitted on the grounds of mental illness. Also, the 16 out of 56 accused (28.57%), who had mental illness as per psychiatrists' opinion, were acquitted on the grounds of mental illness ($P = 0.002$). The 18 (17.65%) cases out of a total of 102 cases were acquitted on the grounds of mental illness. The Honorable High Courts' judgment was mostly in line

with the judgment of the lower Court and heavily relied on the documentary evidence of mental illness. The psychiatrists' opinion was an important parameter, which is quite encouraging. The results strongly point toward the need for proper documentation.

### Absconding behavior in patients with mental illness

When PWMI abscond from psychiatric hospitals, especially closed wards, it places an enormous burden on the hospital staff in terms of the legal implications. The absconders may not take care of self and may be at risk of harm to self, others, and property. Though absconding from psychiatric hospitals or nursing homes is quite common, no Indian data are available in the published literature, probably because of the concern that it may reflect negatively onto the staff and hospital administrators. Though this is an unfortunate event, we need not feel inhibited researching this as absconding is common in any closed setting including high secure prisons[12] and general hospitals,[13] and psychiatric hospitals worldwide,[14-16] and in India,[17] are no exception.

It is heartening to note that an article dealing with this important, albeit unaddressed issue is published.[18] Among the in-patients, the absconding behavior was found in 4.5% of the individuals. They were mostly males, with a diagnosis of schizophrenia or mood disorder with comorbid substance-use disorder, with impaired insight and high perceived coercion being the predictors of absconding behavior. About 22.2% of the nine absconders committed suicide. A previous history of self-harm and wandering away from home in those absconded points toward the need to inquire regarding this as part of history taking. This study focused on open wards where PWMI consent for admission and the caregivers who stay are responsible for patient care. It is pertinent to study absconding behavior in the closed ward setting where PWMI are admitted involuntarily (through courts and prisons) without caregivers, thus placing more "responsibility" on the hospital authorities. There is a dire need to employ polices to prevent such incidents by rationalizing pharmacotherapy; adequate use of restraints and seclusions as per guidelines;[1] electroconvulsive therapy for agitated patients; strengthening the hospital security by constructing stronger wards with tall walls and fencing, adequate personnel, sophisticated gadgets, and alarms; timely discharge from the hospital; etc. It also points to the need for prison mental health services where forensic patients can be managed securely in the prison itself.[19]

For patients with severe mental retardation, dementia, and severe and enduring obvious mental illnesses, such as severe psychosis, who are at risk of absconding behavior, few of my psychiatry colleagues as part of informal discussion suggested use of metal bracelets (kadas that are religiously acceptable) with details engraved (names, phone numbers, and address of patient and caregiver); bands; and implants, gadgets, watches, and chips with GPS location device and trackers. However, these need to be used after obtaining written informed consent, but the concerns expressed are cost, need for battery charging, can be thrown away, technology not so advanced for universal application, etc. Other concerns expressed were ethical and legal issues, stigma, restriction of civil liberties, violation of privacy, infringement to capacity, practicality, etc. The tattoos with name, phone, and address of the caregiver seem to be a reasonable option, as these cannot be discarded and may have a fashion statement, the future suggestion being tattoos with radioactive (but safe) traceable ink material that can be tracked *(in a conversation with Live CME Psychiatry WhatsApp group members: 2019 Feb., 06).* However; based on ethical and legal guidelines, these need further discussion before implementation.

## DISABILITY BENEFIT OF PERSONS WITH MENTAL ILLNESS

Disability in mental illness is a state where the patient has shown symptomatic recovery with the available treatment modalities, however, has deficits that lead to significant problems with self-care, interpersonal, social, and occupational functioning, and impaired quality of life that may need aggressive rehabilitation.[20,21] Balakrishnan *et al*.[22] scholarly reviewed various aspects of the Rights of Persons with Disabilities Act, 2016,[23] especially regarding the certification guidelines. They point toward the ambiguity related to screening instruments, resource allocation, and the need for inclusive education. They recommend increased focus and reservation for patients who have a disability due to mental illnesses and specific learning disorders; and decentralization of the disability certification, for example, certification of severe or profound intellectual disability at the primary health center (PHC) itself. This would prevent inconvenience to end users, reduce workload at tertiary level psychiatric centers, would be cost-effective and less time consuming, and would lead to higher recruitment of mental health professionals, especially qualified psychiatrists and clinical psychologists at PHC itself. However, such certification should be done by a medical board *mandatorily comprising a qualified psychiatrist and clinical psychologist* and not by other professionals such as pediatricians.

"With rights, come responsibilities!" "An individual has a mental illness, is aware of it, exercises his right to not

take treatment, commits a crime, attributes the crime to mental illness, and claims no responsibility for the crime as it was due to the mental illness." An example in the context of disability would be that few patients have insight into their mental illness with intact mental capacity but exercise their "right to refuse treatment." Thus, they do not want to take responsibility for getting treated. However, to avail benefits, they "claim disability" on the grounds of mental illness. How can such an individual exercise his right to refuse treatment; but at the same time claim "benefits" related to his mental illness?

The poverty of our patients may sometimes override our clinical assessment; however, it is the State's responsibility to take care of the financial status of its citizens. Psychiatrists should only be concerned about mental illness and the resulting disability. Thus, even a rich person who has a disability due to mental illness should get disability benefits. *The disability benefits must be independent of the financial status of PWMI.* A limited budget is allocated for disability benefits, and improper certification may prevent benefits to really deserving PWMI; such individuals should be carefully evaluated. This is of paramount importance in general hospital psychiatry units where the nonpsychiatric medical professionals may not be aware of the real concept of disability due to mental illness, hence may fail to understand as to why a particular procedure is being followed by the psychiatrists. We need to educate them regarding the legal intricacies of dealing with PWMI.

## CONCLUSION

Every PWMI is a potentially medicolegal case unless proved otherwise. However, we need not be fearful but cautious while evaluating and treating them and be aware of the legal angle which ultimately boils down to the ethical aspects. It is paramount that the fear of being accused of "violation of rights" should not prevent us from providing legally sound ethical psychiatric care in the "best interest" of the PWMI, vis-à-vis responding to the genuine concerns of caregivers, especially parents who bear the brunt of patients' illness.

"All approaches to medical ethics, be they empirical, legal, sociological, theological or philosophical should aim at being practically useful … good medical ethics must help inform and guide those who are directly involved in moral issues in medicine and healthcare. This means that above all, good medical ethics is clinically relevant."[24] "The need is for balancing idealism with pragmatism of how much is feasible and how much should be attempted."[25] It is important that the medical ethics should not become archaic impractical laws; but scientifically sound, implementable guidelines taking into consideration the ethos, and these should be periodically updated.

**Acknowledgment**

I thank the Live CME Psychiatry WhatsApp group admin Dr. M. Aleem Siddiqui, MD, DPM for permitting me to cite the conversation relating to absconding behavior in PWMI.

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## REFERENCES

1. Ministry of Law and Justice. The Mental Healthcare Act; 2017. Gazette of India. Available from: http://www.egazette.nic.in/WriteReadData/2017/175248.pdf [Last cited on 2019 Jan 27].
2. Agarwal AK, Gupta SC. Ethics in psychiatry. In: Vyas JN, Ahuja N, editors. Textbook of Postgraduate Psychiatry. JPB Publishers; 2003.
3. Molanguri U. Ethics in psychiatric society. Telangana J Psychiatry 2017;3:57-60.
4. Mental Health Care Act 2017. The way ahead: Opportunities and Challenges. Indian J Psychol Med 2019;41:113-8.
5. Oxford English Living dictionaries. Ethic. Available from: https://en.oxforddictionaries.com/definition/ethic. [Last cited on 2019 Jan 27].
6. The Medical Council of India. Code of medical ethics regulations, 2002 (Amended up to 8th October 2016). Available from: https://www.mciindia.org/CMS/rules-regulations/code-of-medical-ethics-regulations-2002. [Last cited on 2019 Jan 27].
7. Gupta S, Sarkar S, Patil V, Patra B. Does sociodemographic background determine the responses to ethical dilemma vignettes among patients? Indian J Psychol Med 2019;41:161-5.
8. Gowda GS, Komal S, Sanjay TN, Mishra S, Kumar CN, Math SB. Socio-demographic, legal, and clinical profiles of female forensic inpatients in Karnataka: A retrospective study. Indian J Psychol Med 2019;41:138-49.
9. Basavaraju V, Enara A, Gowda GS, Harihara SN, Manjunatha N, Kumar CN, *et al*. Psychiatrist in Court: Indian Scenario. Indian J Psychol Med 2019;41:126-32.
10. Ramamurthy P, Chathoth V, Thilakan P. How does India decide insanity pleas? A review of High Court judgments in the past decade. Indian J Psychol Med 2019;41:156-60.
11. Section 84. Indian Penal Code 1860.
12. The Punch newspaper. 105 inmates escape from Brazilian prison. Available from: https://punchng.com/105-inmates-escape-from-brazilian-prison/ [Last cited on 2019 Jan 27].
13. Khammarnia M, Kassani A, Amiresmaili M, Sadeghi A, Karimi Jaberi Z, Kavosi Z. Study of patients absconding

behavior in a general hospital at southern region of Iran. Int J Health Policy Manag 2015;4:137-41.
14. Exworthy T, Wilson S. Escapes and absconding from secure psychiatric units. Psychiatrist 2010;34:81-2.
15. Stewart D, Bowers L. Absconding from psychiatric hospitals. A literature review. London: Institute of Psychiatry. Available from: https://pdfs.semanticscholar.org/9844/994d01b7f7a13c8d7bc3a8e111d3780ef395.pdf [Last cited on 2019 Jan 27].
16. Mezey G, Durkin C, Dodge L, White S. Never ever? Characteristics, outcomes and motivations of patients who abscond or escape: A 5-year review of escapes and absconds from two medium and low secure forensic units. Crim Behav Ment Health 2015;25:440-50.
17. The Indian Express. In 5 years, 420 patients have 'disappeared' from state-run IHBAS. Available from: https://indianexpress.com/article/cities/delhi/in-5-years-420-patients-have-disappeared-from-state-run-ihbas/. [Last cited on 2019 Jan 27].
18. Gowda GS, Thamby A, Basavaraju V, Nataraja R, Kumar CN, Math SB. Prevalence, clinical, and coercion characteristics of patients who abscond during inpatient care from psychiatric hospital. Indian J Psychol Med 2019;41:150-5.
19. Rajshekhar B, Keshavulu B, Tejam P, Ashok Reddy K, Anand B, Gowri Devi M, *et al.* Diagnostic categorization of psychiatric patients coming to criminal ward of IMH, Hyderabad from legal authorities. Indian J Psychol Med 2004;25:84-93.
20. Lehman AF. Measures of quality of life among persons with severe and persistent mental disorders. Soc Psychiatry Psychiatr Epidemiol 1996;31:78-88.
21. Mohan I, Tandon R, Kalra H, Trivedi JK. Disability assessment in mental illnesses using Indian Disability Evaluation Assessment Scale (IDEAS). Indian J Med Res 2005;121:759-63.
22. Balakrishnan A, Kulkarni K, Moirangthem S, Kumar CN, Math SB, Murthy P. The rights of persons with disabilities Act 2016: Mental health implications. Indian J Psychol Med 2019;41:119-25.
23. The Rights of Persons with Disabilities Act, 2016, Gazette of India (Extra-Ordinary). Available from: http://disabilityaffairs.gov.in/upload/uploadfiles/files/RPWD%20ACT%202016.pdf [Last cited on 2019 Jan 27].
24. McMillan J. Good medical ethics. J Med Ethics 2018;44:511-2.
25. Desai NG. Responsibilities of psychiatrists: Need for pragmatic idealism. Indian J Psychiatry 2006;48:211-4.



**Access this article online**

**Website:** www.ijpm.info

**DOI:** 10.4103/IJPSYM.IJPSYM_59_19

Quick Response Code

**How to cite this article:** Bipeta R. Legal and ethical aspects of mental health care. Indian J Psychol Med 2019;41:108-12.

# Guest Editorial

# Mental Healthcare Act 2017 – *The way ahead: Opportunities and Challenges*

Milton Friedman *"One of the great mistakes is to judge policies and programs by their intentions rather than their results."*

(Milton Friedman; 1914-1986)

## INTRODUCTION

The new Mental Healthcare Act (MHCA) of 2017[1] has been a milestone in the way mental health care is to be delivered in the country. There is a lot of anguish about the MHCA, primarily for three reasons:

1. The lawmakers did not trust psychiatrists in the drafting of the act
2. The Indian Psychiatric Society (IPS) was not taken on board, unlike in the case of the Mental Health Act (MHA), 1987
3. The caregivers' rights and burden of care are not adequately addressed.

When the Consumer Protection Act of 1986 was introduced, clinicians had a lot of apprehensions and quite frankly, fear of the misuse of law, which made most of them become defensive in the way they practice medicine. However, there is a need to learn from this and not let the history repeat itself. The MHCA is a reality that needs to be accepted and we need to adapt to comply with the new act.

## WHAT WAS THE NEED FOR THE NEW LAW?

The MHA of 1987[2] had not been able to adequately protect the rights of the persons with mental illness. Although, back in the day, the act was able to achieve what it was intended to, as time passed and more focus was put on the rights of the mentally ill, the MHA 1987 simply did not have the answers to the questions being raised.

The United Nations Convention on the Rights of Persons with Disabilities 2006 (UNCRPD)[3] defines the rights of persons with disabilities and the obligations of the state toward persons with disabilities. It mandates the signatories to provide the following rights to persons with disabilities: The right to accessibility, including the information technology; the rights to live independently and to be included in the community;[4] the rights to personal mobility,[5] habitation and rehabilitation;[6] and the rights to participate in political and public life and cultural life, recreation, and sports.[7]

The convention also mandated all parties to raise awareness about the human rights of persons with disabilities[8] and ensure access to roads, buildings, and information.[9]

The convention had eight governing principles:[10]

1. Respect for inherent dignity; individual autonomy, including the freedom to make one's own choices; and independence of persons
2. Nondiscrimination
3. Full and effective participation and inclusion in society
4. Respect for difference and acceptance of persons with disabilities as part of human diversity and humanity.
5. Equality of opportunity
6. Accessibility
7. Equality between men and women
8. Respect for the evolving capacities of children with disabilities and respect for the right of children to preserve their identities.

Though the MHA 1987 addressed some of the above principles, it fell short of being fully compliant with the UNCRPD resolution. The human rights groups started questioning the constitutional validity of the MHA 1987, as some provisions were interpreted as a curtailment of the personal liberty of the mentally ill. There was no provision of a proper review by any judicial body to oversee and address the issues at the ground level. The MHA 1987 provided that the research on mentally ill can be carried out by the consent of the caregiver,[11] which violated the human rights of the mentally ill. There was a stigma attached with mentally ill admitted in mental health establishments (MHEs), which the MHA 1987 was unable to address. Also, the MHA 1987 did not specify any defined role for the appropriate governments in mental health care delivery.

To address these issues and be compliant with UNCRPD, the Government of India, as a participant in the UNCRPD, had two choices in front of it: either to amend the MHA 1987 to fully comply with the UNCRPD resolution, or draft a new bill in its entirety to govern the way mental health care gets delivered in the country. The Ministry of Health and Family Welfare (MoHFW), in its better judgment, chose the latter path.

## ROLE OF IPS IN MHCA 2017

The MHA of 1987 was conceived, piloted, and drafted by the IPS. However, during the drafting process for new MHCA 2017, IPS was not taken on board. Although invited for the consultation process at different stages, the IPS was not assigned any significant role in the drafting of the new act. IPS had raised concerns and apprehensions about various provisions in the new act that is believed to be not in the best interest of the mentally ill, which unfortunately did not receive any attention.

The MoHFW, for reasons best known to them, entrusted the job of drafting and conducting the initial consultation process to a psychiatrist who is not even an ordinary member of the IPS. This act was primarily driven by human rights activists and nongovernmental organizations (NGOs), with very little involvement from organizations of professions who are major stakeholders in the delivery of mental health care.

However, the act is now formalized and in effect from May 29, 2018. There is a need to accept this reality and adapt.

## WELCOME CHANGES

The IPS welcomes a lot of changes this new act has brought in and the effect the act is having on the mental health care in our country. To begin with, the rights of the mentally ill are clearly defined. Persons suffering from mental illnesses have been afforded a lot of freedom and right over choosing the type of medical treatment, where they would like to be treated, and the duration of their treatment. They now have the rights to stay in the community instead of being confined to an establishment, to hold a job, to health insurance, and to live with dignity. This is a commendable attempt to reduce the stigma plaguing the mentally ill. Affording equal rights to the mentally ill, irrespective of their gender, class, religion, region, and even sexual orientation, is another step in the right direction.

## DECRIMINALIZING SUICIDE

Attempt to commit suicide is not a crime but a cry for help. The biggest change and the most commendable one in the MHCA 2017 is that of decriminalizing suicide.[12] A person who attempts suicide shall be presumed to be suffering from mental stress or illness at the time of the act and will not be punished under the Indian Penal Code (IPC). The IPS is proud to have taken the initiative in this change and in bringing about the change of mindset which ultimately resulted in decriminalizing suicide. This will not just improve reporting of suicide but will also help in discovery and treatment of the undetected mentally ill. This will also go a long way in decreasing the legal and procedural burden on an already traumatized family of a person who attempted suicide.

## INSURANCE FOR MENTAL ILLNESS

The new act grants the persons with mental illness to have mental health insurance similar to those with physical illnesses[13] and mandates the government and the private insurance companies to provide mental health insurance on par with physical illnesses. Insurance Regulatory and Development Authority of India has already issued a welcome directive to health insurers to include mental illnesses in medical insurance policies.[14]

Ayushman Bharath has been a landmark initiative from the Government of India. Ayushman Bharath has accepted 17 of the 21 proposals from IPS and National Institute of Mental Health and Neuro Sciences (NIMHANS). The prices are reasonable for both the psychiatrists and the patients. However, private psychiatry has not been included in Ayushman Bharath; but the hope is there that in the near future, private psychiatry too will be recognized.

The new act also mandates and clearly defines the duties of the government.[15] The appropriate government has the duty to provide community living facilities, like shelter homes, halfway homes, etc. In a reasonable period of time, the government has to ensure that the quality of mental health services is on par with the internationally accepted standards.

As per the new act, the mentally ill patients are entitled to receive free legal aid when it comes to any legal disputes from exercising the rights accorded to them by the act.[16]

## ROLE OF IPS AND MHCA IN SCRAPPING SECTION 377 IPC

The IPS has to be commended for its continued efforts to bring equal rights and a life of dignity for the Lesbian, Gay, Bisexual, Transgender, Questioning/Queer (L.G.B.T.Q) community and to get the section 377 of IPC repealed.[17] The position statement from IPS was accepted by the Supreme Court and various provisions of the MHCA 2017 were quoted in the judgment. Justice Nariman quoted the nondiscrimination clauses from the MHCA. Justice Chandrachud quoted extensively from the act and also commented against "Conversion Therapy" which never really had any basis in psychiatry. Justice Indu Malhotra also pointed at the inherent contradiction between the rights protected by the MHCA 2017 and Section 377 of IPC.

The IPS and MHCA playing a role in the landmark judgment that repealed section 377 of IPC are in itself a small victory. This should motivate the IPS and the professional community to continue fighting the social maladies plaguing our society.

## OPPORTUNITIES AHEAD

The IPS, in collaboration with other agencies, is striving to improve the quality of academic and postgraduate training in the country. IPS has been insisting the erstwhile Medical Council of India (MCI) on including psychiatry as an independent subject and not just an offshoot of general medicine in the MBBS curriculum.

There is a need to strive to improve the quality of mental health service so that they reach the international standards as mandated by the MHCA. A lot of work also needs to be done to remove the stigma associated with mental illness and the mentally ill.

## NEW CHALLENGES

The MHCA 2017 has introduced a lot of new concepts like the mental health capacity,[18] which as of now is ambiguous and ill defined. As per the clause, everyone by default is presumed to have the capacity and the right to consent. It is the responsibility of the treating mental health professional to prove otherwise if the provision of supported admission has to be invoked.

In the absence of any clear guidelines from the MoHFW regarding the assessment of mental health capacity, perhaps it would be helpful to refer to McArthur's Competence Assessmentt Tool for Treatment.[19] Institute of Human Behavior and Allied Sciences also has come up with an informal mental health capacity assessment proforma, and NIMHANSwill soon come out with its own guidelines.

Advance directive (AD)[20] is a form of medical will which the mental health professionals have to follow in case of nonemergency when there is a loss of capacity to consent for treatment. This throws up new challenges to the professionals when the instructions in the AD are not in alliance with the best practice guidelines or when the treatment proposed is expensive or in a setup which is far to reach. This can put an extra burden on the caregivers and the family.

Similarly, the concept of the nominated representative (NR)[21] has been introduced. In the United Kingdom, "NR" stands for nearest relative who would make decisions on behalf of the mentally ill in case of loss of capacity to consent. However, the MHCA defines NR differently. Any person nominated by the patient can be the NR once ratified by the Mental Health Review Board (MHRB). This person needs to be consulted for all treatment-related decisions and his/her opinion supersedes that of the nearest relative. Again, this can throw up a lot of challenges to the treating professional and may also strain the Indian family system, and affect the family dynamics of patients and caregivers.

In view of all the challenges, there is a need to adapt the way psychiatry is practiced. There is a big need to engage with the media, police, NGOs, human rights activists, etc. It is imperative that they are seen as partners and taken on board. Mental health professionals need to actively write articles on mental health in periodicals, appear in debates, and conduct regular workshops and education programs on mental health and the MHCA for police, media, and NGOs.

## WHAT NEXT?

In light of the new laws, there are two options:

1. Get defensive by getting cautious, being very guarded in the way psychiatry is practiced, cutting down on the number of admissions, focusing more on outpatient care, etc., However, this is not recommended as this may lead to an increased burden of mental illness on the society and higher suicide rates and overall, undo the years of good work that has been done and take us back by decades
2. The rational choice would be to accept and move forward, and reinvent ourselves. The most important change would be to reconnect with the patients. Psychiatrists need to refocus from giving

more attention to the caregiver and the family, and should make the patients the central figures in the management plans. Gone are the days of a patriarchal way of practicing medicine or top-down relationship between the doctor and the patient. There is an urgent need to make the patient a party in all decision-making processes. We need to have better communication with patients, family, NR, media, NGOs, and human rights groups.

There is a need to find creative solutions to problems that may arise as a result of the new act. More ffrequent monitoring on an outpatient basis, more house visits, constant communication, and mobilizing Mental Health Professionals for door-to-door visits to increase contact and bridge the gap between patients and mental health services is the way forward.

There is a big need to popularize and advertize the availability of psychiatric emergency services, options of pick-up from homes, and psychiatric ambulances. We need to focus on suicide prevention strategies, especially for those who are the most vulnerable, like the farmer groups.

There is still a lot of scope left to popularize and destigmatize psychiatry among the general population and even our own medical community. Perhaps, more awareness programs and cross-specialty scientific programs need to be conducted to demystify psychiatry.

## HOW TO CHANGE AND ADAPT?

Mental health professionals need to be well aware of the MHCA and other relevant legislations like the Protection of Children from Sexual Offences, Narcotic Drug and Psychotropic Substances Act, MCI (Professional conduct, Etiquette, and Ethics) guidelines for good practice, etc., The process of obtaining consent should be thorough, and we should strive to get a written informed consent, which is preferably handwritten by the patient in their native language, with signatures of witnesses, NR, etc., whenever possible.

We should be careful while selecting patients for home visits and pick up from homes. There is a need to document care at every step, as the courts presume that care was not provided if it was not documented. We should respect the AD and the wishes of the patient and the NR, even if those are not in their best interest. At the same time, we should offer them options which are based on evidence and help the patient make an informed choice.

## MANAGING A MENTAL HEALTH ESTABLISHMENT

MHEs need to be fully compliant with the new act. There are extensive guidelines about running an MHE which need to be followed, beginning with the renewal of the license from state mental health authorities, registering as an MHE. There is an urgent need to conduct self-audit, assess mental health capacity of all inpatients, and to take their consent for continued admission. If they do not consent for a stay, discharge planning has to be done with the help of family members, and the patients and caregivers have to be educated about alternatives like shelter homes, half-way homes, etc., which the appropriate government has to provide. There is a need to educate the patients about their rights in accordance with the new act. We need to educate families and orient them toward the MHCA. The staff has to be trained to respect the rights and liberties of the patients. The establishments have to be made "least restrictive." There is also a need to upgrade the MHEs to meet internationally accepted standards in accordance with the International Society for Quality in health care. Applying and procuring National Accreditation Board for Hospitals and Healthcare Providers (NABH) accreditation would be the way forward. However, one needs to be aware of the disparity between MHCA and NABH as to how care has to be provided. For instance, guidelines given by MHCA and NABH on the use of physical and chemical restraints differ. NABH guidelines state that the attendants be immediately informed about the reasons for restraint, while MHCA gives the establishment a window of 24 h to inform the NR. Also, MHCA mandates all MHEs to inform the MHRB, in a monthly report, about all instances of restraints,[22] while NABH does not mandate any such reporting.[23]

All MHEs should prepare for audits and visits from the MHRBs. As and when the state mental authorities start forming MHRB, the implementation of the new act will kick in at the ground level. There is a need to liaise with independent psychiatrists and have them conduct independent evaluation and assessment for all supported admissions. Although suicide has been decriminalized, any abetment to commit suicide or suspicion of homicide attempt should be reported to the authorities.

## SAFEGUARD FROM LITIGATION

To protect ourselves from legal hassles and potential litigations, there is a need to have extensive documentation at every step. Written and informed

consents should be taken for every management plan, and every care provided should be documented. There is a need to have professional indemnity insurance with legal counsel coverage.

To reduce potential liability, avoid the urge to make a definitive diagnosis in the first visit itself. Always try to obtain second and third opinions from independent psychiatrists. Mental health professionals need to be consistently updated, maintain competence by attending relevant continuing medical education (CME), be aware of legal aspects of psychiatry, and understand their role as an expert witness when summoned.

## BURDEN ON MENTAL HEALTH SERVICES

The effect of MHCA on the health services and the burden it might cost the exchequer are yet to be formally estimated. The Kerala Health Department estimates the cost of MHRB at Rs 1 crore per year per Board; the Karnataka Health Department could only allot a measly 5 lakh Rs from its budget to implement the MHCA. Time will tell whether the mental health services will get more expensive, while everyone starts complying with the MHCA.

What would be the financial and emotional burdens on the families? Will MHCA cause more legal hassles to mental health professionals, mentally ill, and the families? What is the accountability of an NR? Will the MHCA be an additional burden on an overloaded judiciary? These are some of the questions which perhaps will be answered over time.

## CHANGING SCENARIO

In medicine, usually new and ground-breaking research, academic developments, and novelties influence the changing trends in clinical practice. However, in psychiatry, the recent trends have been influenced by legal issues like rights of the mentally ill and new regulations on establishments which treat them, rather than by research on illness and treatment. Perhaps, once we get past the rights-based issues, which were much needed, the focus should be on research on illnesses and treatments to get psychiatry on par with other specialties in medicine.

## CONCLUSION

MHCA 2017 comes out to be a praiseworthy effort for addressing the long-standing problems encountered by patients and clinicians in the sector of mental health. This act has the potential to bring a radical change in the way mental health care is delivered in our country. Even though some sections of the act have been criticized, it is still more humane and appropriate in the current scenario. Perhaps, with future amendments in some necessary areas, this act can prove to be a blessing to the mental health care system.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

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## REFERENCES

1. Mental Health Care Act 2017. Available from: https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf [Last accessed on 2019 Feb 15].
2. Mental Health Act 1987. Available from: http://ncw.nic.in/acts/THEMENTALHEALTHACT1987.pdf [Last accessed on 2019 Feb 15].
3. Article 4-32; Convention on the Rights of Persons with Disabilities (CRPD). Available from: http://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf [Last accessed on 2019 Feb 15].
4. Article 19: Living independently and being included in the community; Convention on the Rights of Persons with Disabilities (CRPD). Available from: http://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf [Last accessed on 2019 Feb 15].
5. Article 20: Personal mobility; Convention on the Rights of Persons with Disabilities (CRPD). Available from: http://www.un.org/disabilities/documents/convention/convention_accessible_pdf [Last accessed on 2019 Feb 15].
6. Article 26: Habilitation and rehabilitation; Convention on the Rights of Persons with Disabilities (CRPD). Available from: http://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf [Last accessed on 2019 Feb 15].
7. Articles 29: Participation in political and public life and Article 30: Participation in cultural life, recreation, leisure, and sport; Convention on the Rights of Persons with Disabilities (CRPD). Available from: http://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf [Last accessed on 2019 Feb 15].
8. Article 8: Awareness-raising; Convention on the Rights of

Persons with Disabilities (CRPD). Available from: http://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf [Last accessed on 2019 Feb 15].
9. Article 9: Accessibility; Convention on the Rights of Persons with Disabilities (CRPD). Available from: http://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf [Last accessed on 2019 Feb 15].
10. Article 3: General principles; Convention on the Rights of Persons with Disabilities (CRPD). Available from: http://www.un.org/disabilities/documents/convention/convention_accessible_pdf.pdf [Last accessed on 2019 Feb 15].
11. Chapter VIII: Protection of human rights of mentally ill persons, section 81, clause 2(ii); Mental Health Act 1987. Available from: http://ncw.nic.in/acts/THEMENTALHEALTHACT1987.pdf [Last accessed on 2019 Feb 15].
12. CHAPTER XVI: Miscellaneous, section115; Mental Health Care Act 2017. Available from: https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf [Last accessed on 2019 Feb 15].
13. Chapter V: Rights of persons with mental illness; Section 21: Right to equality and non-discrimination, clause (4); Mental Health Care Act 2017. Available from: https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf [Last accessed on 2019 Feb 15].
14. Health insurance to now cover treatment of mental illnesses, Bloombergquint 17.08.2018. Available from: https://www.thequint.com/news/insurance-to-cover-mental-health [Last accessed on 2019 Feb 15].
15. Chapter VI: Duties of appropriate government. Mental Health Care Act 2017. Available from: https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf [Last accessed on 2019 Feb 15].
16. Chapter V: Rights of persons with mental illness, section 27: Right to legal aid. Mental Health Care Act 2017. Available from: https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf [Last accessed on 2019 Feb 15].
17. In the Supreme Court of India criminal original jurisdiction writ petition (criminal) no. 76 of 2016 Navtej Singh Johar & ors. …petitioner(s) versus Union of India thr. Secretary Ministry of Law and Justice …Respondent(s). Available from: https://www.sci.gov.in/supremecourt/2016/14961/14961_2016_Judgement_06-Sep-2018.pdf [Last accessed on 2019 Feb 15].
18. Chapter II: Mental illness and capacity to make mental healthcare and treatment decisions, Mental Health Care Act 2017 section 4. Available from: https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf [Last accessed on 2019 Feb 15].
19. MacArthur Competence Assessment Tool for Treatment (MacCAT-T) Thomas Grisso, Paul S. Appelbaum Professional Resource Press, 1998.
20. Chapter III: Advance Directive; Mental Health Care Act 2017. Available from: https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf [Last accessed on 2019 Feb 15].
21. Chapter IV: Nominated Representative; Mental Health Care Act 2017.Available from: https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf [Last accessed on 2019 Feb 15].
22. Chapter XII: Admission, treatment and discharge, Section 97: Restraints and seclusion. Mental Health Care Act 2017. Available from: https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf [Last accessed on 2019 Feb 15].
23. Accreditation standards for hospitals, National Accreditation Board for hospitals and healthcare providers (NABH) 4th Edition, December 2015. Care of Patients COP. 17: Documented policies and procedures guide the care of patients under restraints (physical and/or chemical).



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|---|---|
| **Website:** www.ijpm.info | Quick Response Code |
| **DOI:** 10.4103/IJPSYM.IJPSYM_38_19 | |

**How to cite this article:** Jagadish A, Ali F, Gowda MR. Mental Healthcare Act 2017 – *The way ahead: Opportunities and Challenges*. Indian J Psychol Med 2019;41:113-8.

Review Article

# The Rights of Persons with Disabilities Act 2016: Mental Health Implications

**Abhilash Balakrishnan, Karishma Kulkarni[1], Sydney Moirangthem[2], Channaveerachari Naveen Kumar[2], Suresh Bada Math[2], Pratima Murthy[2]**

ABSTRACT

India's ratification of the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) necessitated the need for a rights-based, biopsychosocial model of disability, which was endorsed in the Rights of Persons with Disabilities (RPwD) Act, 2016. This article examines the Act, its rules, and guidelines provided by the Government of India, from a mental health perspective, and compares it to its predecessor, the Persons with Disabilities (PwD) Act, 1995. The RPwD Act provides clearer definitions of various constructs, a greater focus on rights of PwD, and guidelines for assessment and certification of disabilities. There is, however, an underemphasis on mental illnesses in the reservation and legal decision making, and a move toward centralizing the process of disability certification. Also, there is a lack of clarity about screening instruments to be used, resource allocation to implement the provisions, and the guidelines for inclusive education. This article suggests recommendations that could strengthen some of these provisions.

**Key words:** *Disability, India, mental illness, rights, RPwD*

## INTRODUCTION

For the World Report on Disability (2011), the International Classification of Functioning, Disability and Health (ICF) conceptualized disability as a dynamic interaction between health conditions and contextual factors that include attitudinal and environmental barriers. This view of disability implies and emphasizes that it is not an attribute of the person. Disability encompasses both the medical model, wherein disability lies in the individual's body or mind, and the social model, which holds that societal barriers cause disability. The resultant model is biopsychosocial in approach.[1]

This paradigm shift from the stigmatizing medical approach to the medical-social one needs to be reflected in the Indian legislation as well. The Rights of Persons with Disabilities (RPwD) Act (2016), which replaced the Persons with Disabilities (PwD) Act (1995), was a move in this direction. India ratified the United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) in October 2007, which

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| **Website:** www.ijpm.info | **Quick Response Code** |
| **DOI:** 10.4103/IJPSYM.IJPSYM_364_18 | |



**How to cite this article:** Balakrishnan A, Kulkarni K, Moirangthem S, Kumar CN, Math SB, Murthy P. The rights of persons with disabilities Act 2016: Mental health implications. Indian J Psychol Med 2019;41:119-25.

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called for a change in the legislature, and the RPwD Act was passed in December 2016. The rules that serve as a guide to implement the Act came almost 6 months later on June 15, 2017, after many months of inviting public opinion before finalization. Finally, on January 4, 2018, the Ministry of Social Justice and Empowerment provided guidelines and procedures for the certification of the various disabilities specified by the Act.

The understanding of disability as biological, psychological, and social is quite fitting for mental disorders that are caused by a complex interaction of biological, social, environmental, cultural, and economic factors. In developing countries like India, the rampant poverty, illiteracy, unemployment, and lack of access to resources contribute to the causation of and recovery from mental disorders. Some mental illnesses are associated with substance abuse, homelessness, violence, crime, and trauma.[2] The National Mental Health Survey (2015–2016), conducted in 12 states from six regions in India, found that 10.6% of the population suffers from mental illness. Three out of four persons with a severe mental disorder were found to experience significant disability in work and social and family life.[2]

The RPwD Act has important implications for the rights of persons with mental illness, who are vulnerable to exploitation and violation of their rights.[3] These persons need the legal system of the country to ensure a mechanism to protect their rights. This article attempts to examine the implications of the Act, particularly from the mental health standpoint.

## CHANGES INTRODUCED IN THE RPWD AND THEIR MENTAL HEALTH IMPLICATIONS

### Greater number of disabilities recognized

The Act has expanded the number of conditions included under it from 7 to 21. Table 1 provides a list of differences between the two Acts. The PwD Act, 1995, accorded for blindness, low vision, hearing impairment, leprosy cured, locomotor disability, mental retardation, and mental illness.[4] The RPwD Act includes cerebral palsy, dwarfism, muscular dystrophy, chronic neurological disorders (including Parkinson's disease and multiple sclerosis), blood disorders (including hemophilia, thalassemia, and sickle cell disease), acid attack victims, speech and language disability, and intellectual disability (ID; which includes specific learning disability [SLD] and autism spectrum disorder).[5] This has broadened the range of disorders and affected individuals who would be eligible to avail reservations and benefits under the Act.

### Clearer definitions

The 2016 Act has been able to provide greater clarity into hitherto undefined constructs. For example, the definitions of discrimination, barrier, mental illness, and benchmark disability have been elucidated. In the 1995 Act, a person with disability meant "a person suffering from not less than forty per cent of any disability as certified by a medical authority."[4] In the 2016 Act, this definition has been replaced by the following: A person with disability "means a person with long-term physical, mental, intellectual or sensory impairment which, in interaction with barriers, hinders his full and effective participation in society equally with others."[5]

The former definition typifies a person based purely on the degree of disability. The latter, in contrast, provides a holistic view of what the person's disability could comprise, emphasizing not only on biological determinants but also on social, environmental, and relational ones.

The concept of disability itself has been altered in the new Act that views the concept on a continuum. Figure 1 illustrates the continuum of disability as conceptualized by the RPwD Act. This is a broader and more inclusive understanding of disability, in comparison with the 1995 Act which recognized PwD as only those with a disability equal to or higher than 40%.

Similarly, in the PwD Act, mental illness was defined as "any mental disorder other than mental retardation." The new Act provides a broader definition of mental illness:

"Mental illness means a substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgment, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life, mental conditions associated with the abuse of alcohol and drugs, but does not include mental retardation which is a condition of arrested or incomplete development of mind of a person, specially characterised by subnormality of intelligence."[5]

This definition is the same as that provided by the Mental Health Care Act 2017 (MHCA)[6] and reflects a progressive move. It may be argued that the use of the term "substantial" may lend itself to varying interpretations again, due to the lack of


**Figure 1:** Continuum of disability as discussed in the RPwD 2016

**Table 1: Comparison of the RPwD Act 2016 with the PwD Act 1995**

| Item | PwD Act 1995 | RPwD 2016 |
|---|---|---|
| Model adhered to | Medical model | Medical plus social model |
| Approach | Charity based | Rights based |
| Applies to the whole of India | Except to Jammu and Kashmir | Yes |
| Definitions | Poorly defined | Definitions of discrimination, barrier, caregiver, person with benchmark disability, rehabilitation |
| Definition of mental illness | "Any mental disorder other than mental retardation"<br>Narrow definition without any elucidation | "A substantial disorder of thinking, mood, perception, orientation or memory that grossly impairs judgement, behaviour, capacity to recognise reality or ability to meet the ordinary demands of life, but does not include retardation which is a condition of arrested or incomplete development of mind of a person, specially characterised by subnormality of intelligence" |
| Number of disabilities | 7 | 21 |
| Rights and entitlements | Mentioned but fewer | Rights are more with special mention of women and children, legal capacity being explained better with rules on ensuring accessibility to vote |
| Limited Guardian | No mention of the term | Mention of the term with clear rules defining the same and defining when a conflict of interest arises |
| Provision for barrier free access | Broadly mentions the need to ensure removal of architectural barriers in schools, public, and work places | Has clear rules and specification about accessibility of buildings and transportation, including a 2-year deadline to ensure barrier free access and no approval without ensuring standards |
| Right to free education | Right to free education until 18 years of age<br>Provision of free books and equipment | Right to free education and free assistive devices, 5% reservation in high school |
| Inclusive education | Integration into normal schools<br>Part-time classes for those who discontinued school after 5$^{th}$ standard or for functional literacy | Move toward inclusive education including training teachers in Braille, other assistive devices |
| Rights in higher education | Age relaxation mentioned (number of years not mentioned) | 5 years age relaxation in institutions of higher education |
| Surveys to identify and treat disability | No mention | 1st survey after 2 years, then a survey yearly for early detection, management |
| Reservation at the workplace | 3% in every establishment | 4% in government institutions |
| Chapter on offences and penalties | Not mentioned | Mentioned with specific redressal mechanisms and quantum of punishment |

RPwD: Rights of persons with disabilities; PwD: Persons with disabilities

operationalization. Nevertheless, the new act defines constructs much more clearly than its predecessor. The term mental retardation has been replaced by ID, which was intended to reduce the associated stigma, and this is also in line with the MHCA 2017.

## Rights

Taking a leaf out of the UNCRPD, the RPwD Act has introduced the right to legal capacity, that is, the right to equal recognition of PwDs before the law. In this, PwDs have a right to own or inherit property, control their financial affairs, and have access to financial credit. In addition, the Act has attempted to improve the accessibility to voting services by providing instructions to the Election Commission of India and the State Election Commissions to ensure that all polling stations are accessible to PwDs and all materials related to the electoral process are easily understandable by and accessible to them. PwDs also have a choice of a limited guardian who can help the person in taking legally binding decisions. If there is a conflict of interest or when deemed otherwise, the PwD has the right to change the guardian.[5]

However, in case of mental illness, several problems may arise in the implementation of these provisions for equal legal capacity and choice of a limited guardian. In case of a person with a psychiatric disability, where there might be impaired judgement and poor insight, or psychopathology interfering with decision making, the validity of the affected individual's report of discrimination/abuse/exploitation (against the limited guardian) or their judgment of an appropriate guardian can come to question. A provision in the act to better handle such a scenario would have been ideal as it is in the MHCA which allows for an advanced directive and a nominated representative (both of which are decided when the person is of sound mind).[6]

Rights of women and children, including the right of a child to not be separated from her or his parents on the grounds of disability, have been mentioned in the RPwD as it was in its predecessor. The Act provides protection from abuse, violence, and exploitation, and means to report any such act to the Executive Magistrate.

The difference in the two acts in this regard is the removal of the following clause from the new Act: "the appropriate Governments and the local authorities shall, within the limits of their economic capacity and

development, provide…," which appears in several locations of the PwD Act. Math and Nirmala (2011) call this clause the "disabling clause" of the act, stating that this empowers the authorities to never realize the provisions of the Act.[3]

The new Act, in contrast, reflects a shift from this charity-based model, wherein only what is feasible for the authorities is done for the PwD, to a rights-based model, where the provisions in the Act are mandated.[5]

### Role of the family

If a court or any other designated authority finds that a PwD who has been provided support is still unable to take legally binding decisions, he or she may be provided with the support of a legal guardian who may take decisions on the PwD's behalf. Limited guardianship is limited to a specific decision and to a specific time period.

The family, both in limited guardianship and in applying for support on behalf of the patient, may be of utmost value in case of mental illness as most often, they are responsible for the burden of care and may understand the person's illness best. The Act provides that any person with a benchmark disability can apply to a competent medical authority if he or she considers himself or herself to require high support needs. This can also be done by a non-governmental organization (NGO) or any other person on his or her behalf. The Act also includes a clause which states that in case of a conflict of interest between the person providing support and the PwD, the person providing support must withdraw the support for the duration of the conflictual situation. Despite this clause being in the best interest of both the parties, it may prevent an otherwise willing family member from helping out the person with disability, due to the consideration of possible legal consequences.

