ISSN 0971-8990

Journal of Mental Health and Human Behaviour

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Official Publication of
the Indian Psychiatric Society - North Zone

Vol. 17, Issue 2, September, 2012

RIN NO. 64907/96 **ISSN 0971 - 8990**

JOURNAL OF MENTAL HEALTH AND HUMAN BEHAVIOUR

2012 Volume 17, Issue 2

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Editorial

Media Portrayal of Mental Illness: Role and Responsibilities of Psychiatrists

Rajesh Sagar

The review article[1] in the current issue provides a review of cinematographical depictions of mental illness in India and highlighted the role of cinema as a powerful medium with a strong and emotional narrative to educate the masses. The print and broadcast media frequently debate the psychiatric or psychological aspect of a particular issue or incident, and seek expert comments. However, the attitudes towards mental illness are still largely negative in the mainstream media. The oft-used labels, misconceptions or misattributions reinforce the negative attitudes and beliefs among the laypeople.

Mainstream mass media, be it newspaper, television or movies, form an important source of information about mental illness for the laypeople. Media depictions for psychiatric illness are more likely to be negative compared to that of physical illness, and are known to impact the lay person's beliefs and attitudes towards mentally ill persons.[2] In a 4-week prospective study of print media items about mental illness, dangerousness to others (61.3%) and criminality (47.3%) predominated as central themes.[3] Use of generic terminologies for mental illness, rather than specific diagnosis, was common. The items dealing with patient's perspectives or more humane self-portrayals of people with mental illness were largely missing.[4] In a similar study for television, the mentally ill were found to be nearly 10 times more violent than other television characters (30% vs 3%), and 10 to 20 times more violent (during a 2-week sample) than the entire country (over the course of one year).[5] It appears that two main fallacies reinforce negative stigma: (a) inaccurate representations of the mental illness and (b) frequent depiction of mainly negative symptomatology of the mental illness.[2] These findings point to the tremendous challenge facing the mental health professionals to address negative public image about mental illness.

Several complex and challenging issues lie at the interface of the media- psychiatrist interactions. As seen in prior research studies, positive depictions by psychiatrists may be undermined by the need to create 'newsworthy' items.[6] Interestingly, in a survey published in the Lancet, reporters felt certain that they get the technical details of medical reporting correct, while the physicians felt that they do not and that the coverage was too sensational.[7] Psychiatrists may have mixed feelings about working with mass media and the pitfalls and potentials of such interactions have been debated.[8,9]

The first question which may be asked is why to interact with media? Essentially, psychiatrists have a role of being public educators, in addition being clinicians, teachers and researchers and thus, have a responsibility for educating the society about the current state of psychiatric field. The interactions with media can be aimed towards reducing stigma and other barriers, conveying the safety or efficacy of

treatment, or counteracting misconceptions and distortions of information. Further, another important role of psychiatrists may be to advocate for the rights of people who suffer from mental disorders. Experts have argued that psychiatrists should take more active role in reaching out to the public, engaging them in print or electronic media and raising public awareness.[9]

The more tricky question is how to work or interact with media? There is usually no formal training on handling the media interactions during psychiatry residency (though this scenario is changing in western settings) and most psychiatrists gain the requisite skills during the course of experience.

Many philosophical, ethical and practical issues need a careful consideration whenever a psychiatrist comes in contact with media. Psychiatrists, in their media interactions, should be governed by the principles of professional conduct and social responsibility. As stated in Madrid declaration, psychiatrists shall ensure that people with mental illness are presented in a manner which preserves their dignity and pride and serve to reduce stigma. They should not make announcements to the media about presumed psychopathology of any particular individual.[10] When asked to comment on a specific individual in the public eye, they may, in accordance with their expertise, comment on the general health issue involved. As far as possible, psychiatrists should base their statements on well-established findings from the literature rather than personal opinions. The language used in public statements must be carefully scrutinized to avoid any biases or stigmatizing words. The patient-related material, if discussed in media interactions, should be sufficiently disguised so that the confidentiality of patient is preserved.

The contact with mass media can be in several forms varying in depth and intensity from brief comments in relation to a specific story; promotion of new clinical services, a book, new research findings etc by a psychiatrist; clarification or debate on larger issues of public health interest e.g. policy initiatives, school mental health; dealing with controversies surrounding psychiatric medications or treatment; or planned mass-media interventions for mental health at a larger scale.

Several pragmatic issues need a consideration while preparing for a media interaction. A psychiatrist must clarify the specific name, nature and quality standards of the publication or broadcast program, the focus of the interview, specific time allocated to him/her, any other experts invited for contrary viewpoints and likely themes of discussion. An important aspect is to judge if one is qualified to comment on the specific issue, taking care not to venture outside one's area of expertise. More often than not, the media persons and journalists may share the biases and beliefs of the lay people about mental illness especially due to lack of sensitization and training in mental health issues. Further, at the time of interviewing a psychiatrist, their sole focus may be a particular incident e.g. an adolescent's suicide. Therefore, in response to questions e.g. *why did the teenager kill himself, he was obviously a good student*, a psychiatrist should decline to answer or comment on specific person; however, may address the common myths and raise the larger issue of adolescent suicide, its link with depression, usual presentation and the available treatment services. A crucial aspect is to frame the key message to fit in the allocated time or space, which may be few minutes or few lines.

There has been several large scale campaigns in mental health which have employed mass media to reach to public e.g. 'defeat depression' and 'changing minds' by

Royal College of Psychiatrists in U.K, 'like minds, like mine' in New Zealand and 'open the doors' campaign by World Psychiatric Association across several countries, though rigorous evaluations are not available for all of them. The tobacco cessation programmes have also employed mass media campaigns with some efficacy.[11]

So, what can be done to improve the coverage of mental health issues in mainstream media and enhancing the image of psychiatry. In India, Ramadas et al[12] evaluated the impact of a suicide-reporting guideline developed as a result of collaboration between media and mental health professionals after a day's workshop in Kerala. The idea was not to normalize, idealize, or sensationalize suicide, and to focus on encouraging people to seek help when needed. Though this particular study did not find a significant change, but there is a need for more research in this direction, particularly with more extensive and consistent collaborations with media. In the western settings, there have been some initiatives to provide media training during psychiatry residency, as briefed by Kutner and Beresin.[13] Brief seminars and workshops may be considered for enhancing the credibility and acceptability of the message of mental health professionals. The field of psychiatry may attempt to sensitize the students/ in-training journalists by imparting the basic knowledge and sensitivity towards mental health issues as part of the journalism curriculum and various other innovative approaches can be tried in collaboration with media professionals.[14]

In recent times, there has been some positive changes in cinematic depiction of mental disorders, for example movies like *Taare Zameen Par* have dealt with issue of learning disability in a sensitive manner. The wider availability and growing use of internet and social media has opened a new avenue for mental health professionals to raise public awareness. The National Drug Dependence Treatment Centre, AIIMS has recently launched an e-health portal 'alcohol web india' in collaboration with W.H.O. to provide information and self-help for alcohol use. There is a need to make pro-active efforts by the psychiatric associations or organizations to engage all kinds of popular media on a regular basis, with the goal of disseminating information by the leading experts in the field. The user and advocacy groups have an important role to play to create public awareness for mental illness and reduce stigma. The change is likely to occur very gradually, but we hope that it is a positive one.

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Review Article

Mental illness in India: A cinematographical review

Krishan Kumar, Arunima Gupta, Rajiv Gupta

Abstract

Cinema is one of the most potent and substantial form of mass communication which plays an important role in the contemporary socio-cultural context and has great impact on the perception of the audience. Movies in fact act as mirror reflecting the 'psyche' and values of the society. The present article reviews the psychiatric aspect of Indian cinema; the stigma, the ridicule and the satire the mental illnesses have undergone through Indian cinema. It also highlights the importance of cinema as a potential medium in enlightening and educating the masses about mental and emotional problems with strong narrative and technically sound manner.

Key words: *Indian cinema, movies, mental illnesses, mental health*

Movies have been a part of popular culture for over a hundred years. Besides being a popular mode of entertainment, movies are the visions of a particular culture, place or community. They serve as a communication medium to highlight the plight of weaker sections of society. Movies are also a powerful medium to understand and express human psyche. Emotional and behavioural issues and the contemporary social issues have been powerfully depicted through cinema.[1-3]

While cinema may tend to exaggerate or downplay the symptoms and behaviors of mental illness, many movies have demonstrated a textbook example of the disorder(s) and are valuable for learning.[4] Films encourage people to look at events in a fresh manner, suggest possible solutions to their problems, and confirm their views and, perhaps, prejudices.[5] It is also a medium for communicating social and cultural values, and thus, a tool for bringing about a better social order.[6]

Brief history of cinema: A journey from silent to 5D movies

The word cinema emerged from Greek root word *kinema* which means '*movement*'. The French term *cinéma*, was originally coined by the *Lumière brothers* in 1890s by shortening the word *cinématographe*, which literally means "movement writing". Cinema is an art because it is something wrought and constructed by a person (or group of people) that has no specific practical function; only to explore, engage, inform, entertain and edify. It was only after the turn of the century that Indian entertainment underwent a sea change when the Father of Indian cinema, Dadasaheb Phalke released his

path breaking film of the silent era in 1913. India's struggle for independence in the 1950's finally parted the curtain on the golden age of Indian cinema. This historic period provided a strong impetus to the industry, when themes changing to social issues relevant at the time. Next era ushered in a mixed genre of romantic films, thrillers, action movies, comedy films and films based on human emotions. Indian cinema finally found global mass appeal at the turn of the 21st century and gave way to 5D movies, which combine a 3D film with physical effects in the theatre and allows people to get incredibly real emotions.

Portrayals of psychiatric conditions

Psychological conflicts and psychiatric disorders have always been an inspiration for many filmmakers. Over the past twenty years, many movies had abundant portrayals of psychiatric conditions including personality disorders, schizophrenia, mental retardation, obsessive-compulsive disorder and depression.[1,7-9] Psychiatry and films, by their very natures, are linked by several similarities. Psychiatrist may be literally designated as 'doctor of the soul'. Indeed, many characters in films with psychiatric theme are engaged in emotionally and intellectually compelling battles to restore their sense of self, or 'soul'.[7]

Film is an art form that thrives on the portrayal of heightened emotions and captivating motivations. The audiences and filmmakers have long enjoyed the varying degrees of sensationalism and escapism, but some mental health professionals have remained sceptical about the accurate portrayal of psychiatry as a discipline in the films. Movies does not have to rely solely on their entertainment value, and can combine entertainment and education in order to get a better understanding of the issues portrayed in the film. Despite these limitations, it has been argued that films can be successfully used to point out various aspects of psychiatric conditions and patients.

Cine mind from different perspectives

There have been many award winning movies with exceptional social relevance. Many such movies have successfully highlighted emotional and conflictual issues for the purview of the society. The following issues concerning psychiatry have often been portrayed in cinema and deserve a special mention.

Stigma

Generally, Indian movies have portrayed mental illness in a negative manner and presented them in the form of crude comedy, showing the victim of mental illness as a subject of ridicule. This can aggravate the stigma associated with mental disorders.

Recent movies, for example *Paa, Tere, Naam, Taare Zamin Par* have displayed more restrain and understanding towards the afflicted characters. Hindi cinema is a cultural and ideological force that can create or reinforce perceptions and attitudes among its viewers, leading to positive and significant contributions towards inclusion of the mentally ill and reducing the stigma.

Patient – therapist relationship

The patient- therapist relationship is crucial because it is a kind of living laboratory of all relationships. Many boundaries exist in the patient- therapist relationship, which include boundaries of role, time, place, space, money, gifts and services, clothing, language and physical contact.[10] The ethical patient- therapist relationship depends upon the doctor creating an environment of mutual respect and trust in which the patient can have confidence and safety. Many movies depict a potential for

transference-counter transference to arise. Some movies *Khamoshi (The Silence) (1970)*, deal with psychoanalysis where not only the principles of psychoanalysis are described, but also the film is largely set in a psychoanalysis centre.

Hypnosis in films

Movies have shown hypnosis where practitioners try to change and examine one's subconscious. Many hypnotists in different movies were villains and hypnosis itself was often presented as brain washing and in a negative way. This kind of portrayal are inaccurate as hypnosis has been used for the effects of traumatic experiences, depression or psychosomatic disorders.