The Act also specifies that the family member can apply for a disability certificate on behalf of the PwD. This is in keeping with the PwD Amendment Rules, 2009.[7]

Narayan and John (2017) have critiqued the RPwD, stating that the Act criminalizes service providers and family members for perceived abuse or exploitation toward the PwD when the PwD may, in fact, be mentally ill and a threat to himself or herself.[8] Section 7[2] of the Act, which the authors identify in this regard, mentions that if anyone has a reason to believe that a PwD has been, is being, or may be abused or exploited, they may give information to the Executive Magistrate. The provision has been made to protect PwDs against violence and exploitation and not to keep the family away. In fact, the Act stipulates that if on an investigation the Executive Magistrate finds that the complaints ring true, he or she may forward the complaint to the Judicial or Metropolitan Magistrate. This action seems to be reasonable and do not warrant the critique it received in the review.

### Reservations

Another positive change in the new Act has been with respect to reservations for PwD. The 1995 Act allowed for 3% employment reservations for PwDs in government and government-aided institutions, with 1% reservation each for (1) hearing impairment, (2) blindness/low vision, and (3) locomotor disability/cerebral palsy.[5]

The 2016 Act allows for 4% reservations for PwDs, and this includes reservations for persons with mental illness, autism, SLD, and ID for the purpose of employment in all government establishments [Table 2]. There is also a provision for at least 5% reservation in higher education; 5% reservation in allotment of agricultural land and housing, with priority accorded to women; 5% reservation in poverty alleviation schemes (3% in the 1995 Act), with priority accorded to women; and 5% reservation in the allotment of land at concessional rates.[5] These provisions are important steps in the empowerment of PwDs.

On the downside, the Act allocates only 1% reservation for the following disorders combined—SLD, ID, mental illness, autism spectrum disorder, and multiple disabilities. In a country where depressive disorders are 7$^{th}$ on the list of problems causing most disability (Institute for Health Metrics and Evaluation, 2017), this figure of 1% for all the above categories seems inadequate.[9]

The Act is also silent on how the support system would be built in a country that has millions of people with mental illness. Also, as the number of people with disability increases, with an increase in the number of included disabilities, the state would find it difficult to tackle the load.

### Education

While both the Acts provide free education for children between 6 to 18 years, the PwD Act allocated 3%

**Table 2: Reservation for specific disabilities**

| | Nature of disability | Percentage of reservation |
|---|---|---|
| a | Blindness and low vision | 1 |
| b | Deaf and hard of hearing | 1 |
| c | Locomotor disability | 1 |
| d | Autism, intellectual disability, SLD, and mental illness | 1 (for both d and e combined) |
| e | Multiple disabilities | |

SLD: Specific learning disability

reservation in high schools, which the RPwD Act has increased to 5%.[4,5] These provisions are greater than those proposed in the Right of Children to Free and Compulsory Education Act, 2009, in which all children would receive free education from the age of 6 years until the age of 14 years.[10] RPwD Act also specifies 5 years upper age relaxation of PwDs in institutions of higher education.

The PwD Act included provisions for setting up special schools and promoting the integration of students with disabilities in normal schools. In its successor, more specific goals aimed at inclusive education have been included. These are early detection and intervention of SLD and conducting school surveys every 5 years for identifying children with disabilities to ascertain their needs and the extent to which these needs are being addressed.

Inclusive education, while ideal to ensure nondiscrimination and equality, may be difficult to implement in a country where there is a shortage of teachers (18% shortage in primary schools and 15% shortage in the secondary schools).[11] Inclusive education would require specially trained teachers for dealing with children with disabilities in assistive and augmentative communication, behavior analysis techniques, and parent management.

Also, the Act does not specify which categories of PwD can be included in inclusive education. People with moderate to severe ID or children requiring high support needs would not be expected to do well with the inclusive approach as they might be unable to cope with the demands of normal schooling and would need a much more targeted approach.

### Assessment of disability and certification

In a notification released on January 4, 2018, the Ministry of Social Justice and Empowerment provided guidelines for the certification of the various disabilities specified by the RPwD Act. This document outlines screening, assessment, and certification procedures. The screening of ID (in addition to hearing, vision, etc.) is to be done by pediatricians. However, the screening tool to be used has not been specified. Subsequently, the children/persons will be referred to child or clinical psychologists, who will conduct the assessment of adaptive functioning and intelligence quotient (IQ) testing. The standardized tools to conduct the assessments have been specified and include the Vineland Social Maturity Scale (VSMS) for the assessment of adaptive functions and the Binet Kamat Test of Intelligence (BKT) or the Malin's Intelligence Scale for Indian Children (MISIC) for the assessment of intellectual functioning. With regard to ID, a progressive move has been that 25% disability has been afforded to the borderline IQ group (range = 70–84), allowing children to attain some benefit for suboptimal intellectual functioning.

The screening for SLD must be conducted by 8 years of age or class third (whichever is earlier) by school teachers, and each school must establish a screening committee. However, here too, the screening tool for SLD to be used by teachers has not been specified. After the initial screening, the parents must be involved, and a referral must be sent to a pediatrician. After a detailed neurological examination and ensuring normal vision and hearing, an IQ assessment by a child or clinical psychologist must be conducted. The SLD assessment is done only if the IQ is more than 85, and the National Institute of Mental Health and Neurosciences (NIMHANS) Specific Learning Disability Battery has been specified for this purpose. The age for certification, validity of the certificate, and the renewal process have also been specified.

However, the recommended tool does not provide severity scores in its assessment of SLD, and thus, the weighted benefits of different levels of severity would not apply for SLD. In fact, the quantification of SLD has not been possible till date. Another significant concern is that, in a populous country like India, where the prevalence of SLD varies from 3% to 10%,[12] the number of people who have SLD and reservations for them would be in millions. As the professionals who assess SLD, that is, clinical psychologists with adequate training, are limited in our country, the implementation of this section of the Act requires policy-level changes.

In the assessment of mental illness, a clinical assessment by a psychiatrist, rating with the Indian Disability Evaluation and Assessment Scale (IDEAS), and/or IQ assessment by a qualified psychologist must be carried out.[13]

As per the PwD Act 1995, the assessment and certification of disabilities have to be done by the respective specialists, which meant that only about 35% of PwDs had been issued disability certificates as in October 2010.[14] The RPwD Act and the subsequent guidelines have clearly mentioned the procedures regarding certification, but this again implies that patients would need to seek multiple appointments with specialists or super-specialists in order to get a certificate.

It was to avoid this that the Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Amendment Rules, 2009[15] and the subsequent guidelines[14] were issued to state

governments such that the disability certificate can be issued at the level of primary health centers (PHCs), community health centers (CHCs), and hospitals at the subdivisional level. Also, in the case of non-obvious single disabilities, certificates can be issued by a single specialist, and only in case of multiple disabilities, a multi-member board would be required to issue the certificate.[14]

The RPwD Act appears to have taken a step back by not decentralizing the assessment and certification processes, as was the case in the PwD Amendment Rules, 2009. This would lead to people needing more time and resources to avail certification, which could work against the intention of empowerment which the Act sought to do.

### Employment

The PwD Act encouraged private institutions in which 5% of the workforce comprised of PwDs, with incentives. The Government of India, in 2008, promulgated an incentive scheme to the employers for providing employment for PwDs in the private sector. Under this scheme, the employees with disabilities (covered under the PwD Act of 1995 and the National Trust for Welfare of Persons with Autism, Cerebral Palsy, Mental Retardation and Multiple Disabilities Act, 1999) would be covered.[16]

In addition to this, the RPwD Act mandates 4% reservations in government and government-aided organizations. Both the PwD and the RPwD Acts clearly mention provisions for situations wherein an employee acquires a disability while in service. In such a scenario, he or she cannot be dismissed. If the affected individual is unable to carry out the job adequately, then he or she may be shifted to another post, without a decrease in pay scale or service benefits. If that is not possible, then he or she can be kept on a supernumerary post until a suitable post is available or until retirement.[4,5] This provision is of immense relevance in mental illnesses, which often develop during the early productive years of working life and can lead to significant social and occupational dysfunction. This provision would allow for continued livelihood despite an inability or reduced ability to perform at work. Also, mental illnesses may be episodic in nature, allowing for several months or years of productive work. This provision could ensure that even if there are periods of unproductivity, affected persons would be able to retain their jobs.

## RECOMMENDATIONS

1. There needs to be a greater recognition of the changing mental functioning of the persons with mental illness, and allowances for legal capacity and guardianship should be ascertained according to the soundness of mind
2. Although there are more types of disabilities recognized, the percentage of reservation may be inadequate for mental health conditions and disproportionate to the morbidity caused. There is an urgent need to extend these allowances so as to represent the numbers of persons with mental illness or ID in the country
3. Specifying which categories of PwDs would be suitable for inclusive education or specifying institutions that can ascertain such suitability would go a long way to streamline the process of inclusion and allow for clearer guidelines in inclusive schools
4. The view of SLD as a condition that requires accommodation (such as additional support during examinations in the form of scribes, extra time, etc.), rather than entitlement in the form of reservation, would serve to reduce the paucity of reserved seats for other disabilities. By removing reservations for SLD, the issue of a lack of severity scale for SLD would also be redundant
5. Decentralization of the process of assessment and certification of disabilities needs to be reconsidered (as in the 2009 amendment rules) to ensure a less cumbersome process for the PwDs. For example, from a mental health perspective, people with severe or profound ID can be given a certificate at the PHC level itself, and for cases wherein the deficits are not striking, appropriate referrals to specialists may be made.

## CONCLUSION

The RPwD Act 2016 replaces the PwD Act 1995, and the RPwD Rules, 2017, indicate how the provisions need to be implemented. The major changes include improved definitions and operationalized terms, increased focus on the rights of PwDs, measures to reduce discrimination, a movement toward an inclusive approach in education and work, the process of appointing a limited guardian, and the section on offences and penalties for contravening the rules. The Act appears to follow the initial covenants of the World Health Organization (WHO) and focuses to a great extent in ensuring that there are lesser discrimination, more barrier-free access, and more usable rights. The moves from charity-based to rights-based laws and from a purely medical model to a biopsychosocial model are certainly steps in the right direction. Although there is criticism that the Act could have focused more on mental disabilities, it definitely seems to be much ahead of the previous Act of more than two decades ago. For the same reason, it needs to be linked to the MHCA 2017 which in and of itself has

an equally rights-based and progressive approach. The links which have already occurred at the conceptual level in terms of similar definitions of mental illness, and in terms of a move from a charity-based to a rights-based method in both the RPwD Act and the MHCA, along with the advanced directives and nominated representative concept (which runs parallel to the concept of guardianship) need to be taken further to ensure overall better care for the person with mental disabilities. On examination of the Act, there emerges a need for greater reservation for mental disabilities and greater clarity with regard to the screening tools, decentralization of certification, and guidelines for inclusive education. SLD remains a challenging area with large numbers requiring remediation and perhaps not reservation and, thus, may need to be reconsidered.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

## REFERENCES

1. World Health Organization. World Report on Disability. Geneva: World Health Organization; 2011.
2. National Mental Health Survey of India, 2015-2016 Prevalence, Patterns and Outcomes, Supported by Ministry of Health and Family Welfare, Government of India, and Implemented by National Institute of Mental Health and Neurosciences (NIMHANS). Bengaluru: In Collaboration with Partner Institutions; 2015-2016.
3. Math SB, Nirmala MC. Stigma haunts persons with mental illness who seek relief as per Disability Act 1995. Indian J Med Res 2011;134:128-30.
4. The Persons with Disabilities (Equal Opportunities, Protection of Rights and Full Participation) Act; 1995. Available from: http://www.disabilityaffairs.gov.in/upload/uploadfiles/files/PWD_Act.pdf. [Last accessed on 2018 Sep 08].
5. The Rights of Persons with Disabilities Act, 2016, Gazette of India (Extra-Ordinary). Available from: http://www.disabilityaffairs.gov.in/upload/uploadfiles/files/RPWD/ACT/2016.pdf. [Last accessed on 2016 Dec 28].
6. The Mental Healthcare Act 2017. Available from: http://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf. [Last accessed on 2018 Sep 08].
7. The Amended Rules for Persons with Disabilities. Available from: http://ayjnihh.nic.in/Amended_PWDRules1996_accessible.pdf. [Last accessed on 2018 Sep 09].
8. Narayan CL, John T. The Rights of Persons with Disabilities Act, 2016: Does it address the needs of the persons with mental illness and their families. Indian J Psychiatry 2017;59:17-20.
9. Institute for Health Metrics and Evaluation, 2017. Available from: www.healthdata.org/India. [Last accessed on 2018 Jan 02].
10. Right of Children to Free and Compulsory Education Act, 2009. Available from: eoc.du.ac.in/RTE%20-%20notify.pdf. [Last accessed on 2018 Sep 09].
11. Government of India, Ministry of Human Resource Development, Department of School, Education and Literacy, Lok Sabha, 2016. Available from: http://164.100.47.190/loksabhaquestions/annex/10/AS265.pdf. [Last accessed on 2018 Sep 09].
12. Ramaa S. Two decades of research on learning disabilities in India. Dyslexia 2000;6:268-83.
13. Government of India, Ministry of Social Justice & Empowerment, Department of Empowerment of Persons with Disabilities, 2018. Available from: http://www.ccdisabilities.nic.in/content/en/docs/Newguideline.pdf. [Last accessed on 2018 Sep 08].
14. Government of India, Ministry of Social Justice & Empowerment, Simplification and Streamlining the Procedure for Issue of Disability Certificates to the Persons with Disabilities, 2011. Available from: http://pib.nic.in/newsite/PrintRelease.aspx?relid=68913. [Last accessed on 2018 Sep 12].
15. Government of India, Ministry of Social Justice & Empowerment, 2009. Available from: http://disabilityaffairs.gov.in/upload/uploadfiles/files/content/TO%20BE%20PUBLISHED%20IN%20THE%20GAZETTE%20OF%20INDIA.pdf. [Last accessed on 2018 Sep 09].
16. Government of India, Ministry of Social Justice & Empowerment (Disabilities division), 2008. Available from: http://disabilityaffairs.gov.in/upload/uploadfiles/files/incentive_rev.pdf. [Last accessed on 2018 Sep 12].

# Review Article

# Psychiatrist in Court: Indian Scenario

**Vinay Basavaraju, Arun Enara, Guru S. Gowda, Shashidhara Nagabhushana Harihara, Narayana Manjunatha, Channaveerachari Naveen Kumar, Suresh Bada Math**

ABSTRACT

The impetus for practical exposure to legalities that arise in the context of psychiatry and law is minimal in postgraduate training in psychiatry and curriculum. Those who choose to get trained often do not get first-hand exposure to court proceedings. Law and psychiatry often come into each other's interface, and psychiatry is regulated by the legal system more often than the other specialties in medicine. This article is an attempt to equip the psychiatrist in dealing with instances where they will present themselves in court.

**Key words:** *Court, expert witness, forensic psychiatry, India, MHCA 2017, psychiatry*

## INTRODUCTION

Health professionals and health establishments are regulated by the Medical Council of India,[1] State Medical Council, Clinical Establishment Act,[2] Medical Termination of Pregnancy Act (MTP Act),[3] Pre Conception and Pre-Natal Diagnostic Techniques Regulation and Prevention of Misuse Act (PC-PNDT Act),[4] Surrogacy Act,[5] HIV Act,[6] Transplantation of Human Organs Act (THOA),[7] and Consumer Protection Act.[8] In addition, psychiatrists come under the purview of Mental Health Care Act, 2017 (MHCA 2017),[9] Rights of Persons with Disability Act (RPWD Act),[10] and Narcotics Drugs and Psychotropic Substances Act (NDPS Act).[11] Law and psychiatry come into interface more often than the other specialties in medical discipline. Psychiatrists appear in court when accused of breach of contract, negligent acts (medical negligence, criminal negligence) and behavior, and violation of the rights of the patients.[12] They are also called upon to act as experts in the court of law or quasi-judicial bodies to comment upon the following areas: (a) fitness to stand trial, (b) insanity defense, (c) testamentary capacity related to execution of a will, (d) capacity to make a contract, (e) capacity to manage property, (f) marriage and divorce, (g) custody of the child, (h) interviewing the child in case of sexual abuse, (i) fitness for job, (j) assessment of mental disability, and so forth.[13,14]

In the current Indian scenario, psychiatry residents often do not get first-hand exposure to court proceedings.[15,16] Forensic psychiatry training is mandated for 2 weeks

| Access this article online | |
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| **Website:** www.ijpm.info | **Quick Response Code** |
| **DOI:** 10.4103/IJPSYM.IJPSYM_53_19 | |



**How to cite this article:** Basavaraju V, Enara A, Gowda GS, Harihara SN, Manjunatha N, Kumar CN, *et al*. Psychiatrist in court: Indian scenario. Indian J Psychol Med 2019;41:126-32.

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only, and on many occasions, budding psychiatrists are let down in terms of equipping themselves with the skills and practical inputs needed to handle the court scenario. Appearing in the court as an expert witness may make the psychiatrist, especially the beginner, anxious, due to lack of such exposure. This article attempts to equip the psychiatrist in dealing with such scenarios as a witness.

## COMMON LEGAL TERMINOLOGIES USED IN COURT

### Expert witnesses and fact witness

An expert witness is a person whose opinion by virtue of education, training, certification, skills, or experience is accepted by the judge as expert. The Indian Evidence Act, under section 45, enumerates the laws relating to the opinion of experts.[17] The section says that an "expert" means a person who has special knowledge, skill, or experience in any of the following: foreign law, science, art, handwriting, or finger impression, and such knowledge has been gathered by him by practice, observation, logical reasoning, or proper study.[12]

A psychiatrist may be requested to testify as either a "fact witness" or an "expert witness" [Table 1]. Broadly, an expert witness and a fact witness are often called the "court witness" in the summons. A fact witness testifies about direct observations. A common example would be the treating psychiatrist asked to testify about his or her observation on his or her own patient's symptoms, treatment, the course of the illness, and the outcome of treatment. In this situation, the psychiatrist is not ordinarily asked to give opinions on the subject matter of dispute. The court witness can be summoned by the defense or prosecution, depending on the need.

Expert witnesses are not witnesses of facts. The expert is expected to depose his or her evidence as an advisory and to test the accuracy of the conclusion that is derived upon by somebody else. This enables the judge to form his or her independent judgment by application of the criteria to the facts proved by the evidence.

**Table 1: Comparison between expert witness and fact witness**

| Expert witness | Fact witness |
|---|---|
| Offers opinion and assists the judge in understanding technical knowledge to make a sound ruling. | Verifies facts pertinent to the case. Testifies about direct observations. |
| Does not have prior involvement in the activities that precipitated litigation. | Usually, the treating psychiatrist is legally involved with the litigants. |
| Autonomy and confidentiality with regard to patient care can be overruled by the court. | Ethical dilemma for the doctor to decide on the extent of nondisclosure of information due to the obligations under the "doctor-patient" relationship. |

Furthermore, the expert witness can be a testifying or nontestifying expert witness:

a. A nontestifying expert is hired by a contesting party to evaluate facts of the case. The expert helps the lawyer to prepare a case, without testifying in the court. An example of a nontestifying expert is a consulting expert. A consulting expert helps in questioning the other side's theory and methods and often helps drill a hole in their arguments, without testifying in court.[18]

b. The testifying expert appears in the court to testify before the judge, under the oath that the expert will "speak the truth and nothing but the truth" and seek help from God.

Generally, the issue of appearing in the court of law starts with the receiving of the summons and includes preparing for the appearance in the court, discussion with the lawyer who summoned, taking an oath, deposing in the court of law, and receiving an attendance certificate.

In the case of criminal case, the lawyer representing the state is called Public Prosecutor. He or she is a public official in charge of the investigation and prosecution of punishable acts on behalf of the state or an international commission.[19] The lawyer representing the accused is called the Defense Lawyer. A defense lawyer is a lawyer representing the legitimate interests of the suspect or the accused at the proceedings of the criminal case. The defense lawyer offers the suspect legal assistance by all means, not prohibited by law.[20]

### Subpoenas/Summons

A subpoena or witness summons is a legal document, usually issued by the clerk of a court in the name of the judge, which requests a party (e.g., a psychiatrist) to:

a. Provide documents or
b. Appear and give testimony.

### Receiving and responding to a subpoena

There should be a well-documented procedure for the receipt, registry, and timely response to the summons by an appropriate official. The protocol of receiving the summons should be known to the staff of the medical record department of the hospital, doctor, and the main office receiving the incoming documents of the hospital. Recipient must acknowledge receipt of the summons, note the date and time of receipt while signing acceptance, and note the phone number of the person delivering the summons. He or she should verify the summons and details of the case pertaining to the summons, hospital file number, contact number of the lawyers and investigating officers (in criminal cases), and address of the court. If the time is unsuitable or if

it is too short a notice, it is recommended to note the same on the summons at the time of receiving and seek a fresh date either in writing or after personal appearance. The psychiatrist should prepare to testify. Attending the court is mandatory except in rare emergencies that should be conveyed to the court (registrar of the court).

On receiving the subpoena, one should not fail to respond to it.[21] A subpoena is part of a court's legal process, and failure to respond to a subpoena is considered contempt of court. Once the subpoena is acknowledged, it is advisable to seek legal advice and assert the doctor–patient privilege. Once the doctor–patient privilege is asserted, then the doctor withholding information on the basis of confidentiality clause is acceptable. Failure to assert the privilege can be grounds for legal action by the client, especially in civil cases. The doctor should contact the client and/or the client's lawyer to seek consent from the patient before deposing the information in the court of law. If the client wants the doctor to comply with the subpoena, then the psychiatrist should get written authorization from the client before sharing the requested information. If the client does not consent, the doctor can continue to assert the privilege, until the court overrules that privilege and orders the psychiatrist to depose. At this point, the doctor must abide by the court order. The expert witness, however, does not have to mandatorily seek patient authorization or consent to produce evidence related to litigation. However, it would be advisable to seek the consent or authorization of the patient on ethical grounds. Figure 1 depicts the procedures to be followed while receiving and responding to a subpoena.

## Evidence in the court of law

The evidence that the court relies on are divided into two, as follows:

a. Oral evidence of the witness
b. Documentary evidence.

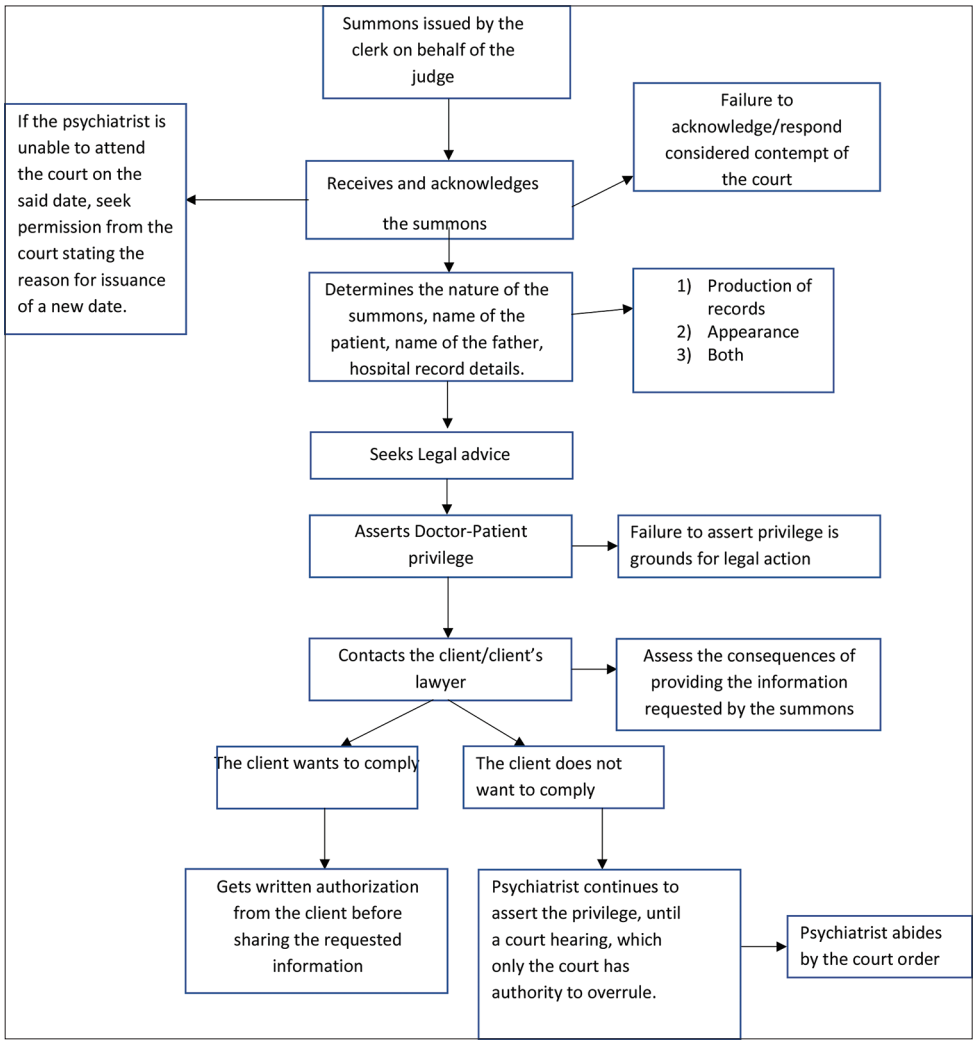


**Figure 1:** Procedures followed while receiving and responding to a summons

Psychiatrists are often needed to give evidence in medicolegal cases in the court of law as a fact/expert witness or as a professional accused of negligence. The psychiatrist needs to understand the importance and implication of evidence under the Indian Penal Code[22] and the Indian Evidence Act. In many situations, the doctor testifying may be put under pressure to change their statement in favor of the accused or alter the facts in the medical records. The psychiatrist should maintain professional integrity at all cost.

## PREPARATION BEFORE AND ON THE DAY OF APPEARING AS AN EXPERT WITNESS

### Preparation prior to appearance in the court of law

It is very important that the psychiatrist is well-prepared while representing himself in the court of law, since it is more a test of a skill that comes only with repeated practice. Testifying and winning cases in a court will depend on the writing, verbal, and nonverbal skills of the expert witness. Certain prerequisites which the psychiatrist should be equipped with are as follows:[12]

The preparation before the said date of appearance involves preparing for the presentation of the evidence. This is often considered the easiest part of your testimony compared with the intricacies involved in answering questions. One should be well-prepared and well-rehearsed to confidently handle any unforeseen situations and questions. It is important to proof-read the documents and exhibits. There should also be ample preparedness to respond to the anticipated questions.

### Preparation of testimony as an expert witness

The preparation as an expert witness will primarily involve understanding what is expected through the testimony. The psychiatrist should collect and study all the relevant documents and should be prepared to differentiate between the facts of the case and derived opinions. There is also a need to anticipate likely questions and be prepared with the responses.[23] Documents for presentation should include data given by the patient and caregivers, preferably verbatim, including the source of information, the details of investigations, joint consultations, referrals, serial mental status examination, ward observations, cognitive function testing, and so on, and opinion derived and the reasons of deriving the opinion.

It is required to present the documents at the time of appearance before the court. The court may also make the documents available to both the parties as per the need. It would be prudent to discuss the case with the lawyer who summoned.[12,24] A young psychiatrist can seek the help of senior colleagues who are well versed in attending and deposing in the court of law. If psychiatrists have to travel to another city to attend the court, it is advisable to go before the day of deposing and get a good night's sleep before one attends the court.

### On the day of the court

The psychiatrist should report to the authority who summoned them, specifically the court clerk or the lawyer who summoned, on reaching the court. Before testifying, one will have to take an oath as per the protocols of the law. The psychiatrist should wait for their turn to speak and should avoid talking out of turn. After deposing as a witness, the psychiatrist should also collect the certificate of attendance. In civil cases, there is also a provision to apply for remuneration from the court.

## ANSWERING QUESTIONS ON THE WITNESS STAND

It is important to understand that the entire process will revolve around establishing one's credibility, starting from the moment one stands up, to proceeding to the witness box to take a stand, including the gait and preferred dressing.[23] Switch off your mobile phone or any other communicating devices while in the court of law. The preferred posture is to stand with your shoulders over your hips with the feet shoulder width apart. One can place their hands comfortably by their sides and preferably not in their pocket. It is also important to hold one's chin up, such that it is parallel to the ground while speaking. Avoid speaking softly. It is important that one is audible and clear so that one does not have to repeat the questions or answers. When asked, state your name without hurry, pausing between your first name and last name. Take care to speak clearly, fully pronouncing your words. Avoid slang, lazy speech, and colloquial language. Also watch out for filler words such as um, ah, okay, right, and you know. Instead of these filler words which give you time to think and answer, silence will have a larger impact on what one will say next.[23] Maintain eye contact with the lawyer when asked a question. It is important to look at the judge when one answers the questions raised by the lawyer. Adequate eye contact is often a sign of truthfulness and respect. It is of utmost importance to listen in entirety to the questions raised before responding. Interrupting midway when someone is answering is considered aggressive behavior. In addition, answering a question too quickly gives the appearance of being too anxious or over-rehearsed. Neither response will show you in your best light. Always take a few seconds to gather your thoughts before responding. It is important to ensure that one does not ramble on in a lengthy explanation

and is precise. What you say and is out of the context can be used against you and may help the opposite counsel in framing new questions. Avoid technical jargon. If it is unavoidable to use technical jargon, then take time to explain what the terminology means.[23]

## RESPONDING TO THE ADVOCATES

### Examination-in-chief

In the court of law, the expert witness will usually undergo examination-in-chief, that is, the questioning of a party's own expert witness under oath, at trial. Witnesses are introduced to a trial by their examination-in-chief, which is when they answer questions asked by the lawyer representing the party which called them to the stand,[25] followed by cross-examination.

Cross-examination is the questioning of a witness at a trial or hearing by the lawyer from the opposing party, who has called the witness to testify.[26]

The examination-in chief will be less difficult if the psychiatrist has discussed with the advocate in advance about what to expect in the court. However, the psychiatrist must be truthful and avoid unnecessary information and disclosure. When responding to the court, one must have a logical thought process while arriving at a conclusion, and evidence should be produced with proper reference for the same. Most of the questions in this stance will be open-ended. During the examination-in-chief, the advocates are forbidden from asking their witnesses leading questions. A leading question is one which requires a "yes" or "no" response.

### Cross-examination

The cross-examination often gets tricky and can put the psychiatrist in a fix. There are three types of questions which may catch you off-guard and discredit your testimony.

#### *a. Ambiguous question*

Ambiguous questions are usually vague, often with a meaning other than what it conveys. The answers to ambiguous questions can be raised against the psychiatrist. One way of tackling an ambiguous question is to request clarification or ask for the question to be rephrased before attempting to answer. Take time to answer such questions.[27]

#### *b. Two-part question*

Example of a two-part question is "Was there a lack of care on your part, because of which the patient has deteriorated?" When advocates tactfully put such questions, the psychiatrist should identify such questions and become aware of the trap that one part of the question is obviously true and the other part false. If the psychiatrist attempts to answer both parts of the question at the same time, there is a probability of getting tangled in a difficult situation. The solution is to answer only one part of the question. One must carefully select which part of the question one would like to answer and then state, "Since this is a two-part question, let me answer the (first/second) part." One should also be careful not to automatically start answering the second question once you finish answering the first part. The answer to the second question can be given once it is redirected to you. If you are unable to answer the question, ask for clarification or for time to think or to look into the medical records.[27]

The example question given above addresses a lack of care and deterioration, and answering both the questions with a "yes" or "no" will lead to a different meaning than what one tries to convey. This can be answered by addressing first the part on lack of care and then addressing the deterioration after requesting the judge for permission.

#### *c. Closed-end questions*

When a question is framed by reducing it into a "yes" or "no" response, it becomes a closed-end question. These questions are answered with a "yes" or a "no." For instance, consider this situation where one is asked, "Is there a chance that your diagnosis would be wrong?" or "Is schizophrenia an incurable disease?" This again is a difficult situation for the psychiatrist. In such situations, the psychiatrist should look at the judge and put forward the difficulty in answering the question with a "yes" or a "no." One could state that such answers would not serve the purpose of the oath taken in the court of law and hence a request to grant permission to explain the same with evidence.

Cross-examination will always be a matter of concern. It will test the patience and composure of the psychiatrist. There will be blatant attempts by the opposite panel to unnerve and discredit the testimony. If an attempt at discrediting the testimony fails, they could follow this with personal attacks that could discredit credentials such as attempts taken to pass exams, donation for undergraduate/postgraduate seats, and number of forensic cases seen. Being mindful of such attacks can help one maintain composure and integrity in the court of law. There is also a need to familiarize with the responses that can possibly be challenged and be prepared in advance to answer them head on. The credibility of the person can also be influenced by the manner in which one responds. Remember to look the part, speak the part, and act the part. The more one practices, the more perfect one becomes in responding.

The expert witness may also be asked to provide the details of one's training and skill set that would make them an expert. One should be prepared to give them a brief description of the same. It is important to maintain objectivity in the court of law. There is no room for personal opinions in the courtroom. Be objective and keep to the facts of the case and logical conclusions. You are summoned as an expert, and it is important to keep the decorum of an expert in mind.

## CONFIDENTIALITY OF MEDICAL RECORDS

Confidentiality is of paramount importance in the judicial system, just like in the medical system. Under the provision of the Indian Evidence Act 1872, personal documents may not be revealed without explicit written consent of the individual.

## PRIVILEGED COMMUNICATION

In India, Sections 126–129 of the Indian Evidence Act, 1872 deal with privilege that is attached to professional communication between a legal adviser and the client. Sections 126 and 128 mention circumstances under which the legal adviser can give evidence of such professional communication.[28] Privileged communication arises in the context of matters of great public interest. In the case of privileged communication in the court of law, under the orders of the presiding judge, the professional secrecy clause may be violated. However, the communication may be kept to the barest minimum and essential. The barest minimum communication is in line with Section 25 of MHCA 2017[9] (which states that the patient and nominated representative are eligible to receive the basic medical records), thereby ensuring confidentiality in communication. The doctor should not volunteer confidential information about the patient until ordered by the court. There is reason enough for the doctor to protest if requested for confidential information about the patient on the grounds of professional secrecy.[29] If insisted by the court, the doctor may reveal the information in writing to those entitled to receive it so that it does not become public knowledge. Only as a last resort should the doctor divulge the information in the open court.

## PENALTIES FOR FALSE EXPERT EVIDENCE

If the doctor succumbs to the pressure and offers false expert advice, they can be implicated under:

a. Punishment for false evidence (IPC193)
b. False statement made in declaration which is by law receivable as evidence (IPC 199)
c. Causing disappearance of evidence of offense, or giving false information while screening the offender (IPC 201)
d. Destruction of document or electronic record to prevent its production as evidence (IPC 204).

## FUTURE DIRECTIONS IN LINE WITH THE MENTAL HEALTHCARE ACT 2017

MHCA 2017 provides the provision for a Mental Health Review Board (MHRB) which will be a quasi-judicial body. The patients can approach the board without the hassles of legal procedures, unlike the prevailing system. Any issues related to admission, discharge, or right violations will be taken up by the MHRB. The psychiatrist will find themselves appearing before the MHRB in issues pertaining to the care of the patient, and it is important that we maintain the same decorum, keeping in mind the intricacies of the legal system. Unlike the existent legal system, the MHRB comprises of psychiatrists and mental health professionals in its panel. It is reasonable to assume that this representation will be helpful for psychiatrists.

## CONCLUSION

The law and psychiatry will always go hand in hand, and it is imperative that the psychiatrist will have to appear in court, either to defend himself/herself or to provide evidence. It is important for the psychiatrist to be cognizant of the increasing legal intrusions that could crop up in patient care and take steps to avoid such situations altogether. It is also important to understand the intricacies in the legal system and its processes and be prepared well, if ever a need arises to present themselves in court.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

## REFERENCES

1. MCI India [Internet]. Available from: https://www.mciindia.org/CMS/. [Last cited on 2019 Jan 14].
2. The Clinical Establishments (Registration and Regulation) Act [Internet]. Available from: http://clinicalestablishments.gov.in/cms/Home.aspx. [Last cited on 2019 Jan 14].
3. Hirve SS. Abortion law, policy and services in India: A critical review. Reprod Health Matters 2004;12 (Suppl 24):114-21.
4. Bhaktwani A. The PC-PNDT act in a nutshell. Indian J Radiol Imaging 2012;22:133-4.
5. The Surrogacy (Regulation) Bill, 2016 [Internet]. PRS. 2017. Available from: http://www.prsindia.org/billtrack/surrogacy-regulation-bill-2016. [Last cited on 2019 Jan 14].

6. HIV/AIDS Act 2017 | National AIDS Control Organization | MoHFW | GoI [Internet]. Available from: http://naco.gov.in/hivaids-act-2017. [Last cited on 2019 Jan 14].
7. Transplantation of Human Organs Acts and Rules | Ministry of Health and Family Welfare | GOI [Internet]. Available from: https://mohfw.gov.in/acts-rules-and-standards-health-sector/acts/transplantation-human-organs-acts-and-rules. [Last cited on 2019 Jan 14].
8. The Consumer Protection Bill, 2018 [Internet]. PRS. 2018. Available from: http://www.prsindia.org/billtrack/consumer-protection-bill-2018. [Last cited on 2019 Jan 14].
9. Mental Healthcare Act, 2017. [Internet]. Available from: https://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf. [Last cited on 2019 Jan 8].
10. Rights of Persons with Disabilities (RPWD) Act, 2016 | National Centre for Promotion of Employment for Disabled People [Internet]. Available from: http://www.ncpedp.org/RPWDact2016. [Last cited on 2019 Jan 14].
11. Mehra ML. Encyclopaedia of Narcotic Drugs and Psychotropic Substances. Google Books [Internet]. Available from: https://books.google.co.in/books/about Encyclopaedia_of_Narcotic_Drugs_and_Psyc.html. [Last cited on 2019 Feb 21].
12. Chaplow DG, Peters JL, Kydd RR. The expert witness in forensic psychiatry. Aust N Z J Psychiatry 1992;26:624-30.
13. Broderick JJ. Role of the psychiatrist and psychiatric testimony in civil and criminal trials. Notre Dame Law 1959;35:508.
14. Chadda RK. Forensic evaluations in psychiatry. Indian J Psychiatry 2013 1;55:393.
15. Murthy P, Malathesh BC, Kumar CN, Math SB. Mental health and the law: An overview and need to develop and strengthen the discipline of forensic psychiatry in India. Indian J Psychiatry 2016;58(Suppl 2):S181-6.
16. Nambi S, Ilango S, Prabha L. Forensic psychiatry in India: Past, present, and future. Indian J Psychiatry 2016;58 (Suppl 2):S175-80.
17. Section 45 in The Indian Evidence Act, 1872 [Internet]. Available from: https://indiankanoon.org/doc/1025384/. [Last cited on 2019 Jan 14].
18. Funk C. Expert Witness Disclosure Rules: Consulting vs. Testifying Experts [Internet]. The Expert Institute. 2018. Available from: https://www.theexpertinstitute.com/expert-witness-disclosure-rules-consulting-vs-testifying-experts/. [Last cited on 2019 Jan 19].
19. Definition of PUBLIC PROSECUTOR [Internet]. Available from: https://www.merriam-webster.com/dictionary/public+prosecutor. [Last cited on 2019 Jan 14].
20. What is the Difference between Defense Lawyer and Public Prosecutor [Internet]. MargarianLaw. 2017. Available from: https://margarianlaw.com/defense-lawyer-public-prosecutor/. [Last cited on2019 Jan 14].
21. Mossman D. "You"ve been served': What to do if you receive a subpoena. Curr Psychiatry 2015;14:33-6.
22. Publications C. The Indian Penal Code, 1860 [Internet]. 2015. Available from: https://books.google.co.in/books?id=DYj9CAAAQBAJ. [Last accessed on 2019 Feb 14].
23. Being an Effective Psychiatric Expert Witness | Psychiatric Times [Internet]. Available from: http://www.psychiatrictimes.com/risk-assessment/being-effective-psychiatric-expert-witness. [Last cited on 2019 Jan 19].
24. Grounds A. The psychiatrist in court. Br J Hosp Med 1985;34:55-8.
25. Witness Definition [Internet]. Available from: http://www.duhaime.org/LegalDictionary/W/Witness.aspx. [Last cited on 2019 Jan 14].
26. Cross Examination Law and Legal Definition | USLegal, Inc. [Internet]. Available from: https://definitions.uslegal.com/c/cross-examination/. [Last cited on 2019 Jan 14].
27. Ashlock S. Expert Witness: Effective Courtroom Testimony [Internet]. Forensic Magazine. 2010. Available from: https://www.forensicmag.com/article/2010/02/expert-witness-effective-courtroom-testimony. [Last cited on 2019 Jan 19].
28. Role of Indian Judiciary in Protecting Victims Rights [Internet]. Legal Articles in India. Available from: http://www.legalservicesindia.com/law/article/8/5/Role-of-Indian-Judiciary-in-Protecting-Victims-Rights. [Last cited on 2019 Jan 14].
29. Bateman AG. Professional secrecy and privileged communications. Trans Medico-Leg Soc YearÖ 1904;2:49-75.

Review Article

# Suicide Risk in Comorbid Bipolar Disorder and Obsessive-Compulsive Disorder: A Systematic Review

**Andrea Amerio**[1,2]

ABSTRACT

**Introduction:** The co-occurrence of bipolar disorder (BD) and obsessive-compulsive disorder (OCD) seemed to be a poor prognostic factor associated with greater disability, lower social and occupational functioning, poorer treatment response, and higher suicidal ideas and attempts compared to BD patients. **Materials and Methods:** A systematic review was conducted on the risk of suicide in BD-OCD patients compared to BD patients. Relevant papers published through August 2018 were identified searching the electronic databases MEDLINE, EMBASE, PsycINFO, and the Cochrane Library. **Results:** In all cases, diagnoses were according to the standard Diagnostic and Statistical Manual criteria and were established using validated assessment scales. More than 80% of the selected studies presented higher rates of history of suicide attempts and lifetime depressive episodes in BD-OCD patients compared to non-comorbid patients. **Conclusions:** Osler's view that medicine should be a treatment of diseases, not of symptoms, is consistent with the approach of mood stabilization as the first objective in apparent BD-OCD patients, as opposed to immediate treatment with antidepressants. In line with that, especially in comorbid patients, lithium may be preferred because of its proven anti-suicidal effect.

**Key words:** *Bipolar, comorbidity, obsessive-compulsive, suicide*

## INTRODUCTION

The co-occurrence of bipolar disorder (BD) and obsessive-compulsive disorder (OCD) was noted 150 years ago by the French psychiatrist Morel,[1] but the significance of this comorbidity has not been sufficiently clarified yet.[2]

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| **Website:** www.ijpm.info | Quick Response Code |
| **DOI:** 10.4103/IJPSYM.IJPSYM_367_18 | |

Our previous meta-analysis revealed higher comorbidity rates in youths than adults,[3] with the majority of patients experiencing the onset of OCD prior to the onset of BD.[4] Compared to non-BD-OCD patients, BD-OCD patients had a higher prevalence of family history for mood disorders and lower prevalence of family history for OCD.[5]



**How to cite this article:** Amerio A. Suicide risk in comorbid bipolar disorder and obsessive-compulsive disorder: A systematic review. Indian J Psychol Med 2019;41:133-7.

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Obsessive-compulsive (OC) symptoms in comorbid patients appeared more often - and sometimes exclusively - during depressive episodes, and comorbid BD and OCD cycled together, with the OC symptoms often remitting during manic/hypomanic episodes.[6] In other words, OC symptoms would initially coexist with BD symptoms, even cycling together, and they would gradually tend to decrease in the adulthood, supporting the hypothesis that OC symptoms in childhood and adolescence are an expression of vulnerability to a later BD diagnosis.[7]

Moreover, BD-OCD comorbidity seemed to be a poor prognostic factor associated with greater disability, lower social and occupational functioning, poorer treatment response, and higher suicidal ideas and attempts compared to BD patients.[8]

Although recent studies have investigated the co-occurrence of anxiety and BDs, the topic is insufficiently studied, and the relationship between BD and OCD remains unclear. To address this unanswered question, we updated our systematic review to investigate specifically the risk of suicide in BD-OCD patients.

## MATERIALS AND METHODS

As done before,[9,10] this review was conducted according to methods recommended by the Cochrane Collaboration and the Preferred Reporting Items for Systematic Reviews and Meta-Analyses (PRISMA) guidelines.[11,12]

### Information sources and search strategy

Studies were identified by searching the electronic databases MEDLINE, EMBASE, PsycINFO, and the Cochrane Library. We combined the search strategy of free text terms and exploded MESH headings for the topics of bipolar disorder and obsessive-compulsive disorder combined as following: (((((((“Bipolar Disorder” [Mesh]) OR Bipolar disorder) OR BD) OR Bipolar) OR Manic depressive disorder) OR Manic depressive) OR Manic)) AND (((((“Obsessive-Compulsive Disorder” [Mesh]) OR OCD) OR Obsessive-compulsive) OR Obsessive-compulsive disorder)). The strategy was first developed in MEDLINE and then adapted for use in the other databases. Studies that compared BD patients and BD-OCD patients, published in English, through August 31st, 2018 were included [Figure 1].

### Inclusion criteria

#### *Study population and study design*

We considered studies that compared BD patients and BD-OCD patients. BD and OCD were considered if diagnostic criteria used were specified. Among hospital-based studies, inpatients, day-hospital, and outpatient subjects were included, whereas emergency

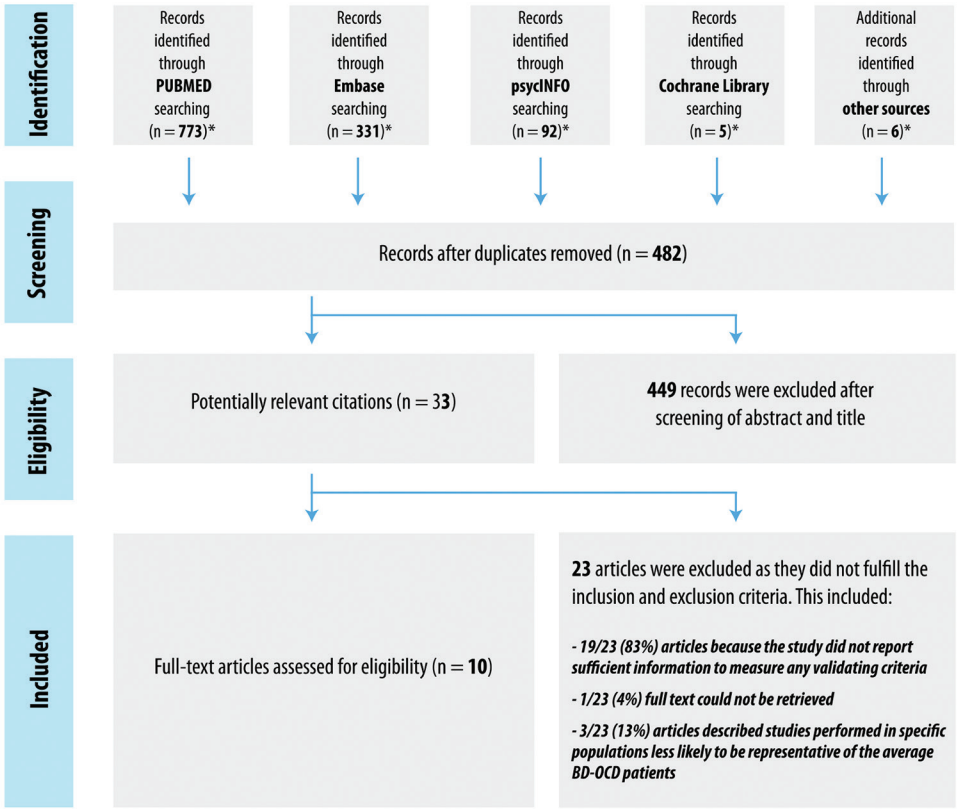


**Figure 1:** Flow diagram of selected studies

care records were excluded as non-representative. All experimental and observational study designs were included apart from case reports and case series. Narrative and systematic reviews, letters to the editor, and book chapters were excluded.

### *Outcomes*

Studies that investigate the risk of suicide in BD patients and BD-OCD patients were considered.

### *Study selection and data extraction*

Identified studies were independently reviewed for eligibility by two authors in a two-step process: a first screening was performed according to the title and abstract, and then full texts were retrieved for a second screening. At both stages, disagreements by reviewers were resolved by consensus. Data were extracted by two authors and supervised by a third author using an *ad-hoc* developed data extraction spreadsheet. The data extraction spreadsheet was piloted on three randomly selected papers and modified accordingly.

## RESULTS

Ten studies were selected [Table 1]. In all cases, diagnoses were according to the standard Diagnostic and Statistical Manual (DSM) criteria and were established using validated assessment scales. More than 80% of the selected studies presented higher rates of history of suicide attempts and lifetime depressive episodes in BD-OCD patients compared to non-comorbid patients.[13-17] In the Epidemiologic Catchment Area (ECA) database, BD-OCD patients had statistically significant higher lifetime rates of "thoughts of suicide," "thoughts of death," "suicide attempts," and "wanting to die" versus non-comorbid patients.[18] These features were also confirmed in a case-control study conducted in the USA in the adolescent population. OCD was associated with a 2.4-fold increase in the odds of suicidal ideation among BD adolescents as compared to non-comorbid adolescents.[19] Less than 20% of the selected studies did not report a statistically significant difference in terms of suicide attempts between comorbid and non-comorbid patients.[20-22]

## DISCUSSION

The main limitation of this systematic review is linked to the study design and analysis strategy of the included studies, as documented by the quality assessment scale

**Table 1: Studies that met inclusion/exclusion criteria for systematic review**

| References | Study design | Country | Study population | Diagnosis assessment | Results | Quality* |
|---|---|---|---|---|---|---|
| Chen *et al*. 1995[18] | Cross-sectional study | USA | Pt. with BD, unipolar disorder or any Axis I disorder other than bipolar or unipolar disorder (*n*=6622, age >18): BD (*n*=167) | DIS; DSM-III | Higher lifetime rates of "thoughts of suicide", "suicide attempts", "thoughts of death" and "wanting to die" in BD-OCD pt. vs BD pt. | 25/31 |
| Dilsaver *et al*. 2006[19] | Case-control study | USA | Latino adolescents (*n*=313): BD (*n*=115, mean age=14.6±1.5) | SCID; DSM-IV | BD-OCD pt. associated with a 2.4 fold increase in the odds of suicidal ideation vs BD pt. (95% CI=1.0-5.8). | 18/31 |
| Goes *et al*. 2012[13] | Cross-sectional study | USA | BD (*n*=1416, mean age=42.0), first-degree relatives with BD (*n*=850) | DIGS; DSM-IV | Higher rates of history of suicide attempts in BD-OCD pt. vs BD pt. (48.3 vs. 29.6%). | 23/31 |
| Jeon *et al*. 2018[20] | Case-control study | Korea | BD (*n*=264, mean age=35.5), BD-OCD (*n*=50, mean age=31.8) | SCID; DSM-IV | No statistically significant differences between BD-OCD patients and BD patients in terms of a history of suicidal attempts. | 23/31 |
| Kazhungil *et al*. 2017[14] | Case-control study | India | BD-I (*n*=90, mean age=21.69) | SCID; DSM-IV | Higher rates of suicide attempts in BD-OCD pt. vs BD pt. (0.29±0.59 vs. 1.19±0.93). | 23/31 |
| Koyuncu *et al*. 2010[21] | Case-control study | Turkey | BD (*n*=214, mean age: BD=34.8±10.3, BD-OCD=36.2±15.9) | SCID; DSM-IV | No statistically significant differences between BD-OCD pt. and BD pt. in terms of lifetime suicide attempts. | 20/31 |
| Kruger *et al*. 2000[15] | Case-control study | Germany | BD-I or BD-II (*n*=143, mean age=44) | SCID; DSM-III-R | Higher incidence of prior suicide attempts in BD-OCD pt. vs BD pt. (90% vs. 38%). | 22/31 |
| Magalhaes *et al*. 2010[16] | Case-control study | Brazil | BD (*n*=259, mean age=41) | SCID; DSM-IV | Higher rates of history of suicide attempts in BD-OCD pt. vs BD pt. (70% vs. 35%). | 23/31 |
| Shashidhara *et al*. 2015[22] | Case-control study | India | BD-I (*n*=396, mean age=22.55) | MINI-BIPOLAR; DSM-IV | No statistically significant differences between BD-OCD pt. and BD pt. in terms of current suicide risk. | 23/31 |
| Simon *et al*. 2004[17] | Cross-sectional study | USA | BD (*n*=475, mean age=41.7±12.8) | MINI; DSM-IV | Higher rates of history of suicide attempts in BD-OCD pt. vs BD pt. | 23/31 |

BD: bipolar disorder; OCD: obsessive-compulsive disorder; DSM: Diagnostic and Statistical Manual of Mental Disorders; SCID: Structured Clinical Interview; DIS: Diagnostic Interview Schedule; DIGS: Diagnostic Instrument for Genetic Studies; MINI: Mini International Neuropsychiatric Interview; MINI-BIPOLAR: MINI: Mini International Neuropsychiatric Interview for Bipolar Disorders Studies. *Checklist for measuring study quality developed by Downs and Black

used. Most studies are observational, according to the retrospective assessments, and do not include a control group. Small sample size and enrollment of subjects mainly from BD-OCD outpatient units may limit the generalizability of these results. Potential confounding factors, such as demographic and clinical variables and phase of illness, often were not appropriately analyzed through multivariate modeling. Moreover, suicide outcomes were assessed by structured interview in only a minority of the studies. The strength of the selected studies is that the diagnosis of BD, OCD, and comorbid psychiatric disorders were consistently according to the DSM criteria and were established by trained investigators mainly using validated assessment scales, with good interrater reliability. The main strength of this review is its being systematic and its inclusion of the entire scientific evidence published so far on the main medical databases.

It is of crucial importance to identify effective and safe maintenance therapy for BD-OCD comorbidity so as to reduce patients' mood instability, hospitalization rates, and the risk of suicide and to improve their quality of life. Osler's view that medicine should be a treatment of diseases, not of symptoms, is consistent with the approach of mood stabilization as the first objective in apparent BD-OCD patients, as opposed to immediate treatment with antidepressants.[23] In line with that, especially in comorbid patients, lithium may be preferred because of its proven anti-suicidal effect.

Considering the important nosological, clinical, and therapeutic implications, prospective controlled studies with long-term follow-up data collected are needed to confirm or refute our findings and consequent clinical recommendations. In particular, further research is required to investigate several risk factors such as severity of illness, other comorbid disorders, or treatment resistance that might be associated with elevated risk of suicidal behavior among BD-OCD patients.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

## REFERENCES

1. Morel BA. Traité des Maladies Mentales. 2nd ed. Paris: Masson; 1860.
2. Tonna M, Amerio A, Ottoni R, Paglia F, Odone A, Ossola P, *et al*. The clinical meaning of obsessive-compulsive symptoms in bipolar disorder and schizophrenia. Aust N Z J Psychiatry 2015;49:578-9.
3. Amerio A, Stubbs B, Odone A, Tonna M, Marchesi C, Ghaemi SN. The prevalence and predictors of comorbid bipolar disorder and obsessive-compulsive disorder: A systematic review and meta-analysis. J Affect Disord 2015;186:99-109.
4. Tonna M, Amerio A, Odone A, Stubbs B, Ghaemi SN. Comorbid bipolar disorder and obsessive-compulsive disorder: Which came first? Aust N Z J Psychiatry 2016;50:695-8.
5. Amerio A, Tonna M, Odone A, Stubbs B, Ghaemi SN. Heredity in comorbid bipolar disorder and obsessive-compulsive disorder patients. Shanghai Arch Psychiatry 2015;27:307-10.
6. Amerio A, Tonna M, Odone A, Stubbs B, Ghaemi SN. Course of illness in comorbid bipolar disorder and obsessive-compulsive disorder patients. Asian J Psychiatr 2016;20:12-4.
7. Tonna M, Amerio A, Odone A, Ossola P, Marchesi C, Ghaemi SN. Are obsessive-compulsive symptoms expression of vulnerability to bipolar disorder? Acta Psychiatr Scand 2015;132:411-2.
8. Amerio A, Odone A, Liapis CC, Ghaemi SN. Diagnostic validity of comorbid bipolar disorder and obsessive-compulsive disorder: A systematic review. Acta Psychiatr Scand 2014;129:343-58.
9. Amerio A, Galvéz JF, Odone A, Dalley SA, Ghaemi SN. Carcinogenicity of psychotropic drugs: A systematic review of US Food and Drug Administration-required preclinical *in vivo* studies. Aust N Z J Psychiatry 2015;49:686-96.
10. Marchesi C, Ossola P, Amerio A, Daniel BD, Tonna M, De Panfilis C. Clinical management of perinatal anxiety disorders: A systematic review. J Affect Disord 2015;190:543-50.
11. Higgins J, Green S, editors. Cochrane Handbook for Systematic Reviews of Interventions, Version 5.1.0. The Cochrane Collaboration; 2001.
12. Liberati A, Altman DG, Tetzlaff J, Mulrow C, Gøtzsche PC, Ioannidis JP, *et al*. The PRISMA statement for reporting systematic reviews and meta-analyses of studies that evaluate healthcare interventions: Explanation and elaboration. BMJ 2009;339:b2700.
13. Goes FS, McCusker MG, Bienvenu OJ, Mackinnon DF, Mondimore FM, Schweizer B, *et al*. Co-morbid anxiety disorders in bipolar disorder and major depression: Familial aggregation and clinical characteristics of co-morbid panic disorder, social phobia, specific phobia and obsessive-compulsive disorder. Psychol Med 2012;42:1449-59.
14. Kazhungil F, Cholakottil A, Kattukulathil S, Kottelassal A, Vazhakalayil R. Clinical and familial profile of bipolar disorder with and without obsessive-compulsive disorder: An Indian study. Trends Psychiatry Psychother 2017;39:270-5.
15. Kruger S, Braunig P, Cooke RG. Comorbidity of obsessive-compulsive disorder in recovered inpatients with bipolar disorder. Bipolar Disord 2000;2:71-4.
16. Magalhaes PV, Kapczinski NS, Kapczinski F. Correlates and impact of obsessive-compulsive comorbidity in bipolar disorder. Compr Psychiatry 2010;51:353-6.
17. Simon NM, Otto MW, Wisniewski SR, Fossey M, Sagduyu K, Frank E, *et al*. Anxiety disorder comorbidity in bipolar disorder patients: Data from the first 500 participants in the Systematic Treatment Enhancement Program for Bipolar Disorder (STEP-BD). Am J Psychiatry 2004;161:2222-9.
18. Chen YW, Dilsaver SC. Comorbidity for obsessive-compulsive

disorder in bipolar and unipolar disorders. Psychiatry Res 1995;59:57-64.
19. Dilsaver SC, Akiskal HS, Akiskal KK, Benazzi F. Dose-response relationship between number of comorbid anxiety disorders in adolescent bipolar/unipolar disorders, and psychosis, suicidality, substance abuse and familiality. J Affect Disord 2006;96:249-58.
20. Jeon S, Baek JH, Yang SY, Choi Y, Ahn SW, Ha K, *et al*. Exploration of comorbid obsessive-compulsive disorder in patients with bipolar disorder: The clinic-based prevalence rate, symptoms nature and clinical correlates. J Affect Disord 2018;225:227-33.
21. Koyuncu A, Tukel R, Ozyildirim I, Meteris H, Yazici O. Impact of obsessive-compulsive disorder comorbidity on the sociodemographic and clinical features of patients with bipolar disorder. Compr Psychiatry 2010;51:293-7.
22. Shashidhara M, Sushma BR, Viswanath B, Math SB, Janardhan Reddy YC. Comorbid obsessive compulsive disorder in patients with bipolar-I disorder. J Affect Disord 2015;174:367-71.
23. Amerio A, Odone A, Marchesi C, Ghaemi SN. Do antidepressant-induced manic episodes in obsessive-compulsive disorder patients represent the clinical expression of an underlying bipolarity? Aust N Z J Psychiatry 2014;48:957-63.

# Original Article

# Sociodemographic, Legal, and Clinical Profiles of Female Forensic Inpatients in Karnataka: A Retrospective Study

**Guru S. Gowda, Sai Komal, Tarasingh N. Sanjay, Saumya Mishra, Channaveerachari N. Kumar, Suresh B. Math**

ABSTRACT

**Background:** Forensic patients are often admitted to psychiatric hospitals without any details of illness or treatment. They pose a unique challenge for clinical services in the context of diagnosis, management, and particularly legal issues. **Materials and Methods:** We conducted a retrospective chart review using a structured data-extraction tool. A total of 23 female forensic inpatients were admitted under the Department of Psychiatry from January 2006 to June 2016. Data were analyzed by descriptive statistics. **Results:** The mean age of the patients was 31.3 ± 7.9 years. In total, 82.6% of them were married, 87% were from a nuclear family, and 78.3% were from an urban background. Totally, 73.9% were referred from prison and 26.1% from the court. However, 73.9% were referred for the purpose of diagnosis and treatment and 21.7% for assessment of fitness to stand trial. Moreover, 47.8% had an alleged charge of murder (of killing close family members). A total of 30.4% had schizophrenia and other psychotic disorders, and 47.8% had a mood disorder. The mean duration of inpatient care was 6.2 ± 7.4 weeks, and 87% had shown considerable clinical improvement at the time of discharge. **Conclusions:** The majority of female forensic patients were young adults from nuclear families. They had mood disorders, schizophrenia, and other psychotic disorders. They were referred primarily for treatment purposes. Prospective studies are required for a better characterization of the relationship between crime and psychiatric disorders.

**Key words:** *Female, India, legal profile, mental illness, prisoner*

**Key messages:** *a) Female forensic patients had mood disorders, schizophrenia, and other psychotic disorders. b) Female forensic patients were referred primarily for treatment purposes. c) Most female forensic patients were accused with the killing of close family members. d) Half of the female forensic patients had a mental illness at the time of occurrence of the crime.*

## INTRODUCTION

Imprisonment for offending the law has been on the rise worldwide, including in India.[1] Worldwide, at any given point in time, there are over 10 million individuals in prison.[2] As per the Institute for Criminal Policy

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| DOI: 10.4103/IJPSYM.IJPSYM_152_18 | |



**How to cite this article:** Gowda GS, Komal S, Sanjay TN, Mishra S, Kumar CN, Math SB. Sociodemographic, legal, and clinical profiles of female forensic inpatients in Karnataka: A retrospective study. Indian J Psychol Med 2019;41:138-43.

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Research and National Crime Records Bureau 2015, the Indian prison population is estimated to be around 4,19,623, and among them, 4.3% are females.

Mental illness (MI) has been a major concern in the prison inmates. Previous research has consistently shown a high prevalence of MI among inmates of prisons, and moreover, a few countries have more mentally ill patients in prisons than in psychiatric hospitals.[2-5] MI is found to be higher in prison inmates than in the general population.[3] It may be because of the factors such as environmental stress, psychosocial factors, and substance use.[4,5] One study noted that imprisonment is severe enough stress or to precipitate MI in vulnerable individuals.[6]

Prison inmates are referred to psychiatric hospitals for various reasons which include assessment, diagnosis, and treatment of MI including behavioral problems and substance use disorders (SUD), general follow-ups of those who are already on medication, and assessment and certification for fitness to stand trial and insanity defence.[7] There is often a significant delay in referral when it comes to seeking medical help and psychiatric evaluation of prisoners.[8-10] This is probably due to lack of awareness among the prison officials about the MI and also deficient psychiatric beds in the general and psychiatric hospitals.

Western studies have shown that there is consistent evidence of depression and psychotic illness as the major diagnoses in psychiatric hospital referrals among the prison population.[2] A systematic review from 12 countries showed higher rates of MI in female prisoners, with 4% of them having psychotic illnesses, 12% major depression, and 42% personality disorders.[11] A special report by US Department of Justice revealed that nearly half (49%) of the mentally ill had committed violent offences such as robbery, homicide, and sexual assault, followed by property, drug, and public order offences.[12] Furthermore, there are very few forensic psychiatric beds for prison patients, and the available beds for forensic psychiatry are usually occupied by long-term patients who are incompetent to stand trial, found not guilty by reason of insanity, or sexually violent predators. Hence, beds are usually not readily available for new admissions.[9,13-15]

There are only a few studies from India until now on the profile of female patients admitted to a forensic psychiatric hospital. A study from Central Jail, Amritsar, on 500 convicted prison inmates, showed a point prevalence of 23.8% for MI, and among them, 56.4% had a history of substance use before imprisonment.[3] In another study from Rajasthan done in 2013, prison inmates showed a point prevalence of 33% for psychiatric disorders. Depressive disorders (16.1%) were more common than psychosis (6.7%), and 58.8% had a history of drug abuse/dependence prior to imprisonment.[16] The above two studies were done in Amritsar and Rajasthan central prison set up. A study from a forensic psychiatric hospital from south India on male prison inpatients showed that the majority of prisoners (85.7%) were under trial, murder being the most common charge, and psychiatric diagnoses were made in 122 (90.3%). The most common diagnoses were psychosis, including schizophrenia (28.2%).[7] Among the available studies, there are very few which looked into the female population exclusively.[17-20] Hence, there is an urgent need for studies on female forensic inpatients (FFI) referred from prison. In this paper, we aimed at studying socio-demographic, clinical, and legal characteristics of FFI.

## MATERIALS AND METHODS

The study was carried out at the medico-legal unit , Department of Psychiatry, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru, India. It is a tertiary care center with research, academic, and training facilities in the area of forensic psychiatry in India. The forensic psychiatric inpatients receive care from a multidisciplinary team consisting of forensic psychiatrists, nurses, clinical psychologists, and psychiatric social workers.

Each forensic patient is evaluated by the multidisciplinary team using "Forensic Psychiatry Work-up Proforma" [Available as online supplemental material]. It was developed by revising the previous version of "NIMHANS Detailed Workup Proforma for Forensic Psychiatry Patients (NDPFPP)."[7] In addition, ward behavior of each patient is documented every day using the NIMHANS behavioral observation report,[7] and serial mental status examinations are done on a daily basis. Along with the above observation, we try to collate information about patients by getting central observation report from prison, past medical records, first information report (FIR), post-mortem report, crime details, and also by contacting the family and neighbors. All these details were collected by our multidisciplinary team with the patients informed consent. This provides a holistic understanding of the illness and also the person. Considering all the information, the forensic psychiatry team will come to a diagnosis as per the International Classification of Diseases (ICD-10). In some patients requiring another set of assessments, such as intelligence test or diagnostic psychometry, appropriate psychological instruments are used. Clinical improvement was assessed on the Clinical Global Impression (CGI) scale. It is a 3-items observer-rated scale that measures illness severity Clinical Global Impression-Severity (CGI-S), global improvement or change Clinical Global Impression-

Global Improvement (CGI-GI), and therapeutic response. The CGI–S scores range from 1 (very much improved) to 7 (very much worse). The CGI has proved to be a robust measure of efficacy in many clinical trials and is easy and quick to administer if the clinician knows the patient well.[21]

For this study, FFI were operationally defined as female forensic patients admitted to the closed ward of the institution for treatment, observation, or certification to stand trial and insanity defence through Honourable court or prison authority. A retrospective study design was employed by reviewing the case file of 23 forensic prison patients admitted to the female closed ward from January 2006 to June 2016. A year-wise list of names and inpatient registration numbers of patients who were admitted to the female closed ward was made as per the admission register maintained in the ward. This was counter-checked with the psychiatric inpatient's admission register maintained in the medical records department. The files could be retrieved from the medical records department after obtaining permission from the medical records division officer. An average of 60 to 90 min was needed to extract data from each case file. Personal information related to patients available in the case files was not shared with anyone.

A structured tool to extract necessary details was developed following suggestions from the experts in forensic psychiatry: most information was available in inpatient Forensic Psychiatry Work-up Proforma. The Forensic Data Extraction Schedule covered three dimensions: socio-demographic, clinical, and legal profiles. All the obtained information was used solely for the purpose of research.

### Statistical analysis

Data were analyzed by descriptive statistics.

### Ethical considerations

Institutional ethical committee approved the above study project by name "A file-based review of medico-legal referral to NIMHANS."

## RESULTS

Table 1 shows socio-demographic details of FFI.

Table 2 shows the legal profile of FFI. We reviewed about the patient's MI by looking at past psychiatric treatment records, collecting information from family, and retrospective history clarification from patients and other possible sources. With this, we tried to find the relation between MI and alleged crime. Past history of MI was present in 8.6% ($n$ = 2), meaning that these patients had a past episode of MI sometime before and they had recovered before the alleged crime. In total, 52.2% ($n$ = 12) patients were experiencing the illness during the commission of a crime. However, 17.4% ($n$ = 4) developed MI after the alleged crime and 4.3% ($n$ = 1) during their confinement.

Table 3 shows the clinical profile of female forensic inmates.

**Table 1: Socio demographic profile of female forensic inpatients**

| Variable | | *n*= 23 |
|---|---|---|
| Age in years [Mean (SD)] | | 31.39(7.9) |
| Education [*n* (%)] | No formal education | 6(26%) |
| | <7th | 3(13%) |
| | 8th-12th | 10(43.5%) |
| | Above 12th | 4(17.5%) |
| Occupation [*n* (%)] | Employed | 7(30.3%) |
| | Unemployed/ homemaker | 16(69.7%) |
| Religion [*n* (%)] | Hindu | 18(78.3%) |
| | Muslim | 3(13%) |
| | Christian | 2(8.7%) |
| Type of family [*n* (%)] | Nuclear | 20(87%) |
| | Joint family | 3(13%) |
| Socio-economic status (SES) [*n* (%)] | BPL | 10(43.5%) |
| | APL | 13(56.5%) |
| Marital status [*n* (%)] | Single | 4(17.4%) |
| | Married | 19(82.6%) |
| Location [*n* (%)] | Rural | 5(21.7%) |
| | Urban | 18(78.3%) |

BPL: Below poverty line; APL: Above poverty line

**Table 2: Legal profile of female forensic inpatients**

| Variable | | *n*= 23 |
|---|---|---|
| Referring authority | Magistrate | 6(26.1%) |
| | Medical officer/prison superintendent | 17(73.9%) |
| Reason for referral | Treatment | 18(78.3%) |
| | Fitness to stand trial | 5(21.7%) |
| Legal status | UTP | 20(87%) |
| | CTP | 3(13%) |
| Legal charges | IPC 302 | 11(47.8%) |
| | Non-IPC 302 | 12(52.2%) |
| Homicide case against | Murdering husband | 3(13%) |
| | Murdering own child | 4(17.4%) |
| | Murdering neighbor | 4(17.4%) |
| FIR copy at admission | Present | 1(4.3%) |
| | Absent | 22(95.7%) |
| The relation between the alleged crime and mental illness | Psychiatric illness before the crime | 2(8.7%) |
| | Psychiatric illness before and during the crime | 12(52.2%) |
| | Psychiatric illness After the crime | 4(17.4%) |
| | Malingering | 1(4.3%) |

UTP: Under trial prisoner; CTP: Convicted trial prisoner

## DISCUSSION

The current study gives a glimpse of the socio-demographic, clinical and legal characteristics of

**Table 3: Clinical profile of female forensic inpatients**

| Variable | | *n*= 23 |
|---|---|---|
| Primary psychiatric diagnosis [*n* (%)] | Schizophrenia and other psychotic disorder | 7 (30.4%) |
| | Mood disorders (including unipolar and bipolar) | 11 (47.82%) |
| | No psychiatric diagnosis | 4 (17.4%) |
| | Malingering | 1 (4.3%) |
| Co-morbid psychiatric Diagnosis [*n* (%)] | Mental retardation | 2 (8.6%) |
| | Personality disorder | 2 (8.6%) |
| Comorbid medical illness [*n* (%)] | | 4 (17.4%) |
| CGI severity at admission [*n* (%)] | Normal | 5 (21.7%) |
| | Symptomatic | 18 (78.3%) |
| Past admission [*n* (%)] | Present | 3 (13%) |
| | Absent | 20 (87%) |
| Medication used [*n* (%)] | Antipsychotic | 8 (34.8%) |
| | Antidepressant | 8 (34.8%) |
| | Mood stabilizers | 2 (8.7%) |
| | No medication | 5 (21.7%) |
| Treatment modalities [*n* (%)] | Oral | 2 0(87%) |
| | Parenteral injection | 5(21.7%) |
| | Electroconvulsive therapy | 4 (17.4%) |
| CGI severity at discharge [*n* (%)] | Normal, Not at all ill | 18 (78.3%) |
| | Mildly ill | 2 (8.7%) |
| | Moderately ill | 1 (4.3%) |
| | Severely ill | 2 (8.7%) |
| Mean (SD) score on CGI severity at admission | | 5.9 (0.3) |
| Mean (SD) score on the duration of I P care in weeks | | 6.3 (5.8) |
| Mean (SD) Duration of illness in months | | 27 (26.2) |
| Mean (SD) score on CGI severity at discharge | | 1.73 (1.57) |
| Mean (SD) score on CGI global improvement at discharge | | 1.69 (1.52) |

CGI - Clinical Global Impresssion

FFI who were cared for in a tertiary care neuropsychiatric institute. All patients were in their thirties. The majority had severe mental disorders, and they had MI during the commission of the alleged crime as per retrospective history and medical record evaluation. This profile throws light on many important issues related to FFI in India. In the current study, the mean age of the patients was 31 years (between 25 and 35 years), which is similar to the findings of other studies done in western countries and in India.[7,8,11] Most of them were unemployed or homemakers, married, living in nuclear families, and belonging to an urban population, which was consistent with earlier studies. Female prison population had been victims of rejection and humiliation, separation, adultery, domestic violence, substance abuse, and extramarital affairs. These are severe social and psychological stressors that may contribute significantly to the development of MI.[22]

The medical officer of the prison referred a majority of FFI for treatment purpose. This shows that prison authorities were referring patients just because of unmanageability, as most of the patients were severely ill at the time of admission as evidenced by the CGI-S scores. Behavioral observation reports were available for the majority of patients. These reports were used in making early diagnosis and starting treatment, which helped the short inpatient care in our sample, which is comparable to a study among male prison inmates in the same institute.[7]

In the current study, 20 inpatients (87%) were under trial prisoners, and 11 inpatients (47.8%) were registered under the Indian Penal Code (IPC) section 302. Among alleged case under IPC 302, murder of their close relative or family members was the most common, i.e., the murder of their child (17.4%) or husband (13%), followed by neighbors (17.4%). This is consistent with earlier study findings on incarcerated male and female patients with MI.[7,22]

The majority of the admitted female prisoners in the psychiatric ward had illness before and during the commission of the crime, most common being mood disorders (bipolar disorder and depression), followed by other psychotic illnesses. None in our sample had an SUD. This is in contrast to earlier studies that reported mainly the male prison population of having psychosis and SUD as the most common diagnoses followed by a mood disorder.[7,8] However, the findings of this study are supported by Math *et al.* study, where depressive disorders were the most common diagnosis, followed by psychosis.[4,22]

Murdering of own child, called maternal filicide, accounted for 17.4% in our study. Among those who committed that particular crime, 75% were suffering from severe depressive episode prior to and during the commission of the crime. This finding is in line with past studies on maternal filicide. In the past studies, maternal filicide was found to be associated with family stressors and mental disorders such as ongoing major depressive episode, psychosis, subnormal intelligence, and substance use.[23-25]

We propose the following recommendations according to our findings:

1. Increase awareness among prison authorities regarding MI: this will ensure early identification and referral to mental health facilities
2. A screening system for every prison inmate once they enter the prison. If MI is suspected, a systematic psychiatric evaluation has to be undertaken at the earliest
3. Referral to mental health facilities with FIR and behavioral observation reports, which would assist and aid in early diagnosis and decrease the duration of hospital stay
4. Start forensic wards in the mental health hospitals/establishment and wherever it is available already, increase the number of forensic beds so that more patients can be referred for treatment, which will help in early treatment and thereby reduce morbidity
5. Many FFI patients were referred for fitness to stand trial. However, in India, we do not have any scales, assessment tools, or schedule to assess fitness to stand trial. Therefore, there is an urgent need for the development of standardized, culturally relevant, acceptable tools for the Indian setting to assess the fitness to stand trial.

### Limitations

It was a retrospective chart review. However, the records are well-documented in the institute. The sample size was small. However, this could have been a result of the lack of prompt referral to a psychiatric hospital from the prison.

#### *Future direction*

There is a need for further studies on FFI patients, and would help us understand the mental health care needs of women and how different they are from those of the males.

## CONCLUSIONS

Most female forensic patients had mood disorders, schizophrenia, or other psychotic disorders. They were referred primarily for treatment purpose. Majority of them were charged with the killing of close family members. On retrospective evaluation, approximately half of the study sample had an illness at the time of occurrence of the crime. Prospective studies are required for better characterization of the relationship between crime and female patients with psychiatric disorders.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

## REFERENCE

1. CRIME - Statistical Year Book India 2016 | Ministry of Statistics and Program Implementation [WWW Document], n.d. Available from: http://mospi.nic.in/statistical-year-book-india/2016/206. [Last accessed on 2017 Mar 04].
2. Fazel S, HayesAJ, Bartellas K, Clerici M, Trestman R. Mental health of prisoners: Prevalence, adverse outcomes, and interventions. Lancet Psychiatry 2016;3:871-81.
3. Goyal SK, Singh P, Gargi PD, Goyal S, Garg A. Psychiatric morbidity in prisoners. Indian J Psychiatry2011;53:253-7.
4. Math SB, Murthy P, Parthasarathy R, Kumar CN, Madhusudhan S. Mental Health and Substance Use Problems in Prisons. The Bangalore Prison Mental Health Study: Local Lessonsfor National Action. Bangalore: NIMHANS; 2011.
5. WHO - Mental health and prisons. SubStance 2005;39:1-7.
6. Coid J. How many psychiatric patients in prison? Br J Psychiatry 1984;145:78-86.
7. Kumar D, Viswanath B, Sebestian A, Holla B, Konduru R, Chandrashekar CR, *et al*. Profile of male forensic psychiatric inpatients in South India. Int J Soc Psychiatry 2014;60:55-62.
8. Kishore B, Verma H, Shah D. An analysis df 380 criminal mental patients. Med Educ1970;12:117-9.
9. Torrey EF, Zdanowicz MT, KennardAD, Lamb HR, Eslinger DF, Biasotti MC, *et al*. The treatment of persons with mental illness in prisons and jails: A state survey. Arlington, VA: Treatment Advocacy Center; 2014. p. 1-116.
10. Wang PS, AngermeyerM, Borges G, Bruffaerts R, Tat Chiu W, DE Girolamo G, *et al*. Delay and failure in treatment seeking after first onset of mental disorders in the World Health Organization's World Mental Health Survey Initiative. World Psychiatry 2007;6:177-85.
11. Fazel S, Danesh J. Serious mental disorder in 23 000 prisoners: A systematic review of 62 surveys. Lancet 2002;359:545-50.
12. James DJ, Glaze LE. Mental Health Problems of Prison and Jail Inmates. Bur Justice Stat 2005. Spec. Rep. 12.
13. Konrad N. Prison Psychiatry 2013;3-20. doi: 10.1007/978-94-007-0086-4_1.
14. Konrad N, Völlm B, Weisstub DN. Ethical issues in prison psychiatry.International Library of Ethics, Law, and the New Medicine 2013; Springer Netherlands. doi: 10.1007/978-94-007-0086-4.
15. Konard N, Optiz-welke A. The challenges of treating the mentally ill in a prison setting: The European perspective. Clin Pr 2014;11:517-23.
16. Kumar V, Daria U. Psychiatric morbidity in prisoners. Indian J Psychiatry 2013;55:366-70.

17. Torkaman M, Miri S, Farokhzadian J. Relationship between adaptation and self-esteem in addicted female prisoners in the south east of Iran. Int J Adolesc Med Health 2018. doi: 10.1515/ijamh-2017-0168.
18. Climent CE, Ervin FR, Rollins A, Plutchik R, Batinelli CJ. Epidemiologicalstudies of female prisoners. IV. Homosexual behavior. J Nerv Ment Dis 1977;164:25-9.
19. Borrill J, Burnett R, Atkins R, Miller S, Briggs D, Weaver T, *et al*. Patterns of self-harm and attempted suicide among white and black/mixed racefemale prisoners. Crim Behav Ment Health 2003;13:229-40.
20. Climent CE, Plutchik R, Ervin FR, Rollins A. Parental loss, depression andviolence. III. Epidemiological studies of female prisoners. Acta Psychiatr Scand 1977;55:261-8.
21. Guy W. ECDEU Assessment Manual for Psychopharmacology. Rockville, MD, U.S.: Department of Health, Education, and Welfare; 1976.
22. Math SB, Murthy P, Parthasarathy R, Naveen Kumar C. Minds Imprisoned: Mental Health Care in Prisons. Bangalore: NIMHANS; 2011.
23. West SG. An Overview of Filicide. Psychiatry (Edgmont) 2007;4:48-57.
24. Razali S, Salleh RM, Yahya B, Ahmad SH. Maternal filicide among women admitted to forensic psychiatric institutions in Malaysia: Case series. East Asian Arch Psychiatry 2015;25:79-87.
25. Flynn S, Gask L, Appleby L, Shaw J. Homicide-suicide and the role of mental disorder: A national consecutive case series. Soc Psychiatry Psychiatr Epidemiol 2016;51:877-884.

# Original Article

# Prevalence and Clinical and Coercion Characteristics of Patients who Abscond during Inpatient Care from Psychiatric Hospital

**Guru S. Gowda, Abel Thamby, Vinay Basavaraju, R. Nataraja[1], Channaveerachari Naveen Kumar, Suresh Bada Math**

## ABSTRACT

**Background:** Patients absconding from psychiatric hospitals pose a serious concern for the safety of patients and public alike. Absconding is associated with an increased risk of suicide, self-harm, homicide, and becoming "missing" from society. There are only scarce data on profile and outcome of the absconding patients in India. **Aims:** To study the prevalence and describe the clinical and coercion characteristics of patients who abscond during inpatient care from an open ward. **Methodology:** "Absconding" was defined as patients being absent from the hospital for a period of more than 24 h. This is an analysis of absconding patients out of the 200 admitted patients at a tertiary psychiatric hospital. Descriptive statistic was used to analyze the demographic, clinical, and perceived coercion profile and outcome. **Results:** The absconding rate was 4.5 incidents per 100 admissions. Most of these patients were males, from a nuclear family, admitted involuntarily, belonging to lower socio-economic status, diagnosed with schizophrenia or mood disorder with comorbid substance use disorder and had absent insight. The MacArthur Perceived Coercion Scale score was 4.58 (±1.44), and 80% of the absconded patients felt subjective coercive experiences in most domains at admission. Out of the 9 absconded patients, 2 patients had completed suicides and one continued to remain untraceable. **Conclusion:** The absconded patients were males; admitted involuntarily; diagnosed with schizophrenia, mood disorder, and comorbid substance use disorder; and had absent insight and high perceived coercion. Absconding patients had the tendency to harm themselves and wander away from home.

**Key words:** *Absconding, guidelines, India, inpatients, psychiatry*

**Key message:** *a) Patients absconding from psychiatric hospitals pose a serious mental health concern. b) Absconding patients with mental illness had the tendency to harm themselves and wander away from home. c) There is a need to adopt a uniform guideline and legal provision across the country to deal with the absconding persons with mental illness.*

| Access this article online | |
|---|---|
| **Website:** www.ijpm.info | Quick Response Code |
| **DOI:** 10.4103/IJPSYM.IJPSYM_188_18 | |



**How to cite this article:** Gowda GS, Thamby A, Basavaraju V, Nataraja R, Kumar CN, Math SB. Prevalence and clinical and coercion characteristics of patients who abscond during inpatient care from psychiatric hospital. Indian J Psychol Med 2019;41:144-9.

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## INTRODUCTION

Absconding from psychiatric hospitals poses a serious concern for the safety of patients and public alike. Absconding of a person with mental illness from the hospital is associated with an increased risk for suicide, self-harm, homicide, and becoming "missing" from society. Absconding rates in psychiatric care are 5.58 patients/100 admissions in India, 4.28 patients/100 admissions in Ireland, 8.92 patients/100 admissions in the United States of America (USA), and 6.28 patients/100 admissions in the United Kingdom (UK).[1] It is interesting to note that the rates reduce when forensic cases are excluded in case of USA but not so in case of UK.[1] As expected, a systematic review found the absconding rates to be substantially lower for locked wards (1.34/100 admissions) compared to open wards (7.96/100 admissions). The trend remained similar even when event-based rates, i.e., events of absconding per 100 beds or 100 admissions, were calculated.[1] The rates of absconding have been found to be different across various parts of the world. It may because of reasons such as lack of operational definition of "absconding," type of security measures, type of hospital care, presence of forensic patients, legal measures, and multiple other factors. Repeated absconders contributed to a large number of incidents, with a few studies reporting absconding rates around 50%.[2-4] Repeated absconders were more likely to be detained under the mental health act of the country, to be from a younger age group, to have a shorter duration of stay, to be of male sex, and to have a primary diagnosis of psychosis.[2,3,5-8]

A few studies have evaluated the antecedents leading to escape, according to hospital records and interview with nursing staff. Moore's study classified absconders as "opportunity takers" and "opportunity makers." The former made an attempt to escape when an opportunity arose and had reported thoughts regarding absconding in the preceding few weeks, whereas the latter had planned their escape out.[9] Most common reasons identified in 210 absconding incidents were treatment failure, family issues, alcohol, finances, and influence of other patients.[2] Medication non-compliance in the preceding 2 days was a predictor for escape in a case comparison study.[10] Overall, the impression is that opportunistic absconders signal their intentions much before the actual escape.[1]

There have been four studies in the past from India looking into the above issue, but two out of the four studies were conducted in the same settings as the current study, about three decades ago. The first study, which was done in 1977 at a general hospital psychiatry unit (GHPU), found the absconding rate to be 11.6 per 100 admissions. The study did not find a significant difference between mentally ill and medically ill absconders.[11] The first study from our study settings, done in 1980, found that the annual incidence of absconding was 3.3% ($n$ = 128).[12] The predictors of escape were being in the age group of 30 years or less, men, voluntary patients, and suffering from schizophrenia or mania. However, all absconders were traced out later.[13] The second study was done about a decade later and found overall rates of absconding at 1.85 per 100 admissions.[14] However, more cases of absconding were being reported from open wards compared to closed wards as detected in the earlier study.[11-14] The predictors of escape were also similar, with male gender and age less than 40 years predicting absconding from the ward.[13] The latest study, in 2008, from a GHPU, also found high rates of absconding as the previous study from a GHPU. Of the 231 admitted patients, 14.28% patients had absconded. The study also found the highest risk of absconding in the initial days of admission, and the absconders were more likely to have bipolar mania.[15]

In the above background, we aimed to study the socio-demographic, clinical profile, coercion profiles, and outcome of patients who absconded from a tertiary psychiatric hospital in south India.