ECT and cinema

Cinema, in general, and Indian cinema, in particular, has a fantastic disconnectedness from reality. Hindi cinema is an important source of public information and misinformation about ECT. By and large, the depictions of ECT in movies are inaccurate, distorted and dramatized. Our bollywood flicks may be greatly responsible for instilling fears in the minds of general public, where the villain or vamp chains the hero to so called electrocution chair and gives him shock. Between 1967 and 2008, 13 Hindi movies like *Jewel Thief, Raat aur Din,Khamoshi, Damini* and so on contained referrals to ECT and it was administered to punish, to obliterate identity and to induce insanity and for rarely clinically valid indications.[11] The image of ECT in Hindi films is extreme, punitive and has been used as dramatic device to highlight the cruelty of the modern psychiatry.

Psychodynamics and Movies

The psychodynamics of depression is well explained in the films like *Pyar Tune Kya Kiya, Tere Naam, Monsoon Wedding.* Object relations theory provides a framework for an understanding of these films.

Psychoanalysis and Movies

The portrayal of psychoanalysis in modern Hindi cinema is rare. But films offer a narrative of human experiences, relations and activities. Cinema is a powerful medium for exploring the human conflicts and the complicated workings of the mind. Psychoanalytic ideas help make sense of characters' behaviour. Films offer an enlightening and sometimes disturbing insight into troublesome or dangerous emotional states and film directors have been engaged by the richness of their characters' inner lives as psychoanalysts have by their patients'. *Khamoshi* is probably the first Hindi film to describe the descriptive aspect of psychoanalysis. In this film the chief psychiatrist explains about Freudian analytical thinking in the form of Electra and Oedipus complex. Furthermore, this hint of the oedipal complex and the way mother-son relationship work is an interesting paradox.[2,12]

Although films may be stereotypical and prejudiced, they have been used in teaching, as exemplified in the paper by Kalra[13] on development of a movie club and its use for psychiatry trainees. An advantage of using films for teaching is that they are well produced, interesting and lively, and there are no concerns over confidentiality.[14]

Indian Cinema: A review from mental health perspective

In general, films have reflected a much wider diversity of views on psychiatry.[2] The psychiatric themes are more accessible and acceptable in the recent films than ever before.

In the movie *Hum Kisise Kam Nahin,* the hero is a patient of paranoia and another actor

plays the role of a psychiatrist wears a white coat and uses a stethoscope. He confirms the diagnosis of anxiety by simply checking the pulse using a stethoscope with the perception given to the audience that all mental illnesses are like physical illnesses. The film *Karorpati* depicts the character to be mentally retarded and the family plans to send him to a lunatic asylum. But a simple fall recovers him from his madness. The doctor pronounces him cured of his madness and emphasizes that this sort of recovery is quite common. Similarly in the film *Pagla kahin ka,* the film tries to raise the topic of madness that is hereditary and precipitated by stress, death, loss, bereavement. However, the personality of the patient is abnormal and portrayed comically. The film uses madness as a peg for the story to introduce the notions of lost love, lost friendship, and social isolation starting in the lunatic asylum. In the film *Khamoshi*, the senior psychiatrist chairs a meeting with at least 10 other psychiatrists to decide whether the character is insane or not. They take turns in asking questions to assess his mental state.

Over the years the image of psychiatry in films has struggled a lot. Fortunately, today films about psychiatric topics have increasingly begun to adopt a more balanced, realistic and less sensationalistic approach. Here is a list of movies which show decade wise catalogue. The list is not complete and exhaustive but definitely allows one to review the prevalent themes with technical and professional approach adopted by various film makers.

Movie	***Theme***
1950s	
Half Ticket (1959)	Mentally Challenged
Karorepati (The Millionaire)	Mentally Challenged
Funtoosh (1956)	Mental illness
1960s	
Raat aur Din (Night and Day) (1967)	Multiple personality disorder
Khamoshi (The Silence) (1970)	Affective Disorder
Baharon ki manzil	Psychotic illness
1970s	
Pagla Kahin Ka	Mental illness/ hereditary madness
Baharon ki Manzil	Mental illness
Khilona (The Toy) (1970)	Mad behaviour
Ittefaq	Mental illness
Zanjeer	Angry young man
Sholay	Classic psychopath
Deewar	Antisocial Personality Disorder
1980s	
Insaaf ka Tarazu	Female psychopath
Khoon Bhari Maang	Female psychopath
Zakhmi Aurat	Female psychopath
1990s	
Khalnayak	Anti Social Personality
Darr	Obsessive love, stalking and psychopath
Anjaam	Psychopath
Baarigar	Psychopath
Deewana	Obsessive love, stalking and psychopath
Agnisakshi	Morbid jealousy
Daraar	Obsessive stalking lovers
Dastak	Obsessive stalking lovers
Gupt	Female psychopaths
Dilwale (1994)	Psychosis
Kaun	Psychopath
Pyar Tune Kya Kiya	Violence and depression
2000s	
Tere Naam	Psychopath
Kyon Ki	Mental illness
Apartment	Delusion of infidelity
Dushman	Anti Social Personality Disorder
Madhoshi	Mental illness
Raaz	Personality disorder
Main Aisa hi Hoon	Mentally challenged
U Me Aur Hum	Dementia

Movie	*Theme*
Chehraa	Psychosis
Krazzy 4	Mentally Challenged
Taare Zameen Par	SLD/Dyslexia
Guzaarish	Euthanasia
Paa	Progeria
My name is Khan	Asperger's Syndrome
Ghajini	Anterograde amnesia
36 Chowringhee Lane	Dementia
15 Park Avenue	Schizophrenia
Black	Dementia
Koi…Mil Gaya	Mental retardation
Aks	Psychopath
Maine Gandhi Ko Nahin Mara	Alzheimer's disease
Apna Asmaan	Autism
Ekalavya	Neurosis/Mania
Aparichit	Multiple Personality Disorder
Shadi se Pahle	Alcoholism
Mumbai Express	Alcoholism
Jurm	Paranoia
Devaki	Mental Illness
Chehraa	Mental Illness
Devdas	Alcoholism
Monsoon wedding	Child abuse
Sanghrsh	Psychopath
Kucch to hai	Psychopath
Karthik calling karthik	Schizophrenia
Once upon a time in Mumbai	Dissocial
Haunted – 3D	Parapsychology

Cinema: A double edged sword

Films tend to provide exciting and emotionally compelling opportunities to portray personal struggles feared by most of humanity, namely, to retain or restore one's sense of self. The unique properties of films can also have decisively positive effects on mental health. Visual stimulation can queue a range of emotions and the collective experience of these emotions through the cinema provides a safe environment in which to experience roles and emotions we might not otherwise be free to experience. Psychological effects of films include influencing one's appearance, behaviour, mannerisms, speech, thoughts and emotions. On the other hand, movies may also influence antisocial behaviour, crimes and delinquency. It has been noticed that many crimes have been motivated and modelled through movies. Exposure to smoking scenes in movies may influence the initiation of smoking in young people.[15]

Future Directions

Cinema is a powerful means to depict various social problems. Some of the psychiatric problems have been portrayed in an exaggerated manner. We really need to develop a methodologically efficient (more objective and befitting for enlightening discourse) approach to Hindi cinemas as far as understanding the cinematic undercurrents on the disabled is concerned. The filmmakers need to more attune to the social fabric and as an audience, we need to be more insightful in our recapitalization of Hindi cinematic representation. More films should come on special population like autism, mental retardation etc. Care should be taken to ensure that only scientifically sound messages are conveyed to the lay audience. The help of the censor board should be taken to check the dissemination of erroneous messages related to mental disorders which would only aggravate the traditional stigma associated with such disorders. Cinema should focus to reduce the stigma and facilitate the early recognition and intervention for mental illness.

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Source of funding: Nil

Conflict of Interest: None declared.

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Original article

Assessment of risk factors among suicide attempters at a tertiary care hospital

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Abstract

Background*: The prevalence of suicide in India is 11.4 per one lakh population. It is important to identify the probable reasons for attempting suicide in order to prevent future risks.* ***Method****: It was a cross-sectional study of psychiatric referrals, in which 90 consecutive patients were evaluated for psychosocial, environmental and clinical risk factors using Beck's Suicide Intent scale (SIS) and Presumptive Stressful Life Event Scale (PSLES).* ***Results****: Over two-thirds of subjects were males. Poisoning (83%) was the commonest method of attempting suicide. Nearly 90% had history of at least one suicide attempt. Psychiatric morbidity was observed in 54% males and 44.8% females. Common psychiatric disorders were major depression, adjustment disorder and substance abuse; and immediate precipitating factors were relationship problems, job-related problems, broken love affair, family problems, financial problems and scolding by parents/husband. The SIS mean score correlated significantly ($p<0.001$) with mean one-month PSLES score.* ***Conclusion:*** *Research in this direction has implications for early recognition and prevention of suicidal risk. Awareness about depressive illnesses, psychosis, alcohol and drug abuse may help in reducing risk.*

Key words: *suicide, risk factors, India*

Introduction

The reasons for killing or harming oneself vary with cultures and societies and in urban or rural settings. Suicidal intent is defined as the seriousness or intensity of the patient's wish to terminate his/her life.[1] The level of suicidal intent at the time of self-harm has been investigated as a potential risk factor and it appears to predict the lethality of method.[2]

The National Crime Records Bureau (NCRB)[3] data in India report the major causes of suicide as illness (21.1%), family problems (23.7%), love affair (3.1%), sudden change in economic status (2%), poverty and dowry (2.3% each) and drug abuse (2.5%).The popular methods of attempted suicide include pesticide poisoning, hanging, drowning, slashing/cutting and self immolation. The risk factors associated and the methods employed for suicide attempt are strikingly different from those reported in western data.[4,5] Suicide in India is slightly above the world rates. Of the half-million people reported to die of suicide worldwide every year, 20% are Indians (constituting 17% of world population). In the last two decades, the suicide

rate has increased from 7.9 to 11.4 per 100,000. Suicide attempters are ten times more in number than the suicide completers. Actual data could be much more higher than reported. Suicide may be underreported due to several reasons, such as the support provided by the joint families, the stigma related to suicide, the phenomenon of dowry deaths and anticipated legal problems.[4,5]

Assessment of suicide remains a complex and obstacle laden domain. Several studies have failed to specify operational criteria of suicidal intention and to differentiate these from motivations for self injury behavior. The clinical and phenomenological aspect of suicidal behaviours have been rather neglected in several. The present study has been an attempt to systematically elicit the socio-demographic and psychosocial variables which are relevant as risk factors in suicidal behaviors.

The study aimed to (a) determine the sociodemographic profile of suicide attempters; (b) study the clinical risk factors, including the intent to die, that distinguish male suicide attempters from their female counterparts; (c) investigate the various environmental risk factors, including life events of one month and total one year prior to the event, of suicide attempters.

Materials and Method

This study was carried out at the psychiatry out-patient department for a period of one year. A total of 90 suicide attempters who were referred from medicine and surgery departments for psychiatric assessment were the participants of the study. The definition for suicide for purpose of the study was 'any act of self damage inflicted with self destructive intentions, however vague and ambiguous, was taken as a suicide attempt'.[6] Patients whose injuries were considered accidental in nature with no suggestion of self harm intentions and who succumbed to their injuries were excluded. The patients were interviewed once they acquired physical stability after resuscitation and a period of observation in the respective medical / surgical unit. Close family members of each patient were interviewed with the patient's consent for additional information.

The study protocol was approved by the institutional ethics committee. After explaining the purpose of the study written informed consent was obtained from those who agreed to participate and confidentiality was assured.

A semi-structured proforma was used to record sociodemographic profile, methods and situations around suicide attempt, intent, communication and clinical profile of the patient. Immediate precipitating event prior to suicide were recorded to assess the risk factors and psychiatric history was recorded. Psychiatric diagnoses were made according to DSM IV TR.[7]

Suicide Intent Scale (SIS)[1]**:** The SIS is a 15 item questionnaire designed to assess the severity of suicidal intention associated with an episode of self harm. The questionnaire is divided into two sections: the first 8 items constitute the 'circumstances' section (part 1) and are concerned with the objective circumstances of the act of self-harm; the remaining seven items, the ' self-report' section (part 2), are based on patients' own reconstruction of their feelings and thoughts at the time of the act. Each item was rated on an ordinal scale from 0 to 2 with the total score ranging from 0 to 30. The scores were further categorized as low, medium and high. The SIS has high internal reliability (alpha: 0.95) and high inter-rater reliability, ranging from 0.81 to 0.95.

Presumptive Stressful Life Events (PSLES) Scale[8]: It is a standardization of the Social Readjustment Rating Scale (SRRS) for use in

Indian settings. It is in the form of 51-item inventory, each item having a weighted stress score. For example, death of spouse = 100; conflict over dowry = 51; going on pleasure trip = 20. The items are further categorized as (i) personal or impersonal events. (ii) desirable, undesirable, or ambiguous events. It is administered in the form of a semi structured interview, wherein the events are assessed to be either present or absent. The scores were rated for one month and for one year.

The analyses were conducted using SPSS package version 15.0, using both parametric and non-parametric tests.

Results

The study included 90 participants of which 61(67.8%) were males and 29 (32.2%) were females. The detailed profile is shown in Table 1. Poisoning with insecticides/pesticides/ organophosphorous compounds constituted the commonest method of attempting suicide (78.7% in males, 93% in females) as shown in table 2.

Nearly 90% had history of at least one suicide attempt. Psychiatric morbidity was

Table 1: Socio-demographic profile

Variable	Male (N=61) n (%)	Female (N=29) n (%)	Total (N=90) n (%)
Age			
> 25 years	28 (45.9%)	14 (48.3%)	42 (46.7%)
≤ 25 years	33 (54.1%)	15 (51.7%)	48 (53.3%)
Marital status			
Married	35 (57.4%)	19 (65.5%)	54 (60.0%)
Unmarried	21 (34.4%)	10 (34.5%)	31 (34.4%)
Others	5 (8.2%)	0 (0.0%)	5 (5.6%)
Residence			
Rural	36 (59.0%)	23 (79.3%)	59 (65.6%)
Urban	25 (41.0%)	6 (20.7%)	31 (34.4%)
Education Level			
Post graduate	2 (3.3%)	4 (13.8%)	6 (6.7%)
Graduate	12 (19.7%)	2 (6.9%)	14 (15.6%)
Secondary/Higher secondary	18 (29.5%)	3 (10.3%)	21 (23.3%)
Primary	22 (36.1%)	13 (44.8%)	35 (38.9%)
Illiterate	7 (11.5%)	7 (24.1%)	14 (15.6%)
Socioeconomic Status			
Lower	16 (26.2%)	11 (37.9%)	27 (30.0%)
Middle	26 (42.6%)	12 (41.4%)	38 (42.2%)
Upper	19 (31.1%)	6 (20.7%)	25 (27.8%)
Occupation			
Service	10 (16.4%)	0 (0.0%)	10 (11.1%)
Farmer/labourer	29 (47.5%)	8 (27.6%)	37 (41.1%)
Business/Self employed	9 (14.8%)	1 (3.4%)	10 (11.1%)
Unemployed/ Housewife	3 (4.9%)	12 (41.4%)	15 (16.7%)
Student	10 (16.4%)	8 (27.6%)	18 (20.0%)
Family/living arrangement			
Nuclear	16 (26.2%)	10 (34.5%)	26 (28.9%)
Joint	41 (67.2%)	14 (48.3%)	55 (61.1%)
Lives alone	4 (6.6%)	5 (17.2%)	9 (10.0%)

Table 2: Environmental risk factors

Variable	Male (N=61) n (%)	Female (N=29) n (%)	Total (N=90) n (%)
Method of suicidal attempt			
Poisoning	48 (78.7%)	27 (93.1%)	75 (83.3%)
Hanging	1 (1.6%)	0 (0.0%)	1 (1.1%)
Slashing/Cutting	6 (9.8%)	2 (6.9%)	8 (8.8%)
Self immolation	2 (3.3%)	0 (0.0%)	2 (2.2%)
Drowning/jumping	2 (3.3%)	0 (0.0%)	2 (2.2%)
Poisoning with drug overdose	1 (1.6%)	0 (0.0%)	1 (1.1%)
Acid poisoning	1 (1.6%)	0 (0.0%)	1 (1.1%)

Table 3: Clinical profile

Variable	Male (N=61) n (%)	Female (N=29) n (%)	Total (N=90) n (%)
Psychiatric morbidity †			
Substance abuse	12 (19.7%)	0 (0.0%)	12 (13.3%)
Bipolar mood disorder	1 (1.6%)	0 (0.0%)	1 (1.1%)
Depression	18 (29.5%)	9 (31.0%)	27 (30.0%)
Anxiety disorders	1 (1.6%)	0 (0.0%)	1 (1.1%)
Adjustment disorder	1 (1.6%)	4 (13.8%)	5 (5.5%)
Motive			
Relieve anger	20 (32.8%)	19 (65.5%)	39 (43.3%)
To forget about something	21 (34.4%)	2 (6.9%)	23 (25.5%)
To punish self	4 (6.6%)	4 (13.8%)	8 (8.9%)
To seek attention	13 (21.3%)	2 (6.9%)	15 (16.6%)
To upset others	1 (1.6%)	1 (3.4%)	2 (2.2%)
Guilt	5 (8.2%)	3 (10.3%)	8 (8.9%)
Immediate precipitating factors			
Relationship problem	22 (36.1%)	14 (48.3%)	36(40.0%)
Job related problem	5 (8.2%)	0 (0.0%)	5 (5.6%)
Failure in exams	4 (6.6%)	1 (3.4%)	5 (5.6%)
Broken love affair	18 (29.5%)	1 (3.4%)	19 (21.1%)
Unbearable physical pain	2 (3.3%)	2 (6.9%)	4 (4.4%)
Scolding by parent/husband	4 (6.6%)	10 (34.5%)	14 (15.5%)
Financial problem	11 (18.0%)	1 (3.4%)	12 (13.3%)
Loss of spouse(death)	2 (3.3%)	0 (0.0%)	2 (2.2%)

† Diagnosis as per DSM-IV TR

Table 4: Beck's Suicide Intent Scale (SIS) Score

Variable	Male (N=61) n (%)	Female (N=29) n (%)	Total (N=90) n (%)
Intent Score			
High	22 (36.9%)	5 (17.2%)	27 (30.0%)
Medium	30 (49.2%)	14 (48.2%)	44 (48.8%)
Low	9 (17.7%)	10 (34.4%)	19 (21.1%)

$\chi 2=4.307$, df=2, $p>0.5$

Table 5: **Presumptive Stressful Life Events Scale (PSLES)- 1 month**

Variable	`N (%)
Lack of child	4 (4.44%)
Break-up with friend	4 (4.44%)
Excessive alcohol or drug use by family member	5 (5.5%)
Major personal illness or injury	5 (5.5%)
Self or family member unemployed	5 (5.5%)
Unfulfilled commitments	5 (5.5%)
Broken engagement or love affairs	6 (6.6%)
Failure in examinations	8 (8.8%)
Conflict with in laws	9 (10.0%)
Financial loss or problems	11 (12.2%)
Marital conflicts	13 (18.4%)
Family conflicts	23 (25.5%)

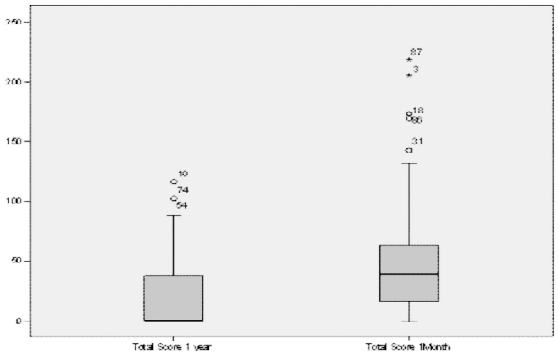

Figure 1: Box plot - Presumptive Stressful Life Events Scale (1-month and 1-year scores)

Discussion

The study revealed several significant findings regarding the clinical and environmental risk factors for suicide attempts.

Nearly half (51.1%) of sample was 25 years of age or less. A previous study from India[5] had 70% of patients below 40 years. Other Indian studies have reported that between 38-65.5% of suicides were seen in those below the age of 30 years,[9,10] Nearly 71% were below 44 years of age in a study from western setting.[11] It has also been observed that while completed suicide is more prevalent among older men, nonfatal suicidal behaviours are more prevalent among young persons, women, unmarried, or those with a psychiatric disorder.[11] Some of earlier studies[5] have also reported a male preponderance similar to present study. More attempters (61%) were from joint families in this study. Unlike the traditional belief of joint family being a cushion, perhaps the friction within the joint families is increasing in view of changing socio-cultural values. Nearly all subjects in the study were Hindus, but this may also be due to over-representation of hindu community in the local population.

Poisoning with insecticides/pesticides/ organophosphorous compounds constituted the commonest method of attempting suicide. In India, it has been estimated that about 5-6 persons per lakh of population die due to poisoning every year. Suicide attempts occur mostly were due to organophosphorus poisoning (25.4%) followed by rodenticide poisoning (15.79%).[10]

In the present study, 49.2% of male and 48.2% of female patients had moderate intent scores on SIS, and there were no significant gender differences across low, moderate and high intent. Pallis and Sainsbury[12] found that the intent scores were significantly higher in males than in females. Contrary to present findings, some studies have found that suicide

attempters were mainly young females, and a higher intent was seen in adolescent females compared to males.[13,14]

The present study shows that stressful life events strongly influence suicidal behavior and this has emerged as one of the important risk factors for suicidal attempt. The mean scores for 1-month life event score was significantly higher than mean 1-year life event score. Major stressful events were family conflicts, marital conflicts, financial loss or problems and conflict with in-laws.Depressive episode was the most common psychiatric disorder in both male and female attempters, followed by substance abuse in males and adjustment disorder in females. In studies from other parts of Asia, specifically China and Pakistan, depression, chronic stress, unemployment and negative life events have been found to be predictors of suicidal behaviour.[15,16] Younger age, lack of employment outside home, marital problems, and no death motives were more influential in female attempted suicide, while alcohol misuse and severe psychiatric morbidity were more frequently associated with male attempted suicide.[17] In a model of adolescent suicide risk, Metha et al[18] reported that males progressed from depression to substance use and then to suicide risk, while females progressed directly from depression to suicide risk. In longitudinal studies, depression has been found to be the most frequent predictor of subsequent suicidal ideation and attempts, which, in turn, were predictors of subsequent depression.[19] Quarrels with in-laws and problems in interpersonal relationships appear to be extremely common causes of attempted suicide[20,21] which were also the major precipitating factors in the present study.

The study has several limitations. It was not possible to include all self-harm patients presenting to the general hospital during the study period. The study sample was restricted only to psychiatric referrals. Follow-up information was not available for all patients in the study sample. Due to medico-legal issues, some suicide attempters did not give a clear intent score. Since the study was based on patients presenting to only one general hospital, there is need to perform large scale longitudinal community based studies to generalize the results which can have major impact on the society.

The study attempts to evaluate the risk factors which may be associated with suicidal attempts in an Indian sample. Research in this direction has implications for early recognition and prevention of suicidal risk. Crisis intervention, psychiatric and psychosocial evaluation at emergency medical facilities, and follow-up care for suicide attempters are important components for suicide prevention. Awareness about depressive illnesses, psychosis, alcohol and drug abuse should be created which would help in identifying risk groups. Social stigma attached to mental health problems which is a major obstacle to suicide prevention efforts should be dealt with.

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Source of support: Nil

Conflict of Interest: None declared.

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Original article

Recurrent depressive disorder with or without spontaneous hypomania: Are they really different?