## METHODOLOGY

### Study population

The study was carried out at the Department of Psychiatry, National Institute of Mental Health and Neuro Sciences (NIMHANS), Bengaluru. For the purpose of this paper, data were derived from a larger study that looked into the patient, family, and clinician perspectives on admission, treatment, and coercive experiences during psychiatric inpatient care. This is a review of the current status of absconding patients out of 200 admitted patients. These patients were recruited between June 2013 and September 2014.

Each day, maximum of 2 inpatients out of all psychiatric admission using computer generated random number sampling and who are aged 18 years and above were approached to participate in the study. Patients affected by mental retardation, organic brain syndromes, delirium, dementia, developmental disorders, or antisocial personality disorder were excluded. Patients' written consent was obtained, in accordance with the ethical approval obtained for the study, after a comprehensive description of the study at the time of admission. The insight was graded as full, partial, or no insight, on the basis of awareness, attribution and acceptance about illness, and willingness to take treatment. The clinical and coercion (using McArthur

Admission Experiences Survey)[16] assessments were done for all admitted patients at the time of admission, details of the assessments are published elsewhere.[17,18] Through a telephonic survey, we took separate oral informed consent and looked into the outcome of 9 absconded patients.

In this paper, we aimed to determine the socio-demographic, clinical, and coercion-related characteristics of the absconded patients who were admitted to the inpatient psychiatric facility. We included all the wards except two closed wards, which also has forensic wards, where patients referred from the legal system are admitted. Patients admitted to these open wards are either voluntary boarders or admission under special circumstances with a family member who also takes part in treatment decisions and therapeutic process. These wards are open wards with security guards posted at the main gates. Patients are allowed to go outside accompanied by an attendant. As per standardized operating procedure (SOP) of the institute, "Absconding" is defined as "patients being absent from the hospital ward without official permission for a period of more than 24 hours." In addition, those who have not informed either caretaker or the in charge hospital staff and are not available for any mode of telecommunication were also considered as "absconding." When patient absconded from the ward, we counseled the family members, issued a missing letter from the institute, and assisted the family in lodging the missing complaint in the nearest police station as the SOP of the institute. The families were informed about the need for continuation of inpatient care if the patient is found and continued to be a risk to self or others, to be a threat to the public or private party, or if they are found to have an inability to take care of self.

### Ethical considerations

The study was approved by the Institutional Ethics Committee, NIMHANS, Bengaluru.

### Statistical analysis

Statistical analysis was performed using the level of statistical significance of $P < 0.05$. Socio-demographic characteristics of the sample were analyzed by descriptive statistics. The Chi-square test was used to assess discrete variables.

## RESULTS

A total of 200 admitted patients were selected between June 2013 and September 2014. Out of these, 15 (7.5%) absconded from the hospital. Family members traced 6 patients within the next 24 h of absconding, and the inpatient care was continued. To the families of the remaining 9 (4.5%) patients, we issued a missing letter from the institute and assisted them in lodging the missing complaint. The patients were discharged as absconding case entry, which is described in Figure 1.

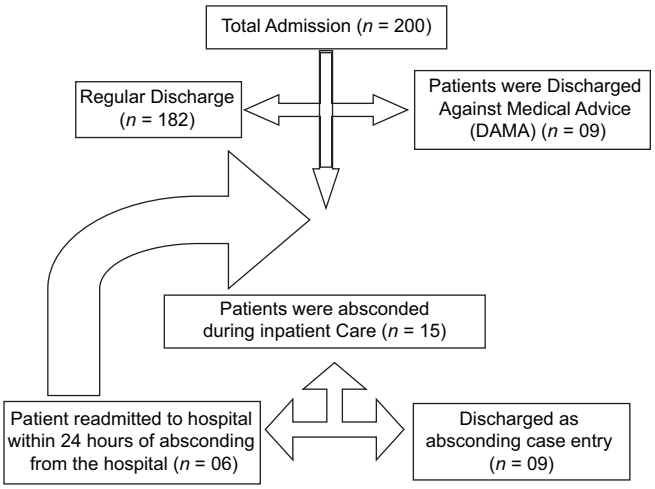


**Figure 1:** Discharge process in the hospital

Of 9 (4.5%) patients who were discharged as absconding case entry, 7 patients were male, single, and from a nuclear family and belonged to the below poverty line category. The mean age was 29.0 years, mean years of education was 9.5, the mean duration of inpatient care was 11.22 days, and mean Clinical Global Impression – Severity (CGI –S) score at admission was 5.75. Eight of them were admitted as "involuntary admission" (admission under special circumstance) with a request letter from caregivers. Mean duration of inpatient care among the absconded was 11.2 days, compared to 21.2 days in the overall sample.

After admission, 8 patients had expressed their unwillingness to stay as inpatients. Five patients had a psychotic spectrum disorder, 3 patients had a bipolar manic episode, and one patient had cannabis dependence syndrome. Three patients had comorbid alcohol dependence syndrome, 4 patients had comorbid nicotine dependence syndrome, and 1 patient had comorbid cannabis dependence syndrome.

None of the patients had insight into the illness at the time of admission, and 8 of the patients felt subjective coercive experiences at admission in most domains, such as 8 patients felt admitted against their will, 8 patients felt treated against their will, 6 patients felt they were sedated, 6 patients felt they were isolated, 6 patients felt they were restricted in interpersonal contact, 6 patients felt that their autonomy was taken away, 6 patients felt they were heavily medicated, and 6 patients felt there was a loss of dignity. Mean (± SD) score at admission on MPCS was 4.58 (±1.44) and on MacArthur Negative Pressure Scale was 2.7 (±1.6).

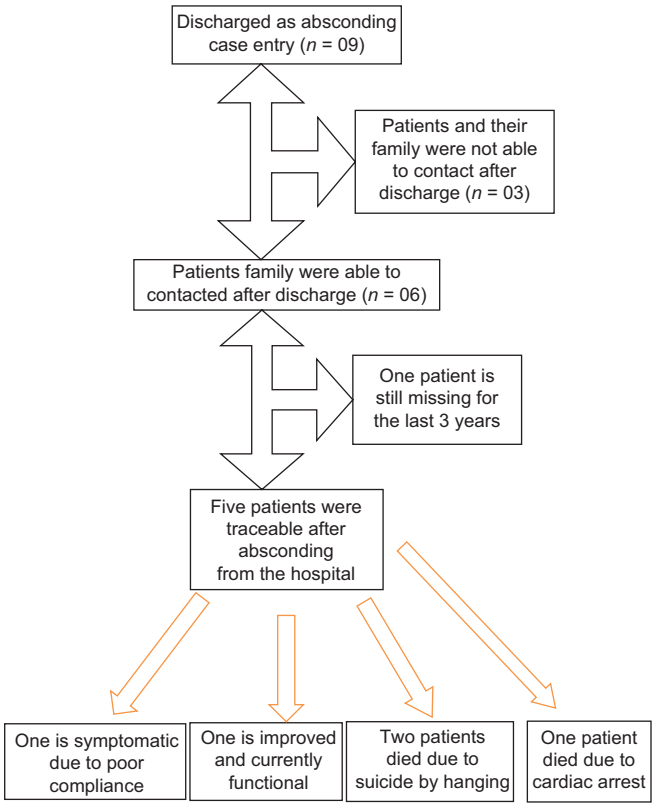


**Figure 2:** Outcome of nine patients who absconded from the open ward

We reviewed the file and contacted the families of the 9 absconded patients. Figure 2 describes the outcome of the absconded patients. Mean duration to contact the patient after absconding was 3.8 (±5.7) days. Among 6 patients, whose families we were able to contact after the discharge, 5 patients had reached home: 4 patients by themselves and 1 patient through a relative. One patient is missing till date. Two patients were readmitted after reaching home, and rest 3 patients did not take further treatment. Three patients died over 4 years: 2 patients by hanging themselves (one by acting out on hallucination and another because of the felt stigma related to the psychiatric illness).

## DISCUSSION

The absconding rate was 4.5 incidents per 100 admissions. This rate is high compared to previous studies from the same setting, where the rate was 3.3% in 1980[12] and 1.85% in 1977–87,[14] and low compared to the overall rate of 5.58% in India.[1] Worldwide, the rate of absconding ranges from 4.28% to 8.92%, with a mean of 7.96% in open psychiatric settings. We do not have data on absconding rates in locked wards to compare with the worldwide prevalence rate of 1.34%.[1,11-14]

In our study, the majority of absconded patients were male, single, from a nuclear family, and belonging to below poverty line. These findings are in line with past studies of absconding patients in a psychiatric setup.[1] With regard to diagnosis, in our sample, absconders had severe mental illnesses such as schizophrenia, psychosis, bipolar disorder, and comorbid substance use. At the time of admission, they were severely ill as per CGI –S scale and were admitted involuntarily. This finding is also supported by previous descriptive and case-control studies, which found psychotic illness to be a common factor predicting absconding.[2,10,19,20]A few studies have also found increased rates of affective illness, substance use, and personality disorders.[6,21,22] Most studies have been able to demonstrate an increased prevalence of involuntary patients among absconders,[3,7,20,23] which supports our findings. However, a case-control study could not demonstrate the above finding and instead suggested that the absconding incidents might be more officially reported among involuntary patients than the voluntary ones.[10]

Mean duration of inpatient care among the absconded was 11.2 days, compared to 21.2 days in the overall sample.[24] This finding is also in line with previous studies that absconder's escape relatively early during the inpatient stay has been a consistent finding.[3,25,26] Other studies evaluating the above question using patient interviews found domestic factors more implicated in the reasons for absconding. Most frequent reason reported by the absconded patient was the need to take care of family and children, to return to work, and other domestic issues.[27,28] This is further supported by the fact that most of them went home after absconding.[20,23] It is unclear to us whether similar issues would have been the reasons behind the absconding of our patients.

One of the most important aspects of studying these questions is the safety of the absconded patients and the public as a whole. As per the available information of 6 absconded patients, 2 patients completed suicide by hanging themselves, and one patient is still missing for the last 3 years. Hence, patients who had absconded were potentially dangerous to self, than to others, in our sample. Such a risk was observed in 50% of the absconded patients in comparison with 20% risk in other studies, where the risks were described as substance abuse, attempted suicide, aggression toward family, and wandering behavior.[19,28,29]

Absconding of psychiatric patients from the hospital can be prevented by identifying the high-risk population who are prone for absconding, such as patients admitted involuntarily, not willing to stay, having absent insight, with comorbid substance use disorder, early part of

admission, and providing a one to one observation and care to patients in the ward. Other measures include establishing strong cohesive therapeutic relationships with patients, patient-centered care, use of least coercive settings, and minimization of restrictive environments. Hospital staff should make patients relatives aware and educate about the problem, keep the patients in close observation, patient centered care and monitoring of patients who are at a high risk of absconding, and also facilitate in bringing patients back to the hospital if a patient absconds.[15]

Educating the relatives (and the patients) about the consequences of absconding could be crucial in reducing the absconding rates. Patients' relatives should be made aware of their crucial role in bringing patients back. The nursing staff and social workers has a key role in this psychoeducation. This can be facilitated by appointing a "psychiatric nurse" or "Social Worker" to work closely with the family toward the patient care.

Appointing a "psychiatric nurse" or "Social Worker" does not involve significant resources but rather a change in thinking. Such this approach will not only help to reduce absconding but improve the overall quality of patient care and reduce the medico–legal issues.

### Absconding during inpatient care, legal relevance, and mental health law

As we have seen, the open wards with least restrictive alternative treatment and settings are associated with higher rates of absconding than locked ward or seclusive facility. However, new Mental Health Care Act – 2017 (MHCA) advocates care in the least restrictive settings and banned the seclusive care.[30] This may inturn increase absconding rates in the hospital settings. The MHCA-2017, sec-100, made it mandatory for officer-in-charge of the local police station to make a First Information Report (FIR) of missing person/ wandering patients and to take him to nearest public health establishment.

## CONCLUSION

The absconding rate is less in our study compared to the rest of the world. Patients who are admitted involuntarily, males, of low socio-economic status, diagnosed with schizophrenia or mood disorder and comorbid substance use disorder, and having absent insight and higher perceived coercion are associated with absconding from the hospital. Hence, the use of frequent assessment, vigilance, least coercive treatments, and alternatives may improve the outcome. Absconding was also a risk for completed suicide and wandering behavior. There is a need to adopt a uniform guideline across the country to deal with the absconding persons with mental illness so that the safety of the person with mental illness, family members, and society at large is ensured.

### Financial support and sponsorship

Nil.

### Conflict of interest

There are no conflicts of interest.

## REFERENCES

1. Stewart Duncan BL. Absconding from psychiatric hospitals : Aliterature review. Inst Psychiatry, Maudsley 2010;5:3.
2. Muller DJ. The "missing" patient. A survey of 210 instances of absconding in a mental hospital. Br Med J 1962;1:177-9.
3. Short J. Characteristics of absconders from acute admission wards. J Forensic Psychiatry 1995;6:277-84.
4. Molnar G, Pinchoff DM. Factors in patient elopements from an urban state hospital and strategies for prevention. Hosp Community Psychiatry 1993;44:791-2.
5. Chandrasena R, Miller WC. Discharges AMA and AWOL: A new "revolving door syndrome". Psychiatr J Univ Ott 1988;13:154-7.
6. Kleis LS, Stout CE. The high-risk patient: A profile of acute care psychiatric patients who leave without discharge. Psychiatr Hosp 1991;22:153-9.
7. Falkowski J, Watts V, Falkowski W, Dean T. Patients leaving hospital without the knowledge or permission of staff–absconding. Br J Psychiatry 1990;156:488-90.
8. Lange P. Elopement from the open psychiatric unit: A two-year study. J Nerv Ment Dis 1967;144:297-304.
9. Moore E. A descriptive analysis of incidents of absconding and escape from the English high-security hospitals, 1989–94. J Forensic Psychiatry 2000;11:344-58.
10. Bowers L, Jarrett M, Clark N, Kiyimba F, McFarlane L. Determinants of absconding by patients on acute psychiatric wards. J Adv Nurs 2000;32:644-9.
11. Lal N, Sethi BB, Manchandra R, Sinha PK. A study of personality and related factors in absconders in a psychiatric hosptial. Indian J Psychiatry 1977;19:51-16.
12. John CJ, Gangadhar BN, Channabasavanna SM. Phenomenology of "escape" from a mental hospital in India. Indian J Psychiatry 1980;22:247-50.
13. Gangadhar B, John C, Channabasavanna S. Factors influencing early return of escapees from a mental hospital. Int J Soc Psychiatry 1981;27:317-20.
14. Mubarak Ali R, Shekar K, Kazi A, Kavitha MA, Shariff IA. Escape from a Mental Hospital-Comparison of Escaped Patients during 1977 and 1987. Nimhans J 1989;7:123-6.
15. Khisty N, Raval N, Dhadphale M, Kale K, Javadekar A. A prospective study of patients absconding from a general hospital psychiatry unit in a developing country. J Psychiatr Ment Health Nurs 2008;15:458-64.
16. Gardner W, Lidz CW, Hoge SK, Monahan J, Eisenberg MM, Bennett NS, *et al.* Patients' revisions of their beliefs about the need for hospitalization. Am. J. Psychiatry 1999;156:1385-91.
17. Gowda GS, Noorthoorn EO, Kumar CN, Nanjegowda RB, Math SB. Clinical correlates and predictors of perceived coercion among psychiatric inpatients: A prospective pilot study. Asian J Psychiatr 2016;22:34-40.
18. Gowda GS, Kondapuram N, Kumar CN, Math SB. Involuntary

admission and treatment experiences of persons with schizophrenia: Implication for the Mental Health Care Bill 2016. Asian J Psychiatr 2017;29:3-7.
19. Dolan M, Snowden P. Escapes from a medium secure unit. J Forensic Psychiatry 1994;5:275-86.
20. Tomison AR. Characteristics of psychiatric hospital absconders. Br J Psychiatry 1989;154:368-71.
21. Raynes AE, Patch VD. Distinguishing features of patients who discharge themselves from psychiatric ward. Compr Psychiatry 1971;12:473-9.
22. Nussbaum D, Lang M, Chan B, Riviere R. Characterization of elopers during remand: Can they be predicted? The METFORS experience. Am J Forensic Psychol 1994;12:17-37.
23. Dickens GL, Campbell J. Absconding of patients from an independent UK psychiatric hospital: a 3-year retrospective analysis of events and characteristics of absconders. J Psychiatr Ment Health Nurs 2001;8:543-50.
24. Gowda GS, Lepping P, Noorthoorn EO, Ali SF, Kumar CN, Raveesh BN, *et al.* Restraint prevalence and perceived coercion among psychiatric inpatients from South India: A prospective study. Asian J Psychiatr 2018;36:10-6.
25. Molnar G, Keitner L, Swindall L. Medicolegal Problems of Elopement from Psychiatric Units. J Forensic Sci 1985;30:10963J.
26. Meehan T, Morrison P, McDougall S. Absconding behaviour: An exploratory investigation in an acute inpatient unit. Aust N Z J Psychiatry 1999;33:533-7.
27. Kernodle RW. Nonmedical leaves from a mental hospital. Psychiatry 1966;29:25-41.
28. Bowers L, Jarrett M, Clark N, Kiyimba F, McFarlane L. Absconding: Why patients leave. J Psychiatr Ment Health Nurs 1999;6:199-205.
29. Milner G. The absconder. Compr Psychiatry 1966;7:147-51.
30. The Mental Health Care Act, 2017 – Ministry of Health& Family Welfare Department, Govt. of India. Retrieved from: http://www.prsindia.org/uploads/media/Mental%20Health/Mental%20Healthcare%20Act,%202017.pdf. [Last accessed on 2018 Apr 28].

# Original Article

# How does India Decide Insanity Pleas? A Review of High Court Judgments in the Past Decade

**Parthasarathy Ramamurthy, Vijay Chathoth, Pradeep Thilakan**

ABSTRACT

**Background:** The Section 84 of the Indian Penal Code (IPC) describes how Indian courts have to deal with 'the act of an unsound person'. This study was undertaken with the objectives of estimating the success rate of insanity pleas in Indian High Courts and determining the factors associated with the outcome of such insanity pleas. **Materials and Methods:** The data was collected from the websites of 23 High Courts of India using the keywords 'insanity' and 'mental illness', and the judgments delivered between 1.1.2007 and 31.08.17 were retrieved. Information regarding the nature of the crime, diagnosis provided by the psychiatrist as an expert witness, documents used to prove mental illness, and the judgment pronounced by the High Court were retrieved. **Results:** A total of 102 cases were retrieved from 13 High Courts for which data was available. Out of the 102 cases examined, the High Court convicted the accused in 76 cases (74.50%), thereby rejecting the insanity defense. The High Court acquitted the accused under section 84 IPC in 18 cases (17.65%), thereby accepting the insanity plea raised by the accused. Chi-square tests of independence revealed that the verdict of the lower court, documentary evidence of mental illness prior to the crime, and the psychiatrist's opinion were associated with the success of insanity pleas. **Conclusion:** Insanity pleas had a success rate of about 17% in Indian High Courts in the past decade. The factors associated with success of insanity pleas provide valuable guidance to several stakeholders who are dealing with mentally ill offenders.

**Key words:** *Criminal liability, insanity defence, McNaughton's rules, mens rea*
**Key message:** *a) The success rate of insanity pleas in Indian High Courts was a modest 17%. b) Lower court verdict, documentary proof of mental illness and psychiatrist's opinion were associated with the success of insanity pleas.*

## INTRODUCTION

The plea of insanity as a defense in criminal cases has a long and fascinating history. The introduction of McNaughton's rules in 1843 was a watershed moment in the history of the insanity defense. Despite criticisms leveled against McNaughton's rules as a 'test of knowing', and the undue stress it places on the intellectual dimension rather than the moral or affective dimensions, it continues to enjoy widespread usage.[1] Irresistible impulse test, Durham rule, and the American Law Institute's model

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| **DOI:** 10.4103/IJPSYM.IJPSYM_373_18 | |



**How to cite this article:** Ramamurthy P, Chathoth V, Thilakan P. How does india decide insanity pleas? A review of high court judgments in the past decade. Indian J Psychol Med 2019;41:150-4.

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penal code have been proposed in the subsequent decades to address the shortcomings of the McNaughton's rule.[1,2]

In India, Section 84 of Indian Penal Code (IPC) deals with the act of a person of unsound mind. This Section 84 of IPC was heavily influenced by McNaughton's rules, and there is no other provision for an insanity defense in Indian courts.[3]

The meaning and scope of each phrase of Section 84 IPC have been extensively described with illustrative examples by several authors.[4,5] The concepts of medical versus legal insanity, the burden of proof in insanity cases, and the role of psychiatrists in insanity pleas have been well described.[6] However, questions regarding the outcome of insanity pleas in India and the factors associated with the outcome of such pleas have largely remained unanswered. The present study was conducted to estimate the success rate of insanity pleas in Indian High Courts and to determine the factors associated with the outcome of such insanity pleas.

## MATERIALS AND METHODS

The data was collected from the websites of 23 High Courts of India from the official link http://indiancourts.nic.in/. The information was collected only from those High Courts which offered an option of free text search in their websites. The websites were searched using the keywords 'mental illness' and 'insanity', and the judgments delivered between 1.1.2007 and 31.08.17 were retrieved. Judgments delivered for criminal cases were reviewed in detail to check of its eligibility for inclusion in this study. All judgments where the perpetrator was alleged to have mental illness, and insanity defense was raised were included. Only the final judgments were included. Interim orders and bail appeals were excluded from this study.

A semi-structured pro forma was used to gather details regarding the nature of the crime, diagnosis provided by the psychiatrist as an expert witness, documents used to prove mental illness, and the judgment pronounced by the High Court. In addition, information pertaining to the gender of the accused, the relationship of the victim to the accused, the duration between the crime and the psychiatric evaluation, and the duration between the crime and the judgment were also retrieved.

### Statistical analysis

Statistical analysis was done using Statistical Package for Social Sciences (SPSS) version 20 (IBM Corp, Armonk, NY, USA). Categorical data were summarized in terms of frequencies and percentages. The verdict of the lower court, availability of documentary evidence of mental illness in the accused prior to the crime, and psychiatrists' opinion were considered to be factors that could influence the decision of the High Court. Chi-square test of independence and Fisher's exact test were performed between each of the above factors and the verdict of the High Court to assess the relationship between these variables.

## RESULTS

Out of the 23 High Courts in India, data was available for recovery from the websites of 13 High Courts. The information about a total of 102 cases which fulfilled the inclusion criteria were retrieved for detailed analysis. Kerala (31), Madras (15) and Himachal Pradesh (20) High Courts contributed 66 out of the 102 cases (approximately 65%), retrieved for evaluation. Rajasthan and Karnataka High Courts contributed nine cases each. Madhya Pradesh (Seven cases), Delhi (Five cases), Punjab (Three cases), Chhattisgarh (Two cases) and Andhra Pradesh (One case) contributed the remaining 18 cases (17% of the cases). No cases in the Hyderabad, Jammu and Kashmir or Orissa High Courts were retrieved in which the insanity plea was raised in the preceding ten years. The option of free text search for judgments was not available for Allahabad, Bombay, Calcutta, Gauhati, Gujarat, Jharkhand, Manipur, Meghalaya, Sikkim, and Uttarakhand High Courts.

### Nature of crime

The most common crime in which an insanity plea was raised was murder, which amounted to 78 out of 102 cases (76.50%). It is pertinent at this point to note that in most cases, the accused was tried under several sections of IPC. For example, in a vast majority of cases in which the appellant was accused of murder, he or she was also accused of additional crimes like an attempt to murder, trespass, criminal intimidation, or voluntarily causing hurt using dangerous weapons. The highest crime for which the accused was put on trial is tabulated in [Table 1].

### Nature of the cases

Among the 102 cases, 92 (90.20%) were appeals against conviction where the accused had approached the High Court challenging the verdict of conviction by the Sessions Court. The remaining 10 cases (9.80%) were appeals against acquittal where the High Court was approached by the State challenging the order of acquittal by the Sessions Court. The median duration between the crime and the High Court judgment was 106 months (Interquartile range: 67), with a minimum of 22 months and a maximum of 422 months.

### Relationship of victim to the accused

Among the 102 cases studied, the victim was the spouse of the accused in 22 cases (21.57%) and a first degree

relative in another 22 cases (21.57%). The relationship of the victim to the accused is depicted in [Table 2]. The accused was male in 98 (96.07%) cases and female in the remaining four cases (3.92%).

### Psychiatrist's opinion

Among the 102 cases analyzed, psychiatric opinion was not obtained for 26 cases (25.49%), even though the insanity plea was raised by the defendant. Details were not clear about this aspect for nine cases (8.82%). In the remaining 67 cases, the psychiatrist testified that the accused has some form of mental illness in 61 cases and there was no mental illness in six cases. The most common diagnosis provided by the psychiatrist, as an expert witness was schizophrenia and other psychotic disorders (42 cases, [Table 3])

Among the 67 cases where the psychiatrist was called as an expert witness, in 32 cases the psychiatrist had treated the patient prior to the crime. The duration between the previous visit to the psychiatrist and the date of the crime varied between one day and 60 months, with a mean of 14.7 months (SD 18.8).

In 41 of the 67 cases, the psychiatrist first saw the patient only after the crime and after varying intervals. The duration between the crime and the psychiatric evaluation varied widely between one day after the crime and 2555 days after the crime, with a mean duration of 275.2 days (SD 469.7).

### High Court verdict

Out of the 102 cases examined, the High Court convicted the accused in 76 cases (74.50%), thereby rejecting the insanity defense. The High Court acquitted the accused under section 84 IPC in 18 cases (17.65%), thereby accepting the insanity plea raised by the accused. There were four cases (3.92%), in which the accused was acquitted due to lack of evidence and another four cases (3.92%), in which the trial was vitiated as the lower courts did not follow the due procedure.

### Factors associated with High Court verdict

The data was analyzed further to check for the association of the gender of the accused, the decision of the lower court, availability of psychiatrist's opinion, psychiatric diagnosis, and also the availability of documentary evidence of mental illness prior to the crime with the final verdict delivered by the High Court. Those cases where the trial was vitiated (four cases), or the accused was acquitted due to lack of evidence (four cases) were excluded from this analysis.

Among the 94 cases, the accused was male in 90 cases and female in four cases. Among the 90 males, 16 were acquitted due to insanity. Among the four females, two were acquitted due to insanity. These different numbers with respect to the gender of the accused on the High Court verdict cannot be commented upon, as males vastly outnumbered females.

**Table 1: Nature of crimes for which insanity plea was raised in Indian High Courts in the last ten years**

| Nature of crime | Number of cases (%) |
|---|---|
| Murder | 78 (76.47) |
| Rape | 5 (4.90) |
| Attempt to murder | 4 (3.92) |
| Murder and attempted suicide | 2 (1.96) |
| Culpable homicide not amounting to murder | 2 (1.96) |
| Voluntarily causing grievous hurt using dangerous weapons or means | 2 (1.96) |
| Assault on a woman with intent to outrage her modesty | 1 (0.98) |
| House-trespass; Criminal intimidation | 1 (0.98) |
| Mischief by fire with intent to destroy house; Obscene acts in public | 1 (0.98) |
| Rash driving on a public way; Causing hurt by act endangering personal safety of others | 1 (0.98) |
| Impersonation and forgery; Cheating | 1 (0.98) |
| Cheating and dishonestly inducing delivery of property | 1 (0.98) |
| Falsification of records; Misappropriation of funds | 1 (0.98) |
| Bribing the presiding officer of the court | 1 (0.98) |
| Cheque dishonored due to an insufficiency of funds | 1 (0.98) |
| Total number of cases | 102 (100) |

**Table 2: Relationship of victim to the accused in cases where insanity pleas were raised in Indian High Courts in the past ten years**

| Relationship of victim to the accused | Number of cases (%) |
|---|---|
| Spouse | 22 (21.57) |
| Parent | 13 (12.75) |
| Child | 6 (5.88) |
| Sibling | 3 (2.94) |
| Second-degree relative | 14 (13.73) |
| Employer/superior | 2 (1.96) |
| No relation | 34 (33.33) |
| Not applicable | 4 (3.92) |
| Details not available | 4 (3.92) |
| Total | 102 (100) |

**Table 3: Diagnosis given by the psychiatrist in cases where insanity plea was raised in Indian High Courts in the past ten years**

| Diagnosis | Number of cases (%) |
|---|---|
| Schizophrenia and other psychotic illnesses | 43 (42.16) |
| Bipolar disorder/Mania | 7 (6.86) |
| Depression | 7 (6.86) |
| Organic psychosis | 2 (1.96) |
| Epilepsy | 2 (1.96) |
| No mental illness | 6 (5.88) |
| Not obtained | 26 (25.49) |
| Details not available | 9 (8.82) |

Chi-square test of independence was performed to examine the relation between the verdict of the lower court and the verdict of the High Court. The relation between these variables was significant, $X^2$ (1, $N$ = 94) = 22.098, $P$ < 0.001. It was found that those who were convicted by the lower court had a much higher probability of getting convicted by the High Court, and conversely, those who were acquitted by the lower court due to insanity had a much higher probability of getting acquitted due to insanity by the High Court [Table 4].

Similarly, a Chi-square test of independence was performed to examine the relation between documentary proof of mental illness prior to the crime and the verdict of the High Court. The relation between these variables was significant, $X^2$ (1, $N$ = 91) =6.349, $P$ - 0.012. In other words, those cases where there was a document to prove that the person was mentally ill prior to the crime had a higher probability of being acquitted due to insanity by the High Court. On the other hand, those cases with no document to prove that the accused was mentally ill prior to the crime had a lower probability of being acquitted due to insanity by the High Court [Table 4].

In those cases where psychiatrist's opinion was not obtained (in about 24 cases), or the psychiatrist reported that there was no mental illness in the accused (six cases), there was no verdict of acquittal under section 84 of IPC. Among the 56 cases where the psychiatrist reported of some form of mental illness in the accused, the accused was acquitted under section 84 of IPC in 16 cases. Fisher's exact test found that this relationship was significant $P$ 0.002 [Table 4].

**Table 4: Factors associated with the success of insanity pleas in Indian High Courts in the last ten years**

| Factors associated with the verdict of the High Court | Convicted by the High Court (Insanity plea rejected) | Acquitted by the High Court (Insanity plea accepted) | Total |
|---|---|---|---|
| Appeal against conviction | 74 | 11 | 85 |
| Appeal against acquittal | 2 | 7 | 9 |
| Documentary evidence available to prove mental illness prior to the crime | 26 | 11 | 37 |
| No documentary evidence to prove mental illness prior to the crime | 49 | 5 | 54 |
| Mental illness present according to psychiatrist opinion | 40 | 16 | 56 |
| No mental illness according to psychiatrist opinion | 6 | 0 | 6 |
| Psychiatrist opinion not obtained | 24 | 0 | 24 |

The role of the actual diagnosis on the outcome of the trial could not be meaningfully analyzed because of the limited number of cases under each category except for schizophrenia.

## DISCUSSION

The success rate of insanity pleas was found to be a modest 17.6%. The verdict of the lower court and the availability of documentary evidence of mental illness prior to the crime were associated with the decision of the High Court in cases where the insanity plea was raised. The opinion of the psychiatrist regarding the presence of mental illness in the accused was also noted to be associated with the success of insanity pleas.

In an eight-state study in the USA, it was found that 26% of insanity pleas were successful and the range varied widely between 7% and 87% in different states.[7] A national survey in the USA reported that the median success rate for insanity pleas was one acquittal for every 6.5 pleas (approximately 15%).[8] The 17.6% success rate of insanity plea found in our study is comparable to the above findings.

In the present study, the association of gender of the accused with the outcome of insanity pleas could not be analyzed as the vast majority of the accused was male. A previous report suggested that the success rate for females was higher during the insanity pleas.[9]

Predictably, this study found that the presence of documents proving mental illness prior to the crime was associated with a higher success rate of the insanity plea. A similar finding was reported in the USA, where defendants who had a history of prior hospitalizations for mental illness had a higher success rate of the insanity plea.[9] Another study conducted among inmates of a Canadian maximum security psychiatric institution found that the seriousness of the index offense, and the diagnosis were the most important determinants of insanity defense verdicts.[10] Similarly, in the current study, the psychiatrist's opinion regarding the presence of mental illness played a notable role in the outcome of insanity pleas.

### Implications

This study has important implications for several stakeholders in the field of mental health: For practicing psychiatrists, the present study highlights the importance of documentation in the case sheets, as it provides valuable documentary evidence in the

unfortunate event of criminal proceedings against a psychiatrically ill person. The findings of this study offer an opportunity to the expert witnesses to gain a better understanding of the legal scene of insanity plea in India and the importance of their opinion in the outcome of such pleas. Our results would be useful for practicing lawyers, as the factors found to influence the outcome of insanity defenses can guide the defense attorney.

### Limitations

The present study has its own share of limitations. The data from some of the High Courts were not reviewed due to lack of access. Furthermore, as the data was collected from the final judgments and not from the case transcripts, it is possible that the unique circumstances of the case and other decisive factors in the nature of evidence in the individual cases were overlooked.

### Future directions

It would be valuable to know how insanity pleas are decided by the Sessions Courts, where the trial occurs for the first time for the crime committed. In addition, understanding the decision-making process, by reviewing the court transcripts, would provide in-depth understanding and fresh insights on how Indian courts decide on the insanity pleas. Future work to answer a pertinent question as to how often insanity plea is raised in criminal cases in Indian courts should also be carried out.

## CONCLUSION

Insanity pleas had a success rate of about 17% in Indian High Courts in the past decade. The factors associated with success of insanity pleas provide valuable guidance to several stakeholders who are dealing with mentally ill offenders.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

## REFERENCES

1. Asokan TV. The insanity defense: Related issues. Indian J Psychiatry 2016;58(Suppl 2):S191-8.
2. Akhtar S, Jagawat T. Plea of insanity as a defense in criminal cases: An update. Indian J Psychiatry 1994;36:25-9.
3. S. 84, The Indian Penal Code 1960.
4. Vats M, Rajpal L. Legal dimensions with reference to insanity under section 84 of the Indian Penal Code. Int J Res Humanity Arts Lit 2017;5:59-70.
5. Upadhyay RK. Defence of insanity under Indian legal system: An analysis. Indian J Eng Manag Res 2017;7:711-7.
6. Math SB, Kumar CN, Moirangthem S. Insanity defense: Past, Present, and Future. Indian J Psychol Med 2015;37:381-7.
7. Callahan LA, Steadman HJ, McGreevy MA, Robbins PC. The volume and characteristics of insanity defense pleas: An eight-state study. Bull Am Acad Psychiatry Law 1991;19:331-8.
8. Pasewark R, McGinley H. Insanity plea: National survey of frequency and success. J Psychiatry Law 1986;13:101-8.
9. Cirincione C, Steadman HJ, McGreevy MA. Rates of insanity acquittals and the factors associated with successful insanity pleas. Bull Am Acad Psychiatry Law 1995;23:399-409.
10. Rice M, Harris G. The predictors of insanity acquittal. Int J Law Psychiatry 1990;13:217-24.

# Original Article

# Does Sociodemographic Background Determine the Responses to Ethical Dilemma Vignettes among Patients?

**Snehil Gupta, Siddharth Sarkar, Vaibhav Patil, Bichitrananda Patra**

ABSTRACT

**Background and Aims:** Patients are important stakeholders in the care process and may have different viewpoints on clinical disclosure, which may be influenced by their sociodemographic and cultural background. Hence, the aim of this study was to assess whether age, gender, employment status, educational status, and other sociodemographic variables of persons with mental illness influence their views about ethical issues in clinical care. **Materials and Methods:** The study was conducted at the Outpatient Department of a tertiary care mental health/de-addiction center in North India. Patients aged ≥18 years and currently in remission of their primary psychiatric illness were included. Using case vignettes, their responses to ethical issues related to clinical situations were assessed. **Results:** The study included a total of 160 participants. The younger age group less frequently agreed on disclosure of a man's Human Immunodeficiency Virus-positive status to other family members against his wishes. Women less frequently agreed on disclosure of marital strife to husbands' parents. Higher educational status was associated with a less frequent agreement to disclosure of a man's suicidal ideas to other family members, and those currently employed less frequently agreed to disclosure of marital strife of a female patient to her parents. **Conclusion:** Age, gender, education, and employment status might influence some of the responses to ethical dilemmas in the clinical setting. These factors may be considered while clinical decision-making faces ethical challenges.

**Key words:** *Confidentiality, ethics, mental health, patient, sociodemographics*

**Key message:** *Ethical issues in health-care are important concerns, but are infrequently discussed. This paper explores whether demographic factors have an influence on the way patients and their family members discern and resolve ethical conundrums.*

## CASE VIGNETTE

A 30-year-old married male presents to a psychiatrist with an illness of 4 months, characterized by persistent pervasive low mood, loss of interest in previously pleasurable activities, getting easily tired both physically and mentally, inability to sleep at night, not feeling

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| **DOI:** 10.4103/IJPSYM.IJPSYM_110_18 | |



**How to cite this article:** Gupta S, Sarkar S, Patil V, Patra B. Does sociodemographic background determine the responses to ethical dilemma vignettes among patients?. Indian J Psychol Med 2019;41:155-9.

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like taking food, forgetting things easily, and inability to focus on the task at hand. Later, he has also started thinking that he is a burden to his family and that he will not be able to overcome from his current situation and also has recurrent thoughts of ending his life, though he did not want his suicidal ideation to be revealed to his family members. Patient also requested the psychiatrist not to disclose his suicidal ideations to anyone. The family members, however, want to know the content of the discussion between the two. Should the psychiatrist disclose the patient's suicidal ideations to his family members in spite of the fact that the patient does not want the same?

## INTRODUCTION

Autonomy of an individual in society is usually culturally driven. When an individual comes in contact with the healthcare, his autonomy is influenced by his cultural heritage and society's perceptual framework of illness, well-being, and accepted treatment modalities.[1-3]

Ethical issues, especially those pertaining to confidentiality, can bring a health professional at the cross-road of dilemma particularly in situations which involve disclosure of a sensitive information like informing a patient about his life-threatening medical condition like malignancy or making a decision for a terminally ill patient like taking away his life-supporting measures or maintaining confidentiality while dealing with the patients with substance use and sexual problems, and mental illnesses.

Studies have shown that patients who believe that their privacy will be respected are more likely to seek treatment, discuss problems openly, and return for follow-up care.[4,5] It is interesting to note that physicians themselves may have differing opinions about how much information should be disclosed, to whom and when, particularly in the setting where a family is actively involved in the patient's care and have their own apprehensions regarding the patient's illness.[6] Patient perspectives on ethical dilemmas and confidentiality can provide stakeholders insight into what could be the right course of action in a given ethically dilemmatic situation. Patients themselves are also an important party to the care process along with the healthcare providers, policymakers, and the caregivers and may have different viewpoints about what is ethically correct in a particular situation, especially those involving confidentiality; hence, their views about ethical issues in medical care need attention.[7-9] However, patients themselves represent a heterogeneous population with varying sociodemographics and to understand whether selected demographic characteristics influence their thought process toward addressing clinical dilemmas would be helpful for clinicians to understand and anticipate their responses. In a previous work, we had highlighted patients' and caregivers' perspective on ethical issues in mental health care in terms of their agreement to the responses given for various ethical dilemma situations.[10] In this work, we aimed to assess whether the sociodemographic characteristics, such as, age, gender, education, occupational status, etc., of persons with mental illness influence their responses.

## MATERIALS AND METHODS

This study was conducted at the outpatient services of a tertiary care mental health/de-addiction center in North India. The hospital provides clinical services in the form of pharmacotherapy, psychotherapy, and rehabilitation. The study employed a sampling of convenience, and all the patients following up in the Psychiatry Outpatient Department (OPD) and fulfilling inclusion criteria of having age >18 years, in remission of their primary psychiatric condition, mostly mood or psychotic disorders, as assessed through clinical interview by a trained psychiatrist, and scoring less than eight on both Hamilton Depression Rating Scale (HAMD) and Young Mania Rating Scale (YMRS) and less than four in all the items of the Brief Psychiatric Rating Scale (BPRS), were included.[11-13] The participants were recruited after obtaining written informed consent. The study had approval from the Institute Ethics Committee.

The participants were presented with case vignettes. These vignettes were in the form of short sentences depicting clinical situations which require responding about whether a doctor should divulge sensitive information to spouse or family members or undertake coercive treatment. The vignettes, portraying six different ethically challenging situations in the Indian context, prepared after a discussion among the investigators, all of whom were psychiatrists (including two being assistant professors). The vignettes were presented in Hindi, and responses were sought in the form of yes/no. The interviews were conducted by qualified psychiatrists between February 2016 and January 2017.

Descriptive statistics were used for the demographic data. The responses of the participants to each of the vignettes (in the form of yes/no) were compared across various sociodemographic characteristics, using Chi-square test. A $P$ value of $<0.05$ was considered significant. The analysis was done using licensed SPSS software (version 21.0, IBM Corp., Armonk, New York, USA).[14]

## RESULTS

In total, 160 patients were included. They had a mean (± SD) age of 35.6 ± 11.3 years. Sociodemographic

characteristics of the sample are presented in Table 1. Ninety-three (58.1%) were males, 81 (50.6%) were educated above the tenth grade, 73 (46.6%) were employed, 89 (55.6%) belonged to a nuclear family, 126 (78.8%) had urban residence (two missing data for employment status and residence), and the median per capita income was 5,000 Indian National Rupees (INR) (interquartile range from INR 2,400 to INR 8,000). The primary diagnosis was anxiety spectrum disorders in 56 (35.0%), mood disorders in 44 (27.5%), substance use disorders in 41 (25.6%), and psychotic disorders in 19 (11.9%). Male gender was associated with the patient being employed (Spearman Rho = 0.528, $P < 0.001$), but gender was not associated with age or educational categories. Educational attainment did not have a statistically significant relationship with occupation status.