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Abstract

Background*: Recurrent depression, followed or preceded by spontaneous hypomania, is a common clinical presentation. It may be a major challenge for the clinicians to diagnose the bipolarity in such patients.* ***Aim:*** *The study aimed to assess and compare socio-demographic and clinical variables among Recurrent depressive disorder (RDD) patients with and without spontaneous hypomania, and to study the association of spontaneous hypomania with other clinical characteristics.* ***Methods****: A total of 60 RDD patients with minimum 5 years of illness and index episode of depression were included. Patients were assessed using semi-structured proforma, Montgomery- Asberg Depression Rating Scale, Atypical Depression Diagnosis Scale, Zurich Hypomania Symptoms Checklist and Family History Screen.* ***Results****: Of total, 40% patients had at least one hypomanic episode in the past (spontaneous in 28.3% and antidepressant-induced in 17.3%). Based on presence of spontaneous hypomanic episodes, two groups were made viz. RDD and bipolar-II disorder (BP-II). Patients of BP-II group had significantly lower age of onset for the first depressive episode; higher co-morbidity of alcohol abuse, atypical depressive symptoms in the index episode, higher lifetime suicide attempt(s), higher rates of family history of BP-II.* ***Conclusion****: Spontaneous hypomanic episodes were observed in a sizeable proportion of RDD patients, and some of their clinical variables differed from those without hypomania. A careful evaluation to rule out bipolarity may help in better management.*

Key words*: Recurrent depressive disorder, hypomania, bipolar disorder*

Introduction

Till recently, it was believed that no more than 1% of general population has bipolar disorder. Emerging data across the world has begun to provide evidence for a higher prevalence, with at least 5% of general population having bipolarity.[1-3] Between 27-62% of all major depressive disorder patients in the clinical settings, on careful follow-up, were found to have bipolar-II disorder (BP-II) or its variants. [4-6]

Literature suggests that certain clinical features of depressive episode could predict bipolar outcome of an apparent unipolar depression. These features include early age at onset, acute onset, multiple recurrences, chronicity, atypical features, antidepressant induced hypomania, seasonal pattern and family history of BP-II. The observation of such

features should lead to greater alertness and suspicion for hidden bipolarity on the part of clinicians.[2,3,7-10] Unless thoroughly enquired, such hypomanic episodes may easily be missed by clinicians as the patients of depression or their relatives may not consider them significant.[11,12] The diagnosis of BP-II is crucial for both therapeutic and prognostic reasons, as these patients are at a higher risk of relapse and multiple recurrences and show higher rates of suicide attempts and completed suicides than patients with bipolar-I disorder or unipolar depression.[12,13] The rate of hypomanic switch in BP-II ranges from 2.2% to as high as 70%.[14-16] The present study was planned in order to address some of these issues in Indian settings.

The present study aimed to assess and compare the socio-demographic and clinical variables in patients of Recurrent Depressive Disorder (RDD) with hypomania and those without hypomania. In addition, it also aimed to assess the association of spontaneous hypomania with clinical characteristics.

Materials and Method

This was a cross-sectional study using purposive sampling conducted at the Department of Psychiatry, All India Institute of Medical Sciences, New Delhi.

A total of 60 patients, of either gender, with a DSM-IV-TR[17] diagnosis of RDD with an index episode of mild or moderate depression were included, if they had at least 5 years of illness duration, a reliable informant and were willing to provide informed consent. Patients with significant medical illness, mental retardation, cognitive impairment, and those with index episode of severe depression (in view of difficulty in recalling their past depressive and/ hypomanic episodes and difficulty to participate in the detailed assessment) were excluded from the study.

The relevant information on socio-demographic and clinical variables was collected using semi- structured proforma. Assessment was done using Montgomery–Asberg Depression Rating Scale (MADRS)[18] to rate severity of depression and Atypical Depression Diagnosis Scale (ADDS) [19] for atypical depressive features in the index depressive episode. In addition, Zurich Hypomania symptoms checklist was used, using a cut off of 8 or more symptoms, which has been validated in previous study using a slightly modified version of hypomania symptoms checklist.[20,21] Family History Screen for assessing life-time psychiatric illnesses and attempted/completed suicide in the first degree relatives was used.[22]

The data collected during the study was analyzed using SPSS 10.0 version. Descriptive statistical analysis was done for continuous and categorical variables. Chi-square test was used for comparison between the two groups for categorical variables and student's t-test was used to compare the two groups for continuous variables. Finally logistic regression was carried out. Two tailed p-values were used and probability level was set at $p < 0.05$.

Results

Of the total 60 patients, 40% (n=24) patients were found to have experienced at least one past hypomanic episode using Zurich hypomania symptom checklist; 28.3% (n=17) had spontaneous hypomanic episodes and 17.3% (n=7) patients had anti-depressant-induced hypomanic episodes. The study sample was divided into two groups based on presence or absence of spontaneous hypomanic episode(s), viz. those without history of spontaneous hypomania (RDD) and those with history of spontaneous hypomania (BP-II).

No statistically significant difference was

seen in socio-demographic characteristics of the two groups.

However, on comparing the clinical variables, BP-II had statistically significant lower age at onset of first depressive episode (23.9 ± 6.91 vs 30.3 ± 7.8 years), higher rates of alcohol abuse (35.3% vs 4.6%), higher number of lifetime suicide attempts (41.2% vs. 9.3%) and significantly higher rates of family history of BP-II in their first degree relatives (47% vs 2.3%) as compared the RDD group. Although no patient in either of the two groups fulfilled the criteria for definite atypical depression, yet 70%(n=12) patients in the BP-II had probable atypical depression (atypical depressive features) as compared to 17% (n=7) patients in the other group, which was significantly different.

Univariate logistic regression of spontaneous hypomania (dependent variable) with mean age at onset of first depressive episode, co-morbid substance and alcohol use disorder,

Table 1: Socio-demographic variables of RDD and BP-II disorder groups

Variables	**RDD (n=43)**	**BP–II (n=17)**	**p**
Age (years)	40.14 ± 9.23	35.12 ± 10.61	0.072
Gender			
Male	22	10	0.592
Female	21	7	
Marital Status			
Married	40	15	0.509
Unmarried	2	2	
Divorced	1	0	
Education			
Illiterate	6	1	0.817
Below 10^{th} Std.	9	3	
10^{th} Std	15	5	
Above 10^{th} Std	13	8	
Occupation			
Professionals/semiprofessionals	6	5	0.413
Skilled worker	14	4	
Semi skilled worker	3	0	
Housewife	18	5	
Unemployed	1	2	
Retired	1	1	
Religion			
Hindu	39	16	0.805
Muslim	3	1	
Sikh	1	0	
Type of Family			
Nuclear	28	15	
Extended	11	2	
Joint	4	0	0.168
Locality			
Urban	28	10	0.649
Rural	15	7	

RDD = Recurrent Depressive disorder, BP-II = Bipolar II disorder

lifetime suicide attempts and family history of BP-II in first degree relative (Independent variables) showed statistically significant positive association of these clinical variables with spontaneous hypomania but not with probable atypical depression.

treated as cases of BP-II. This finding is supported by previous studies reporting a higher prevalence (27- 62%) of BP-II among patients of apparent unipolar depression.[4,11,2] No significant difference was seen in socio-demographic variables across two groups, which

Table 2: Comparison of clinical variables across RDD and BP-II groups

Variables	RDD (n=43)	BP-II (n=17)	p
Age of onset of first depressive episode	30.26 ± 7.83	23.88 ± 6.91	0.01*
Number of past depressive episodes	2.16 ± 1.13	2.76 ± 1.39	0.08
MADRS score			
Mild depression	16 (37.2%)	7 (41.2%)	0.78
Moderate depression	27 (62.8%)	10 (58.8%)	0.89
Atypical Features (ADDS)			
Non mood reactive depression	23 (53.5%)	3 (17.6%)	0.02*
Simple mood reactive depression	13 (30.2%)	2 (11.7%)	<0.01*
Probable atypical depression	7 (16%)	12 (70%)	0.01*
Definite atypical depression	0 (0.0%)	0 (0.0%)	
Co-morbid substance use disorder	2 (4.6%)	6 (35.3%)	<0.01*
Antidepressant-induced hypomania	7 (16.2%)	0 (0.0%)	0.08
Number of Suicide attempts			
Current episode	0 (0.0%)	0 (0.0%)	<0.01*
Life time	4 (9.3%)	7 (41.2%)	
Family History Screen			
Major depressive disorder	5 (11.6%)	1 (5.3%)	0.50
Bipolar-I disorder	1 (2.3%)	0 (0.0%)	0.53
Bipolar–II disorder	1 (2.3%)	8 (47%)	<0.01*

ADDS = Atypical Depression Diagnosis Scale MADRS = Montgomery depression rating Scale, RDD = Recurrent Depressive disorder, BP-II = Bipolar II disorder

Table 3: Univariate logistic regression with spontaneous hypomania as dependent variable

Variables	Odds Ratio	95% CI	p
Age at onset of first depressive episode	2.2	0.1 – 2.4	0.04*
Co-morbid substance and alcohol use disorder	2.4	0.2 – 5.9	0.02*
Probable atypical depression	1.5	0.6- 3.9	0.14
Suicide attempts life time	2.2	0.5 -2.2	0.03*
First degree family history of BP-II	3.1	0.2 - 6.8	<0.01*

C.I. Confidence Interval; BP-II = Bipolar II disorder

Discussion

Of the sample of recurrent depressive disorder patients, 28.3% had history of spontaneous hypomanic episode(s) and consequently, were

is in line with previous studies. The BP-II group had lower mean age at onset of illness (23.88 ± 6.91 vs 30.26 ± 7.8 years; $p < 0.05$) compared to RDD group. This is in keeping with previous

studies reporting a lower age of onset of depressive illness in BP-II patients as compared to unipolar depression patients.[11,24] No statistically significant difference was found in number of past depressive episodes, which was unlike the previous studies reporting a relatively higher number of past depressive episodes in the BP-II disorder group.[5,25,26]

In terms of severity of index depressive episode, there was no statistically significant difference between the two groups, which is contrary to several previous studies reporting higher rates of severe depression and psychotic symptoms in the index depressive episode of BP-II patients compared to unipolar depression.[27-29] Few similar studies on patients with unipolar major depression and BP-II disorder also did not find any difference in terms of severity of the index depressive episode.[15,21,20] The possible reason for this finding may be due to exclusion of patients with severe depressive episode in this study.

In the current study, 70% of the patients of BP-II group had probable atypical depression compared to only 16% of the patients in the RDD group ($p<0.05$). This finding was clinically significant and in agreement with previous studies reporting higher rates of atypical depressive features during the index depressive episode in patients of BP-II disorder. Studies have suggested that the presence of atypical depressive symptoms can be considered a marker of bipolarity especially BP-II disorder in the apparent unipolar depression patients.[8,11,31,32] However, prospective as well as genetic studies are needed to conclusively prove that presence of atypical depression is really a marker of bipolarity especially BP-II disorder.

Co-morbid alcohol abuse was seen in 36.3% of BP-II patients compared to only 4.6% in the RDD group. This finding concurs with previous studies reporting higher rates of co-morbid substance and alcohol abuse in patients of BP-II disorder compared to unipolar depression patients.[13,33] Higher co-morbid substance and alcohol abuse in BP-II patients had prognostic implications because unless specific treatment measures are taken for co-morbid substance and alcohol abuse, such patients will have frequent relapses affecting the overall outcome and prognosis of illness.

In the present study, 16.2% of the patients in the RDD group had history of at least one hypomanic episode during the course of their antidepressant treatment, mostly during treatment with tri-cyclic antidepressants. This finding was in agreement with previous studies reporting 0.4- 11% hypomanic/manic switch rates with antidepressants, especially tricyclics in unipolar depression patients.[4,21,34] The possible interpretation of the high rate of antidepressant-induced hypomania in the RDD group was that these patients had hidden bipolarity and the use of antidepressants alone might have led to the instability of the mood with unmasking of their bipolar diathesis.[27] One study found that in unipolar depression patients, the polarity switching during antidepressant treatment had 100% specificity for eventual bipolar outcome in them. Literature is also unanimous in including such patients in the rubric of bipolar spectrum disorders and naming this group as Bipolar-III disorders.[27]

A significantly high rate of lifetime suicide attempt was seen in BP-II (41.2%) compared to in 9.3% of patients in the RDD group. Lifetime suicide attempt was found to have a strong association with the BP-II disorder (Odds ratio= 2.2 and $p<0.05$). This finding is supported by previous studies reporting higher suicide attempts in the BP-II disorder compared to unipolar depression patients [13, 35]. Owing to such a high suicide attempt rates in the depressive phase of these patients with bipolar diathesis,

the clinicians should be sensitive enough to assess for suicidality in such patients.

In this study, 11.6% patients of the RDD group as compared to only 5.3% in the BP-II group had history of major depressive disorder in their first degree relatives which is in line with previous studies, wherein 47% of the patients in the BP-II group and only 2.3% in the RDD group were found to have family history positive for BP-II disorder in their first degree relatives. Logistic regression also found a strong positive association of BP-II disorder in the first degree relatives of patients with the BP-II disorder (Odds ratio=3.1, $p<0.05$). This finding is supported by previous studies reporting a higher rate (upto 50%) of BP-II disorder in the first degree relatives of BP-II probands as compared to those of unipolar depression probands.[9,36,37] So, clinicians should carefully probe for history of hypomania while assessing patients with unipolar depression having a family history of BP-II disorder, as eventually they may turn out to be potential BP-II disorder patients.

This study had several limitations. It had a small sample size and purposive sampling. The study was cross- sectional in design and there is a possibility of retrospective recall bias. As far as possible, measures were taken to overcome some of these limitations. As patients with only mild or moderate index depressive episode were included, they could still give valid clinical information, reducing the recall bias. Further, collateral information was taken from reliable informants and a systematic screening for past history of hypomania using Zurich Hypomania Symptoms Checklist and for family history of psychiatric illness using structured and validated Family History Screen was done. This was done to minimize the recall and interviewer bias.

To summarize, the findings of this study highlight the fact that a significant proportion of patients with an apparent RDD are in fact BP-II patients. Clinicians need to carefully probe for hypomanic episodes as patients and their family members usually do not report hypomanic episodes spontaneously. Such patients appear to have an early age of onset of depressive episode, symptoms of atypical depression, higher rate of alcohol and substance abuse, past history of antidepressant induced hypomanic episodes, higher rate of suicide attempt(s) and family history of BP-II. In future, well designed studies recruiting patients consecutively or randomly with larger sample size are needed in Indian settings to address this issue further.

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Source of funding: Nil

Conflict of Interest: None declared.

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Original article

Level of Disability, Quality of Life and Perceived Stressful Life Events in Anterior Cruciate Ligament Injury Patients

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Abstract

Introduction: *Importance of psychological antecedents and consequences in ACL injuries is well documented. The present study aimed to assess perceived stressful life events, level of disability and quality of life in post operative patients with ACL injuries.* ***Method:*** *A total of 20 post-operative patients of either gender between 18-50 years with ACL injuries were assessed using Rapid Disability Rating Scale, WHO Quality of Life and Perceived Stressful Life Events Scale.* ***Results:*** *The most frequent life event in the past one year that occurred was major personal illness or injury. In lifetime event it was illness of family members and outstanding personal achievements. The most common personal event that occurred was change in working conditions and impersonal event was major personal illness or injury. Patients had low disability scores which suggests only a mild disability after the surgery. Quality of life assessment revealed that mean score was lowest on physical domain and highest on social relationships.* ***Conclusion:*** *This is an initial exploratory study of psychological aspects of ACL injury patients. Further research is needed with a control group to generalize results to larger populations.*

Key words: *anterior cruciate ligament injury, quality of life, perceived stressful life events, disability*

Introduction

The Anterior Cruciate Ligament (ACL) is one of four major ligaments inside the knee which is responsible for maintaining stability of the knee during certain activities e.g. turning, pivoting and twisting. ACL tears are the most common form of knee ligament tears and nearly 70% of them occur through non contact mechanisms (e.g . when the knee is flexed and the tibia is rotated).[1] The incidence of knee ligament tears and Anterior Cruciate Ligament Injuries is increasing over the years and is higher in people who participate in high risk sports and in female athletes.[2]

Growing body of research has documented the importance of psychological antecedents and consequences of ACL injuries. Psychological factors have been found to play an important role in the recovery from an ACL injury. It has been found that injured athletes commonly experience tension, depression, anger, and other forms of emotional distress. Most sports not only require a high level of physical, but also psychological, skills to handle stressful situations etc.[3]

A number of models have been proposed to emphasize a relationship between psychological risk factors and injury occurence, which are briefly summarized here. Among the most influential is Williams and Andersen's 'stress injury model' which proposes to divide psychological risk factors into three main categories: personality factors, history of stressors, and coping resources.[4] Another model that accentuates specific injury risk factors is Junge's 'model of the influence of psychological factors on sports injury' with three distinct psychological categories: psychological stressors, coping resources, and emotional state.[5] Thirdly, Johnson and Ivarsson's also proposed 'empirical model of injury risk factors'.[6] The latter one stresses that personality factors, stress and coping influence the injury risk especially among soccer players. Another stage model, presented by Graham-Jones and Hardy, states that emotional reaction after injury has two phases.[7] comprising of a reactive phase which includes shock and negative emotions such as depression, anger and denial followed by an adaptive phase which includes positive emotions such as confidence and hope. A major short-coming of the stage models has been that they fail to account for individual differences in response to athletic injury. Hence, many researchers started building models based on cognitive appraisal of injury. According to one such model, injured athlete's personal factors and situational factors influence their responses to injury.[8]

Keeping the above in mind, the aim of the present study was to assess level of disability, quality of life and perceived stressful life events in post operative patients with ACL injury patients.

Materials and method

The sample comprised of 20 post operative patients with ACL injury, coming for follow up (2 weeks to 2 months post operative) to Department of Orthopaedics, Post Graduate Institute of Medical Research, Chandigarh. Sample comprised of both male and female patients in the age range of 16-50 years. Patients were assessed on following tools:

(a) Rapid Disability Rating Scale- 2:[9] It consists of 18 items divided into two parts. Part A deals with activities of daily living, which focuses on eight basic activities: walking, mobility, bathing, dressing, toileting, grooming, adaptive tasks and eating. Part B assesses the degree of disability which occurs as a result of natural process of aging, basically in communication, hearing, sight, diet, locomotion, continence, physical health making a person dependent on medication, mental efficiency and psychological well being.

(b) WHO Quality of Life-BREF:[10] The WHOQOL-BREF contains a total of 26 questions. The four domains included are physical health, psychological, social relationships and environment. The method of scoring converts domain scores to a 0-100 scale.

(c) Perceived Stressful Life Events Scale (Gurmeet Singh, Dalbir Kaur & Harsharan Kaur; 1983).[11] This scale consists of 51 life events. These 51-items were classified according to (a) whether they were personal or impersonal, (b) according to whether they were (i) desirable (ii) undesirable (iii) ambiguous. Number of times each item was reported was summed up separately for lifetime and past 1 year. In the original sample taken for scale construction by the authors of this scale, the average number of events experienced in lifetime was found to be 10.34 ± 5.40 and for past 1 year it was found to be 1.90 ± 2.62.

Patients with ACL injury were referred by the orthopaedic consultant for psychiatric evaluation during the post-operative period. Researcher administered the tests individually to the patients, in a single session. Informed consent was taken from all the patients for participation in the stud and confidentiality had been assured. The participation did not interfere with the treatment of the patients.

Data was analyzed using descriptive statistics.

Results

In the present study, mean age of patients with ACL injuries was 25.6±8.73 years. Detailed socio-demographic profile is shown in Table 1.

Table 1: Socio Demographic Profile (N=20)

Variable	Frequency (%)
Age (in years)	25.6 ± 8.73
Sex	
Male	12 (60%)
Female	8 (40%)
Marital Status	
Married	9 (45%)
Single	11 (55%)
Occupation	
Professional	9 (45%)
Semi Professional	2 (10%)
Student/Unemployed	9 (45%)
Education	
Matric/Inter	9 (45%)
Graduate	5 (25%)
Masters/Professional	6 (30%)
Income	
6000 and above	20 (100%)
Religion	
Hinduism	13 (65%)
Sikhism	6 (30%)
Islam	1 (5%)
Family Type	
Nuclear	13 (65%)
Joint	7 (35%)
Locality	
Urban	18 (90%)
Rural	2 (10%)

Overall, the sample had a low disability score (mild disability in 15 and moderate in 3 patients). Assessment of quality of life revealed that mean score was highest on social relationships and environment , and lowest on physical health. (Table 2)

Table 2: Disability and Quality of Life Scores

	Mean	SD
WHO-Quality of life -BREF		
Physical Health	53.1	18.0
Psychological	53.9	17.9
Social Relationships	67.2	25.6
Environment	61.9	20.6
Rapid Disability Rating Scale	10.2	7.9

The range of life events (minimum to maximum) in past 1 year was 0-12, whereas, for life events over lifetime, it was 1-8. The average number of life events per patient was 3.35 for past 1 year and 1.4 for lifetime. The most frequent life event in the past one year that occurred was major personal illness or injury. In lifetime event it was illness of family members and outstanding personal achievements. It was also seen that there were more life events in past 1 year than lifetime. The most common personal event that occurred was change in working conditions and impersonal event was major personal illness or injury. (Table 3)

Table 3: Presumptive Stressful Life Events Scale (N = 20)

Life events	Number of events
Past 1 Year Events	67
Lifetime Events†	28
Personal Life Events (most common)	
Change in working conditions	6
Going for Pilgrimage	4
Impersonal Life Events (most common)	
Major personal illness/injury	12
Appearing for examination/interview	6
Change in working conditions	6

†Lifetime events are exclusive of past 1-year events

Discussion

The aim of our study was to assess perceived stressful life events, level of disability and quality of life in post operative patients with Anterior Cruciate Ligament injury patients.

The patients' quality of life for social relationships was better than other domains. Patients have reported good quality of life after ACL reconstruction in other studies also.[12] Social relationships included personal relationships, social support and satisfaction with sexual activity. The psychosocial perspective would hold that the extent of disability is dependent on the nature and extent of physical and social resources available to those afflicted. Evidence abounds suggesting that social support play a preventive role in a wide range of medical and physical condition.[13-16] The availability of social support exerts a direct impact on the speed and adequacy of adjustment and overall happiness and quality of life.[17]

Life events refer to major changes in lifestyle, status, role or situation. The most frequent life event in the past one year was major personal illness or injury and in lifetime, it was illness of family members and outstanding personal achievements. Major personal life event was change in working conditions. It has long been established that major alterations in life circumstances can produce deleterious effects on mental and physical well being,[18, 19,] including the risk of injury.[6 ,20] Struggle with chronic difficulties may tax coping abilities and lead to greater difficulties in attempting to manage events encountered in daily life. Empirical evidence indicates a more direct association and a greater predictability of health and emotional outcome through measuring one's daily hassles. Other studies have also reported that faulty perception and cognition resulting in stress will expose one to increased risks of injury.[6,20,21] It s important to be aware of the role that mental functioning plays in reinforcing physical illness and injury and at times, even in their creation.

Post operative ACL injury patients in our study had mild level of disability. Some meta-analyses have reported that, after ACL reconstruction, 65% to 70% of patients return to their pre injury level of activity.[22, 23] Disability is the end result of both primary and secondary impairments which shape the response of the individual. It follows that the disability is not necessarily in direct proportion to the physical damage, but rather represents the end result of the synergistic effect of the physical loss and the individual's perception and mental attitude towards this loss. Hence, just like pain, disability is very much the result of the subjectivity of the experiencing individual. This does not imply that the physical loss itself is dependent on the mental state of the individual, but rather than the extent of disability hinges on that state. Likewise, a positive mental outlook will not negate a disablement but will most likely improve chances of healing. In our study patients had mild disability which might be due to the fact that they had improved post operative. As patients were not compared with a control group it is difficult to say that the mild disability scores were due to ACL surgery. There are several limitations. It was a small sample from a single setting, and findings may differ across other settings. The absence of a control group is another limitation. The study was cross-sectional and a prospective study may better assess the psychological consequences of ACL injury in post-operative period.

To conclude, it can be said that it is an exploratory study of its kind dealing with ACL injury post operative patients in which perceived stressful life events, level of disability and quality of life were assessed. Further data is

needed with a control group to generalize results to larger populations. It would increase our understanding of a patient's psychological profile prior to ACL reconstruction, rehabilitation, and assist the surgical and rehabilitative process.