**Table 1: Socio demographic characteristics of patients**

| Variable | Mean (±SD) or median (IQR) or frequency (%) |
|---|---|
| Patients | |
| Age in years | 35.6 (±11.3) |
| Gender | |
| Male | 93 (58.1) |
| Female | 67 (41.9) |
| Education | |
| Up to 10th grade | 79 (49.4) |
| Above 10th grade | 81 (50.6) |
| Occupation# | |
| Employed | 73 (46.6) |
| Not employed | 85 (53.4) |
| Primary Diagnosis | |
| Anxiety disorder | 56 (35.0) |
| Mood disorders | 44 (27.5) |
| Substance use disorders | 41 (25.6) |
| Psychotic disorders | 19 (11.9) |
| Family type | |
| Nuclear | 89 (55.6) |
| Extended/Joint | 71 (44.4) |
| Residence‡ | |
| Urban | 126 (78.8) |
| Rural | 32 (21.2) |
| Per capita income† | 5,000 (5,600) |

SD – Standard deviation. †Indian Rupees per Month (1 US$=approximately 68 Indian Rupees currently). ‡2missing data. IQR: Interquartile range

The tabulation of various sociodemographic parameters across the response to case vignettes is shown in Tables 2 and 3. Significant differences emerged only for four of the comparisons. Only those variables have been tabulated whose dichotomized categories have shown at least one statistically significant association with the responses on the vignettes.

To summarize the results, it was observed that younger age group less frequently agreed on disclosure of a man's Human Immunodeficiency Virus (HIV)-positive status to other family members without his wishes ($\chi^2 = 4.690$, $P = 0.030$). Females less frequently agreed on disclosure of marital strife to husbands' parents when the wife was suffering from mild anxiety problems ($\chi^2 = 4.055$, $P = 0.044$). Participants who were unemployed, less frequently agreed on disclosure of marital strife to wife's parents when the wife was suffering from mild anxiety problems ($\chi^2 = 4.612$, $P = 0.032$). Higher education was associated with a less frequent agreement of disclosure of a man's suicidal ideas to other family members ($\chi^2 = 4.586$, $P = 0.034$). No statistically significant association was found between sociodemographic variables, such as age, gender, or

**Table 2: Responses in "yes" represented as *n* (%) to questions on clinical vignettes**

| Vignette | Age | | Gender | |
|---|---|---|---|---|
| | ≤35 years (*n*=86) | >35 years (*n*=74) | Male (*n*=93) | Female (*n*=67) |
| 1. Wife being told about suicidal ideas of a man without his consent | 82 (95.3) | 68 (91.9) | 88 (94.6) | 62 (92.5) |
| 2. Other family members being told about suicidal ideas of a man without his consent | 75 (87.2) | 66 (89.2) | 84 (90.3) | 57 (85.1) |
| 3. Admission of a patient with alcohol use disorder without his consent when brought by a family member | 65 (75.6) | 60 (81.1) | 71 (76.3) | 54 (80.6) |
| 4. Admission of a patient with unprovoked violence without his consent when brought by a family member | 78 (90.7) | 67 (90.5) | 84 (90.3) | 61 (91.0) |
| 5. Disclosure without consent of issues with husband to wife's parents when the wife is suffering from mild anxiety problems | 53 (61.6) | 51 (68.9) | 65 (69.9) | 39 (58.2) |
| 6. Disclosure without consent of issues with husband to husband's parents when the wife is suffering from mild anxiety problems | 53 (61.6) | 52 (70.3) | 67 (72.0) | 38 (56.7)* ($P = 0.044$) |
| 7. Disclosure without consent about a man's (who had been suffering from mild depression) extramarital affair to his parents | 59 (68.6) | 59 (79.7) | 64 (68.8) | 54 (80.6) |
| 8. Disclosure without consent about a man's (who had been suffering from mild depression) extramarital affair to his in-laws | 42 (48.8) | 46 (62.2) | 50 (53.8) | 38 (56.7) |
| 9. Disclosure without consent of a man's HIV-positive status to wife | 82 (95.3) | 72 (97.3) | 88 (94.6) | 66 (98.5) |
| 10. Disclosure without consent of a man's HIV-positive status to other family members | 58 (67.4) | 61 (82.4)* ($P = 0.030$) | 64 (68.8) | 55 (82.1) |

*Significant at $P<0.05$

**Table 3: Responses in "yes" represented as *n* (%) to questions on clinical vignettes**

| Vignette | Education | | Employment | |
|---|---|---|---|---|
| | ≤10th grade (*n*=79) | >10th grade (*n*=81) | Employed (*n*=73) | Not employed (*n*=85) |
| 1. Wife being told about suicidal ideas of a man without his consent | 76 (96.2) | 74 (91.4) | 70 (95.9) | 79 (92.9) |
| 2. Other family members being told about suicidal ideas of a man without his consent | 74 (93.7) | 67 (82.7)* (*P* = 0.032) | 67 (91.8) | 73 (85.9) |
| 3. Admission of a patient with alcohol use disorder without his consent when brought by a family member | 61 (77.2) | 64 (79.0) | 56 (76.7) | 68 (80.0) |
| 4. Admission of a patient with unprovoked violence without his consent when brought by a family member | 73 (92.4) | 72 (88.9) | 68 (93.2) | 76 (89.4) |
| 5. Disclosure without consent of issues with husband to wife's parents when the wife is suffering from mild anxiety problems | 55 (69.6) | 49 (60.5) | 54 (74) | 49 (57.6)* (*P* = 0.032) |
| 6. Disclosure without consent of issues with husband to husband's parents when the wife is suffering from mild anxiety problems | 54 (68.4) | 51 (63.0) | 53 (72.6) | 50 (58.8) |
| 7. Disclosure without consent about a man's (who had been suffering from mild depression) extramarital affair to his parents | 59 (74.7) | 59 (72.8) | 51 (69.9) | 65 (76.5) |
| 8. Disclosure without consent about a man's (who had been suffering from mild depression) extramarital affair to his in-laws | 49 (62.0) | 39 (48.1) | 39 (53.4) | 47 (55.3) |
| 9. Disclosure without consent of a man's HIV-positive status to wife | 76 (96.2) | 87 (107.4) | 70 (95.9) | 82 (96.5) |
| 10. Disclosure without consent of a man's HIV-positive status to other family members | 64 (81) | 55 (67.9) | 52 (71.2) | 65 (76.5) |

*Significant at $P<0.05$

educational and occupational status with the responses on the vignettes related to coercive admission for a person with alcohol use disorder, unprovoked violence, and revelation of a man's extra-marital affairs. Further, residence, family type, or per-capita income were not found to be associated with responses to any of the ethical case vignettes.

## DISCUSSION

The findings suggest that the responses of patients on various ethical dilemmas, especially those involving issue of confidentiality, are influenced by sociodemographic variables, such as age, gender, education, and employment status. Some differences in opinion were observed in the patients' responses, based on their age, gender, education, and employment status, in regard to disclosure of information relating to suicidal ideation, marital issues, and HIV status of a patient to his family members, though generally, responses did not differ across the groups.

Putting our findings in context, a previous study had shown that those with older age and from low sociodemographic status tended to be opposed to disclosure and patient decision making; on the contrary, their younger, wealthier, and more educated counterparts agreed the right of a patient to know about their medical status.[15] In this study, as compared with the older population, the younger participants did not agree on disclosure of HIV-positive status of a person by the psychiatrist to formers' family members. This finding is in consonance with another study conducted on Korean American and Mexican American populations, in which younger participants were more in favor of maintaining patients' autonomy than their older counterparts.[16] According to authors of the current study, the driving factor for younger participants' response favouring confidentiality could be their perceived stigma associated with HIV/AIDS and, hence not agreeing to disclose the HIV-positive status of the patient to family members, thereby respecting the right of autonomy of the patients, while for older participants, the response was primarily governed by the need of family member to know about the HIV-positive status of their family members, which is considered a severe condition, so that effective preventive and therapeutic actions could be taken. A previous study had shown that revelation of HIV positivity of an individual to his family members is not only governed by the stigma associated with it but also by a relative need of involvement of family member in the treatment of HIV/AIDS, which is considered a grave condition in various religious and conservative societies. That study observed that 81% of patients of Saudi Arabia (versus 37% patients from the United States) favored disclosing HIV-positive status of an individual in a hypothetical situation to a patient's family members even if a patient is not willing for the same, which the authors explained using the aforementioned psychological understanding.[9]

Women in the sample supported nondisclosure of a female patient's issues related to husband to her parents without her permission. One of the possible reasons for this finding could be that the women are probably not very comfortable in discussing their problems with her in-laws as compared to their own parents and also not sharing marital strife with the in-laws can be an attempt to maintain the harmony of the family, though this finding requires further corroborative research.

Those individuals who were employed, less frequently agreed on disclosure of marital strife in a female patient with mild anxiety disorder to her parents. This may represent that higher socioeconomical strata of the society prefer maintaining privacy regarding marital issues and to resolve things by themselves, a finding which warrants further research.

Our findings strengthen the literature related to ethics, especially in terms of a person's right to autonomy and maintenance of confidentiality in the context of the medical setting.

This study has some limitations which require the reader's discretion while interpreting the findings. These include a single tertiary care treatment setting, categorization of age and education to two singular groups, responses based upon hypothetical situations instead of the actual experience of the participants, and the limited number of ethical situations that could be addressed. Moreover, the vignettes were brief, and the questions were close-ended. Such an approach might have overlooked the nuances of thought-process that lead to a particular response in these clinical scenarios. Further, we did not assess the role of primary psychiatric illness in determining the responses to ethical dilemma vignettes.

## CONCLUSION

This paper assessed the relationship of patients' age, gender, and educational and employment status and their views about ethical dilemmas in the clinical setting. These selected sociodemographic characteristics may generally have a minimal role in determining the responses, though some clinical situations may be influenced by these characteristics. Further studies are required that might look into how sociodemographic characteristics might influence the actual decision making through in-depth qualitative inquiry. Studies should also be conducted to explore whether sociodemographic characteristics influence the opinions of the general population with regard to the ethical issues in the medical setting.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

## REFERENCES

1. Berger JT. Culture and ethnicity in clinical care. Arch Intern Med 1998;158:2085-90.
2. Elliott AC. Health care ethics: Cultural relativity of autonomy. J Transcult Nurs 2001;12:326-330.
3. Orr RD, Marshall PA, Osborn J. Cross-cultural considerations in clinical ethics consultations. Arch Fam Med 1995;4:159-64.
4. Ginsburg KR, Slap GB, Cnaan A, Forke CM, Balsley CM, Rouselle DM. Adolescents' perceptions of factors affecting their decisions to seek health care. JAMA 1995;273:1913-8.
5. Woods KM, McNamara JR. Confidentiality: Its effect on interviewee behaviour. Prof Psychol 1980;11:714-21.
6. Perez-Carceles M, Pereniguez J, Osuna E, Luna A. Balancing confidentiality and the information provided to families of patients in primary care. J Med Ethics 2005;31:531-5.
7. Carman D, Britten N. Confidentiality of medical records: The patient's perspective. Br J Gen Pract 1995;45:485-8.
8. Jenkins G, Merz J, Sankar P. A qualitative study of women's views on medical confidentiality. J Med Ethics 2005;31:499-504.
9. Mobeireek AF, Al-Kassimi F, Al-Zahrani K, Al-Shimemeri A, al-Damegh S, Al-Amoudi O, *et al*. Information disclosure and decision-making: The Middle East versus the Far East and the West. J Med Ethics 2008;34:225-9.
10. Sarkar S, Patra BN, Patil V, Gupta S, Mallanik S, Pandey A. Patient and caregiver perspectives on ethical issues in mental health care: An Exploratory Study from India. Int J Ment Health Addict 2018;16:714-21.
11. Young RC, Biggs JT, Ziegler VE, Meyer DA. A rating scale for mania: Reliability, validity and sensitivity. Br J Psychiatry 1978;133:429-35.
12. Hamilton M. A rating scale for depression. J Neurol Neurosurg Psychiatry 1960;23:56-62.
13. Overall JE, Gorham DR. The brief psychiatric rating scale. Psychol Rep 1962;10:790-812.
14. IBM Release Notes -- IBM SPSS Statistics 21.0-United States [Internet]. 2012. Available from: http://www-01.ibm.com/support/docview.wss?uid=swg27024941. [Last cited on 2016 Aug 26].
15. Blackhall LJ, Murphy ST, Frank G, Michel V, Azen S. Ethnicity and attitudes toward patient autonomy. JAMA 1995;274:820-5.
16. Weiss M. Explanatory model interview catalogue (EMIC): Framework for comparative study of illness. Transcult Psychiatry 1997;34:235-63.

# Original Article

# Geographical and Temporal Variation of Suicide in India, 2006–2015: An Investigation of Factors Associated with Suicide Risk Difference across States/Union Territories

**Parthasarathy Ramamurthy, Pradeep Thilakan**

ABSTRACT

**Background:** In India, about 130,000 people died by suicide in the year 2015. It is important to understand the variation of suicide across different parts of India and the trend of suicide rates over the years. The objectives of this study were to determine whether suicide rates in India showed temporal variation in the last decade and to determine whether suicide rates in India showed geographical variation across different states and union territories (UTs). **Methods:** Data on suicide rates for the years 2006–2015 were collected from the official publication of the National Crime Records Bureau. This study looked for time trend in suicide rates over the years. Further, the variation in suicide rates across different states/UTs in India and the factors associated with the variation were also analyzed. **Results:** The average suicide rate in India for the years 2006–2015 was 10.9/100,000 population. Overall, there was no significant variation in the suicide rate over time in the years studied. The average suicide rate varied widely across the states and UTs, between 0.91 and 43.92 per 100,000 population. The analysis revealed a positive association between suicide rates and accident rates for the above years. In addition, for the year 2011, a positive association between suicide rate and per capita state domestic product was noted. **Conclusion:** There was no variation in the suicide rate in India over time. However, there were significant regional differences. Reporting differences and economic factors could partially explain the differences.

**Key words:** *Deliberate self-harm, geographical variation, temporal variation*

## INTRODUCTION

Tragic tales of suicide are ubiquitous across the globe. As per the World Health Organization (WHO) estimates, suicide claims the lives of close to 800,000 people every year.[1] According to the WHO, low- and middle-income countries contributed to 78% of global suicide in 2015.

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| **Website:** www.ijpm.info | **Quick Response Code** |
| **DOI:** 10.4103/IJPSYM.IJPSYM_569_17 | |



**How to cite this article:** Ramamurthy P, Thilakan P. Geographical and temporal variation of suicide in India, 2006–2015: An investigation of factors associated with suicide risk difference across states/union territories. Indian J Psychol Med 2019;41:160-6.

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Suicide is the second leading cause of death among 15–29-year-olds globally.[1]

Wide variation in suicide rates across different geographical regions has been reported time and again from several countries.[2-5] Spatiotemporal variations of suicide rate have been described from several countries including Australia,[2] China,[3] Ireland,[4] and the European Union.[5] Without exception, all the reports described a wide variation in suicide rates across different countries and different regions within the same country. Misclassification as deaths due to undetermined causes,[5] socioeconomic deprivation,[2,4] low access to mental health services,[2] rurality,[3] social fragmentation,[4] and population density[4] were the key factors contributing to the variation of suicide rate across different geographical areas.

In India, about 130,000 people died by suicide in the year 2015 as per official statistics, thus contributing to >15% of global suicide deaths. Geographical variation of suicide has not been systematically studied in India.

This study was conducted with the objectives of determining whether suicide rates in India showed temporal variation in the last decade and whether suicide rates in India showed geographical variation across different states and union territories (UTs).

To address the above objectives, we relied on the data on suicide rate of different states and UTs published annually by the National Crime Records Bureau (NCRB) in the past 10 years.

## METHODS

Data regarding suicide rates for the 29 states and 7 UTs of India were gathered from the annual publication "Accidental Deaths and Suicides in India" by the NCRB for the years 2006–2015.[6-15] Rate of suicides has been calculated using mid-year projected population for the noncensus years, whereas for the census year 2011, the estimate of "The Population Census 2011" was used.

In India, the general public forwards the information about any unnatural death to the police. When the officer in charge of a police station receives information that a person has suffered an unnatural death, he/she proceeds to the place where the body of such deceased person is, makes an investigation, and draws up a report of the apparent cause of death. The above proceeding is called the "Inquest." After the conclusion of inquest, autopsy is conducted to determine the cause of death. When the investigation has been completed, the investigating officer draws up a report in a standardized format, in which the apparent cause of death is stated. The manner of death (accident/suicide/homicide) is decided based on composite information available from the examination of the scene, the collection of trace evidence, circumstantial evidence, and autopsy report.

The above information from the police stations is collated by the respective State Crime Records Bureaus. The NCRB collects and collates numerical data from State Crime Records Bureaus of all states/UTs using 24 standardized pro formas. Projected midyear population, as provided by the office of Registrar General of India/Population Commissioner, Ministry of Home Affairs, is used for calculation of suicide rate for states/UTs.

In our study, we collected and tabulated state-wise suicide rate for the 10 years 2006–2015. Age-specific suicide rates were not available for individual states and UTs. Hence, age-standardized suicide rates could not be calculated. The states with the highest and lowest average suicide rate for the past 10 years were compiled and studied.

Population density, per capita state domestic product, police strength, and misclassification of suicides as accidents were considered as possible factors that could contribute to the variability of suicide rate across different states and UTs.

Suicide rates for the different geographical regions of India were compiled and studied. The different geographical regions include North India, South India, East India, West India, Central India, and Northeast India.

The number of civil police for the year 2011 was available from the Union Government of India's Open Data Initiative https://data.gov.in.[16] Police strength per lakh population was calculated using the total number of civil police in each state divided by population of each state.

State domestic product is the total value of goods and services produced during any financial year within the geographical boundaries of a state. Per capita Net State Domestic Product for the year 2010–2011 was obtained from the publication of the Central Bureau of Health Intelligence titled "National Health Profile 2011."[17]

To check for possible misclassification of suicide, the accidental death rate for the years 2006–2015 was obtained from the annual publication "Accidental Deaths and Suicides in India" by the NCRB for the years 2006–2015.[6-15] An inverse relationship might suggest misclassification of suicide as accidents.

Statistical analysis was done using Statistical Package for Social Sciences (SPSS) version 20 (IBM Corp, Armonk, NY). The significance of the trend of suicide in India and each of the Indian states was analyzed using linear regression with time as the independent variable and suicide rate as the dependent variable.[18] Spearman's correlation analysis was done to check for the relationship between suicide rate and accident rate for the years 2006–2015. This assisted us in the detection of possible inverse relationships between suicide rate and accident rate for that particular year. Suicide rate 2011 was considered for evaluation of the role of population density, per capita state domestic product, and police strength on the variability of suicide rate across different states and UTs. The year 2011 was selected due to the availability and accuracy of data for that particular year. Spearman's correlation analysis was done to check for the relation between suicide rate 2011 and the above-mentioned factors.

## RESULTS

The mean suicide rate per 100,000 population for India for the years 2006–2015 was 10.9 (standard deviation – 0.30) [Figure 1]. The states/UTs with the highest average suicide rates for the years 2006–2015 were Puducherry, Sikkim, Andaman and Nicobar Islands, Kerala, and Chhattisgarh [Table 1]. The states with the lowest average suicide rates for the above years were Bihar, Nagaland, Manipur, Uttar Pradesh, and Jammu and Kashmir [Table 2].

To analyze the significance of time trend, a simple linear regression was calculated to predict suicide rate based on year. The overall suicide rate in India did not show any significant increasing or decreasing trend over the years 2006–2015. Out of the 29 states and 7 UTs, 7 showed a significantly increasing trend over the years 2006–2015. They were Gujarat, Haryana, Madhya Pradesh, Meghalaya, Mizoram, Punjab, and Tamil Nadu [Table 3]. On the other hand, the seven states/UTs that showed a significantly decreasing trend of suicide rates over the years studied were Andhra Pradesh, Karnataka, Kerala, Rajasthan, West Bengal, Andaman and Nicobar Islands, and Puducherry [Table 3]. None of the other 22 states or UTs showed any significant trend over the 10 years studied. The temporal trend of suicide rates in the different regions of India is represented in Figures 2-7. As noted in Figures 2, 3, and 7, there is a significant variation of suicide rates even among neighboring states and UTs.

Surprisingly, a strong positive association was noted between suicide rate and accident rate reported for each of the years studied [Table 4].

Suicide rate for the year 2011 was found to have a moderate positive association with per capita Net State

**Table 1: States with the highest average suicide rate in the years 2006-2015**

| State | Mean suicide rate | SD |
|---|---|---|
| Puducherry | 43.92 | 4.91 |
| Sikkim | 34.43 | 8.98 |
| Andaman and Nicobar Islands | 31.97 | 4.51 |
| Kerala | 24.77 | 1.42 |
| Chattisgarh | 23.38 | 2.76 |

SD – Standard deviation

**Table 2: States with the lowest average suicide rate in the years 2006-2015**

| State | Mean suicide rate | SD |
|---|---|---|
| Jammu and Kashmir | 2.44 | 0.50 |
| Uttar Pradesh | 2.04 | 0.28 |
| Manipur | 1.43 | 0.26 |
| Nagaland | 1.23 | 0.46 |
| Bihar | 0.91 | 0.25 |

SD – Standard deviation

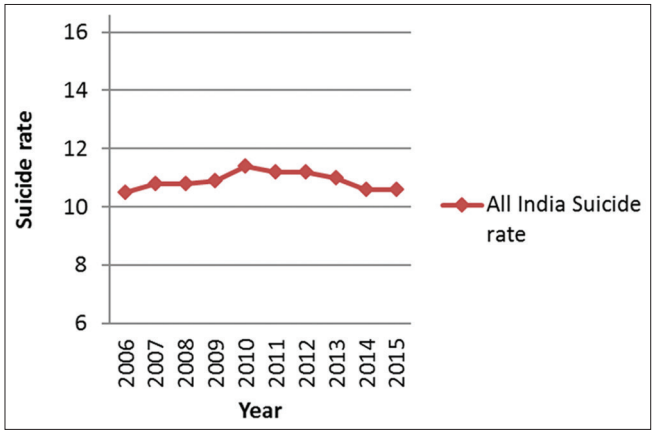


**Figure 1:** All India suicide rate in the years 2006–2015

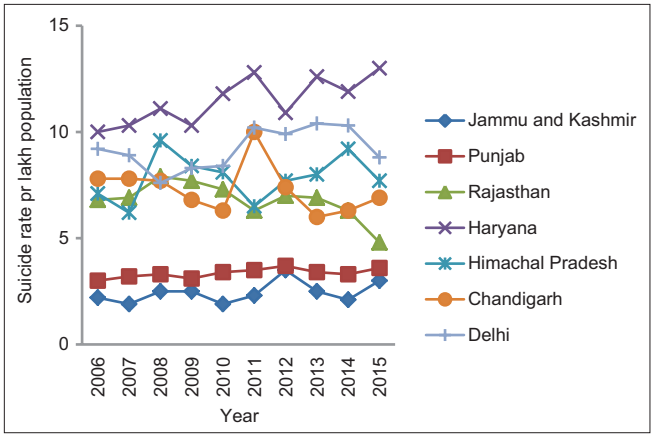


**Figure 2:** Time trend of suicide rates in North Indian states in the years 2006–2015

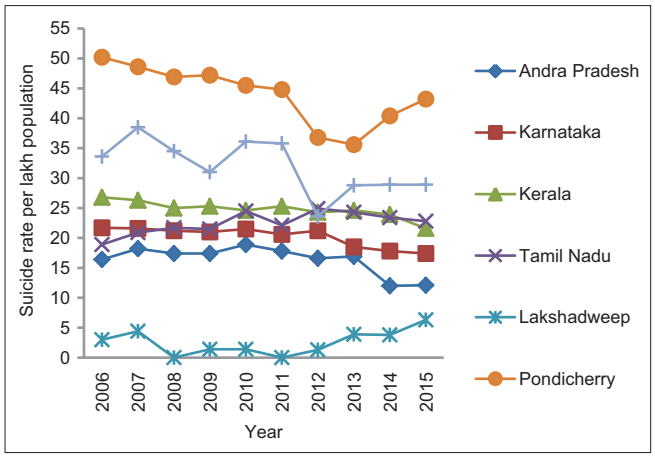


**Figure 3:** Time trend of suicide rates in South Indian states in the years 2006–2015

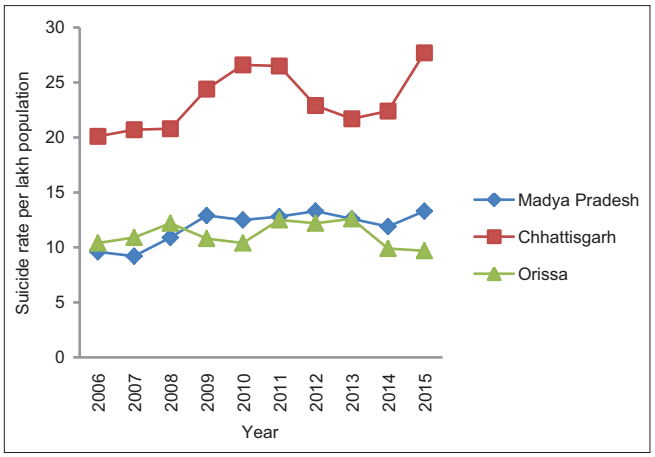


**Figure 4:** Time trend of suicide rates in Central Indian states in the years 2006–2015

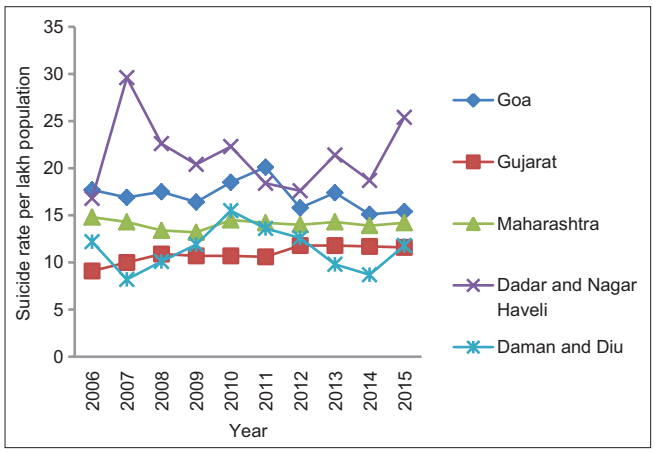


**Figure 5:** Time trend of suicide rates in West Indian states in the years 2006–2015

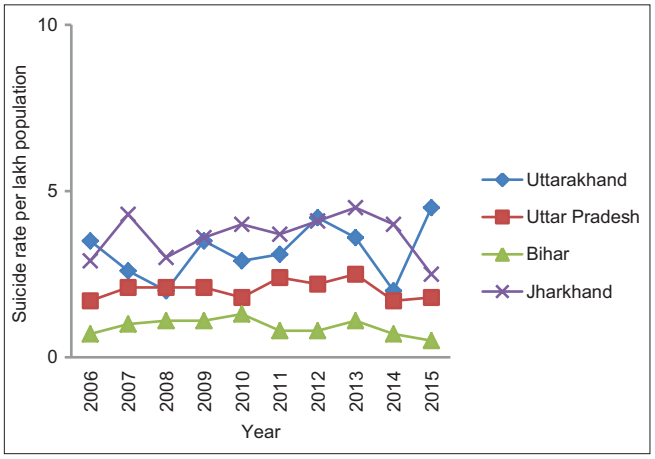


**Figure 6:** Time trend of suicide rates in East Indian states in the years 2006–2015

**Table 3: Time trend analysis using linear regression of suicide rates in specific states of India over the years 2006-2015**

| State | F (1,8) | *P* | $R^2$ | Beta |
|---|---|---|---|---|
| Andhra Pradesh | 6.705 | 0.032 | 0.456 | −0.675 |
| Gujarat | 26.887 | 0.01 | 0.771 | 0.878 |
| Haryana | 14.573 | 0.005 | 0.646 | 0.803 |
| Karnataka | 24.445 | 0.001 | 0.753 | −0.868 |
| Kerala | 26.674 | 0.001 | 0.769 | −0.877 |
| Madhya Pradesh | 11.118 | 0.01 | 0.582 | 0.763 |
| Meghalaya | 7.150 | 0.028 | 0.472 | 0.687 |
| Mizoram | 7.706 | 0.024 | 0.491 | 0.700 |
| Punjab | 8.500 | 0.019 | 0.515 | 0.718 |
| Rajasthan | 5.500 | 0.047 | 0.407 | −0.638 |
| Tamil Nadu | 8.769 | 0.018 | 0.523 | 0.723 |
| West Bengal | 6.547 | 0.034 | 0.450 | −0.671 |
| Andaman and Nicobar Islands | 5.933 | 0.041 | 0.426 | −0.653 |
| Puducherry | 12.440 | 0.008 | 0.609 | −0.780 |

Domestic Product (Spearman rho – 0.585, $P < 0.001$). There was no significant association between suicide rate for the year 2011 and police strength in the year 2011 (Spearman rho – 0.111, $P = 0.527$). Similarly, no significant association between suicide rate 2011 and population density for the year 2011 was found (Spearman rho – 0.136, $P = 0.459$) [Table 5].

## DISCUSSION

The average suicide rate in India for the years 2006–2015 was found to be 10.9 per lakh population. The overwhelming consensus based on other studies with more rigorous methodology is that the official data are a gross underrepresentation of the true suicide rate. For instance, in the Million Death Study, the suicide rate in India was calculated to be 22 per lakh population among the people with age 15 years and above.[19] In another verbal autopsy study, suicide rate in the 85 villages of the Kaniyambadi region of South India for the period 1994–1999 was reported to 95.2/100,000.[20] Suicide rate for the same region for the years 2000–2002 using the same methodology was reported to be 92.1/100,000.[21] In a prospective

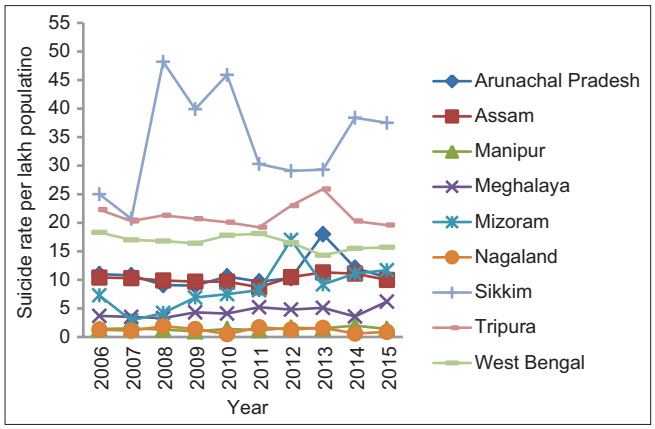


**Figure 7:** Time trend of suicide rates in North East Indian states in the years 2006–2015

**Table 4: Correlation between suicide rates and accident rates in the years 2006-2015**

| Year | Spearman's rho | *P* |
|---|---|---|
| 2006 | 0.643 | <0.01 |
| 2007 | 0.623 | <0.01 |
| 2008 | 0.629 | <0.01 |
| 2009 | 0.686 | <0.01 |
| 2010 | 0.719 | <0.01 |
| 2011 | 0.740 | <0.01 |
| 2012 | 0.560 | <0.01 |
| 2013 | 0.637 | <0.01 |
| 2014 | 0.685 | <0.01 |
| 2015 | 0.568 | <0.01 |

community-based study from Kerala, suicide rate of 44.7/100,000 for males and 26.8/1,00,000 for females was reported.[22] In another study from a district in Tamil Nadu,[23] suicide rate of 71 and 53 per 100,000 population was documented for men and women, respectively. The suicide rate of 82.2 for a population of 108,000 was reported in another study from South India.[24] Unfortunately, no such community-based studies using verbal autopsy methodology were found from states which have low official suicide rates.

Our study found that there was no temporal variation of suicide rates for the years 2006–2015 when all India suicide rates were considered. However, seven states/UTs had increasing trend of suicide rate whereas seven other states/UTs had decreasing trend of suicide rate. A previous study has reported temporal variation of suicide rates in the European Union from 1984 to 1998. It was found that significant downward trends occurred in Austria, Denmark, France, Germany, Greece, Netherlands, Portugal, Sweden, and the UK while significant upward trends were observed in Ireland and Spain. In the same study, no significant trend was observed in suicide rates of Belgium, Finland, Italy, and Luxembourg.[5] Another study from China reported a 38% decline in age-standardized suicide rates from 2006 to 2012, with a similar decline in males and females and in both urban and rural areas.[3] In a study from Sri Lanka, marked fluctuations in suicide rates were reported between 1955 and 2011. The suicide rate increased 6-fold between 1955 and 1980 and halved in the early 21st century, and this pattern was attributed to changes in access to highly toxic pesticides.[25]

Not surprisingly, the suicide rate varied widely among different states and UTs. The states Nagaland and Manipur have a sizable Christian population, whereas Jammu and Kashmir has a majority Muslim population.[26] Religious factors could contribute to the low suicide rates in these states.[27] Among other factors, income inequality,[28] reporting differences,[29] and other sociocultural factors could be responsible for the differences in suicide rates across different regions of India.

In this study, a strong positive correlation between suicide rates and accident rates was observed. It is thus clear that misclassification of suicide as an accident is unlikely to be a factor for variation in suicide rates across different geographical areas in India. Rather, reporting differences of any unnatural death to the police might be lower in some states, and this may explain at least partially the low suicide rates in these states. Alternatively, some states genuinely have both low suicide and accident rate due to factors such as low level of industrialization and sociocultural factors. Misclassification of suicides as undetermined deaths was noted to contribute to the geographical variation of suicide rate in 15 European Union countries in the years 1984–1998.[5]

In this study, population density was not associated with suicide rates significantly. In a study conducted in Ireland,[4] a weak association was found between high population density (urbanicity) and increased suicide risk, especially among females in the 15–39-year age group.

Per capita State Domestic Product was positively associated with suicide rate significantly in this study. That is, states with high per capita State Domestic Product had higher suicide rates. This is in contrast to findings from other countries such as China and Ireland. In a report from a nationally representative mortality surveillance system in China,[3] higher rates of suicide were evident in areas with lower socioeconomic circumstances. In Ireland, for the years 2009–2011, socioeconomic deprivation had the strongest independent effect on small area rates of suicide, with the people of the most deprived areas showing the greatest risk of suicide.[4] Our findings are

**Table 5: State-wise suicide rate for the year 2011 and possible factors associated with the variation**

| State/union territory | Suicide rate 2011 | Police strength per 100,000 population for the year 2011 | Population density for the year 2011 | Per capita Net State Domestic Product 2010-2011 (in rupees) |
|---|---|---|---|---|
| Andhra Pradesh | 17.8 | 82.31 | 308 | 62,912 |
| Arunachal Pradesh | 9.7 | 257.89 | 17 | 55,789 |
| Assam | 8.7 | 92.06 | 398 | 30,569 |
| Bihar | 0.8 | 52.21 | 1106 | 20,708 |
| Chattisgarh | 26.5 | 108.05 | 189 | 41,167 |
| Goa | 20.1 | 287.39 | 394 | 168,572 |
| Gujarat | 10.6 | 87.11 | 308 | 75,115 |
| Haryana | 12.8 | 169.57 | 573 | 94,680 |
| Himachal Pradesh | 6.5 | 141.18 | 123 | 65,535 |
| Jammu and Kashmir | 2.3 | 387.64 | 56 | 37,496 |
| Jharkhand | 3.7 | 123.08 | 414 | 29,786 |
| Karnataka | 20.6 | 108.81 | 319 | 60,946 |
| Kerala | 25.3 | 117.49 | 860 | 71,434 |
| Madhya Pradesh | 12.8 | 73.91 | 236 | 32,222 |
| Maharashtra | 14.2 | 150.53 | 365 | 83,471 |
| Manipur | 1.2 | 378.19 | 128 | 29,684 |
| Meghalaya | 5.2 | 203.34 | 132 | 50,427 |
| Mizoram | 8.2 | 372.66 | 52 | 48,591 |
| Nagaland | 1.7 | 284.69 | 119 | 52,643 |
| Orissa | 12.5 | 70.28 | 270 | 40,412 |
| Punjab | 3.5 | 173.07 | 551 | 69,737 |
| Rajasthan | 6.3 | 93.54 | 200 | 42,434 |
| Sikkim | 30.3 | 269.02 | 86 | 81,159 |
| Tamil Nadu | 22.1 | 113.41 | 555 | 72,993 |
| Telangana | NA | NA | NA | NA |
| Tripura | 19.2 | 290.76 | 350 | 44,965 |
| Uttaranchal | 3.1 | 140.80 | 189 | 36,368 |
| Uttar Pradesh | 2.4 | 77.90 | 829 | 26,355 |
| West Bengal | 18.1 | 66.17 | 1028 | 48,536 |
| Andaman and Nicobar islands | 35.8 | 852.36 | 46 | 76,883 |
| Chandigarh | 10 | 521.51 | 9258 | 128,634 |
| Dadar and Nagar Haveli | 18.4 | 90 | 700 | NA |
| Daman and Diu | 13.6 | 146.25 | 2191 | NA |
| Delhi | 10.2 | 398.13 | 11,320 | 150,653 |
| Lakshadweep | 0 | 703.33 | 2149 | NA |
| Puducherry | 44.8 | 152.90 | 2547 | 150,653 |

NA – Data not available

concordant with another report from India[28] where significant associations between the suicide rates and per capita gross domestic product, consumer price index, foreign exchange, trade balance, total health expenditure as well as literacy rates were documented. Income inequality and the resulting stress due to contrasting lifestyles could be eventually leading to this interesting association.

There may be several psychosocial factors such as farmer suicide that underlie the observed variations in suicide rates.

### Limitations of this study

The inherent limitation in the methodology was the source of data as the official data are well known to under-represent the true suicide rate. Age-standardized suicide rate was not calculated in this study due to nonavailability data on age-specific suicide rate for each state. Thus, at least partially, the variation in the suicide rate among the different states could be due to differing age structure and gender-wise differences in population. Sociocultural differences in the attitude toward suicide and the burning problem of farmer suicides were not incorporated into the analysis of data.

### Future directions

The findings of this study highlight the need for psychological autopsy studies using representative samples in those states with low suicide rates. Detailed evaluation of police records will provide fresh perspectives on the nature of the association between accident and suicide rates. A closer look at the process of the inquest in various states will throw light on the differences in

reporting methodology. Detailed evaluation of suicide rates at the district level will provide much needed valuable input to guide prevention efforts.

## CONCLUSION

There was no temporal variation in the suicide rate in India in the years 2006-15. However, there were significant geographical differences in suicide rate among the states/union territories. Differences in reporting methodology and economic factors could partially explain this geographical differences in suicide rates.

### Financial support and sponsorship
Nil.

### Conflicts of interest
There are no conflicts of interest.

## REFERENCES

1. WHO | Suicide. WHO. Available from: http://www.who.int/mediacentre/factsheets/fs398/en/. [Last accessed on 2017 Jun 28].
2. Cheung YT, Spittal MJ, Pirkis J, Yip PS. Spatial analysis of suicide mortality in Australia: Investigation of metropolitan-rural-remote differentials of suicide risk across states/territories. Soc Sci Med 2012;75:1460-8.
3. Liu S, Page A, Yin P, Astell-Burt T, Feng X, Liu Y, *et al.* Spatiotemporal variation and social determinants of suicide in China, 2006-2012: Findings from a nationally representative mortality surveillance system. Psychol Med 2015;45:3259-68.
4. O'Farrell IB, Corcoran P, Perry IJ. The area level association between suicide, deprivation, social fragmentation and population density in the republic of Ireland: A national study. Soc Psychiatry Psychiatr Epidemiol 2016;51:839-47.
5. Chishti P, Stone DH, Corcoran P, Williamson E, Petridou E; EUROSAVE Working Group. Suicide mortality in the European union. Eur J Public Health 2003;13:108-14.
6. National Crime Records Bureau. Accidental Deaths and Suicides in India 2006. New Delhi: NCRB; 2007. Available from: http://www.ncrb.nic.in/. [Last accessed on 2017 Jul 19].
7. National Crime Records Bureau. Accidental Deaths and Suicides in India 2007. New Delhi: NCRB; 2008. Available from: http://www.ncrb.nic.in/. [Last accessed on 2017 Jul 19].
8. National Crime Records Bureau. Accidental Deaths and Suicides in India 2008. New Delhi: NCRB; 2009. Available from: http://www.ncrb.nic.in/. [Last accessed on 2017 Jul 19].
9. National Crime Records Bureau. Accidental Deaths and Suicides in India 2009. New Delhi: NCRB; 2010. Available from: http://www.ncrb.nic.in/. [Last accessed on 2017 Jul 19].
10. National Crime Records Bureau. Accidental Deaths and Suicides in India 2010. New Delhi: NCRB; 2011. Available from: http://www.ncrb.nic.in/. [Last accessed on 2017 Jul 19].
11. National Crime Records Bureau. Accidental Deaths and Suicides in India 2011. New Delhi: NCRB; 2012. Available from: http://www.ncrb.nic.in/. [Last accessed on 2017 Jul 19].
12. National Crime Records Bureau. Accidental Deaths and Suicides in India 2012. New Delhi: NCRB; 2013. Available from: http://www.ncrb.nic.in/. [Last accessed on 2017 Jul 19].
13. National Crime Records Bureau. Accidental Deaths and Suicides in India 2013. New Delhi: NCRB; 2014. Available from: http://www.ncrb.nic.in/. [Last accessed on 2017 Jul 19].
14. National Crime Records Bureau. Accidental Deaths and Suicides in India 2014. New Delhi: NCRB; 2015. Available from: http://www.ncrb.nic.in/. [Last accessed on 2017 Jul 19].
15. National Crime Records Bureau. Accidental Deaths and Suicides in India 2015. New Delhi: NCRB; 2016. Available from: http://www.ncrb.nic.in/. [Last accessed on 2017 Jul 19].
16. Ministry of Statistics and Programme Implementation. All India and State-Wise Actual Police Strength. New Delhi: MOSPI; 2015. Available from: https://www.data.gov.in/resources/all-india-and-state-wise-actual-police-strength. [Last accessed on 2017 Jul 19].
17. Central Bureau of Health Intelligence. National Health Profile 2011. New Delhi: CBHIDGHS; 2012. Available from: http://www.cbhidghs.nic.in/index2.asp?slid=1208&sublinkid=944. [Last accessed on 2017 Jul 19].
18. Ely JW, Dawson JD, Lemke JH, Rosenberg J. An introduction to time-trend analysis. Infect Control Hosp Epidemiol 1997;18:267-74.
19. Patel V, Ramasundarahettige C, Vijayakumar L, Thakur JS, Gajalakshmi V, Gururaj G, *et al.* Suicide mortality in India: A nationally representative survey. Lancet 2012;379:2343-51.
20. Joseph A, Abraham S, Muliyil JP, George K, Prasad J, Minz S, *et al.* Evaluation of suicide rates in rural India using verbal autopsies, 1994-9. BMJ 2003;326:1121-2.
21. Prasad J, Abraham VJ, Minz S, Abraham S, Joseph A, Muliyil JP, *et al.* Rates and factors associated with suicide in Kaniyambadi Block, Tamil Nadu, South India, 2000-2002. Int J Soc Psychiatry 2006;52:65-71.
22. Soman CR, Safraj S, Kutty VR, Vijayakumar K, Ajayan K. Suicide in South India: A community-based study in Kerala. Indian J Psychiatry 2009;51:261-4.
23. Gajalakshmi V, Peto R. Suicide rates in rural Tamil Nadu, South India: Verbal autopsy of 39 000 deaths in 1997-98. Int J Epidemiol 2007;36:203-7.
24. Bose A, Konradsen F, John J, Suganthy P, Muliyil J, Abraham S, *et al.* Mortality rate and years of life lost from unintentional injury and suicide in South India. Trop Med Int Health 2006;11:1553-6.
25. Knipe DW, Padmanathan P, Muthuwatta L, Metcalfe C, Gunnell D. Regional variation in suicide rates in Sri Lanka between 1955 and 2011: A spatial and temporal analysis. BMC Public Health 2017;17:193.
26. Religion Data – Population of Hindu/Muslim/Sikh/Christian – Census 2011 India. Available from: http://www.census2011.co.in/religion.php. [Last accessed on 2018 Mar 19].
27. Ineichen B. The influence of religion on the suicide rate: Islam and Hinduism compared. Ment Health Relig Cult 1998;1:31-6.
28. Rajkumar AP, Senthilkumar P, Gayathri K, Shyamsundar G, Jacob KS. Associations between the macroeconomic indicators and suicide rates in India: Two ecological studies. Indian J Psychol Med 2015;37:277-81.
29. Aaron R, Joseph A, Abraham S, Muliyil J, George K, Prasad J, *et al.* Suicides in young people in rural Southern India. Lancet 2004;363:1117-8.

# Original Article

# Utilization of Emergency Psychiatry Service in a Tertiary Care Centre in North Eastern India: A Retrospective Study

**Subrata Naskar, Kamal Nath[1], Robin Victor[2], Kaveri Saxena[3]**

ABSTRACT

**Background:** In a developing country like India, with a lot of psychosocial stressors and ample stigma toward psychiatry, we studied the sociodemographic pattern of the patients coming to a tertiary care center for emergency psychiatry services and also evaluated the types and pattern of emergency services provided to them. We also assessed the predominant presenting complaints with which patients presented at the emergency department, "reasons for referral" in an emergency by other departments, and types of psychiatric diagnoses in the patients. **Subjects and Methods:** Data were extracted retrospectively from the general emergency and psychiatry emergency register of Silchar Medical College and Hospital for 1 year and analyzed. **Results:** Out of 41,040 patients attending the hospital seeking emergency care, referral rate to the psychiatric emergency was only 2.8%. The commonest presenting complaint of subjects who were referred was "medically unexplained somatic complaints" (47.70%). The main reason for a referral from other departments was "no physical illness was detected" in the patient (38.59%). About 78.8% of the subjects were diagnosed as having a proper psychiatric illness, with the majority presenting with stress-related and somatoform disorders (F40–49) (43.45%). **Conclusion:** This study highlights various important parameters regarding emergency services being provided and their utilization by the patients attending a psychiatric emergency, which could be helpful for future policies and resource allocation for providing superior quality and cost-effective mental health care to the patients.

**Key words:** *Developing country, emergency psychiatry, presenting complaints, reasons for referral, tertiary care hospital*
**Key messages:** *There is a necessity of improvement of primary psychiatry delivery system in Barak Valley, Assam, India.*

## INTRODUCTION

Emergency psychiatry is the service provided with the intention of providing immediate therapeutic interventions for "any disturbance in thoughts, feelings, or actions."[1] The role of a psychiatrist in an emergency

| Access this article online | |
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| **Website:** www.ijpm.info | **Quick Response Code** |
| **DOI:** 10.4103/IJPSYM.IJPSYM_55_18 | |



**How to cite this article:** Naskar S, Nath K, Victor R, Saxena K. Utilization of emergency psychiatry service in a tertiary care centre in North Eastern India: A retrospective study. Indian J Psychol Med 2019;41:167-72.

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setup of a tertiary care center in consultation-liaison is manifold. He/She not only needs to address a person suffering from psychiatric illness but also needs to assess the associated bio-psycho-social problems and provide appropriate opinion or management for immediate redressal.

In a country like India, where psychiatric consultation is associated with a lot of social stigmas, the study of psychiatric emergency services is an interesting and comprehensive way to recognize the subset of people who utilize the psychiatric services and would provide a gross idea about the prevalence of various psychiatric illnesses in the community. It also gives us information about how practitioners from other disciplines handle the patients in need of emergency psychiatric help.[2] A study like this also provides information about the common presenting complaints of the patients attending a psychiatric emergency, which may vary depending on the sociocultural characteristics of the area. Numerous such studies have been carried out in various countries, namely by Ang *et al*.[3] in Singapore, Salkovskis *et al*.[4] in England, and Stebbins and Hardman[5] at Boston, United States of America. Newer works conducted in this decade include studies done by Shakya *et al*.[6] in Nepal, Chaput *et al*.[7] in Quebec, Canada, and Shahid *et al*.[8] at Karachi, Pakistan. A few such studies have been conducted in India, like research by Kelkar *et al*.[9] in Chandigarh, Bhatia *et al*.[10] in Delhi, and Keertish *et al*.[11] in Tumkur. These kinds of studies provide the much-needed information required for better preparedness and to formulate strategies for emergency psychiatric and liaison-consultation services. However, most of the Indian data on this topic are from pre-1990s and with small sample size.

Thus, with this background, we conducted this study to evaluate the specific important demographic variables and the predominant presenting complaints of the patients attending the emergency psychiatry department, to determine the various reasons for referral of these patients by other departments, and to gain knowledge about the primary psychiatric diagnosis established and the measures or steps taken after diagnosis of the patient. The present study had a large sample size and was done over a period of 1 year in a tertiary care center in the northeastern part of India.

## SUBJECTS AND METHODS

This study was carried out in a tertiary care teaching hospital providing health services to most southern part of Assam, along with the neighboring states of Tripura, Meghalaya, Mizoram, and Manipur. This hospital provides a 24-h walk-in general emergency service in most of the medical disciplines including psychiatry. At first, the patient is attended by a postgraduate resident doctor on duty at emergency, where he/she evaluates the patient, provides the initial basic treatment, maintains a record of the workup, and, if required, refers the patient to appropriate specialty departments for further evaluation and treatment. Thus, when the patient comes to the psychiatry department, he/she is further evaluated by the resident doctor and the postgraduate resident of psychiatry on duty. Initial workup and evaluation of the patient are done, after which appropriate treatment or opinion is provided, and a record is kept in the departmental register.

The psychiatry department emergency register contains data which include patients' hospital number, basic sociodemographic information, date and time of emergency visit, patients' complaint, the reason for referral, department from which the patient was referred, provisional diagnosis, medication prescribed, and, if required, department to which the patient is referred.

This was a retrospective chart review study conducted after obtaining hospital ethics committee approval. Data were extracted from the general emergency and psychiatry department emergency register for 1 year from 1 November 2014 to 31 October 2015.

## RESULTS

A total of 41,040 patients, including the patients asking for psychiatric interventions, attended the general emergency of Silchar Medical College and Hospital during the study period. The data were tabulated in Microsoft Excel spreadsheet under appropriate columns. Pivot charts were created in Microsoft Excel, and the data were grouped accordingly. The psychiatric diagnosis made provisionally was categorized according to the International Classification of Diseases version 10. The chief complaints of the patients were grouped appropriately. SPSS version 22 was used to evaluate the basic descriptive statistics.

The total number of patients referred to psychiatry emergency – either directly from the emergency department or from various other departments – was 1153. Referral rate to psychiatry emergency was found to be 2.8%.

The distribution of the specific important demographic variables of the patients is tabulated in Table 1. About 52.21% of the subjects were females while 47.78% were males. Table 2.1 shows the distribution of the total number of referrals from various departments. The predominant complaints with which the patients presented in the general emergency department are

grouped and shown in Table 2.2. It shows that almost 47.70% of the patients presented with some sort of somatic complaints (any physical symptom that could not be explained by any detectable physical disorders excluding headache). The next most common presentation was abnormal behavior (13.79%). The reasons for which the first responder physician referred the patient from general emergency to psychiatry emergency are tabulated in Table 2.3, which shows that maximum referrals were for cases where "no physical illness was detected" in the patient (38.59%).

Table 2.4 shows the diagnostic evaluations of the total sample. Out of the total 1153 cases referred, a provisional diagnosis of proper psychiatric illness could be made in 909 cases (78.8%), whereas in 182 patients, the diagnosis was deferred (15.78%), and in 62 patients (5.3%), a provisional diagnosis other than a psychiatric diagnosis was made. The outcome of those referrals is tabulated in Table 2.5.

The provisional diagnosis according to ICD-10 categories across both the genders made by the attending psychiatrist or psychiatry resident at the psychiatry emergency department is tabulated in Table 3. Table 4 shows the distribution of the individual psychiatric diagnoses according to gender as per ICD-10 criteria.

**Table 1: Distribution of the specific important demographic variables of the total number of subjects**

| | Female (%) | Male (%) | Total patients (%) |
|---|---|---|---|
| Total | 602 (100.00) | 551 (100.00) | 1153 (100.00) |
| Age | | | |
| 1-10 | 3 (0.50) | 3 (0.54) | 6 (0.52) |
| 11-20 | 189 (31.40) | 87 (15.79) | 276 (23.94) |
| 21-30 | 203 (33.72) | 196 (35.57) | 399 (34.61) |
| 31-40 | 108 (17.94) | 119 (21.60) | 227 (19.69) |
| 41-50 | 63 (10.47) | 86 (15.61) | 149 (12.92) |
| 51-60 | 25 (4.15) | 36 (6.53) | 61 (5.29) |
| 61-70 | 9 (1.50) | 17 (3.09) | 26 (2.25) |
| 71-80 | 2 (0.33) | 7 (1.27) | 9 (0.78) |
| Religion | | | |
| Christian | 0 (0.00) | 2 (0.36) | 2 (0.17) |
| Hindu | 300 (49.83) | 318 (57.71) | 618 (53.60) |
| Muslim | 297 (49.34) | 222 (40.29) | 519 (45.01) |
| Others | 5 (0.83) | 9 (1.63) | 14 (1.21) |
| Domicile | | | |
| Rural | 357 (59.30) | 355 (64.43) | 712 (61.75) |
| Urban | 245 (40.70) | 196 (35.57) | 441 (38.25) |

**Table 2.1: Distribution of the patients according to the various referring department**

| Department | Number of patients (%) |
|---|---|
| Direct referral from general emergency | 855 (74.15) |
| Medicine | 267 (23.16) |
| ENT | 9 (0.78) |
| OBG | 7 (0.61) |
| Surgery | 7 (0.61) |
| Pediatrics | 4 (0.35) |
| Ophthalmology | 2 (0.17) |
| Orthopedics | 2 (0.17) |

OBG: Obstetrics & gynaecology; ENT: Ear, nose, and throat

**Table 2.2: Distribution of the predominant presenting complaints with which the patient presented to the emergency department**

| Presenting complaints | Number of patients (%) |
|---|---|
| Abnormal behavior | 159 (13.79) |
| Feeling tensed/anxious | 135 (11.71) |
| Altered sensorium | 104 (9.02) |
| Excitement and violence | 88 (7.63) |
| Headache | 38 (3.30) |
| Inability to concentrate | 8 (0.69) |
| Inability to remember | 10 (0.87) |
| Insomnia | 34 (2.95) |
| Somatic complaints | 550 (47.70) |
| Suicidal attempt | 16 (1.39) |
| Voluntarily came for de-addiction | 11 (0.95) |

## DISCUSSION

### Specific important demographic characteristics and their association with various ICD-10 diagnoses

We found that the maximum number of patients attending the emergency in need of psychiatric consultation are in their third decade of life (34.61%) and the mean age of the subjects was 30.88 ± 13.38 years. The majority of cases (78.75%) having an ICD-10 psychiatric diagnosis were from the age range of 1–40 years as compared to 41–80 years (21.24%). Majority of the cases in the category F10–19 were from the age range of 1–40 years (74.46%). Since most of the people are likely to begin abusing drugs including tobacco, alcohol, and illegal and prescription drugs during adolescence and young adulthood, various studies[12,13] suggest that by the time they are seniors in school, almost 70% of high school students will have tried alcohol, half will have taken an illegal drug, nearly 40% will have smoked a cigarette, and more than 20% will have used a prescription drug for a nonmedical purpose. Out of the category F40–49, we found that 83.63% of the cases were from the age range of 1–40 years. In this study, anxiety disorders have emerged as the most prevalent mental disorders in the general population. Martin[14] observed that anxiety disorders are more prevalent in the younger age groups due to the presence of high stress during this period, which is similar to our study.

Genderwise, we found that the maximum number of cases with an ICD-10 psychiatric diagnosis were

**Table 2.3: Distribution of the various reasons for referral from various departments**

| Reason for referral | Number of patients (%) |
|---|---|
| Management of associated psychiatric symptoms | 258 (22.38) |
| Organic illness insufficient to explain symptoms | 63 (5.46) |
| Predominant psychiatric symptoms | 387 (33.56) |
| No physical illness detected | 445 (38.59) |

Management of associated psychiatric symptoms - provisional diagnosis regarding physical illness was made along with which there were associated psychiatric illnesses confirmed by previous records of patient. Organic illness insufficient to explain symptoms - organic illness, mostly neurological, was confirmed but the associated behavioral abnormality could not be explained by this organic illness. Predominant psychiatric symptoms - predominant presentation was psychological/behavioral abnormality with or without confirmed previous records with minimal physical illness. No physical illness detected - some behavioral or psychological abnormality present where no physical abnormality was detected to explain the nature and type of psychological/behavioral abnormality

**Table 2.4: The diagnostic evaluations of the total sample**

| Diagnosis of the patient | Number of patients (%) |
|---|---|
| Provisional diagnosis of proper psychiatric illness | 909 (78.8) |
| Diagnosis deferred | 182 (15.78) |
| Diagnosis other than psychiatric illness | 62 (5.3) |

**Table 2.5: Distribution of measures/steps taken for the patient attending the psychiatric emergency**

| | Number of patients (%) |
|---|---|
| Admitted | 89 (7.72) |
| Referred to other departments | 316 (27.4) |
| ENT | 13 (1.13) |
| Medicine | 239 (75.63) |
| Multidepartmental | 13 (1.13) |
| OBG | 18 (1.56) |
| Ophthalmology | 5 (0.43) |
| Orthopedics | 8 (0.69) |
| Pediatrics | 3 (0.26) |
| Surgery | 17 (1.47) |
| Treated and discharged | 748 (64.87) |
| Grand total | 1153 (100) |

OBG: Obstetrics & gynaecology; ENT: Ear, nose, and throat

females (52.21%). Various national and international studies suggest that stress-related neurotic and anxiety disorders are more prevalent in women.[14,15]

### Referral rate and the reason for the referral of patients from other departments

A total of 41,040 patients attended the general emergency of the hospital in the given 1-year period, and 1153 patients were referred to psychiatry emergency. The psychiatry referral rate from the emergency department was found to be 2.8%, and the result is comparable to that of other studies from the subcontinent.[8-11] Various factors like number of tertiary care centers available, number of specialized psychiatry service centers present in the area, and sociocultural factors affect the pattern of utilization of emergency psychiatry services of a particular center. The doctor at emergency referred the cases mostly when "no physical illness was detected" in the patient, followed by cases where "predominant psychiatric symptoms" were present.

### Predominant presenting complaints

Most patients presented to emergency psychiatry with some sort of somatic complaints (47.7%). The next common presentation was abnormal and disorganized behavior (13.79%). The prevailing sociocultural stressors and social unrest, which is going on for the last three decades in this part of the country, maybe indirectly contributing to the increased number of somatoform and stress-related disorders in our study. The above findings also show that patients who are usually referred to psychiatrists from emergency mainly present with somatic symptoms and that physicians of other disciplines want to involve psychiatrists when they do not find any clinically relevant medical/surgical findings to explain the complaints of the patient: 74.15% patients were direct referrals from the Department of Emergency, followed by referrals from Department of Medicine (23.16%).

**Table 3: The distribution of the total cases according to the International Classification of Diseases-10 categories across both the genders**

| Diagnosis | Female (%) | Male (%) | Total patients (%) |
|---|---|---|---|
| Organic, including symptomatic, mental disorders (F00-09) | 5 (0.83) | 10 (1.81) | 15 (1.30) |
| Mental and behavioral disorders due to psychoactive substance use (F10-19) | 7 (1.16) | 87 (15.79) | 94 (8.15) |
| Schizophrenia, schizotypal, and delusional disorders (F20-29) | 71 (11.79) | 82 (14.88) | 153 (13.27) |
| Mood (affective) disorders (F30-39) | 56 (9.30) | 68 (12.34) | 124 (10.75) |
| Neurotic, stress-related, and somatoform disorders (F40-49) | 340 (56.48) | 161 (29.22) | 501 (43.45) |
| Behavioral syndromes associated with physiological disturbances and physical factors (F50-59) | 8 (1.33) | 11 (2.00) | 19 (1.65) |
| Disorders of adult personality and behavior (F60-69) | 0 | 1 (0.18) | 1 (0.09) |
| Behavioral and emotional disorders with onset usually occurring in childhood and adolescence (F90-99) | 0 (0.00) | 2 (0.36) | 2 (0.17) |
| Epilepsy (G40) | 8 (1.33) | 16 (2.90) | 24 (2.08) |
| Migraine (G43) | 3 (0.50) | 4 (0.73) | 7 (0.61) |
| Other headache syndromes (G44) | 14 (2.33) | 17 (3.09) | 31 (2.69) |
| Deferred | 90 (14.95) | 92 (16.70) | 182 (15.78) |
| Grand total | 602 (100.00) | 551 (100.00) | 1153 (100.00) |

**Table 4: Distribution of the patients within each International Classification of Diseases-10 category across both sexes**

| Diagnosis | Female (%) | Male (%) | Total patients (%) |
|---|---|---|---|
| F00-09 | | | |
| Delirium | 4 (80.00) | 7 (70.00) | 11 (73.33) |
| Dementia | 1 (20.00) | 3 (30.00) | 4 (26.67) |
| Total | 100 | 100 | |
| F10-19 | | | |
| F10 | 5 (71.43) | 58 (66.67) | 63 (67.02) |
| F11 | 0 (0.00) | 10 (11.49) | 10 (10.64) |
| F12 | 1 (14.29) | 5 (5.75) | 6 (6.38) |
| F13 | 0 (0.00) | 2 (2.30) | 2 (2.13) |
| F17 | 1 (14.29) | 0 (0.00) | 1 (1.06) |
| F19 | 0 (0.00) | 12 (13.79) | 12 (12.77) |
| Total | 100 | 100 | |
| F20-29 | | | |
| F20 | 40 (56.34) | 45 (54.88) | 85 (55.56) |
| F22 | 1 (1.41) | 0.00 | 1 (0.65) |
| F23 | 26 (36.62) | 28 (34.15) | 54 (35.29) |
| F25 | 2 (2.82) | 7 (8.54) | 9 (5.88) |
| F28 | 1 (1.41) | 1 (1.22) | 2 (1.31) |
| F29 | 1 (1.41) | 1 (1.22) | 2 (1.31) |
| Total | 100 | 100 | |
| F30-39 | | | |
| F30 | 14 (25.00) | 16 (23.53) | 30 (24.19) |
| F31 | 11 (19.64) | 30 (44.12) | 41 (33.06) |
| F32 | 31 (55.36) | 22 (32.35) | 53 (42.74) |
| Total | 100 | 100 | |
| F40-49 | | | |
| F40 | 29 (8.53) | 42 (26.09) | 71 (14.17) |
| F43 | 22 (6.47) | 11 (6.83) | 33 (6.59) |
| F44 | 279 (82.06) | 101 (62.73) | 380 (75.85) |
| F45 | 10 (2.94) | 7 (4.35) | 17 (3.39) |
| Total | 100 | 100 | |
| F50-59 | | | |
| F53 | 5 (62.50) | 0 (0.00) | 5 (26.32) |
| Primary insomnia | 3 (37.50) | 11 (100.00) | 14 (73.68) |
| Total | 100 | 100 | |
| F60-69 | | | |
| F60 | 1 (100.00) | 0 | 1 (100.00) |
| F90-99 | | | |
| F90 | 2 (100.00) | 0.00 (0.00) | 2 (100.00) |

### Psychiatric diagnosis

Out of the total 1153 cases referred, a provisional diagnosis of proper psychiatric illness could be made in 909 cases (78.8%). Neurotic, stress-related, and somatoform disorders (F40–49, 43.45%) were the next most common diagnosis. There was a significant difference in gender distribution among the patients of this category (male: female – 1:2.11). Schizophrenia, schizotypal, and delusional disorders (F20–29) group comprised 13.27% of the total number of cases. Mood (affective) disorders (F30–39) were found in 10.75% of the cases, with a male predominance (male:female – 1.21:1). Among the individual types, bipolar affective disorder (F31) was found to be significantly higher among males (44.12%) than females (19.64%), whereas depressive disorder (F32) was found to be more common in females (55.36%) than in males (32.35%) in this group, which is as per the previously available literature.[16,17]

About 64.87% of the total patients were provided with emergency care and discharged after temporary observation, and only 7.72% of the total patients needed admission. Regarding the management of the patients at psychiatry department, the routine emergency protocol was adhered to, which included initial management with pharmacotherapy followed by other interventions like brief psychotherapy and psychoeducation to the primary caregiver as well as other family members.

## CONCLUSION

This audit of the data, we have obtained here, is to understand the specific important demographic variables and the predominant presenting complaints of the patients attending the emergency psychiatry department, to determine the various reasons for referral of these patients by other departments, and to gain knowledge about the primary psychiatric diagnosis established and the measures or steps taken after diagnosis of the patient, with a larger sample size. Some recommendations that can be made from our observations are that first, there should be proper training of the emergency health-care providers on common psychiatric disorders, as a large bulk of the patients with psychiatric disorder seems to visit the emergency department. Second, most patients with pure psychiatric problems are coming from the rural population. This signifies the necessity of improvement of primary psychiatry delivery system in this region, and finally, since this study highlights various important parameters regarding emergency services provided and their utilization by the patients attending psychiatric emergency, it could be helpful information for future policies and resource allocation for providing superior quality and cost-effective mental health care to the patients.

However, this study had some limitations. As this is a tertiary care hospital-based study, the findings of this study may not reflect the actual pattern of psychiatric illnesses requiring emergency psychiatric care which are prevalent in the community at large. Also, since this is a retrospective descriptive study, the final outcomes of the patients getting emergency services were not evaluated. Further prospective studies are recommended on this topic for better evaluation of various parameters.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

## REFERENCES


1. Sadock BJ, Sadock VA, Kaplan HI. Kaplan & Sadock's Synopsis of Psychiatry: Behavioural Sciences/Clinical Psychiatry. 10th ed. Philadelphia, Pa.: Lippincott Williams & Wilkins; 2007.
2. Jindau RG & K Hemrajani DD. A study of psychiatric referrals in a general hospital. Indian J Psychiatry 1980;22:108-10.
3. Ang AW, Ko SM, Kua EH. Psychiatric referrals from an accident and emergency department in Singapore. J Accid Emerg Med 1995;12:119-22.
4. Salkovskis PM, Storer D, Atha C, Warwick HM. Psychiatric morbidity in an accident and emergency department. Characteristics of patients at presentation and one month follow-up. Br J Psychiatry 1990;156:483-7.
5. Stebbins LA, Hardman GL. A survey of psychiatric consultations at a suburban emergency room. Gen Hosp Psychiatry [Internet] 1993;15:234-42. Available from: https://www.sciencedirect.com/science/article/pii/016383439390038P?via%3Dihub. [cited 2018 Nov 13].
6. Shakya DR, Shyangwa PM, Shakya R. Psychiatric emergencies in a tertiary care hospital. JNMA J Nepal Med Assoc 2008;47:28-33.
7. Chaput Y, Paradis M, Beaulieu L, Labonté E. A qualitative study of a psychiatric emergency. Int J Ment Health Syst 2008;2:9.
8. Shahid M, Khan MZ, Ejaz K, Nakeer R, Iftikhar S. Profile of psychiatric patients presenting to a tertiary care emergency department of Karachi. J Coll Physicians Surg Pak 2015;25:386-8.
9. Kelkar DK, Chaturvedi SK, Malhotra S. A study of emergency psychiatric referrals in a teaching general hospital. Indian J Psychiatry 1982;24:366-9.
10. Bhatia MS, Agrawal P, Khastbir U, Rai S, Bhatia A, Bohra N, *et al.* A study of emergency psychiatric referrals in a government hospital. Indian J Psychiatry 1988;30:363-8.
11. Keertish N, Sathyanarayana MT, Kumar BG, Singh N, Udagave K. Pattern of psychiatric referrals in a tertiary care teaching hospital in Southern India. J Clin Diagn Res 2013;7:1689-91.
12. Winters KC, Tanner-Smith EE, Bresani E, Meyers K. Current advances in the treatment of adolescent drug use. Adolesc Health Med Ther [Internet] 2014;5:199-210. Available from: http://www.ncbi.nlm.nih.gov/pubmed/25429247. [Last cited on 2018 Nov 13].
13. Murthy P, Manjunatha N, Subodh BN, Chand PK, Benegal V. Substance use and addiction research in India. Indian J Psychiatry 2010;52:S189-99.
14. Martin P. The epidemiology of anxiety disorders: A review. Dialogues Clin Neurosci 2003;5:281-98.
15. Trivedi JK, Gupta PK. An overview of indian research in anxiety disorders. Indian J Psychiatry 2010;52:S210-8.
16. Hendrick V, Altshuler LL, Gitlin MJ, Delrahim S, Hammen C. Gender and bipolar illness. J Clin Psychiatry 2000;61:393-6.
17. Arnold LM. Gender differences in bipolar disorder. Psychiatr Clin North Am 2003;26:595-620.

# Original Article

# Perceived Stigma Regarding Mental Illnesses among Rural Adults in Vellore, Tamil Nadu, South India

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ABSTRACT

**Background:** Stigma is an important factor that determines whether individuals seek treatment for mental illnesses. Studies assessing public perceptions regarding mental illnesses are scarce in India. This study documents the stigma perceived by a rural population toward patients with mental illness and their families. **Materials and Methods:** A cross-sectional pilot study was done in five villages, selected by simple random sampling, from a rural block in Vellore, Tamil Nadu. Households in each village were selected by systematic random sampling. From the selected households, 150 subjects aged 18–65 years, without known mental disorders, were chosen by convenience sampling, based on availability. Stigma was assessed using the Devaluation of Consumers Scale (DCS) and Devaluation of Consumer's Families Scale (DCFS). **Results:** The proportion with high perceptions of stigma associated with mentally ill persons was 63.8%, among the 150 interviewed rural respondents (women: 112, median age: 37 years). The proportion which perceived that there was public stigma toward families of those with mental illnesses was 43.4%. Older respondents (>37 years) had higher perceptions of stigma (odds ratio: 2.07; 95% confidence interval: 1.02–4.20) than others. **Conclusion:** The high perception of stigma associated with persons who are mentally ill as well as their families needs to be kept in mind while planning interventions to decrease the treatment gap for psychiatric morbidity, especially in rural areas.

**Key words:** *Mental illnesses, perception, stigma*

**Key messages:** *A large proportion of the rural population perceives that there is a high stigma toward those with mental illnesses and their families.*

## INTRODUCTION

Approximately 30% of the world's population suffers from mental and behavioral disorders, of which around 70% does not receive appropriate treatment, with unipolar depression causing the greatest morbidity.[1,2]

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|---|---|
| **Website:** www.ijpm.info | Quick Response Code |
| **DOI:** 10.4103/IJPSYM.IJPSYM_297_18 | |



**How to cite this article:** Guttikonda A, Shajan AM, Hephzibah A, Jones AS, Susanna J, Neethu S, *et al*. Perceived stigma regarding mental illnesses among rural adults in Vellore, Tamil Nadu, South India. Indian J Psychol Med 2019;41:173-7.

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According to the National Mental Health Survey 2016, 10.6% of adults in India have "any mental disorder" (excluding tobacco use) and 2.7% have depressive disorders, with a treatment gap of >75% for psychotic disorders and neuroses.[3] The reasons for the treatment gap include low awareness, inaccessible health care, costs, alternative remedies like religious/supernatural, as well as stigma, which is widespread, especially in Asia.[4] Stigma prevents affected people and their families from admitting to or accepting the condition and reduces health-seeking behavior, resulting in a treatment gap. Stigma can be assessed by scales measuring self-stigma, perceived stigma, or public stigma (respondents' beliefs regarding the attitude of others in the community toward people with mental illness or toward their families).[5]

A few studies from Chennai, Kolkata, Karnataka, Delhi, and Maharashtra have assessed public attitudes toward those with mental illness as well as their families.[6-11] The prevalence of perceived stigma varies due to diversities in cultural beliefs, socioeconomic status, and access to healthcare.[6]

This study assessed perceptions of stigma among adults in a rural block in south India, where previous studies have shown high suicide rates, including among adolescents and the elderly.[12-15]

## MATERIALS AND METHODS

A cross-sectional pilot study was carried out in Kaniyambadi, a rural block in Vellore district, Tamil Nadu, among those aged between 18 and 65 years, excluding persons with known mental illness. Five clusters (villages) were selected using simple random sampling out of 82 villages. The sample size was calculated to be 150 based on an expected prevalence of 50% perceived stigma and a design effect of 1.5. In each village, 30 households were selected by systematic random sampling. Within each selected household, one adult participant aged between18 and 65 years was included, based on availability and consent (convenience sampling within the household). Perception of stigma was assessed through an interviewer-based questionnaire using the DCS (Devaluation of Consumers Scale) and DCFS (Devaluation of Consumers' Families Scale),[16] translated and pilot tested in Tamil. The DCS assesses perception of stigma toward persons with mental illnesses in terms of community reaction, job prospects and social life, assessing the domains of "status reduction," "role restriction," and "friendship refusal," with an internal consistency/reliability score of 0.82.[16] The DCFS evaluates perceived stigma towards families of those with mental illnesses, in the domains of "community rejection" (looking down on families with mentally ill persons), "causal attribution" (blaming family for the illness), and "uncaring parents" (judging parents with affected children as being less responsible and caring than others), with an internal consistency/reliability score of 0.71–0.77.[16] Knowledge was tested using a vignette (on depression) and assessing whether the case was identified as a mental illness, with the selection of an appropriate course of action.

Statistical analysis was performed using SPSS version 16.0 for Windows (SPSS Inc., Chicago, IL, USA). Categorical variables were expressed as proportions. Mean percentage agreement to the statements indicating perceived stigma was also calculated for the DCS and DCFS scales.[16] To assess factors associated with perceptions of stigma, the responses were scored using a Likert scale of 1–4 and a total score calculated. The median score of the participants was used to categorize as high or low perceptions of stigma. Odds ratios (ORs) were calculated using logistic regression, adjusting for age, sex, education, family history of mental illness, having known someone with a mental illness, and exposure to previous educational messages on mental illness.

The study was approved by the Institutional Review Board and Ethics Committee of the concerned tertiary healthcare institution (IRB min number 10323; dated 5-9-2016). Informed written consent was taken, and confidentiality maintained using unique identifiers.

## RESULTS

Of 160 subjects who were approached, 10 refused to consent to participate. Three-fourths (112) of the 150 participants were women, 82.0% (123) were married, and 93.3% (140) were literate. The median age of the respondents was 37 years. Around one-fourth (23.3%) of the participants had a family member with mental illness, while 50.7% (76) had been previously exposed to awareness programmes/health information on mental illness (newspapers, television, books, pamphlets, etc.).

While 63.8% of the participants perceived that most people devalue persons with mental illnesses, 43.4% felt that most people devalue families of such persons (mean percent agreement with statements indicating stigma, Table 1). The percentage of respondents who agreed to individual statements regarding how people devalue a person with mental illness or their families is shown in Table 1. While 83.3% felt that a person with serious mental illness was dangerous, 52% felt that having a mental illness was worse than being addicted to drugs. A majority (72%) of respondents felt that people look down on someone who was once a patient in a mental hospital, and 75.3% felt that young women

**Table 1: Perceptions of stigma shown by agreement to statements denoting perceived stigma**

| Statements in the questionnaire | | Agreed number (%) (*n*=150) |
|---|---|---|
| Status reduction | Most people think that a person with serious mental illness is dangerous and unpredictable | 125 (83.3) |
| | Most people feel that having a mental illness is worse than being addicted to drugs | 78 (52.0) |
| | Most people look down on someone who once was a patient in a mental hospital | 108 (72.0) |
| | Most people think less of a person who has been a patient in a mental hospital | 105 (70.0) |
| | Most people feel that entering psychiatric treatment is a sign of personal failure | 82 (54.7) |
| Role restriction | Most employees will not hire a person who once had a serious mental illness if he/she is qualified for the job | 54 (36.0) |
| | Most young women would not marry a man who has been treated for a serious mental disorder | 113 (75.3) |
| Friendship refusal | Most people would not accept a person who once had a serious mental illness as a close friend | 104 (69.3) |
| A. Devaluation of consumer scale* | | 63.78% |
| Community rejection | Most people look down on families that have a member who is mentally ill living with them | 89 (59.3) |
| | Most people in my community would rather not be friends with families that have a relative who is mentally ill living with them | 69 (46.0) |
| | Most people would rather not visit families that have a member who is mentally ill | 91 (60.7) |
| Causal attribution | Most people will not treat families with a member who is mentally ill in the same way they treat other families | 107 (71.3) |
| | Most people blame parents for the mental illness of their children | 73 (48.7) |
| Uncaring parents | Most people believe that parents of children with mental illness are not as responsible and caring as other parents | 19 (12.7) |
| B. Devaluation of consumer families scale* | | 43.38% |

*Average proportion of perceptions of stigma based on individual responses

would not marry a man who has been treated for a serious mental disorder.

Nearly half (48.7%) said that people blame parents for the mental illnesses of their children and 59.3% felt that people look down on families with a member who is mentally ill [Table 1].

Older respondents (>37 years) were more likely to perceive stigma (64.9%) than younger respondents (44.9%), after adjusting for gender, education, family history of mental illness, or having known someone with a mental illness, OR: 2.07, 95% confidence Interval (CI): 1.02–4.20. There were no gender differences in perceptions of stigma (males: 57.9%, females: 52.9%, *P* value = 0.577). There was no significant difference in the proportions of perceived stigma between those who had a family history of mental illness (62.9%) compared with others (50.9%), adjusted OR: 1.47 (95% CI: 0.64–3.39), *P* value = 0.214. There was also no significant difference in perceptions of stigma among those who knew someone with a mental illness, e.g. work colleague or friend (61.5%), compared with others (50.0%), adjusted OR: 1.47 (95% CI: 0.71–3.02), *P* value = 0.177.

Only 53% identified the case scenario (depression) as a mental illness, and all 80 of them recommended seeking external help. While 28 respondents (35.0%) said that professional health caregivers need to be approached, family and friends were the choices for the source of help for 51 (64%). Of those who identified the vignette as a mental illness, only 49 (61%) were aware of the availability of medications for mental illnesses such as depression. Participants with an education above the eighth grade (median) were more likely to identify the vignette as a mental illness (OR: 2.38, 95% CI: 1.24–4.61).

## DISCUSSION

This community-based pilot study from rural Tamil Nadu documents public perceptions of stigma toward patients with mental illnesses and their families. The strength of the study is that it is a population-based survey, although the generalisability is restricted to similar parts of south India.

Stigma toward mental illnesses is one of the reasons for a "low demand" for mental health care, along with other barriers, such as poor awareness and cultural beliefs.[3] Qualitative findings from the National Mental Health Survey 2016 also pointed to stigma as one reason for poor utilization of health care for mental illnesses.[3]

Almost three-fourths (72%) of the study respondents felt that people look down on those with a history of hospitalization for mental illness, indicating the high stigma associated with serious mental illnesses. This corresponded with a similar study done in Mumbai, where 60.8% of the general population believed the same.[7] In this study from rural Vellore, only 36% felt that employers would be less willing to hire a person with a mental illness as compared with 71.6% in Mumbai.[7] This may reflect differences in socioeconomic status and occupational experiences as it may be less difficult to

obtain some form of employment in a rural area than in an urban area, even for those with a mental illness. Thus, role restriction due to mental illness was lower in this rural study, for employment, than the study from urban Mumbai which included a large proportion of armed personnel.[7] However, nearly three-fourths (75.3%) of our rural participants felt that young women would be unwilling to marry a man who has been treated for a serious mental illness. This was higher than the results from an urban study from Chennai and Kolkata, where around half of the respondents believed that young women would be reluctant to date a man who has been admitted for a mental illness.[6]

In this study, 69.3% felt that most people would not accept a person who once had a mental illness as a close friend. This was much higher than Chennai and Kolkata, where only 26.5%–36.1% felt that most people would not accept a former mentally ill patient as a close friend, indicating that friendship refusal due to mental illness, a measure of stigma, is higher in rural settings.[6]

Less than half of our rural respondents (48.7%) felt that parents are blamed for the mental illnesses of their children, whereas nearly 78.4% felt the same in Mumbai.[7]

The overall proportion which perceived that most people devalue persons with mental illnesses was 63.8% in this study, similar to a study in New York among caregivers of patients with serious mental illnesses, of whom 70% perceived that there was public stigma toward patients with mental illnesses.[16]

The lower perception of stigma among younger respondents in this study may reflect education and exposure to mass media and implies changing societal attitudes.

Although this study from Vellore was limited by small study size, purely quantitative methodology, location restricted to a block in rural Tamil Nadu, and over-representation of women due to difficulties with sampling in the community, it highlights the magnitude of stigma as perceived by rural communities toward mental illnesses.

Besides widespread stigma in the general community, studies have also found nonpsychiatric healthcare and paramedical personnel to have stigmatizing attitudes against those with mental illnesses.[17-19] Although in our study there was no significant association between perceptions of stigma and family history of mental illness or contact with someone else with a mental illness, one survey from a teaching hospital among nonpsychiatric medical professionals also found that social contact with an affected person was associated with less socially restrictive attitudes.[17] In view of this barrier of stigmatizing attitudes among healthcare workers, an interventional study aimed at reducing stigma through targeting nonspecialist healthcare workers is being planned in low-resource settings in Nepal.[20]

The World Health Day theme 2017 "Depression: Let's talk," highlighted the importance of spreading awareness and promoting health-seeking behavior.[21] The WHO campaign was built on the premise that talking about depression would reduce stigma, breaking down barriers, and encouraging people to seek help. Education and social contact with affected people have been found to be the most effective antistigma measures.[22] A review of interventional studies to reduce stigma revealed the paucity of evidence from low and middle-income countries.[23] An interventional study in Karnataka involved educational methods, such as slide shows, discussions, street plays, and printed material, and found a reduction in stigmatizing attitudes postintervention.[24] Further interventional research is needed in India in different locations and cultural settings, with studies aimed at evaluating community-wide educational programs, including formal assessment of changes in public awareness and stigma.

The prevalence of common mental morbidities in India is highest for urban metros, while it is only marginally higher in nonmetros compared with rural areas.[3] Although rural areas have a lower prevalence of mental disorders, the lower educational level may lead to a higher level of public stigma, and consequently to a higher treatment gap in the rural areas. This was shown in a study from Assam, Uttar Pradesh, and Kolkata, in which stigmatizing attitudes toward mental illnesses were higher in the rural areas, indicating the need for intensified educational efforts.[25]

In conclusion, this population-based study from rural Vellore highlights the high magnitude of stigma toward patients with psychiatric illnesses and their families, indicated by almost three-fourths of the respondents feeling that people look down at those with a history of hospitalization for mental illness, as well as their families. Such a high level of public perception of stigma can potentially deter treatment for mental illnesses and needs to be addressed.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

## REFERENCES


1. Thornicroft G. Most people with mental illness are not treated. Lancet 2007;70:807-8.
2. Mathers CD, Loncar D. Projections of global mortality and burden of disease from 2002 to 2030. PLoS Med 2006;3: e442.
3. Gururaj G, Varghese M, Benegal V, Rao GN, Pathak K, Singh LK, *et al*. National Mental Health Survey of India, 2015-16: Prevalence, patterns and outcomes. Bengaluru, National Institute of Mental Health & Neuro Sciences, NIMHANS Publication No. 129, 2016. Available from: http://indianmhs.nimhans.ac.in/nmhs-reports.php. [Last accessed on 2018 Sep 10].
4. Lauber C, Rossler W. Stigma towards people with mental illness in developing countries in Asia. Int Rev Psychiatry 2007;19:157-78.
5. Wei Y, McGrath PJ, Hayden J, Kutcher S. Mental health literacy measures evaluating knowledge, attitudes and help-seeking: A scoping review. BMC Psychiatry 2015;15:291.
6. Zieger A, Mungee A, Schomerus G, Ta TM, Dettling M, Angermeyer MC, *et al*. Perceived stigma of mental illness: A comparison between two metropolitan cities in India. Indian J Psychiatry 2016;58:432-7.
7. Pawar AA, Peters A, Rathod J. Stigma of mental illness: A study in the Indian Armed Forces. Med J Armed Forces India 2014;70:354-9.
8. Vijayalakshmi P, Ramachandra, Nagarajaiah, Reddemma K, Math SB. Attitude and response of a rural population regarding person with mental illness. Dysphrenia- Acad J Psychiatry 2013;4:42-8.
9. Venkatesh BT, Andrews T, Mayya SS, Singh MM, Parsekar SS. Perception of stigma toward mental illness in South India. J Family Med Prim Care 2015;4:449-53.
10. Salve H, Goswami K, Sagar R, Nongkynrih B, Sreenivas V. Perception and attitude towards mental illness in an urban community in south Delhi – A community based study. Indian J Psychol Med 2013;35:154-8.
11. Kermode M, Bowen K, Arole S, Pathare S, Jorm AF. Attitudes to people with mental disorders: A mental health literacy survey in a rural area of Maharashtra, India. Soc Psychiatry Psychiatr Epidemiol 2009;44:1087-96.
12. Prasad J, Abraham VJ, Minz S, Abraham S, Joseph A, Muliyil JP, *et al*. Rates and factors associated with suicide in Kaniyambadi Block, Tamil Nadu, South India, 2000-2002 Int J Soc Psychiatry 2006;52:65-71.
13. Abraham VJ, Abraham S, Jacob KS, Suicide in the elderly in Kaniyambadi block, Tamil Nadu, South India. Int J Geriatr Psychiatry 2005;20:953-5.
14. Joseph A, Abraham S, Muliyil JP, George K, Prasad J, Minz S, *et al*. Evaluation of suicide rates in rural India using verbal autopsies. BMJ 2003;326:1121-2.
15. Aaron R, Joseph A, Abraham S, Muliyil J, George K, Prasad J, *et al*. Suicides in young people in rural southern India. Lancet 2004;363:1117-8.
16. Struening EL, Perlick DA, Link BG, Hellman F, Herman D, Sirey JA. Stigma as a barrier to recovery: The extent to which caregivers believe most people devalue consumers and their families. Psychiatr Serv 2001;52:1633-8.
17. Sathyanath S, Mendonsa RD, Thattil AM, Chandran VM, Karkal RS. Socially restrictive attitudes towards people with mental illness among the non-psychiatry medical professionals in a university teaching hospital in South India. Int J Soc Psychiatry 2016;62:221-6.
18. Almanzar S, Shah N, Vithalani S, Shah S, Squires J, Appasani R, *et al*. Knowledge of and attitudes toward clinical depression among health providers in Gujarat, India. Ann Glob Health 2014;80:89-95.
19. Pande V, Saini R, Chaudhury S. Attitude toward mental illness amongst urban nonpsychiatric health professionals. Ind Psychiatry J 2011;20:17-20.
20. Kohrt BA, Jordans MJD, Turner EL, Sikkema KJ, Luitel NP, Rai S, *et al*. Reducing stigma among healthcare providers to improve mental health services (RESHAPE): Protocol for a pilot cluster randomized controlled trial of a stigma reduction intervention for training primary healthcare workers in Nepal. Pilot Feasibility Stud 2018;4:36.
21. World Health Organization. World Health Day – 7 April 2017. Depression: Let's talk. Available from: http://www.who.int/campaigns/world-health-day/2017/campaign-essentials/en/. [Last accessed on 2018 Dec 11].
22. Gronholm PC, Henderson C, Deb T, Thornicroft G. Interventions to reduce discrimination and stigma: The state of the art. Social Psychiatry Psychiatr Epidemiol 2017;52:249-58.
23. Thornicroft G, Mehta N, Clement S, Evans-Lacko S, Doherty M, Rose D, *et al*. Evidence for effective interventions to reduce mental-health-related stigma and discrimination. Lancet 2016;387:1123-32.
24. Dharitri R, Rao SN, Kalyanasundaram S. Stigma of mental illness: An interventional study to reduce its impact in the community. Indian J Psychiatry 2015;57:165-73.
25. Jadhav S, Littlewood R, Ryder AG, Chakraborty A, Jain S, Barua M. Stigmatization of severe mental illness in India: Against the simple industrialization hypothesis. Indian J Psychiatry 2007;49:189-94.