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**Findings presented at the Indian Association of Sports Medicine Congress held between 18th -20th November, 2011 at PGIMER, Chandigarh.*

Source of support: Nil

Conflict of Interest: None declared

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Original article

Impact of psychiatry clerkship on knowledge and attitudes of undergraduate medical students towards patients with mental illness

Sujata Sethi, Vidhu Anand

Abstract

Background: *In India, the emphasis on psychiatry during undergraduate training is dismally low. The training is not geared towards imparting knowledge and /or positive attitudinal changes. Stigmatizing attitudes of medical professionals towards psychiatry and psychiatric patients affects the patient care adversely.* ***Aim:*** *The aim of this study is to evaluate the impact of a clinical clerkship in psychiatry on the knowledge of subject and attitudes of medical students towards patients with mental illness.* ***Methods:*** *The authors conducted a cross-sectional survey of first year and fourth year medical students at PGIMS Medical School, Rohtak, Haryana India.* ***Results:*** *Psychiatry clerkship did not make a significant change in the knowledge of psychiatry and attitudes towards patients with mental illness.* ***Conclusions:*** *Psychiatry teaching needs to be taken seriously and made more effective. It will not only improve students' interest in psychiatry but also the patient care.*

Key words: *attitudes, mental illness, medical students, psychiatric clerkship.*

Introduction

Despite an increase in understanding of neurobiological etiology of psychiatric disorders, stigma towards psychiatry and psychiatric patients continues to prevail. These negative attitudes and misconceptions exist not only among the general population but also among medical students and the medical profession at large.[1,2] Such attitudes have been a matter of concern worldwide as these not only make psychiatry a less favorite career choice for undergraduate medical students but also affect the care of patients with mental illness adversely.[3] This becomes all the more important in a country like India where the number of psychiatrists is very low and most of the mental health care is delivered by general physicians.

Galka et al[4] showed that a rotation in psychiatry made positive changes in students' perception of mental illness and their awareness of social and biological etiological factors operative in psychiatric disorders. Feifel et al [5] suggest that the misconceptions associated with psychiatry and mental illness could be corrected by the medical teaching. But studies which show no or negative attitude of medical students towards patients with mental illness after a rotation in psychiatry raise concerns regarding the efficacy of psychiatric clerkship.[6]

In India, like most South-Asian countries, emphasis on training in psychiatry during undergraduate training is dismally low.

Undergraduate medical students are exposed to psychiatry in third year for only 15-20 hours by theory lectures, and a 2-week posting of 2-3 hours per day in psychiatry ward where they work up a case followed by discussion with a senior registrar or consultant.

The present study has focused on the impact of psychiatric clerkship on the knowledge about psychiatry and attitudes of medicals students towards patients with mental illness.

Methods

The participants comprised of medical students in their first and fourth year. The medical students in their first year, had no exposure to medicine or psychiatry and were termed as 'pre- exposure' group. The medical students in their fourth year had completed their psychiatry clerkship and termed as 'post-exposure group'.

The final study sample comprised of 143 students in the 'pre- exposure' group and 142 students in the 'post- exposure 'group (overall response rate: 94%). Anonymity of respondents was ascertained for all the participants.

Tools

The participants were assessed using following scales: Attitudes Towards Disabled Persons (ATDP), a 20-item likert- type scale devised by Yuker et al.[7] Though commonly used for various physical disabilities, it was designed to be used for any kind of disability, including mental disability. Response categories range from +3 (agree very much) to-3 (disagree very much). Low scores on the scale indicate unfavorable or negative attitudes.

Questions related to the etiology of psychiatric disorders and the reasons for hospitalization of patients with mental illness were taken from the questionnaire used by Yamamoto et al[8] in their survey of medical students.

We calculated Cronbach alpha reliability coefficient values to determine the internal consistency of both the scales and obtained satisfactory values.

Statistical analysis

Data was analyzed using software SPSS 15. For the purpose of analysis, individual items were merged into two categorical values: agree encompassed 'strongly agree', 'agree' and 'slightly agree;' disagree consisted of 'strongly disagree', 'disagree' and 'slightly disagree.' Discrete variables were then analyzed by chi square test. Data from ATDP scale was also subjected to factor analysis with varimax rotation. Eight factors with Eigen value greater than unity were computed (Table 1).The same number of factors was indicated by Scree plot.

Results

Mean ATDP scores of 'pre-exposure' (68.11 ± 6.69) and 'post-exposure' (68.00 ± 6.79) groups did not differ significantly. The ATDP scores for both groups indicate unfavorable attitudes.

By principal component factor analysis of the ATDP scale, eight factors were obtained and these explained 59% of the rotated and unrotated variances (Table 1). Eight factors and their item loadings with absolute value greater than 0.3 are shown in Table 2. Of 20 items, 13 loaded only on one factor each and seven items loaded on two factors each. The factor I indicates the negation of normalcy of people with mental illness. Factor II pertained to the items denoting the inability of patients with mental illness to lead a normal social life. Factors III, VI and VII considered these patients to be asocial, worrisome and bad tempered. Factors IV and V negated the ableness of these patients and suggested to provide special arrangements for them. Factor VIII reflected the hostile attitudes

of students suggesting that parents of children with mental disability needed to be strict and that there is no need for special schools for these children.

The two groups did not differ markedly on their knowledge about etiology of mental illness (Table 3). Except for two items, both groups did not differ in their responses to the reason for hospitalization (Table 4). There was no significant gender difference between the two groups on both the scales.

Discussion

The medical students in the study sample had unfavorable attitudes towards patients with mental illness and the psychiatry clerkship did not make any difference. Similar findings have been reported by many other studies.[9-12] Some studies that report a positive change in attitudes have shown this to be transient and that attitudes have been shown to become more negative after graduation.[13,14] Other authors have reported

Table 1: Factor variance with varimax rotation

Factor	Eigenvalue	Percentage of variance	Cumulative percentage
I	2.571	12.856	12.856
II	1.816	9.082	21.938
III	1.540	7.698	29.636
IV	1.391	6.956	36.592
V	1.223	6.114	42.706
VI	1.140	5.701	48.407
VII	1.096	5.482	53.889
VIII	1.005	5.027	58.916

Table 2: Rotated factor loadings for ATDP scale items greater than 0.3

Items	I	II	III	IV	V	VI	VII	VIII
Impossible to lead a normal life		.842						
Cannot have a normal social life		.791						
Upto the government to take care of					.763			
Live and working special communities					.694			
No harder to get along with	-.652				.542			
Same as other people	-.655							
As happy as other people	-.570							
Usually easier to get along with	-.552							
Just as sensible	-436		.497					
Worry a great deal			.625					
Feel sorry for themselves			.676					
Can't expect too much			-.435					
Can't be expected to meet standard				.540				
More easily upset				.653				
Tend to keep to themselves				.555				.811
Often grouchy				.660				.783
Have to be careful what you say								.700
Feel they are not good as others								
Children treated less strictly								
There shouldn't be special schools								

Table 3: Knowledge about etiology of mental illness

	Exposure	Agree	Disagree	χ^2	p
It is possible that any person could develop a mental disorder	Pre	141	2	0.211	0.646
	Post	139	3		
A mental disorder is an illness like any other illness	Pre	116	27	0.574	0.488
	Post	120	22		
A mental disorder is curable if person receives early treatment	Pre	134	9	0.230	0.631
	Post	131	11		
All mental disorders are hereditary	Pre	7	136	0.280	0.597
	Post	9	133		
Mental disorders can be caused by supernatural powers like God, Mana or supernatural spirits	Pre	16	127	0.134	0.715
	Post	14	128		
All mental disorders are caused by stress	Pre	79	64	1.954	0.162
	Post	90	52		
Mental disorders are caused by socio-economic conditions	Pre	134	9	0.064	0.800
	Post	132	10		

Pre-exposure: 1st year medical students; Post-exposure: 4th year medical students

Table 4: Knowledge about reason for hospitalization of mentally ill persons

	Exposure	Agree	Disagree	p
For making a diagnosis	Pre	96	47	0.129
	Post	83	59	
For examinations	Pre	110	33	0.024
	Post	92	50	
For drug therapy	Pre	101	42	0.969
	Post	100	42	
For psychotherapy or counselling	Pre	125	18	0.237
	Post	117	25	
For controlling a patient's problem behaviour	Pre	128	15	0.557
	Post	130	12	
For economic profit for the mental hospital	Pre	9	134	0.631
	Post	11	131	
For providing daily life care and guidance in living skills	Pre	114	29	0.860
	Post	112	30	
For electric convulsive therapy	Pre	109	34	0.216
	Post	99	43	
For social rehabilitation	Pre	109	34	0.136
	Post	97	45	
For providing the patient psychological relief from burden of work or school	Pre	49	94	0.509
	Post	54	88	
For providing an opportunity for adjustment of personal relationships in the family environment	Pre	82	61	0.864
	Post	80	62	
For safety of the community	Pre	69	74	<0.001
	Post	99	43	

Pre-exposure: 1st year medical students; Post-exposure: 4th year medical students

positive change in the attitudes, findings contrary to our findings.[8,15-18] These differences can be explained and attributed to the amount of time as well as the intensity of training undergraduate students received. In addition, social and cultural factors can contribute to fears and stigma attached to mental illnesses.

McParland et al[6] found that changes in student's attitudes could be predicted by their experiences during the course. Result of our study support the conclusion that theoretically oriented teaching methods and contact with psychiatric patients limited only to working up the cases during clinical posting (2 hours per day for 12-14 days) do not foster personal experience and are therefore partly responsible for the absence of any change in student's attitudes.

Further, such teaching methods did not enhance the knowledge of students about psychiatry. This finding is consistent with some previous research[19] but is contrary to other studies.[4, 16, 20, 21]

Williams et al[22] and McParland et al[6] suggest that the direct and personal contact between medical students and patients with mental illness has greater effect on bringing a positive change in attitudes than didactic teaching. Similar conclusions have been drawn by other researchers also.[16,23,24] Research has shown that greater exposure to and direct working with mentally ill persons during medical training decreases fears and creates a positive attitude.[16,23]

Our observation of lack of gender difference in both groups is consistent with the findings of Yamamoto et al[8] but is not in keeping with other studies which showed that females tend to have more positive attitudes than males.[16,25]

The limitations of the study need to be considered. It was a cross-sectional study using paper and pencil assessments. However, students who had completed their psychiatry clerkship were screened after 2 years, not immediately after the completion of posting as has been done in other studies. This time gap between clerkship and assessment would have controlled the desirable response as well as the immediate effect of training on knowledge and attitudinal shift.

These findings demonstrate the need for change in the current medical training system. Dogra et al[26] suggest that stigma and negative attitudes by students are the key issues that need to be addressed through good quality teaching by high profile, enthusiastic and committed teachers of psychiatry. Additionally, both the health and education sectors need to consider how they can effectively support teaching and contribute to the outcome of students having a positive attitude towards psychiatry as a discipline. Whether the implementation of a core curriculum in psychiatry for medical students prescribed by World Psychiatric Association[27] can bring about these desirable changes remains to be seen.

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Source of funding: Nil

Conflict of Interest: None declared

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Case Report

Parkinson's disease with psychosis: A difficult-to-manage case

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Abstract

The co-occurrence of psychosis with parkinson's disease needs a careful diagnostic evaluation and poses management dilemmas. The principles of pharmacotherapy for both disorders are quite different and opposite in approach. We discuss a case of parkinson's disease and paranoid schizophrenia, highlighting the diagnostic and management difficulties.

Key words: *parkinson's disease, psychosis, schizophrenia*

Introduction

Typically Parkinson's disease is a disease of old age while schizophrenia is a disorder of the young. The late age (> 40 years) for onset of schizophrenia may, however, be seen in up to 25% of cases.[1] The comorbidity of idiopathic Parkinson's disease with schizophrenia has been reported in several case studies, and psychotic symptoms may occur in 8-40% of the patients with Parkinson's disease.[2-9] Psychosis is either associated with the disease progression or, more commonly, as a side effect of the medications used for treating Parkinson's disease.

Treating schizophrenia in patients with idiopathic Parkinson's disease is a difficult task as treatment of either may affect the other disorder adversely.[10] We report a case of idiopathic Parkinson's disease who developed paranoid schizophrenia and presented significant management difficulties.

Case Description

Ms G, a 60 year female belonging to an urban Hindu nuclear family, was a known case of hypertension taking Tab. Atenolol 50 mg/day since early 2001. As per the patient and the key informant (her husband), she started having tremors in left upper limb since mid 2001. Over the next one year, the tremors progressed further and she started to have rigidity and fatigue of both limbs (left > right), reduced arm swing, short steps, shuffling gait and sialorrhea. In October 2002, she was diagnosed with idiopathic Parkinson's disease and started on Tab. Trihexyphenidyl 4 mg/day and Tab. Syndopa 125 mg/day. In 2004, she started having occasional forgetfulness about the commonly placed objects at home. Till 2006, she was under regular follow up with neurology department, and largely maintained well on following medications: Tab. Atenolol 25 mg, Tab. Trihexyphenidyl 8 mg, Tab. Syndopa 375 mg plain and 125 mg CR, Tab. Ropinirole 9 mg, and Tab. Amantadine 200 mg daily taken in divided doses.

In Sept 2007, she started hearing voices which were supposedly of a neighboring lady and occasionally of that lady's husband or other

persons in locality, who were actually nowhere nearby and whom others couldn't hear. She would hear these voices passing critical comments or discussing her activities, and sometimes the crying spells of the neighbor's son. She would hear these voices in clear consciousness, many times a day, for 5-30 minutes each time, and in almost every situation or time. Trying but failing to find the source of such voices, she would feel helpless and become irritable. She confronted that lady a few times, and hurled abuses against her and her family members. Claiming that the neighbor would kill her, she stopped talking to that neighbor and started advising caution to her family, while she herself started remaining vigilant about a possible murderous attack. She also claimed that this neighbor was able to know her thoughts through a transmitter. Reporting that she felt her abdomen had become lighter, she claimed the neighbor was controlling her bowel functions and had removed her abdominal organs. She would report sensations of small animals, flowers or tiny newborn babies wandering in her abdomen, and entering and coming out through her vagina. A 'normal' abdominal CT scan, done in early 2007, failed to counter her convictions.

Later she also started voicing death wishes. She would be restless, agitated and would fail to do her housework properly. She had sleep disturbances in the form of early awakening, and later inability to remain asleep. A psychiatric referral was sought in view of her worsening condition and she was on regular follow up since September 2007. Her initial mental status examination revealed delusions of persecution and control, and bizarre delusions with somatic and auditory (commenting and discussing) hallucinations. She was diagnosed with Psychosis (? organic) and Parkinson's disease, and was prescribed Tab. Quetiapine 100 mg and Tab. Clonazepam 0.5 mg daily. In view of lack of response after a month's time, Tab. Quetiapine was switched over to Tab. Olanzapine (5 mg increased to 15 mg daily over a week). Due to adverse effects of slurred speech and increased tremors, Tab Olanzapine was changed to Tab. Aripiprazole 15 mg daily. After 2 weeks, lack of response resulted in Aripiprazole being stopped and Tab. Quetiapine being restored - with the dose being gradually increased from 100 to 300 mg daily.

High suicidal risk management was instituted, and behavioral measures were explained to handle irritability and anger. Neurology liaison was sought for rationalizing antiparkinsonian medications. In view of the possibility of increase in psychiatric symptoms after increasing dose of Tab. Ropinirole from 6.75 mg to 9 mg daily in September 2007, the dose was tapered back to 6.75 mg daily but without any improvement over the next two months. Due to the weight loss of about 12 kg in 1 year, the possibility of paraneoplastic limbic encephalitis was entertained and ruled out by systemic examination, routine biochemistry, and contrast enhanced MRI brain - all being 'normal'. With no improvement on reducing and rationalizing antiparkinsonian medications and no abnormality detected in routine investigations and brain imaging, a final diagnosis of paranoid Schizophrenia was made alongside Parkinson's disease. The patient and her family members were educated about Schizophrenia, Parkinson's disease, and the medication side effects for both disorders. A month's treatment with Tab. Quetiapine 300 mg resulted in perceived improvement of nearly 70%, with the brief psychiatric rating scale score falling from 85/159 to 36/159.

Auditory hallucinations, irritability and anger outbursts had reduced significantly in 2007 but reemerged after about one year and

persisted despite the dose of quetiapine being gradually increased to 800 mg by 2009. Hence, in March 2010 after due education of the patient and the family members and protocol investigations – clozapine was instituted with the dose being hiked gradually to 175 mg daily by June 2010. As she developed marked fatigue, reduced appetite and sedation, the dose of quetiapine was gradually reduced from 800 mg to 600 mg daily. Lack of improvement and the need for regular complete blood counts made the family insist on the clozapine stoppage (achieved by October 2010).

Subsequently her hearing-voices, suspiciousness and irritability increased, so that by end 2010 Tab. Quetiapine had to be increased from 600 mg to 800 mg daily and later Tab. Olanzapine 5 mg/day and Tab. Clonazepam 0.25 mg s.o.s had to be added.

For the last two years, she had significant and progressive memory disturbances, misplacing the commonly used household objects and forgetting to add sugar or salt while preparing tea or vegetables along with substantial difficulty in household chores including preparing the meals. Following this, she started requiring constant help in managing her daily activities like hair combing, selecting properly matched dresses, un/buttoning and putting on/off dresses, and arranging/ organizing her personal and household belongings.

She did not cooperate for detailed neuropsychological testing initially; in later psychometric testing significant impairment was seen in perceptuo-motor functions (BVMGT error score=14), intelligence (IQ=60) and memory (maximum in remote and recent memory, immediate recall, new learning, and visual retention). In view of these symptoms, additional diagnosis of dementia in parkinson's disease was made, and she was started on Tab. Donepezil 5 mg hs followed by Tab. Memantine 5 mg OD, however both were discontinued as she did not tolerate them.

She and her family had refused the option of electroconvulsive therapy. For her distressing hallucinations and delusions cognitive behavior techniques were attempted but she did not comply with the instructions. Currently she is maintaining on Tab. Quetiapine 800 mg/day, Tab. Olanzapine 5 mg/day, T. Clonazepam 0.25 mg tds, T. Syncapone (carbidopa + levodopa + entacapone) 150 mg five times a day and Tab. Ropinirole 2 mg thrice daily. The parkisonian features are relatively controlled, but she continues to be dependent on family for changing clothes and movement outside home, and is disturbed due to the voices, suspiciousness, irritability, sadness, and weakness.

Discussion

Treating psychosis with parkinson's disease is a delicate process as medications for one may adversely affect the management of the other disorder.[10] Finding the proper pharmacological treatment to control both disorders may turn into a dilemma in many of such cases. Several issues related to diagnosis and management may pose clinical challenges.

Initially the possibility of drug induced psychosis was kept in this patient, but no improvement was noted on reducing the dose of antiparkinsonian medications and hence, the diagnosis was revised to paranoid schizophrenia. If psychosis appears to be drug-induced, then withdrawal of antiparkinsonian medication may have to be contemplated, if feasible. In such a case, the following order for withdrawal is recommended: anticholinergics, selegiline, amantadine, dopamine agonists.[11]

In conjunction to anti-parkinsonian treatment, antipsychotic medication is initiated for persistent and problematic psychosis.[12]

Typical antipsychotics are not recommended, because of the significant risk of worsening of parkinsonism.[13] The only drug with confirmed benefit without worsening parkinsonism is clozapine; open-label trials involving over 400 patients and two multicenter, placebo-controlled, double-blind trials having demonstrated its effectiveness in treating the psychosis. It improves tremor, does not worsen other motor functions to any significant extent, and is safe at low doses. Limited data provide conflicting information on both risperidone and olanzapine. Quetiapine seems to be well-tolerated with relatively less worsening of parkinsonian motor features compared to risperidone and olanzapine.[14]

Our patient had significant cognitive impairments for which differentials of dementia with lewy bodies (DLB) and dementia with Parkinson's disease were considered. But as she didn't report visual hallucinations and impairment in attention, the possibility of DLB was ruled out.[15] Temporal sequence of symptoms was also not in favor of DLB as our patient was diagnosed with Parkinson's disease in 2001 and cognitive impairments had started manifesting since 2004 and were significant since 2010. While DLB should be diagnosed when dementia occurs before or concurrently with Parkinsonism (if it is present), it should not be diagnosed when dementia arises in the case with established Parkinson's disease.[15] Thus we finalized the diagnoses of dementia with parkinson's disease.

This patient did not tolerate even the lower doses of several medications to treat psychosis and dementia. Patients with parkinson's disease are frequently elderly and before initiating the anti-psychotic agents, a careful consideration is required for possible adverse-effects, drug-drug interactions and impact on medical comorbidites, if any. This case illustrates the difficulties encountered in managing a patient with schizophrenia comorbid with idiopathic Parkinson's disease.

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Source of funding: Nil

Conflict of Interest: None declared.

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Case Report

Clinical presentation of brain tumor as depression: A case report and brief review

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Abstract

The neurologically silent brain tumors may present initially with mood and behavioral symptoms closely mimicking a primary psychiatric illness. We present the case of a 45 years old male who presented with symptoms suggestive of a moderate depressive episode, however subsequent examination, investigations and clinical course revealed an intracranial space occupying lesion suggestive of meningioma.

***Key words**: brain tumor, meningioma, depression*

Introduction

Intracranial Space Occupying Lesions (ICSOL) particularly brain tumors presenting as psychiatric illness is well documented.[1-4] Patients with lesions in neurologically silent brain areas may present only with symptoms of depression, anxiety states, hypomania, schizophrenia, anorexia nervosa or cognitive decline.[1,5,6] The frequency of this association depends on the location of tumor, with frontal, temporal and diencephalic neoplasms being most commonly associated with neuropsychiatric symptoms.[7] In most cases, slow growing frontal meningiomas are responsible and in fact, psychiatric symptoms may be the only initial manifestation of meningiomas of brain in a significant number of cases.[1,8] The index case shows that brain tumors can be neurologically silent for a sufficient period of time and may manifest with psychiatric symptoms.

Case summary

Mr. S, a 45 years old married male, factory worker from a lower socio-economic status family presented to Psychiatry OPD of Institute of Human Behaviour and Allied Sciences **(**IHBAS), Dilshad Garden Delhi, which is a state-run tertiary care Neuro-psychiatry Institute in Northern India. For the preceding two months, there was a distinct change in the mood state of the patient. Initially he started remaining sad for several hours of the day, which progressed gradually to almost whole of the day. He also began to lose interest in previously pleasurable activities. Gradually, he also started feeling lethargic and would get tired easily on doing less than half of the work which he used to do comfortably previously. After around one month of start of his illness, he also started having frequent crying spells without any apparent reasons. His sleep got reduced by 2-3 hours from his usual self and his appetite as well as food

intake also reduced gradually. For the previous two months, he also started experiencing dull, holocranial headache which was on and off initially, and would get relieved with over-the-counter analgesics but gradually his headache became continuous and would be worse in the morning when it would also be associated with nausea and no relief after analgesics. He was an occasional drinker, but had started taking one quarter of alcohol 4-5 times in a week over past one and a half years. However, he was abstinent from alcohol in preceding 2-3 months. There was no history of head injury, visual impairment, seizures, misrecognition or urinary incontinence. There was no past or family history of psychiatric illness and he had well adjusted pre-morbid functioning. His general physical examination and systemic examination including neurological examination was unremarkable. On mental status examination, he was conscious, cooperative appropriately groomed and was maintaining adequate eye contact and rapport was easily established. His psychomotor activity and speech production were reduced with increased reaction time, speech was relevant, coherent and goal directed. The affect was depressed with decreased range and reactivity. Depressive cognitions were present, but there was no death wish or suicidal ideation. The higher mental functions were intact and insight into illness was present. His complete blood counts, random blood sugar, liver function tests, kidney function test, serum electrolytes and ultrasound abdomen were within normal limits.

An ICD-10 diagnosis[9] of Depressive episode of moderate severity was made along with alcohol harmful use-currently abstinent. He was started on Tablet Escitalopram 10 mg per day and was advised to take it regularly. Even after three weeks of treatment, there was no improvement in his depressive symptoms and his headache further worsened. He was brought to the emergency department in an apparent delirium. He was kept in emergency room for observation and further evaluation. In view of worsening of his clinical condition, neurology consultation was sought and MRI brain was done which revealed a well marginated, extra axial lesion (67 mm x 63 mm x 72 mm) arising from planum sphenoidale causing buckling of underlying cerebral hemisphere with mass effect suggestive of meningioma. His fundus examination revealed mild papilledema. The diagnosis was revised to organic depressive disorder as per ICD-10.[9] He was referred to neurosurgery department for further management of brain meningioma. Though he was advised to attend psychiatry OPD, but he did not report subsequently and was lost to follow up.