# Brief Research Communication

# Hypochondriasis: Clinical Profile in a Tertiary Care Psychiatry and Neurosciences Hospital in Southern India – A Retrospective Chart Review

**N. Pavithra, Ajit Bhalchandra Dahale, Geetha Desai, Santosh Kumar Chaturvedi**

ABSTRACT

**Background:** Hypochondriasis is a complex disorder in the realm of psychosomatic medicine, yet understudied in India. The aim of this study was to assess the clinical profile of patients diagnosed with hypochondriasis. **Materials and Methods:** Retrospective chart review was done in a tertiary care psychiatry and neurosciences hospital in southern India. Medical records of adults diagnosed with hypochondriasis between 2000 and 2010 were analyzed. These patients were also rediagnosed retrospectively using Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition (DSM-5) criteria for illness anxiety disorder (IAD) and Diagnostic Criteria for Psychosomatic Research (DCPR) criteria for health anxiety and illness phobia. Data were organized and analyzed using PSPP for descriptive statistics of different variables. **Results:** There were 114 patients with hypochondriasis, with the most common belief being about dysmorphic appearance. Selective serotonin reuptake inhibitors (SSRIs) were the most commonly prescribed medications. The median follow-up duration was only 2 months. Five percent of the cases fulfilled the criteria for DCPR health anxiety and 20.4% for DCPR illness phobia. DSM-5 criteria for IAD were fulfilled by 45.6% of the cases. **Conclusion:** Dysmorphic appearance was the most common concern in patients with hypochondriasis and SSRIs the most common medications. The follow-up rate and the diagnostic concurrence with DSM-5 IAD and DCPR were low. Studies assessing the influence of psychopathology and culture on the presentation, course, and prognosis of hypochondriasis would be beneficial.

**Key words:** *Health anxiety, hypochondriacal disorder, hypochondriasis, illness anxiety, illness phobia*
**Key messages:** *a) This study found that dysmorphic appearance was the most common concern in subjects with hypochondriasis. b) Th follow up rates and diagnostic concurrence with DSM % Illness anxiety disorder was low.*

## INTRODUCTION

Hypochondriasis is a unique disorder with the primary feature of persistent preoccupation with the possibility of having one or more serious and progressive physical disorders [International Classification of

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| **Website:** www.ijpm.info | Quick Response Code |
| **DOI:** 10.4103/IJPSYM.IJPSYM_177_18 | |



**How to cite this article:** Pavithra N, Dahale AB, Desai G, Chaturvedi SK. Hypochondriasis: Clinical profile in a tertiary care psychiatry and neurosciences hospital in Southern India – A retrospective chart review. Indian J Psychol Med 2019;41:178-81.

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Diseases, 10th Edition (ICD-10)]. It is categorized under somatoform disorders in ICD-10 and DSM-4. Body dysmorphic disorder too is subsumed under hypochondriacal disorder in ICD-10.[1] DSM-5 includes hypochondriasis under somatic symptom and related disorders and subcategorizes it into somatic symptom disorder and illness anxiety disorder (IAD).[2] The prevalence of hypochondriasis is reported to be between 0.02% and 7% in general population studies and between 0.8% and 8.5% in primary care studies.[3] The variation in the prevalence rates is due to the difference in the settings and variability in the criteria for the diagnosis.

Demographic variables, namely, socioeconomic status, educational level, race, or sex, have been inconsistently reported to be associated with hypochondriasis.[3-7] The course of hypochondriasis is generally chronic, with persistent symptoms reported in 34%–70% of patients.[8,9] The maximum duration of follow-up found by these studies was around 5 years.[10] Hypochondriasis is also noted to have an association with anxiety and depression, yet the psychiatric comorbidity may not influence its course.[3,8]

The literature on hypochondriasis is scant from developing countries like India.[11-14] This study aimed to assess the clinical profile of hypochondriasis in an Indian psychiatric hospital setting. This will add to the current understanding on this complex disorder and encourage further research.

## MATERIALS AND METHODS

The study was conducted in the National Institute of Mental Health and Neurosciences (NIMHANS), Bangalore. The hospital register was accessed for the number of patients who had received a diagnosis of hypochondriacal disorder (hypochondriasis) as per ICD-10 clinical descriptions and diagnostic guidelines, for the duration between January 2000 and December 2010, that is, a period of 11 years. The files of adult patients (age above 18 years) diagnosed with hypochondriacal disorder and having symptoms for more than 1 month were retrieved and assessed for adequacy of data. The files with adequate data were used for data extraction using a semi-structured proforma. The details extracted from the files included sociodemographic details such as age, gender, socioeconomic status, religion, residence, and marital status.

The clinical details collected included presence and details of precipitating factor, type of onset, duration of illness, perceived illness or organ system involved, personal and family history of psychiatric illness, personal and family history of medical illness, treatment received by the patient, duration of follow-up, and presence of referrals to other medical specialties. The cases were rediagnosed as per the Diagnostic Criteria for Psychosomatic Research categories of illness phobia and health anxiety and the DSM-5 category of IAD.[2,15] The data collected from the medical records were organized and analyzed using PSPP.[16] This study was approved by the Institutional Ethics Committee.

## RESULTS

### Sociodemographic variables

There were 124 patients with the diagnosis of hypochondriasis as per the medical register. Ten patients were excluded after reviewing the medical records, due to lack of adequate information or a revised diagnosis. Hence, the total number of adult patients diagnosed with hypochondriacal disorder as per ICD-10 clinical descriptions and diagnostic guidelines from January 2000 to December 2010 (11 years) was 114. Among these, 86 (75.4%) were men and 28 (24.6%) were women. The age at presentation varied between 17 and 64 years, and the mean age was 33 ± 11.47 years. Seventy-six (68%) patients belonged to an urban background. The majority of the patients [97 (85%)] were Hindus, and 52 (46%) were married. The mean year of education was 12.09 ± 4.80 years.

### Clinical variables

The duration of illness at presentation varied between 1 and 240 months, with a mean of 50.22 ± 49.56 months and a median of 36 months. The most common type of onset was insidious, noted in 91 (79.7%) cases. The presence of precipitating factor was reported by 57 (50%) cases. The presence of a precipitating factor was twice more common in men (56.98%) than in women (28.57%). Inpatient care was received by 30 (26.3%) of the cases. The most common hypochondriacal beliefs were about dysmorphic appearance (26.3%), HIV/AIDS (12.3%), brain diseases (11.4%), and cancer (10.5%). Among the cases having belief about dysmorphic appearance, 22 (75%) had beliefs related to facial appearance [Table 1].

Overall, psychiatric comorbidity was noted in 64 (56.1%) cases, with comorbid depression and anxiety disorders being present in 31 (27.2%) and 32 (28.1%) cases, respectively, and the proportion was similar in both the genders. History of medical illness was reported by 29 (25.4%) of the cases, and it was more common in men (30.23%) when compared with women (10.71%). Family history suggestive of anxiety disorders was present in 10 (8.8%) cases. The most commonly prescribed medications were selective serotonin reuptake inhibitors (SSRIs; 77%). Among them, escitalopram, which was prescribed

**Table 1: Clinical and treatment related variables**

| Variable | No. (%) |
|---|---|
| Clinical variables | |
| Onset | |
| Abrupt or acute | 25 (20.3) |
| Insidious | 89 (79.7) |
| Perceived illness/organ involvement | |
| Appearance | 30 (26.31) |
| HIV/AIDS | 14 (12.28) |
| Brain diseases | 13 (11.40) |
| Cardiac diseases | 11 (9.64) |
| Cancer | 12 (10.52) |
| Gastrointestinal illnesses | 10 (8.77) |
| Others | 27 (23.68) |
| Psychiatric comorbidity | |
| Any psychiatric illness | 64 (56.1) |
| Depressive disorder | 31 (27.2) |
| Anxiety disorders | 32 (28.1) |
| Diagnostic concurrence with DSM-5 IAD | |
| Present | 52 (45.6) |
| Absent | 62 (54.4) |
| DCPR concurrence | |
| Health anxiety | 6 (5.30) |
| Illness phobia | 23 (20.16) |
| Treatment-related variables | |
| Type of treatment | |
| Inpatient | 30 (26.3) |
| Outpatient | 84 (73.7) |
| Medications used | |
| SSRIs | 85 (74.56) |
| SNRIs | 11 (9.64) |
| TCAs | 12 (10.52) |
| Antipsychotics | 23 (20. 16) |
| Benzodiazepines | 14 (12.28) |
| Behavior therapy received | |
| Yes | 37 (32.5) |
| No | 77 (67.5) |
| Referrals to other specialities | |
| Yes | 18 (15.8) |
| No | 96 (84.2) |
| Duration of follow-up | |
| No follow-up | 39 (34.2) |
| Up to 6 months | 39 (34.2) |
| 7-24 months | 20 (17.5) |
| More than 24 months | 16 (14.0) |

DSM-5 – Diagnostic and Statistical Manual of Mental Disorders, Fifth Edition, IAD – Illness anxiety disorder, DCPR – Diagnostic Criteria for Psychosomatic Research, SSRIs – Selective serotonin reuptake inhibitors, SNRIs – Selective norepinephrine reuptake inhibitors, TCAs – Tricyclic antidepressants

in 43 (50.58%) patients, was the most commonly used SSRI. Cognitive behavior therapy was received by 37 (32.5%) cases, and 18 (15.8%) cases were referred to other medical specialities. The follow-up duration ranged from 0 to 108 months, with a mean of 10.58 ± 20.23 months and a median of 2 months. When the Diagnostic Criteria for Psychosomatic Research (DCPR) was applied retrospectively, 6 (5.3%) cases fulfilled the criteria for health anxiety and 23 (20.4%) for illness phobia. Fifty-two (45.6%) cases fulfilled the DSM-5 criteria for IAD.

## DISCUSSION

In the 11-year period, only 114 patients received a diagnosis of hypochondriasis in the hospital which has around 10,000–12,000 new psychiatric patient registrations yearly (as per the annual reports), which is suggestive of a low prevalence in this setting. The possible reasons could be that patients with hypochondriasis are more likely to seek other specialists like plastic surgeons, physicians, or neurologists based on their beliefs and are unlikely to seek psychiatric help on their own.

We found a higher proportion of men (75.4%) in our sample, whereas earlier studies have conflicting results about the gender preponderance of hypochondriasis.[7] The mean duration of illness at presentation was above 4 years (50 months), suggesting the chronicity of the illness and also a poor understanding about the illness. The presence of a precipitating factor was reported by half of the cases (more commonly by men than women), suggesting a possible role of environmental or modifiable factors in the onset of the illness.

The most common hypochondriacal beliefs were about dysmorphic appearance, followed by brain-related diseases, and HIV/AIDS. We are not aware of any pattern of types of hypochondriacal beliefs noted in other studies.

The overall psychiatric comorbidity was 56%, which is high and comparable to earlier reports of 62%–64.9%.[17,18] One-fourth of the cases had a history of medical illness which may have contributed to the development of health anxiety and hypochondriasis. Cognitive behavior therapy was received by 32.5% of the cases. This low rate may be attributed to patient preference as well as availability and logistic issues. The median follow-up duration was only 2 months, suggestive of poor compliance. Data about the degree of improvement noticed in follow-up were not available consistently and hence could not be assessed.

The diagnostic concurrence of these cases with DSM-5 IAD was around 45%, DCPR illness phobia was 20%, and DCPR health anxiety was 5%, suggesting the differences in the various diagnostic systems, which can have treatment and research implications. The low concordance rates with DSM-5 IAD could be due to the fact that patients with a dysmorphic appearance as core beliefs are likely to receive a diagnosis of body dysmorphic disorders, which is a separate category in DSM. With ICD-11 making changes in the status of hypochondriasis and new criteria in DSM-5 and DCPR, the diagnostic concept of hypochondriasis has been changed to an extent.

The strengths of this study are the long duration of data assessed, the study of different clinical variables including phenomenological and treatment-related variables, and assessment of concurrence with DSM-5 and DCPR criteria. The limitations are the retrospective design, hospital-based data, and data based on medical records. Using minimum 1 month symptoms as duration criterion which is insufficient as per the diagnostic criteria for research given by ICD-10 (the study used criteria given in ICD-10 clinical descriptions and diagnostic guidelines) and the lack of structured assessment of the subjects are other limitations.[1,19] Further studies on clinical manifestation and course, which are prospective and involve different clinical settings and assess cultural influences, would be helpful in a better understanding and management of hypochondriasis. Studies assessing the relation of psychopathology with the course and prognosis would also be beneficial.

**Acknowledgement**

The authors thank the staff at Medical Records Department, NIMHANS.

**Financial support and sponsorship**

Nil.

**Conflicts of interest**

There are no conflicts of interest.

## REFERENCES

1. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines. World Health Organization; 1992. 147 p.
2. American Psychiatric Association. Diagnostic and Statistical Manual of Mental Disorders (DSM-5), Fifth Edition. Washington DC: American Psychiatric Publishing; 2013.
3. Creed F, Barsky A. A systematic review of the epidemiology of somatisation disorder and hypochondriasis. J Psychosom Res 2004;56:391-408.
4. Kellner R. Somatization and Hypochondriasis. Praeger Publishers; 1986.
5. Looper KJ, Kirmayer LJ. Hypochondriacal concerns in a community population. Psychol Med 2001;31:577-84.
6. Kenyon FE. Hypochondriasis: A clinical study. Br J Psychiatry 1964;110:478-88.
7. Bleichhardt G, Hiller W. Hypochondriasis and health anxiety in the German population. Br J Health Psychol 2007;12:511-23.
8. olde Hartman TC, Borghuis MS, Lucassen PLBJ, van de Laar FA, Speckens AE, van Weel C. Medically unexplained symptoms, somatisation disorder and hypochondriasis: Course and prognosis. A systematic review. J Psychosom Res 2009;66:363-77.
9. Simon GE, Gureje O, Fullerton C. Course of hypochondriasis in an international primary care study. Gen Hosp Psychiatry 2001;23:51-5.
10. Barsky AJ, Fama JM, Bailey ED, Ahern DK. A prospective 4- to 5-year study of DSM-III-R hypochondriasis. Arch Gen Psychiatry 1998;55:737-44.
11. Bhugra D, Gupta KR, Wright B. Depression in North India comparison of symptoms and life events with other patient groups. Int J Psychiatry Clin Pract. 1997;1:83-7.
12. Varma VK, Malhotra AK, Chaturvedi SK. Illness Behaviour Questionnaire (IBQ): Translation and adaptation in India. Indian J Psychiatry 1986;28:41-6.
13. Jaisoorya TS, Reddy YCJ, Srinath S. The relationship of obsessive-compulsive disorder to putative spectrum disorders: Results from an Indian study. Compr Psychiatry 2003;44:317-23.
14. Gureje O, Ustün TB, Simon GE. The syndrome of hypochondriasis: A cross-national study in primary care. Psychol Med 1997;27:1001-10.
15. Fava GA, Freyberger HJ, Bech P, Christodoulou G, Sensky T, Theorell T, *et al*. Diagnostic criteria for use in psychosomatic research. Psychother Psychosom 1995;63:1-8.
16. Pfaff B, Darrington J, Stover J, Satman MH, Beckmann F. GNU PSPP Statistical Analysis Software, Release 0.9. 0-g745ee3. Boston, MA: Free Software Foundation, Inc; 2007.
17. Noyes Jr. R, Kathol RG, Fisher MM, Phillips BM, Suelzer MT, Woodman CL. Psychiatric comorbidity among patients with hypochondriasis. Gen Hosp Psychiatry 1994;16:78-87.
18. Scarella TM, Laferton JAC, Ahern DK, Fallon BA, Barsky A. The relationship of hypochondriasis to anxiety, depressive, and somatoform disorders. Psychosomatics 2016;57:200-7.
19. World Health Organization. The ICD-10 Classification of Mental and Behavioural Disorders: Diagnostic Criteria for Research. World Health Organization; 1993. 263 p.

# Binge-Watching: A Matter of Concern?

Sir,

Since the last decade, the concept of watching television has taken a major transition. Traditional television scheduling made their viewers abide by the television broadcast timings, subjected them to advertisements/breaks, and made them wait for days or weeks to watch their favorite serials and/or movies. With the advancement of technology, and more specifically the emergence of online streaming services, there is a tremendous reshaping of traditional broadcasting logics. Any broadcast may be unlocked from 'kickoff to climax' with just a click – "anytime and anywhere!" Such viewing may happen in living room television sets, computer screens, tablets, smartphones, or smartwatches[1] — in simple terms, "it's all television!"

As watching television series has never been so easy, a new behavioral phenomenon has arisen and is making subscribers to "binge-watch," that is, view multiple episodes of the same television series in a single sitting.[2] In simpler terms, this is a choice to spend an evening or a weekend glued to the screen, immersed in consuming multiple episodes or even an entire season of television shows in a single sitting.

Some binge-critique journalists compare "binge-worthy" series to potato chips – tasty for sure, impossible to stop snacking, utterly lacking intellectual value, and after bingeing likely to make viewers feel a bit ill and ultimately feel displeased, which engender to binge more.[3] Moreover, some series are created in such a fashion that they intentionally force viewers to consciously focus on the intricacies of the episodes. A viewer may hence get distressed if they miss any due to something inadvertent.[4]

The current data indicate that binge-watching is increasing, and a study found that at least three of four respondents self-reported as a "binge-watcher."[4] Furthermore, when all episodes of a season were released simultaneously by an online streaming service, it inspired widespread "marathon-viewing" sessions among the 18–34 years age group who initially binge-watched and later took themselves to social media to post their (seemingly positive) reviews of such series.[4] Some binge-watchers also report that

watching a series on one go has "social value" as they can participate in social media conversations with their virtual friends, which create a "sense of belongingness." Are they hooked also to the social media, waiting for a response on their binge-watching from the virtual world?

As of now, only a little is known about the consequences of watching series that may reach "binge" or maybe "addiction" levels. However, one may anticipate whether binge watching could upturn into something like another behavioral addiction. But is there any robust attempt to define binge-watching or to assess its severity or its effects on mental health? Although infrequent media reports on binge-watching definitely mention its effects on mental health and highlight it as yet another emerging clinical condition,[5] has the time really come to qualify or consider such behaviors under the rubric of behavioral addictions?

The existing literature provides some insights into this emerging phenomenon, and findings suggest that binge-watching may affect mental health. As of now, it is more related to features such as fatigability, poor quality of sleep, insomnia, and some mood disturbance.[6-8] Some researchers also assert a possible association with depression,[6] loneliness,[6] and deficient self-regulation.[7] Exelmans and Van den Bulck[8] also mention about presleep arousal following binge-watching. Seemingly,

based on such evidence, some online streaming services have already started alerting viewers when a number of consecutive episodes have been watched.[8] However, none of these studies has confirmed that binge-watching shares characteristics of other defined behavioral addictions (e.g., watching longer than intended; unsuccessful attempts to control, reduce, or cut down watching; displacement of other activities).

Interestingly, binge-watching also occur to "catch-up"' existing episodes of a series and watch new episodes as soon as they are premiered. Fear of missing out (FoMo) is a pervasive apprehension that others might be having rewarding experiences (in this case, online series) from which one is absent/missing.[9] Such a fear or anxiety of losing an updated episode may also compel binge-watchers to check Internet-enabled devices constantly.

Until date, only little is known about the psychological processes underlying binge-watching. A recent study aimed toward a comprehensive understanding of this behavior using qualitative analysis of different phenomenological characteristics.[10] A content analysis identified binge-watching behaviors across three dimensions – (1) watching motivations: that is, bingeing a series, like any hobby or leisure activity, primarily satisfies the "need for entertainment" and hence serves to enhance or maintain positive emotions; (2) watching engagement: that is, who watch series regularly and integrate the activity with their other daily routine. Some people grouped in this dimension do sense a loss of control to their binge-watching behaviors; (3) structural characteristics of series: that is, watching is mainly driven by availability, type, and quality of the narratives and characters involved in the series.[10]

Empirical research has suggested that the structural characteristics of video gaming have an influential role in the initiation and maintenance of addictive behaviors.[11] Therefore, it is always necessary to focus on behavioral analysis and use more qualitative research methods to examine the proposed behavior and deduce reasons for such a "behavioral excess." Nonetheless, giving binge-watching a systematic labeling of behavioral addiction would be premature and may result in adding one more behavioral phenomenon to the unlimited list of new behavioral addictions.

With the emerging trends, affordability and accessibility to high-speed Internet in India and the influence of social media and dedicated leisure time have "hooked" some individuals to online streaming services. Currently, the characteristics of online television series are highly analogous to those described in the "Triple-A" model regarding online sexual activities, that is, affordability, accessibility, and anonymity.[10,12]

Finally, are binge-watchers becoming vulnerable to some mental health conditions? Are we trying to pathologize common behaviors or "leisure activity"? Is there a need to formulate or define a model for binge-watching? The answers to such questions are not clear, and the phenomenon is yet to be elucidated in detail. But introspecting holistically, binge-watching may definitely seem a "behavioral excess" and a matter of concern!

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

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## REFERENCES

1. Burroughs B. House of Netflix: Streaming media and digital lore. Popular Commun 2018; 25:1-7.
2. Walton-Pattison E, Dombrowski SU, Presseau J. "Just one more episode": Frequency and theoretical correlates of television binge watching. J Health Psychol 2018;23:17-24.
3. Matrix S. The Netflix effect: Teens, binge watching, and on-demand digital media trends. Jeunesse: Young People Texts Cult 2014;6:119-38.
4. Jenner M. Is this TVIV? On Netflix, TVIII and binge-watching. New Media Soc 2016;18:257-73.
5. Pinto D. The big binge: Viewers marathon episodes of television shows is a new obsession. [Newspaper article on the Internet]. DNA India; 2014. Available from: http://www.dnaindia.com/lifestyle/report-the-bigbingeviewers-marathon-episodes-of-television-shows-is-a-newobsession-1992675. [Last cited on 2018 Jul 01].
6. Sung YH, Kang EY, Lee W. A bad habit for your health? An exploration of psychological factors for binge-watching

behaviour. Paper presented at 65th Annual International Communication Association Conference; May 2015; San Juan, Puerto Rico.
7. Tukachinsky R, Eyal K. The psychology of marathon television viewing: Antecedents and viewer involvement. Mass Commun Soc 2018;21:275-95.
8. Exelmans L, Van den Bulck J. Binge viewing, sleep, and the role of pre-sleep arousal. J Clin Sleep Med 2017;13:1001-8.
9. Przybylski AK, Murayama K, DeHaan CR, Gladwell V. Motivational, emotional, and behavioral correlates of fear of missing out. Comput Human Behav 2013;29:1841-8.
10. Flayelle M, Maurage P, Billieux J. Toward a qualitative understanding of binge-watching behaviors: A focus group approach. J Behav Addict 2017;6:457-71.
11. Deleuze J, Christiaens M, Nuyens F, Billieux J. Shoot at first sight! First person shooter players display reduced reaction time and compromised inhibitory control in comparison to other video game players. Comput Human Behav 2017;72:570-6.
12. Cooper A, Scherer CR, Boies SC, Gordon BL. Sexuality on the Internet: From sexual exploration to pathological expression. Professional Psychol Res Pract 1999;30:154.



**Access this article online**

**Website:** www.ijpm.info

**DOI:** 10.4103/IJPSYM.IJPSYM_279_18

**Quick Response Code**

**How to cite this article:** Umesh S, Bose S. Binge-watching: A matter of concern?. Indian J Psychol Med 2019;41:182-4.



# Creutzfeldt–Jacob Disease with Psychiatric Presentation: Hen's Teeth in Indian Subcontinent: A Case Report

Sir,

Creutzfeldt–Jacob disease (CJD) is a rare, neurodegenerative, prion disease with an incidence of one per million individuals per year and mortality of 100%.[1] It occurs mostly in sporadic form (90%) followed by familial (15%) and acquired forms (5%).[2] Progressive dementia, visual disturbances, myoclonus, extrapyramidal and pyramidal signs, and behavioral disturbances are among the most common clinical findings. Diagnostic criteria of probable sporadic CJD (University of California San Francisco UCSF, 2007)[3] include (1) rapid cognitive decline; (2) at least two of the following six specific neurological manifestations: myoclonus, pyramidal/extrapyramidal, visual, cerebellar, akinetic mutism, other higher cortical signs (e.g., neglect, aphasia, apraxia, acalculia); (3) positive electroencephalography (EEG) (periodic epileptiform discharges) or positive magnetic resonance imaging (MRI) (either subcortical hyperintensity or cortical gyral hyperintensity [cortical ribboning] on DWI (diffusion-weighted imaging) and preferably restricted diffusion on ADC (apparent diffusion coefficient) map); (4) routine investigations do not suggest an alternative diagnosis. Clinical onset is characterized in most cases by neurological symptoms, whereas in a much smaller percentage by signs of mental deterioration and psychiatric symptoms. The differential diagnosis of psychosis in elderly patients usually includes delirium, dementia, and primary psychiatric disorders. A diagnosis of CJD should not be neglected in elderly patients presenting with recent onset and rapid progression of behavioral changes, anxiety, irritability, mood deflection, and insomnia with no psychopathological history.[4] Mehndiratta *et al*. reported 10 cases of CJD from North India where abnormal behavior was seen in 70% cases.[5] Satishchandra *et al*. in their epidemiological study recorded 20 definite and 10 probable cases of CJD from 1971 to 1990. In that paper, the authors found that psychiatric manifestations were present at onset in 105 cases and there was clustering of cases from Mumbai and Bengaluru.[6]

## CASE REPORT

A 50-year-old woman was brought to the psychiatric outpatient department with history of psychomotor agitation and behavioural problems for the last one and a half months. The personal and family psychiatric history was unremarkable. Initially, the history was taken from the patient's son, who reported that in the last one and a half months the patient had shown behavioural changes, wandering behaviour, and verbal

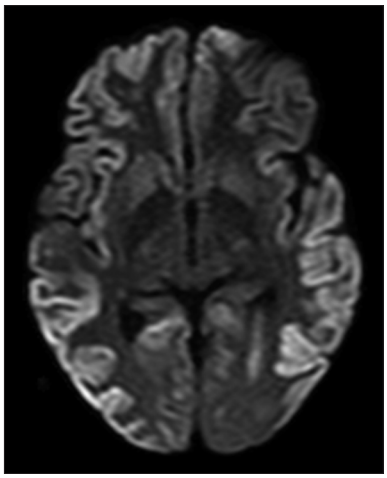

**Figure 1:** MRI Brain showing cortical ribboning on DWI

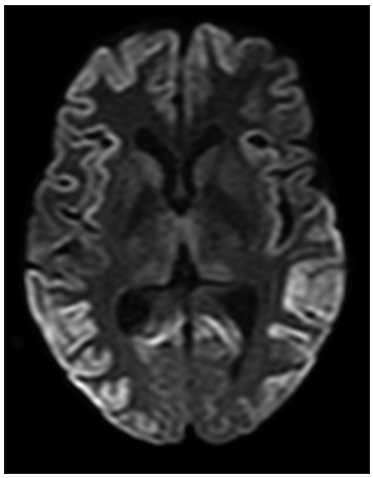

**Figure 2:** MRI brain showing diffusion restriction in bilateral posteromedial thalami giving the hockey-stick appearance

and physical aggression. There was a recent decline in the personal and social functioning. At first psychiatric evaluation, the patient was conscious but confused, not oriented in time, partly oriented towards the place, and seemed uncooperative. Her speech was spontaneous but irrelevant and nongoal directed. Due to her psychomotor agitation, higher mental functions could not be assessed. The patient was admitted, and a provisional diagnosis of a manic episode was kept based on the clinical findings of over-talkativeness, overfamiliarity, agitation, and aggression. Routine blood tests and ECG showed no pathological alterations. To manage the psychiatric symptoms, the patient was started on risperidone (titrated up to 3 mg/day) and diazepam (titrated up to 10 mg/day). Detailed evaluation in the ward revealed memory impairment for the last 3 months. During hospitalization, the patient's condition deteriorated. Perseveration and hallucinatory behavior became evident. A detailed neuropsychological assessment could not be done as the patient was uncooperative. According to the clinical picture, negative psychopathologic history, the rapid progression of memory impairment, and worsening of psychiatric symptoms, an organic substrate for the psychiatric symptoms was hypothesized. Because there was a rapid evolution of symptoms, it was fairly possible to exclude common forms of dementia, such as Alzheimer's disease and frontotemporal dementia. Prion disease was kept as one of the differential diagnoses because of the rapid evolution of symptoms.[7] Neurological symptoms eventually became prominent, with the evolution of apraxia and focal neurological deficits (pyramidal/extrapyramidal signs and akinetic mutism). There was rigidity in all the extremities and hyper-reflexic deep tendon reflexes. MRI brain showed bilaterally symmetrical T2-weighted and fluid attenuated inversion recovery (FLAIR) hyperintensity along the cortex, bilateral globus pallidi, and posteromedial thalami, as well as diffusion restriction and hockey stick appearance of thalami [Figures 1 and 2].

EEG revealed bilateral periodic sharp and short interval diffuse discharges with generalized delta slowing. Cerebrospinal fluid (CSF) analysis was not done as the diagnosis was achieved with the help of neuroimaging and EEG findings. There was worsening of psychiatric symptoms despite treatment and the patient was lost to follow-up.

## DISCUSSION

CJD is a rare, fatal neurodegenerative disease with distinctive clinical and pathological features. Sporadic CJD (sCJD) is the most common form of spongiform encephalopathy and usually appears at 50-70 years of age, consisting 90% of all cases with CJD.

Wall *et al*. retrospectively reviewed 126 patients of sporadic CJD in Mayo Clinic from 1976 to 2001, and found that 26% of the patients had psychiatric symptoms at presentation while 80% demonstrated some psychiatric dysfunction within 100 days of onset of illness. Prominent psychiatric symptoms were sleep disturbances, psychosis, and depression.[4]

The diagnosis of sCJD is based on clinical symptoms along with laboratory tests including EEG, imaging, and CSF analysis for 14-3-3 protein.[1] On T2-weighted MRI, hyperintense areas could be found in the caudate nucleus, putamen, globus pallidus, and thalamus. Diffusion-weighted MRI may indicate bilateral symmetrical hyperintense signals in the basal ganglia and/or cortex cerebri. Shiga *et al*. reported sensitivity and specificity of diffusion-weighted MRI in diagnosing CJD as 92.3% and 93%, respectively.[8] Cerebral atrophy can be another MRI finding. 14-3-3 protein is a protein released from damaged neurons into CSF, and is a good marker for CJD, with the sensitivity and specificity reported near 94% and 84%, respectively.[9] EEG is

a diagnostic modality with sensitivity near 64% and specificity between 74 and 91%.[8]

Our patient presented with a mania-like episode and not discrete episodes of psychosis, which makes it an unusual presentation of CJD to be kept in mind.

## CONCLUSION

In clinical practice, CJD should not be neglected as a differential diagnosis in adult and elderly patients with negative psychiatric history referred to psychiatrists for recent onset and rapidly progressing symptoms such as behavior changes, anxiety, irritability, mood deflection, insomnia, and poor response to treatment. In this case, the symptoms and signs necessary to diagnose a possible sporadic form of CJD emerged only belatedly, at a final stage, while symptoms at onset appeared to be more behavioral in nature.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

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## REFERENCES

1. Weihl CC, Roos RP. Creutzfeldt-Jacob disease, new variant Creutzfeldt-Jacob disease and Bovine spongiform encephalopathy. Neurol Clin North Am 1999;17:835-59.
2. Masters CL, Harris JO, Gajdusek DC, Gibbs CJ Jr, Bernoulli C, Asher DM. Creutzfeldt- Jacob disease: Patterns of worldwide occurrence and significance of familial and sporadic clustering. Ann Neurol 1979;5:177-88.
3. Available from: http://memory.ucsf.edu/sites/all/files/download/MAC_RPD_Primer.pdf. [Last accessed on 2018 Jan 01].
4. Wall CA, Rummans TA, Aksamit AJ, Krahn LE, Pankratz VS. Psychiatric manifestations of Creutzfeldt-Jakob disease: A 25-year analysis. J Neuropsychiatry Clin Neurosci 2005;17:489-95.
5. Mehndiratta MM, Bajaj BK, Gupta M, Anand R, Tatke M, Seryam S, *et al*. Creutzfeldt- Jakob disease: Report of 10 cases from North India. Neurol India 2001;49:338-41.
6. Satishchandra P, Shankar SK. Creutzfeldt-Jakob disease in India (1971-1990). Neuroepidemiology 1991;10:27-32.
7. Gozke E, Erdal N, Unal M. Creutzfeldt-Jacob disease: A case report. Cases J 2008;1:146.
8. Zerr I, Pocchiari M, Collins S, Brandel JP, de Pedro Cuesta J, Knight RS. Analysis of EEG and CSF 14-3-3 proteins as aids to the diagnosis of Creutzfeldt-Jakob disease. Neurology 2000;55:811-5.
9. Shiga Y, Miyazawa K, Sato S, Fukushima R, Shibuya S, Sato Y, *et al*. Diffusion weighted MRI abnormalities as an early diagnostic marker for Creutzfeldt-Jakob disease. Neurology 2004;63:443-9.



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| **Website:** www.ijpm.info | Quick Response Code |
| **DOI:** 10.4103/IJPSYM.IJPSYM_102_18 | |

**How to cite this article:** Singh G, Mehta S, Kumar M, Salhotra A. Creutzfeldt–Jacob disease with psychiatric presentation: Hen's teeth in Indian subcontinent: A case report. Indian J Psychol Med 2019;41:184-6.

# Atypical Limbic Encephalitis and its Complex Psychiatric Presentations: Implications for Diagnosis and Management

Sir,

Autoantibody-mediated encephalitis (AME) is a neurological illness caused by autoantibodies of autoimmune or paraneoplastic pathology, directed against the neuronal surface, synaptic antigens, or the intracellular proteins.[1] The onset is subacute, with the occurrence of altered mental status, seizures, and cognitive deficits, with a rapid progression. AME has been classified in different ways, including those based on anatomical sites involved or the underlying etiology, or eponymously classification too is present.[2] One such terminology is limbic encephalitis (LE), where autoimmune or paraneoplastic affection of the limbic system is implicated as the etiology. LE can manifest with diverse psychopathology, including delusions, hallucinations, irritability, aggression, anxiety, depression, and catatonic symptoms.[1-3] LE can also have atypical etiologies including nonparaneoplastic and seronegative varieties, especially during the early course of illness.[2] Psychiatric presentations of atypical variants of LE are not reported in the existing literature.

We present a case of acute seronegative nonparaneoplastic LE with complex neurological and psychiatric symptomatology including obsessions. The diagnostic implications of the clinical presentation and the integrated neuropsychiatric management required are also discussed.

## CASE REPORT

A 28-year-old woman presented to the emergency department with multiple episodes of seizures, preceded by high-grade fever and headache for 10 days. There was no history of vomiting, blurred vision, or neck stiffness suggestive of meningeal irritation. The epileptic attacks started as right-sided focal seizures followed by generalized tonic–clonic seizures. The episodes were multiple, with a frequency of one episode every 2–3 h, with acute onset and offset; lasting 3–5 min; and associated with loss of consciousness, loss of posture, and postictal drowsiness. Her medical history revealed the presence of hypothyroidism. There was no history of rheumatic or chronic inflammatory conditions. There was no family history of significant medical or psychiatric illness. She developed refractory status epilepticus, which responded to a cocktail of phenytoin 300 mg/day, carbamazepine 600 mg/day, valproate 1500 mg/day, levetiracetam 3 g/day, clobazam 20 mg/day, and midazolam infusion. She was also prescribed prednisolone (50 mg/day) and acyclovir (500 mg/day) for 1 week as prophylactic medications for AME and probable viral encephalitis. The patient required intensive care unit (ICU) monitoring for 3 weeks for adequate control of seizures. Her blood biochemistry evaluation for autoimmune disorders returned normal [Table 1]. The electroencephalogram (EEG) revealed fast beta background activity with an abnormal slowing in the left-sided leads with bilateral infrequent inter-ictal epileptiform discharges. Computerized tomography (CT) of the brain revealed bilateral medial temporal lobe hyperintensities. The CT of the thorax and abdomen was taken to rule out paraneoplastic syndrome, which returned normal. Acute onset of seizure disorder, status epilepticus, lack of focal neurological deficits, and the involvement of temporal lobes pointed to a clinical diagnosis of LE.

During the ICU stay, the patient developed postictal psychosis characterized by episodes of irritability, mutism, staring, posturing, and auditory hallucinations. There were no signs of delirium. The postictal psychosis improved with quetiapine (50 mg/day) in a week's time. After discharge, over 3 months' period, she had low mood, anhedonia, ideas of worthlessness and hopelessness, and suicidal tendencies. She had repetitive and unexplained emotional outbursts. On detailed exploration, she revealed that she experienced repetitive and intrusive urges to have physical intimacy with her spouse. Though she recognized those urges to be her own, repetitive, and intrusive, she could not reveal further information such as irrationality, control, or any associated anxiety. She did not reveal any mental or motor compulsions. The mental status examination revealed depressed affect, the presence of obsessive urges of sexual content, and defects in recent memory, and visuospatial functioning, with intact executive functions, praxis, and language functions. The patient was diagnosed to have Organic Depressive Disorder (F06.32) as per the International Classification of Diseases-10$^{th}$ edition (ICD-10).[4] Antipsychotics were stopped, and she was started on fluoxetine (20–40 mg/day) and clonazepam (0.75 mg/day). Her mood symptoms, obsessive thoughts, and distress improved significantly in a month's

**Table 1: Blood biochemistry, serology, drug levels, and autoimmune panel results**

| Parameter | Patient value | Normal range |
|---|---|---|
| Hemoglobin | 12.6 | 11.7-15.5 gm/dL |
| White blood cell count | 7.35 | 4.0-11.0 × $10^3$/μL |
| Sodium | 139.8 | 136-146 mEq/L |
| Potassium | 3.42 | 3.5-5.5 mEq/L |
| Blood urea | 10 | 15-40 mg/dL |
| Serum creatinine | 0.72 | 0.5-0.9 mg/dL |
| Liver function tests | | |
| Total Bilirubin | 0.24 | 0.3-1.3 mg/dL |
| Direct Bilirubin | 0.15 | 0.1-0.4 mg/dL |
| Serum Protein | 6.3 | 6.7-8.6 g/dL |
| Serum Albumin | 3.9 | 3.5-5.5 g/dL |
| AST | 28 | 12-38 IU/L |
| ALT | 26 | 7-41 IU/L |
| ALP | 99 | 108-306 IU/L |
| Thyroid function tests | | |
| Free T3 | 2.1 | 2.1-4.4 pg/ml |
| Free T4 | 0.95 | 0.8-2.7 ng/dL |
| TSH | 1.44 | 0.35-5.5 μIU/ml |
| Random blood sugar | 108 | 75-140 mg/dL |
| Blood culture | Sterile after 2 days of incubation | |
| Serology | | |
| HIV | Negative | |
| HbsAg | Negative | |
| anti-HCV | Nonreactive | |
| VDRL | Nonreactive | |
| Dengue (IgM ELISA, NS1) | Negative | |
| Malaria (ICT Pf and Peripheral smear) | Negative | |
| PCR for Japanese encephalitis | Negative | |
| CSF analyses | | |
| Cell count | 10 cells (8 lymphocytes) | |
| Glucose | 69 | 75-140 mg/dL |
| Chloride | 123.4 | 102-109 mEq/L |
| Protein | 30 | 15-50 mg/dL |
| Culture | Sterile | |
| HSV PCR | Negative | |
| Oligoclonal bands | Negative | |
| Autoimmune panel | | |
| Anti-TPO | 40.3 | 0-35 IU/ml |
| Anti-TG | <15 | 0-40 IU/ml |
| ANA | Negative | |
| CSF autoimmune panel (done twice for confirmation) | | |
| GABA-B | | |
| AMPA 1 | Negative | |
| AMPA 2 | | |
| NMDAR | | |
| VGKC | | |
| Drug levels | | |
| Valproate | 62 | 50-100 μg/ml |
| Carabamazepine | 6 | 4-12 mg/L |

μIU – micro International Units, μg – microgram, μL – microliter, ALP – Alkaline phosphatase, ALT – Alanine transaminase, AMPA - α-amino-3-hydroxy-5-methyl-4-isoxazolepropionic acid, ANA – Antinuclear antibody, Anti – TG – Antithyroglobulin antibody, Anti-TPO – Antithyroid peroxidase antibody, Anti-HCV – Anti-hepatitis C virus antibody, AST – Aspartate transaminase, CSF – Cerebrospinal fluid, dL – deciliter, ELISA - Enzyme-linked immune sorbent assay, GABA-B – gamma-aminobutyric acid – B, g – gram, HbsAg – Hepatitis B surface antigen, HIV – Human immunodeficiency virus, HSV – Herpes simplex virus, ICT Pf – Immunochromatographic test for *Plasmodium falciparum*, IgM – Immunoglobulin M, IU – International units, L – liter, mEq – milliequivalent, mg – milligram, ml – milliliter, ng – nanogram, NMDAR - N-methyl-d-aspartate receptor, NS1 – Dengue nonstructural protein 1, PCR – polymerase chain reaction, pg – picogram, T3 – triiodothyronine, T4 – thyroxine, TSH – Thyroid stimulating hormone, VDRL – Venereal Disease Research Laboratory, VGKC – Voltage-gated potassium channel

time [Table 2]. The patient was followed up for 3 months with no further relapses. Informed consent was obtained for patient management and write up of this report.

## DISCUSSION

The above clinical scenario sheds light on the diagnostic process of atypical LE and the complex neurological and psychiatric presentations associated with atypical variants of LE. A systematic evaluation of LE can be performed along the lines of clinical assessment, autoimmune panel, EEG, and neuroimaging investigations.[5,6]

In our patient, the clinical presentation was characterized by fever prodrome; generalized seizures with rapid progression to status epilepticus; seizure refractoriness; and polymorphic psychiatric presentation, including signs of catatonia, auditory hallucinations, depressive symptoms, and obsessional urges. The prevailing literature supports that the presence of a febrile prodrome, seizures, abrupt and polymorphic psychiatric complaints, rapid illness progression, poor treatment response, memory disturbances, and focal neurological signs should rouse the possibility of autoimmune encephalitis in patients with acute psychiatric disturbances.[5-7] Our case highlights that, apart from various psychiatric complaints, obsessional urges, which lack the classical features of irrationality or compulsive behaviors, can occur in patients with LE.[2,3,8] The occurrence of obsessions and depressive symptoms can be due to the involvement of medial temporal lobes, which are implicated in both seizures and emotional regulation.[9]

The investigations for infectious, metabolic, endocrine, and drug-induced causes returned normal, ruling out common causes for encephalitis [Table 1]. Further, normal autoimmune panel eliminated common autoimmune causes for LE. Recent literature reports that rarely LE can be nonparaneoplastic and that LE can be seronegative during the early stages.[1-3] Similar to what was observed in our patient, focal or diffuse slowing and epileptiform discharges in the EEG and bilateral medial lobe hyperintensities based on neuroimaging are consistently associated with LE.[6,7]

The comprehensive pharmacotherapy of the patient comprised high-dose corticosteroids, antiepileptics, and various psychotropics. Complex psychiatric disturbances in LE shall entail the supplementation of mood stabilizing antiepileptics to control agitation, atypical antipsychotics for psychosis, and antianxiety agents.[5,7]

The limitations of our report are that autoantibodies such as Glutamic Acid Decarboxylase 65 (GAD65) and those against Gamma-aminobutyric acid–A (GABA-A) receptor were not studied as their kits were not available. Rare possibilities such as new-onset refractory status epilepticus (NORSE), febrile infection related epilepsy syndrome (FIRES), or prion diseases were not actively considered.

Nevertheless, the present report adds to the literature that LE can be atypical when it presents in nonparaneoplastic and seronegative forms. In such atypical LE, the neurological and psychiatric symptoms can be more variegated than LE with an identified etiology. A careful assessment of the clinical presentation invariably determines the appropriate diagnostic work-up of the LE patient. An early, thorough, and integrated neuropsychiatric approach will be able to overcome the difficulties in such cases. Future studies are necessary to understand the symptoms of atypical LE in greater detail, identify their etiopathogenesis, and provide scope for the effective management of its myriad neuropsychiatric manifestations.

**Table 2: Scores on rating scales**

| Scale | Baseline | | | After 4 weeks of antidepressant therapy | | |
|---|---|---|---|---|---|---|
| HDRS-17 | 21 | | | 7 | | |
| Y-BOCS | Obsessions | Compulsions | Total | Obsessions | Compulsions | Total |
| | 14 | 4 | 18 | 5 | 1 | 6 |
| MMSE | 27 | | | 27 | | |

HDRS-17 – Hamilton depression rating scale – 17 items, MMSE – Mini mental state examination, Y-BOCS – Yale Brown Obsessive complusive scale

### Declaration of patient consent

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### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

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## REFERENCES

1. Lancaster E. The diagnosis and treatment of autoimmune encephalitis. J Clin Neurol Seoul Korea 2016;12:1-13.
2. Jammoul A, Li Y, Rae-Grant A. Autoantibody-mediated encephalitis: Not just paraneoplastic, not just limbic, and not untreatable. Cleve Clin J Med 2016;83:43-53.
3. Graus F, Titulaer MJ, Balu R, Benseler S, Bien CG, Cellucci T, *et al.* A clinical approach to diagnosis of autoimmune encephalitis. Lancet Neurol 2016;15:391-404.
4. World Health Organization and others. The ICD-10 Classification of Mental and Behavioural Disorders: Clinical Descriptions and Diagnostic Guidelines [Internet]. Geneva: World Health Organization; 1992. Available from: http://apps.who.int/iris/handle/10665/37958. [Last cited on 2015 Oct 31].
5. Oldham M. Autoimmune encephalopathy for psychiatrists: When to suspect autoimmunity and what to do next. Psychosomatics 2017;58:228-44.
6. Damato V. Diagnostic algorithms in autoimmune encephalitis. Neuroimmunol Neuroinflamm 2016;3:93-7.
7. Asztely F, Kumlien E. The diagnosis and treatment of limbic encephalitis. Acta Neurol Scand 2012;126:365-75.
8. Fernström J, Westrin Å, Grudet C, Träskman-Bendz L, Brundin L, Lindqvist D. Six autoantibodies associated with autoimmune encephalitis are not detectable in the cerebrospinal fluid of suicide attempters. PloS One 2017;12:e0176358.
9. Kanner AM, Schachter SC, Barry JJ, Hesdorffer DC, Hersdorffer DC, Mula M, *et al.* Depression and epilepsy: Epidemiologic and neurobiologic perspectives that may explain their high comorbid occurrence. Epilepsy Behav 2012;24:156-68.



**Access this article online**

**Website:** www.ijpm.info

**DOI:** 10.4103/IJPSYM.IJPSYM_233_18

Quick Response Code

**How to cite this article:** Vengadavaradan A, Subramanian K, Rajkumar RP. Atypical limbic encephalitis and its complex psychiatric presentations: Implications for diagnosis and management. Indian J Psychol Med 2019;41:187-90.



# Mirtazapine Induced Tremors: A Case Report

Sir,

Mirtazapine is an antidepressant with antagonistic action on alpha 2 noradrenergic receptors and postsynaptic serotonergic receptors (5HT2 and 5HT3).[1] It is considered to be one of the safest antidepressants in terms of side effects like involuntary movements. In fact, mirtazapine is one of the medications found useful in alleviating drug-induced akathisia and recommended in Parkinson's disease.[2,3] However, there is literature, mostly case reports, suggesting that at least a few subjects are intolerant to mirtazapine and may develop involuntary movement disorders such as akathisia, dystonia, and dyskinesia.[4] There is no literature implicating mirtazapine with tremors, chorea, or parkinsonism.[5] Here, we describe a case of mirtazapine-induced tremors.

A 60-year-old female came to the outpatient psychiatry department of our hospital with complaints of low mood, reduced interest in daily activities, loss of interest in previously rewarding or enjoyable activities, restlessness, easy fatigability, and reduced sleep and appetite for last 1 week, precipitated by the death of a close relative. The patient had a history of two depressive episodes in the last 3 years, treated with sertraline for a few months, which she had discontinued after experiencing improvement in her symptoms. There was no family history of psychiatric disorders. She had hypertension and was recently started on telmisartan and hydrochlorothiazide along with cilnidipine. Her blood investigation showed profound hyponatremia (117 mmol/L), and hence, she was shifted to cilnidipine and nebivolol by general physician alongside sodium correction with tolvaptan.

Her psychological condition showed significant improvement within 2 days, with improvement in sodium level (137 mmol/L). She was prescribed oral lorazepam 2 mg/day for residual sleep problems and anxiety. In view of persisting sleep disturbances, at first week follow-up, lorazepam was stopped and mirtazapine 7.5 mg at bedtime was initiated. After 2 days of starting

mirtazapine, she started complaining of restlessness and tremors of both hands. She came back for a consultation a week later because of intolerable movements, which on examination was diagnosed to be both subjective as well as objective signs of akathisia and high amplitude, coarse, low frequency (-4 Hz) resting tremors of both hands. Considering the temporal association with the initiation of mirtazapine, the drug was stopped and oral lorazepam 2 mg/day was restarted. Her restlessness and tremors resolved within a week, but she developed florid depressive symptoms, which promptly responded to agomelatine 25 mg/day thereafter. A Naranjo score of 6 indicated probable adverse drug reaction related to mirtazapine.[6]

This is the first case report of tremors caused by mirtazapine. The lady developed akathisia and tremors within 2 days of initiation of mirtazapine, which completely remitted after stopping mirtazapine, and lorazepam helped in the symptomatic alleviation of distressing akathisia.

In general, elderly patients are at increased risk of side effects. This patient presented with probable thiazide-induced hyponatremia, which is known to mimic depression.[7] Hence, correcting hyponatremia and symptomatic treatment of anxiety and sleep disturbances was attempted as the first step. On re-emergence of syndromal depression, mirtazapine was started as it has a lower propensity to precipitate hyponatremia. However, because of the intolerable hyperkinetic involuntary movements of akathisia and tremors, it had to be discontinued.

As a recent review, elderly patients are more prone to hyperkinetic side effects with mirtazapine at a dose more than 30 mg/day.[5] However, our patient had symptoms at a lower dose of 7.5 mg/day. Onset and remission of these side effects were within the time range observed commonly in the literature. These can start from the first dose to 9 weeks of initiation of mirtazapine and remit within a few hours to 3 weeks of termination.[5] As seen in our case, benzodiazepines usually provide symptomatic relief, especially from akathisia.

A meta-analysis showed the efficacy of mirtazapine in antipsychotic-induced akathisia.[2] Although rare, paradoxical mirtazapine-induced akathisia has been well reported from all over the world.[2] Mirtazapine has been shown to improve resting tremors in Parkinson's disease.[3] However, tremors induced by mirtazapine has not been systematically reported earlier. Short-term controlled studies from the United States report the prevalence of tremors to be 2% in patients on mirtazapine in comparison 1% noted on placebo; the clinical characteristics of the same are not detailed.[5] A recent study on a health database showed nearly 3.78 rate ratio of mirtazapine inducing extrapyramidal side effects with respect to age- and follow-up time-matched controls.[8] The mechanism of these side effects is largely unknown, but the temporal relationship implicates them to mirtazapine. Effect on the sensitive striatal alpha 2 adrenergic receptors in susceptible subjects could be the potential factor inducing movement-related adverse effects and may be an unusual phenotypic manifestation.[1]

Mirtazapine is considered as one of the safest options in elderly with depression. However, clinicians need to be aware of its potential resting tremor and akathisia related movement disorder adversities.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

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## REFERENCES

1. Raveendranathan D, Swaminath GR. Mirtazapine induced akathisia: Understanding a complex mechanism. Indian J Psychol Med 2015;37:474-5.
2. Praharaj SK, Kongasseri S, Behere RV, Sharma PS. Mirtazapine for antipsychotic-induced acute akathisia: A systematic review and meta-analysis of randomized placebo-controlled trials. Ther Adv Psychopharmacol 2015;5:307-13.

3. Pena E, Mata M, Lopez-Manzanares L, Kurtis M, Eimil M, Martinez-Castrillo JC, *et al*. Antidepressants in Parkinson's disease. Recommendations by the movement disorder study group of the Neurological Association of Madrid. Neurologia 2016. doi: 10.1016/j.nrl.2016.02.002.
4. Balaz M, Rektor I. Gradual onset of dyskinesia induced by mirtazapine. Neurol India 2010;58:672-3.
5. Yoon WT. Hyperkinetic movement disorders induced by mirtazapine: Unusual case report and clinical analysis of reported cases. J Psychiatry 2017;21:437.
6. Naranjo CA, Busto U, Sellers EM, Sandor P, Ruiz I, Roberts EA, *et al*. A method for estimating the probability of adverse drug reactions. Clin Pharmacol Ther 1981;30:239-45.
7. Liamis G, Filippatos TD, Elisaf MS. Thiazide-associated hyponatremia in the elderly: What the clinician needs to know. J Geriatr Cardiol 2016;13:175-82.
8. Guo MY, Etminan M, Procyshyn RM, Kim DD, Samii A, Kezouh A, *et al*. Association of antidepressant use with drug-related extrapyramidal symptoms: A pharmacoepidemiological study. J Clin Psychopharmacol 2018;38:349-56.



**Access this article online**

**Website:** www.ijpm.info

**DOI:** 10.4103/IJPSYM.IJPSYM_436_18

**Quick Response Code**

**How to cite this article:** Uvais NA, Sreeraj VS, Shihabudheen P, Mohammed TP. Mirtazapine induced tremors: A case report. Indian J Psychol Med 2019;41:190-2.



# Lurasidone-induced Parkinsonism and Hyperprolactinemia

Sir,

Drug-induced parkinsonism (DIP) usually manifests within a few days to up to 3 months of neuroleptic therapy and remits if the offending drug is discontinued.[1] Older age, being a woman, genetic variants, preexisting movement disorders, and cigarette smoking have been identified as risk factors for DIP.[2] Hyperprolactinemia is another common, but neglected, adverse effect of conventional and some atypical antipsychotics that may lead to decrease in libido, amenorrhea and infertility, breast engorgement and lactation.[3] Such adverse effects of medication may be very troublesome for a female in her reproductive period and interfere in the assessment of etiology of infertility too. We encountered a female patient with psychotic depression who developed DIP and had very high levels of serum prolactin following the use of lurasidone.

## CASE DETAILS

Ms A, 26-year-old, was brought by the family for sudden onset behavioral abnormalities, reduced sleep, restlessness, anxious and irritable mood, beliefs of being pregnant despite a negative urinary pregnancy test, and delusions of persecution. She refused to take her meals, was aggressive, and had a labile mood. We diagnosed her with acute polymorphic psychotic disorder without symptoms of schizophrenia (an International Classification of Diseases tenth revision/ICD-10 diagnosis). Her complete hemogram, serum biochemistries, and thyroid function were normal. In view of recent-onset amenorrhea, we ruled out pregnancy by the urine pregnancy test and pelvic ultrasonography. She was treated as an inpatient with olanzapine 10 mg/day and clonazepam 0.5 mg twice a day and had about 50% relief in 2 days and was discharged. However, she did not achieve remission, and her symptoms changed during the next 2–3 weeks. She started remaining sad, stopped participating in household activities, and repeatedly voiced her concern about conception. She would prefer to stay alone and had depressive cognitions in the form of bleak views of future, hopelessness, and suicidal ideations. She also had delusions which were mood congruent and revolved around her conception. However, her appetite was increased, and she gained nearly 3 kg of weight during this period. In view of the change of symptomatology, the diagnosis was revised to major depressive disorder current episode of severe depression with psychotic symptoms (F32.3) and she was re-admitted due to suicidal ideations. The rating of her psychopathology on the Brief Psychiatric Rating Scale (BPRS) revealed a

score of 55, suggestive of a severe illness. After informed consent, she was administered modified bi-temporal electroconvulsive therapy (ECT) at a frequency of three treatments/week. In view of weight gain, olanzapine was replaced with lurasidone which was increased to up to 40 mg twice a day. The treatment and associated details are mentioned in Table 1. Olanzapine was cross-tapered with lurasidone over a period of 2 weeks to avoid a rebound of psychotic symptoms. Consultation with an obstetrician was done for amenorrhea. The levels of luteinizing hormone (11.78 mIU/mL), follicle stimulating hormone (7.76 mIU/mL), and estradiol (21.56 pg/mL) were normal; prolactin (41.20 ng/ml) was slightly raised and endometrial thickness was 3 mm. In view of the slightly raised prolactin levels, an endocrinology consultation was also sought, and additional investigations were suggested. These included serum cortisol levels and a brain magnetic resonance imaging (MRI), both of which turned out to be normal, and so no medications were advised. Her depressive symptoms improved significantly within 2 weeks of treatment, but she developed an expressionless mask-like face and had slow gait and reduced span of arm swing. The ratings on the Extrapyramidal Symptom Rating Scale (ESRS)[4] were moderate (score on questionnaire – 3, bradykinesia – 4, gait and posture – 2, and expressive movements – 4). On clinical global impression (CGI), the severity of parkinsonism was rated as 4, i.e., moderate. A repeat serum prolactin showed very high levels (252.4 ng/ml) but she tested negative for urine alpha-fetoprotein. We attributed the extrapyramidal symptoms and hyperprolactinemia to lurasidone. It was tapered and replaced with low dose aripiprazole (5 mg/day) along with trihexyphenidyl 2 mg thrice a day. There was a significant decline in the DIP within the next week, and she was discharged. After 4 weeks of discharge, repeat serum prolactin level was 11.07 ng/ml and her menstruation had resumed.

## DISCUSSION

Lurasidone has a potent-binding affinity for D2-dopaminergic and serotonin (5-HT2A) receptors, which is even higher than that of the older atypical and typical antipsychotics.[5] It has moderate-to-high affinity for D3-dopaminergic, 5-HT7, and α-2 adrenergic receptors.[5,6] The high affinity for D2 receptors makes lurasidone liable to cause DIP, and the D2-antagonism in the nigrostriatal/tuberoinfundibular pathways may lead to DIP and hyperprolactinemia. These side effects occur due to the interplay of dopaminergic and serotonergic pathways. The former exerts a tonic inhibition of prolactin secretion via tuberoinfundibular and tuberohypophyseal pathways, while serotonin, via GABA-ergic interneurons, inhibits the tuberoinfundibular pathway. However, the antagonism of 5-HT2A receptors and low-binding affinity for the α 1-adrenergic and histaminergic H1 and M1 muscarinic receptors lowers the risk of DIP, orthostatic hypotension, sedation, and cholinergic side effects like dry mouth and constipation.

When compared to other antipsychotics, its side effect profile is similar to aripiprazole, asenapine, and amisulpride for weight gain; while in the case of DIP and hyperprolactinemia, it is similar to asenapine, chlorpromazine, ziprasidone, and olanzapine. Recently, two case reports mentioned the development of restless leg syndrome[7] and rabbit syndrome[8] in female patients treated with 40–120 mg of lurasidone. A recent meta-analysis of efficacy and tolerability of various antipsychotics in schizophrenia concluded that lurasidone more frequently leads to extrapyramidal side effects (odds ratio = 2.46; confidence interval = 1.55–3.72) as well as hyperprolactinemia (standard mean difference/SMD = 0.34; confidence interval = 0.11–0.57) when compared to placebo.[9] Besides, the product labeling for lurasidone mentions a lower potential for hyperprolactinemia, and it is uncommon to see a rise of more than five times the upper levels of normal

**Table 1: Details of treatment, psychopathology, and medication adverse effects**

| Week of treatment | Rating on BPRS | No. of ECTs administered | Medication details | Adverse effects |
|---|---|---|---|---|
| 1st | 55 | 3 | Olanzapine 20 mg reduced to 10 mg<br>Lurasidone 20 mg increased to 40 mg<br>Escitalopram 10 mg | |
| 2nd | 41 | 3 | Olanzapine stopped<br>Lurasidone 40 mg increased to 80 mg<br>Escitalopram 10 mg | ESRS - moderate parkinsonism, hyperprolactinemia (serum prolactin=252.4 ng/ml) |
| 3rd | 33 | 3 | Lurasidone 80 mg reduced to 40 mg<br>Escitalopram 10 mg | |
| 4th | 27 | 3 | Lurasidone stopped<br>Aripiprazole 5 mg started<br>Trihexyphenidyl 2 mg thrice a day<br>Escitalopram 20 mg | ESRS - mild parkinsonism |

ESRS=Extrapyramidal Symptom Rating Scale; BPRS=Brief Psychiatric Rating Scale; ECT=Electro Convulsive Therapy

serum prolactin level.[10] Most of the earlier short-term studies of lurasidone had reported a minimal or modest rise in the levels of serum prolactin levels and in one of the studies, more than five times increase was noted in only 2 out of 219 participants.[10] Additionally, all of these studies showed a greater rise in the serum prolactin levels in females. In the index case, gender was the only predisposing factor for both of the aforementioned adverse effects. She was not taking any other medications and had a normal hormonal profile and neuroimaging, which excluded most of the other causes of raised prolactin levels. Therefore, treatment with lurasidone was believed to be the underlying cause of DIP and hyperprolactinemia in her.

To conclude, though, unlike many other atypical antipsychotics, lurasidone may be associated with a lower potential for weight gain and orthostatic hypotension, the adverse effects of DIP, and hyperprolactinemia, especially in young childbearing women, though infrequent, may be disquieting. Thus, we suggest clinicians to use lurasidone in their female clients carefully.

### Declaration of patient consent

The authors certify that they have obtained all appropriate patient consent forms. In the form the patient(s) has/have given his/her/their consent for his/her/their images and other clinical information to be reported in the journal. The patients understand that their names and initials will not be published and due efforts will be made to conceal their identity, but anonymity cannot be guaranteed.

### Financial support and sponsorship

Nil.

### Conflicts of interest

There are no conflicts of interest.

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## REFERENCES

1. Lopez-Sendon J, Mena MA, de Yebenes JG. Drug-induced Parkinsonism. Expert Opin Drug Saf 2013;12:487-96.
2. Shin HW, Chung SJ. Drug-induced Parkinsonism. J Clin Neurol 2012;8:15-21.
3. Torre DL, Falorni A. Pharmacological causes of hyperprolactinemia. Ther Clin Risk Manag 2007;3:929-51.
4. Chouinard G, Margolese HC. Manual for the extrapyramidal symptom rating scale (ESRS). Schizophr Res 2005;76:247-65.
5. Jaeschke RR, Sowa-Kucma M, Pańczyszyn-Trzewik P, Misztak P, Styczen K, Datka W. Lurasidone: The 2016 update on the pharmacology, efficacy and safety profile. Pharmacol Rep 2016;68:748-55.
6. Ishibashi T, Horisawa T, Tokuda K, Ishiyama T, Ogasa M, Tagashira R, *et al*. Pharmacological profile of lurasidone, a novel antipsychotic agent with potent 5-hydroxytryptamine 7 (5-HT7) and 5-HT1A receptor activity. J Pharmacol Exp Ther 2010;334:171-81.
7. Ghori AK, Sajatovic M, Tampi RR. A case of emergent restless legs syndrome with lurasidone therapy. J Clin Psychopharmacol 2016;36:293-4.
8. Reichenberg JL, Ridout KK, Rickler KC. Lurasidone-induced rabbit syndrome: A case report. J Clin Psychiatry 2017;78:e553.
9. Leucht S, Cipriani A, Spineli L, Mavridis D, Orey D, Richter F, *et al*. Comparative efficacy and tolerability of 15 antipsychotic drugs in schizophrenia: A multiple-treatment meta-analysis. Lancet 2013;383:951-62.
10. Peuskens J, Pani L, Detraux J, De Hert M. The effects of novel and newly approved antipsychotics on serum prolactin levels: A comprehensive review. CNS Drugs 2014;28:421-53.



| Access this article online | |
|---|---|
| **Website:** www.ijpm.info | Quick Response Code |
| **DOI:** 10.4103/IJPSYM.IJPSYM_274_18 | |

**How to cite this article:** Suthar N, Aneja J. Lurasidone-induced parkinsonism and hyperprolactinemia. Indian J Psychol Med 2019;41:192-4.

# Use of Stimulants in Patients with Psychosis Having Past History of or Co-occurring Attention Deficit Hyperactivity Disorder: Is it Safe?

Sir,

Since ages, psychiatrists have cautioned against the use of stimulants in attention deficit hyperactivity disorder (ADHD) when a patient has a psychotic episode.[1] Amphetamine and its analogues are considered the mainstay of treatment for ADHD, and most patients are put on a long-term regimen with these psychostimulants. Some children treated with amphetamines have reported psychosis as an adverse effect.[2] At the same time, a combination of antipsychotics and psychostimulants was found safer and effective in a few patients with schizophrenia, which further raises confusion regarding modes of treatment for comorbid ADHD and psychotic disorder.[3,4]

There is a dichotomy of beliefs among psychiatrists regarding the use of stimulants in patients with a psychotic episode. There is one school of thought which believes that amphetamine and related drugs are anathemas to patients with schizophrenia and any physicians allowing its use in psychosis is subjected to judicial review.[5] Retrospective information from patients with prior premorbid attention dysfunction and stimulant use show a risk ratio of 4.3 [95% confidence interval (CI) = 1.9–8.57] for an increased incidence of schizophrenia or bipolar disorder; stimulant use was also found to be associated with earlier age of onset and more severe course of the disease. Thus, it is difficult at this moment to categorize the subgroup of patients with ADHD who are more susceptible to develop other psychiatric illnesses if stimulants are prescribed.[6] On the other end of the spectrum, in schizophrenia, we have evidence claiming that, provided the psychotic episode has been effectively controlled with an antipsychotic regimen, amphetamine can actually help alleviate negative symptoms and also improve cognitive ability.[7] Another study carried out on 13 first episode psychosis patients concluded that the chance of experiencing a psychotic relapse when started on a stimulant after a stabilized course of antipsychotics has been given is low and brief. The positive symptoms remained controlled and did not change after the introduction of a therapeutic dose of psychostimulants.[3]

Concurrent stimulant-antipsychotic use has been rationalized by suggesting that they are likely to interact with different dopamine-receptor subtypes and do so in different pathways of the brain. In fact, while stimulants cause postsynaptic downregulation over time, antipsychotics cause upregulation.[8] Interestingly, these opposite actions may cancel each other out if both the medications are given concurrently, decreasing the risks of tolerance to both. If there is a synergistic effect, the total amount of medication needed may be less, reducing risks of other side effects.[9]

One in 400 patients with ADHD on stimulants showed symptoms of dose-related psychosis, which is quite significant. However, these episodes are brief and dissipate within 1–2 days of medication discontinuation. Furthermore, discontinuation of the medication brings about rapid re-emergence of hyperactive symptoms. So, the reintroduction of the same drug at lower doses or a drug from a different subset is necessitated. Therefore, stimulant-induced psychosis is considered an idiosyncratic reaction.[2]

As per the National Institute of Health and Clinical Excellence (NICE, 2008), if psychosis occurs due to stimulant use, the stimulant should be discontinued and a trial of atomoxetine should be introduced.[10] However, interestingly, review of the available literature reveals that the duration of treatment with stimulants is not significantly associated with the development of schizophrenia. In fact, a 10-year-follow-up study comparing outcomes of children treated with stimulants to those who were not, established that stimulant use was associated with fewer chances of developing a comorbid psychiatric illness.[11]

At present, there is still a dearth of research on this matter, especially in the Asian scenario. Additionally, uncertainty regarding the combined use of antipsychotics and psychostimulants for comorbid psychotic disorder and ADHD remains in the medical community.[3] Therefore, in children and adolescents with ADHD undergoing stimulant therapy, any signs of psychotic breakdown or mood changes need to be carefully assessed at regular intervals by the physicians and should also involve caregivers and teachers, who spend more time with the patient, to observe change in the symptoms. It is the duty of the physician to alert and psychoeducate the guardians to the myriad symptoms that may herald a psychotic episode. In other words, milder episodes can be tackled with increased or

continuous direct parental supervision, but acute cases warrant temporary discontinuation of the drug till it resolves.[2] Additionally, psychosis in ADHD may emerge due to concomitant use of cannabis or alcohol or it may emerge due to undetected bipolar disorder. Thus, studies are required to assess the potential of psychostimulant to produce psychotic symptoms.

To manage ADHD with comorbid psychosis, clinicians should proceed carefully and empirically. If comorbidity is established, treat the psychosis first. Stimulants to be discontinued if psychotic symptoms appear and in a few cases psychostimulants can be used in low dosages. The decision to continue the stimulant use in episodes of acute psychosis depends on the severity, duration, frequency of the episode, as well as the degree of concurrent deficits in attention and concentration. Generally, symptoms of psychosis can resolve within a few days, so re-challenging can be done after resolution of psychotic symptoms. If ADHD symptoms persist after psychosis treatment, then non-stimulant drugs or non-pharmacological interventions can be considered. However, in-depth and systematic studies are deemed necessary to rule out any apprehension regarding the safe use of stimulants in such patients.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

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## REFERENCES

1. Bramness JG, Gundersen ØH, Guterstam J, Rognli EB, Konstenius M, Løberg EM, *et al*. Amphetamine-induced psychosis-a separate diagnostic entity or primary psychosis triggered in the vulnerable? BMC Psychiatry 2012;12:221.
2. Ross RG. Psychotic and manic-like symptoms during stimulant treatment of attention deficit hyperactivity disorder. Am J Psychiatry 2006;163:1149-52.
3. Levy E, Traicu A, Iyer S, Malla A, Joober R. Psychotic disorders comorbid with attention-deficit hyperactivity disorder: An important knowledge gap. Can J Psychiatry 2015;60(3 Suppl 2):S48.
4. Sambhi RS, Lepping P. Adult ADHD and psychosis: A review of the literature and two cases. Clin Neuropsychiatry 2009;6:174-8.
5. Schaeffer JL, Ross RG. Childhood-onset schizophrenia: Premorbid and prodromal diagnostic and treatment histories. Am Acad Child Adolesc Psychiatry 2002;41:538-45.
6. Dalsgaard S, Mortensen PB, Frydenberg M, Maibing CM, Nordentoft M, Thomsen PH. Association between attention-deficit hyperactivity disorder in childhood and schizophrenia later in adulthood. Eur Psychiatry 2014;29:259-63.
7. Lindenmayer JP, Nasrallah H, Pucci M, James S, Citrome L. A systematic review of psychostimulant treatment of negative symptoms of schizophrenia: Challenges and therapeutic opportunities. Schizophr Res 2013;147:241-52.
8. Goto Y, Otani S, Grace AA. The Yin and Yang of dopamine release: A new perspective. Neuropharmacology 2007;53:583-7.
9. Braun AR, Laruelle M, Mouradian MM. Interactions between D1 and D2 dopamine receptor family agonists and antagonists: The effects of chronic exposure on behavior and receptor binding in rats and their clinical implications. J Neural Transm 1997;104:341-62.
10. National Institute of Health and Clinical Excellence (NICE) Attention deficit hyperactivity disorder. NICE clinical guideline 72. 2008. Available from: http://www.nice.org.uk/nicemedia/live/12061/42059/42059. pdf. [Last accessed on 2018 Jan 24].
11. Biederman J, Monuteaux MC, Spencer T, Wilens TE, Faraone SV. Do stimulants protect against psychiatric disorders in youth with ADHD? A 10-year follow-up study. Pediatrics 2009;124:71-8.



**Access this article online**

**Website:** www.ijpm.info

**DOI:** 10.4103/IJPSYM.IJPSYM_262_18

Quick Response Code

**How to cite this article:** Purkayastha S, Patil V, Sahu A. Use of stimulants in patients with psychosis having past history of or co-occurring attention deficit hyperactivity disorder: Is it safe?. Indian J Psychol Med 2019;41:195-6.

# Multiple Testing and Protection against Type I Error Using *P* Value Correction: Application in Cross-Sectional Study Designs

Sir,

The issue of adjusting the *P* value for determining statistical significance for a family of related outcomes was highlighted by Andrade[1] recently using the example of a randomized controlled trial (RCT). This issue is also relevant, yet subtly different, in cross-sectional studies which are much more commonly conducted than RCTs across settings and, therefore, of interest to researchers.

To clarify, let us take the instance of a study that aims to examine the prevalence of depression in psoriasis compared with healthy controls and also looks at possible predictors of depression in the diseased using a multivariable procedure such as multiple linear regression (MLR). Let us assume that the independent variables being examined include coping, quality of life, and stress. Furthermore, coping and quality of life are measured by scales that yield four related domain scores, which are independently analyzed, whereas stress is a single score.

Now, there will be at least two sequential analyses from this research; the first one being the univariate analysis comparing the sociodemographic and clinical variables of interest (including the aforementioned variables) between groups and the second one being the regression analysis where variables have been selected on the basis of the results of the prior univariate analysis, as is the convention.

In this scenario, univariate testing requires *P* value correction only when examining coping and quality of life (but not for stress scores) and should be set at 0.05/4 (i.e., 0.0125) using Bonferroni method, or alternatively, this becomes the last *P* value for examination in Hochberg's procedure. This is because a correction is only required when different domains of the same construct (e.g., coping) are being examined. For the regression analysis, however, statistical correction of *P* value is not conventionally applied as this is a procedure that controls for multiple variables simultaneously. It is rare to see textbooks recommending adjustments for *P* value while testing partial regression coefficients in an MLR analysis. Researchers must balance the risk of type I error with being overly conservative and choose methods of statistical correction wisely. As a parting note, excessive dependence on *P* values as the basis for drawing study conclusions must be avoided.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

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## REFERENCE

1. Andrade C. Multiple testing and protection against a type 1 (False positive) error using the bonferroni and hochberg corrections. Indian J Psychol Med 2019;41:99-100.



| Access this article online | |
|---|---|
| **Website:** www.ijpm.info | Quick Response Code |
| **DOI:** 10.4103/IJPSYM.IJPSYM_12_19 | |

**How to cite this article:** Menon V. Multiple testing and protection against Type I error using *P* value correction: Application in cross-sectional study designs. Indian J Psychol Med 2019;41:197.

# Author's response to 'Multiple Testing and Protection against Type I Error Using *P* Value Correction: Application in Cross-Sectional Study Designs'

Sir,

Menon[1] correctly points out that, in univariate analyses, in order to protect against a Type I (false positive) statistical error, the *P* value for statistical significance may need to be adjusted when many hypotheses are tested;[2] however, no adjustment of the *P* value is applied when the same variables are studied in a multivariable regression analysis. The situation is, therefore, paradoxical.

Several scenarios need to be considered here. First, in stepwise regressions, the false positive error rate is very high, and in one simulation, 30%–70% of the variables selected in different models were actually "pure noise"; therefore, stepwise regression procedures that use a statistical criterion for variable selection should emphatically be regarded as exploratory.[3]

Second, multivariable regressions commonly seek to examine the effect of one independent variable on the outcome of interest; the other variables in the equation are present to adjust for confounding. In effect, therefore, there is only one hypothesis being tested, and so, there is no inflation of the false positive error rate, and no *P* value adjustment required.

Third, in multivariable regressions in which several variables are selected based on *a priori* hypotheses, and entered in the regression equation to determine the extent to which each variable influences the outcome of interest, many hypotheses are being tested. Therefore, the *P* value for statistical significance does need to be adjusted; that is, that this is not usually done does not alter the fact that it needs to be done.

Finally, in multivariable regressions in which many variables are entered without *a priori* hypotheses and with a view to explore and identify potential relationships with the outcome of interest, the analysis should emphatically be considered exploratory because it is, in effect, a fishing expedition and one that is most vulnerable to false positive errors.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

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## REFERENCES

1. Menon V. Multiple testing and protection against Type I error using *P* value correction: Application in cross-sectional study designs. Indian J Psychol Med 2019;41:197.
2. Andrade C. Multiple testing and protection against a type 1 (false positive) error using the Bonferroni and Hochberg corrections. Indian J Psychol Med 2019;41:99-100.
3. Norman GR, Streiner DL. Biostatistics: The Bare Essentials, 4th ed. Shelton, Connecticut, USA: People's Medical Publishing House; 2014.



**Access this article online**

**Website:** www.ijpm.info

**DOI:** 10.4103/IJPSYM.IJPSYM_61_19

Quick Response Code

**How to cite this article:** Andrade C. Author's response to 'Multiple testing and protection against Type I error using *P* value correction: Application in cross-sectional study designs'. Indian J Psychol Med 2019;41:198.





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# Comments on "Stressful Life Events and Relapse in Bipolar Affective Disorder"

Sir,

Sam *et al.*[1] studied presumptive stressful life events (PSLEs) in 128 consecutive patients who were treated for relapse of bipolar disorder. Their study has many limitations and breaks no new ground. The principal limitation is that there was no control group. It is quite likely that many healthy people would have had PSLEs in the past month.[2] Therefore, unless it is demonstrated that the clinical sample had a larger burden of PSLEs than a control sample, studying PSLEs in the clinical sample serves little purpose.

If the clinical sample did have a higher burden of PSLEs, it might merely have been because the PSLEs, recorded for the 1 month before the patient was recognized by the informants to be "obviously abnormal," may have included dependent life events that resulted from subsyndromal illness behaviors. Family and in-law conflicts and change in sleeping habits are examples of potentially dependent events. Although the authors acknowledged this as a limitation, they described no effort to exclude such dependent events from the analysis.

The authors did not have a preset hypothesis, nor did they explain for what outcome they had powered their sample size calculations. Their sample size estimation, therefore, serves no purpose. Also, if their sample size estimation was a valid exercise, then their recruitment of more patients than necessary could actually be considered unethical.

The analyses examining relationships between PSLEs and sociodemographic and clinical variables were exploratory and not hypothesis-driven; no primary outcome had *a priori* been defined. Therefore, the authors should have considered measures to protect against a Type 1 error.[3]

Many of the reported PSLEs were almost certainly chronic conditions, including unemployment, conflicts with in-laws, and financial problems; therefore, a chronic medical disease in the proband should not have been set as an exclusion criterion in sample selection. Chronic illness is an important and clinically relevant stressor.

The mean interval between the PSLEs and relapse was 20 days. This number has questionable meaning because it was constrained by the study definition of "preonset" as the 1 month before relapse. Had the authors defined preonset as 6 or 8 weeks, the mean interval may have been 30 days or longer. Furthermore, how would the authors calculate an interval for patients who had more than one PSLE, and for patients who had chronic PSLEs?

Delaying the assessment of PSLEs to the time when the patient attained remission is problematic because different patients would have remitted at different rates. Though the authors acknowledged this, the recall of the occurrence and importance of the PSLEs might have varied as a function of time.

Finally, because the authors studied patients in remission and because they presented PSLE results for the full sample, do they imply that the remission rate in the "128 consecutive patients" was 100%? This is an extraordinarily high remission rate[4] considering that the study population had 53 (41.4%) patients[1] suffering from bipolar depression.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

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## REFERENCES

1. Sam SP, Nisha A, Varghese PJ. Stressful life events and relapse in bipolar affective disorder: A cross-sectional study

 

from a tertiary care center of Southern India. Indian J Psychol Med 2019;41:61-7.
2. Singh G, Kaur D, Kaur H. Presumptive stressful life events scale (PSLES) — A new stressful life events scale for use in India. Indian J Psychiatry 1984;26:107-14.
3. Andrade C. Multiple testing and protection against a type 1 (false positive) error using the Bonferroni and Hochberg corrections. Indian J Psychol Med 2019;41:99-100.
4. Thase ME. Bipolar depression: Diagnostic and treatment considerations. Dev Psychopathol 2006;18:1213-30.



**Access this article online**

**Website:** www.ijpm.info

**DOI:** 10.4103/IJPSYM.IJPSYM_42_19

**Quick Response Code**

**How to cite this article:** Suhas S, Singh GP, Gorthi NV, Andrade C. Comments on “Stressful life events and relapse in bipolar affective disorder”. Indian J Psychol Med 2019;41:199-200.

# Describing Research Design

**Chittaranjan Andrade**

ABSTRACT

This article explains how the research design of a study can simultaneously be described in many different ways as nonempirical or empirical, case-based or sample-based, observational or interventional, retrospective or prospective, cross-sectional or longitudinal, uncontrolled or controlled, single arm or multiple arm, nonrandomized or randomized, crossover or parallel group, nonblind, single-blind, or double-blind, superiority or noninferiority, exploratory (hypothesis generating) or confirmatory (hypothesis driven), and many others. Some of these categories can be associated with special types of research design as well, such as cohort studies, case-control studies, nested case-control studies, wedge design studies, and so on. Readers should understand which descriptors are mutually exclusive and which are not.

**Key words:** *Case-control study, cross-sectional study, prospective study, randomized controlled trial, research design*

## DESCRIBING RESEARCH DESIGN

Singh *et al*.[1] made a curious observation in an earlier issue of this journal; the gist was that because their study[2] was cross-sectional in design, it could not be considered prospective. Their observation prompted a discussion in eJCIndia,[3] during the course of which it became apparent that there are widespread misunderstandings about how research design is described. This article will not explain research design; rather, it will explain how the same study can be simultaneously described under different heads of research design, and which descriptors are mutually exclusive and which are not.

The box presents ways in which the research design of a study may be described. The list is not exhaustive. Examples of descriptors that are not included are quasi-experimental studies, which are a special type of controlled study; wedge design studies, which are a special type of crossover trial; cohort studies, which are a special type of group studies; nested case-control studies in which cases and controls are identified from within a cohort; and others.

The reader will now immediately see that a study can be classified in many different ways at the same time, as in randomized, double-blind, active- and placebo-controlled, parallel arm superiority trials that are additionally, and almost by definition, empirical, sample-based, prospective, longitudinal, interventional, and hypothesis-driven in nature. The reader will now also understand why the study of Singh *et al.*[2] was

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|---|---|
| **Website:** www.ijpm.info | Quick Response Code |
| **DOI:** 10.4103/IJPSYM.IJPSYM_66_19 | |



**How to cite this article:** Andrade C. Describing research design. Indian J Psychol Med 2019;41:201-2.

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**Box: Examples of how the research design of a study may be described**

Non-empirical or empirical
Case-based or sample-based
Observational or interventional
Retrospective or prospective
Cross-sectional or longitudinal
Uncontrolled or controlled
Single arm or multiple arm
Nonrandomized or randomized
Crossover or parallel group
Non-blind, single-blind, or double-blind
Superiority or non-inferiority
Exploratory (hypothesis-generating) or confirmatory (hypothesis-driven)

both prospective and cross-sectional. It was prospective because they recruited subjects and collected new data, as different from extracting data that already existed in paper or electronic records (which would have made it a retrospective study). It was cross-sectional because the subjects were assessed at a single point in time as different from being assessed at repeated time points during follow-up (which would have made it a longitudinal study). Note that cross-sectional and longitudinal studies can each be either retrospective or prospective.

**Financial support and sponsorship**
Nil.

**Conflicts of interest**
There are no conflicts of interest.

## REFERENCES

1. Singh M, Sharma P, Raj D, Sharma S, Kaushal A, Raina SK. Authors' responses to the comments on ''leisure time physical activity and risk of developing depression among the youth of Kangra District, Himachal Pradesh, India''. Indian J Psychol Med 2019;41:94-5.
2. Singh M, Sharma P, Raj D, Sharma S, Kaushal A, Raina SK. Leisure time physical activity and risk of developing depression among the youth of Kangra district, Himachal Pradesh, India. Indian J Psychol Med 2018;40:426-32.
3. Thakurdesai A, Ghosh A, Menon V, Sahoo S, Tripathi A, Harshe D, *et al*. Electronic journal clubs for capacity building: A case study in psychiatry as a model for medical disciplines in developing countries. Asian J Psychiatr 2018;34:93-7.