Discussion

Occurrence of psychiatric symptoms with brain tumors and other brain lesions has been known for a long time.[1,2,10-12] Psychiatric manifestations may be in the form of depression, anxiety disorders, personality changes, mania, psychosis, cognitive deterioration, and anorexia nervosa.[8,10,13,14] One study reported that 1 in 1,000 of hospitalized psychiatric patients had brain tumors and it was 20 times higher than that in general population.[15]

The index case lends support to the same, as this patient initially presented with depressive symptoms and headache. MRI brain revealed Meningioma arising from planum sphenoidale which may have caused depressive symptoms as there was no past or family history of depression in this patient. A study by Gupta and Kumar[8] reported that 21% of patients with meningiomas presented with psychiatric symptoms, including depressive illness and/or anxiety and personality-related changes, in the

absence of neurological signs. It means that, in some cases, brain tumors may present with psychiatric symptoms only and making detection of a brain tumor extremely difficult.

Many neuro-surgeons have encountered patients with frontal meningiomas who have received prolonged psychiatric care before their tumors were diagnosed. A history of psychiatric symptoms for many years before tumor diagnosis would not be unprecedented. Hunter et al[5] in one series of parasaggital meningiomas, had found that 8% of patients had history of 10-37 years of psychiatric symptoms before diagnosis of meningioma. Williams and Sinar[16] have reported that depression caused by intracerebral meningioma is relived by leucotomy. The psychiatric symptoms caused by organic brain disorder may at first respond well to psychiatric treatment, but these cases need neurosurgical intervention as definitive treatment. However, the course of psychiatric symptoms after neurosurgical intervention is not very well known.

In cases with brain tumors, generalized neurological symptoms are nausea, vomiting, and mental-status abnormalities. These are caused by increased intracranial pressure due to mass effect and disruption of blood-brain barrier, causing diffusion of water, electrolytes, and proteins into neural tissue.[17,18] The most common generalized symptom is headache, which occurs in half of all patients with gliomas and in one third of all patients with meningiomas. The index case did have headache which was initially seen as a somatic complaint in the background of depressive symptoms.

Irreversible loss of myelin and axons in the frontal areas of brain surroundings the tumor contributes to neuro- psychiatric symptoms in patients of meningiomas.[6]

The index case presented with psychiatric symptoms before an actual diagnosis of meningioma was made which further lends support to the fact that the initial presentation of brain tumors (meningiomas) might be confusing i.e. without any apparent symptoms and signs of raised intra-cranial tension; hence it needs high degree of clinical suspicion for timely detection and management of such cases. (box 1)

The psychiatrist must have a high index of suspicion for underlying brain lesion in such cases and look for neurological symptoms and signs. Therefore, brain imaging studies are indicated when there are some atypicalty in mental status or appearance of neurological symptoms and signs. A delay in detection of underlying lesion might have a direct negative impact on treatment outcome and quality of life of such patients.

To conclude, patients with brain tumors might present with a variety of psychiatric symptoms for a sufficient period of time in the absence of neurological symptoms and signs. Psychiatric presentation of brain tumors especially frontal meningioma is well established. The clinicians should have high index of suspicion in cases having psychiatric manifestations in the absence of neurological symptoms and particularly where the symptoms are not responding to adequate doses of psychotropic medications.

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Box 1: Key points

- Psychiatric symptoms appear in about half of the patients with gliomas and in one third of patients with meningiomas.
- Tumours of frontal, temporal and diencephalic areas are most commonly associated with neuro-psychiatric symptoms.
- Common psychiatric manifestations are in the form of depression, anxiety, personality changes, mania, psychosis, cognitive deterioration, and anorexia nervosa
- Literature suggests an average delay of several months to years and at times up to few decades of psychiatric symptoms before diagnosis of brain tumors.
- Such cases need a comprehensive assessment in the form of complete neurological evaluation and consulta-tions from neurologist and neuro-surgeon along with neuro-imaging to rule out structural abnormalities of brain.
- Indicators of suspicion for presence of underlying brain tumour:
  - Unusual presentation and rapid progression of illness.
  - Psychiatric symptoms not responding to adequate doses of psychotropic medications for considerable period.
  - Patient with psychiatric manifestations presenting in an apparent state of delirium.

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Source of funding : Nil

Conflict of Interest : None declared

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Inspirations from history

A simple, Nobel prize winning experiment by Otto Loewi

Raman Deep Pattanayak, Rajesh Sagar

Carrying forward the theme of '*simple observations, great breakthroughs*', in this issue, we reminisce the story behind the discovery of chemical transmission across synapses, which, later on, had wider implications for several neuropsychiatric disorders and their treatment in neuroscience. The simple yet brilliant experiments of Otto Loewsi in 1921 were first to establish the chemical nature of transmission, for which he was awarded the Nobel Prize in physiology or medicine (1936).[1] He shared it with Henry Dale, who first identified acetyl choline in 1914 and did much of the groundwork which later on facilitated this discovery.[2] They had met in early phase of their careers and became lifelong friends ever since, but carried out their research separately.

Electrical vs chemical transmission: the debate

In the early part of 20th century, there were no known neurotransmitters and many of the technological advances to detect the synaptic chemicals were not yet available. The dominant view was that synaptic transmission was electrical in nature. One of prominent neurophysiologist and later a nobel laureate, John Eccles, was the principal supporter of the electrical transmission ('spark') theory, and opposed possibility of a chemical basis as he felt that the synaptic transmission is too rapid to have a chemical origin. There were often strong debates between him and his protagonist, Henry Dale (favoring the chemical theory). These famous *'spark'* versus *'soup'* debates (electrical vs chemical) invariably ended up favoring the former, and the possibility of a chemical was sidelined and even ridiculed for many years.[3]

Life and Experiment of Otto Loewi [1]

Otto Loewi (1873-1961) studied medicine at Strassburg, Germany and obtained a degree with a thesis on *'techniques of isolations of frog's heart.'* He did not practice as a clinician as he reported being frustrated at high mortality rates of tuberculosis and pneumonia patients during the year he spent at a city hospital. Instead, he took a research position at the laboratory of Hans Meyer in 1902. He spent next six years on research in glucose metabolism, his most notable work being the demonstration of protein synthesis from amino acids for first time and the discovery that cocaine, in small dose, potentiate the responses of sympathetically innervated organs to epinephrine and sympathetic nerve stimulation.[4,5]

In 1908, Loewi was appointed professor of pharmacology at the University of Graz, Austria. He established himself in the university as a popular teacher and dean of the institute. He continued his research on various aspects of glucose metabolism and hyperglycemic effects of epinephrine. During all these years till 1921, his work did not involve the study of synaptic transmission, though

he was generally aware of the ongoing debates. This changed quite suddenly.

In the year 1921, Otto Loewsi conducted an experiment (apparently in the middle of the night after getting inspired by a dream). The experiment, per se, was very simple and became prototype for all investigations of chemical factors in the nervous system.

…I awoke, turned on the light, and jotted down a few notes on a tiny slip of thin paper. Then I fell asleep again. It occurred to me at six o'clock in the morning that during the night I had written down something most important, but I was unable to decipher the scrawl. The next night, at three o'clock, the idea returned. It was the design of an experiment to determine whether or not the hypothesis of chemical transmission that I had uttered 17 years ago was correct. I got up immediately, went to the laboratory, and performed a simple experiment on a frog heart according to the nocturnal design. (Loewsi, 1960; p. 17)[6]

In the experiment, the hearts of two frogs were isolated, first one with the nerves intact and second one without nerves. He placed both of the hearts separately in a warm physiological solution (Ringer's solution), where the frog's hearts continue to beat for several hours. He stimulated the vagus nerve of the first heart for a few minutes and as expected, the heart slowed down. Then, he perfused the second heart with the Ringer's solution surrounding the first heart during vagus stimulation. To much of his excitement, he observed that the second heart slowed as if its vagus nerve had been stimulated. He repeated the same experiment with stimulation of the accelerator (sympathic) nerve, and found that the second heart started beating more rapidly after it was perfused with Ringer's solution from first heart.[4-6]

Thus, these experiments demonstrated that the nerves do not act directly, but rather release some chemical substances, which act on the effector organs. Loewi referred to the substances as Vagusstoff (stuff released from vagus) and Acceleransstoff (stuff released from accelerator/ sympathetic nerve), later identified to be acetyl choline and adrenaline respectively. Subsequent research demonstrated that the chemical neurotransmission occurs in all organs, including CNS synapses.

In the current practice and neuropsychiatric research, neurotransmitters are something which we take for granted in a wide range of disorders from Alzheimer's and Parkinson's disease to Schizophrenia, Nicotine dependence and other behavioral disorders as well as their medications. The experiment by Otto Loewsi played a small but key role in building the foundation for various other clinical and research developments.

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Source of funding: Nil

Conflict of Interest: None declared.

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List of Interesting articles

What is happening in research elsewhere?

- **Clinicopathological significance of psychotic experiences in non-psychotic young people: evidence from four population-based studies**
  British J Psychiatry 2012; 201: 26-32
  Existing research has shown that hallucinations and delusions are prevalent in the general population. The study used data from four population studies to investigate the relationship between psychotic symptoms and non-psychotic psychopathology in adolescents. Younger adolescents had a higher prevalence (21-23%) of psychotic symptoms than older adolescents (7%). Adolescents who reported psychotic symptoms were at particularly high risk of having multiple co-occurring diagnoses.
- **L-Methylfolate as Adjunctive Therapy for SSRI-Resistant Major Depression: Results of Two Randomized, Double-Blind, Parallel-Sequential Trials**
  Am J Psychiatry 2012; 169: 1267-74
  The authors conducted two multicenter sequential parallel comparison design trials to investigate the effect of L-methylfolate augmentation in the treatment of major depressive disorder in patients who had a partial response or no response to selective serotonin reuptake inhibitors (SSRIs). Adjunctive L-methylfolate at dose of 15 mg/day may constitute an effective, safe, and relatively well tolerated treatment strategy for patients with major depressive disorder who have a partial response or no response to SSRIs.
- **Clinical and Functional Outcome of Childhood Attention-Deficit/Hyperactivity Disorder 33 Years Later**
  Arch Gen Psychiatry 2012; 69: 1295-1303
  Prospective studies of childhood attention-deficit/hyperactivity disorder (ADHD) have not extended beyond early adulthood. This is a prospective, 33-year follow-up study of 133 men with ADHD in childhood and 136 without childhood ADHD. Probands had significantly worse educational, occupational, economic, and social outcomes; more divorces; and higher rates of ongoing ADHD but not more mood or anxiety disorders (P = .36 and .33) than did comparison participants. Findings highlight the importance of extended monitoring and treatment of children with ADHD.
- **Dopamine Synthesis Capacity in Patients With Treatment-Resistant Schizophrenia**
  Am J Psychiatry 2012;169:1203-10
  The authors tested the hypothesis that in patients with schizophrenia the response to antipsychotic treatment would be related to the severity of presynaptic dopamine dysfunction, as indexed using [^{18}F]-DOPA uptake positron emission tomography (PET). It was concluded that in some schizophrenia patients, antipsychotic treatment may be ineffective because they do not exhibit

the elevation in dopamine synthesis capacity that is classically associated with the disorder; this may reflect a different underlying pathophysiology or a differential effect of antipsychotic treatment

- **A decision analysis of long-term lithium treatment and the risk of renal failure**

  Acta Psychiatr Scand 2012;126:186-97

  The study aimed to establish whether lithium or anticonvulsant should be used for maintenance treatment for bipolar affective disorder (BPAD) if the risks of suicide and relapse were traded off against the risk of end-stage renal disease (ESRD). Decision analysis based on a systematic literature review with two main decisions: (1) use of lithium or at treatment initiation and (2) the potential discontinuation of lithium in patients with chronic kidney disease (CKD) after 20 years of lithium treatment. The final endpoint was 30 years of treatment with five outcomes to consider: death from suicide, alive with stable or unstable BPAD, alive with or without ESRD. At the start of treatment, the model identified lithium as the treatment of choice. Twenty years into treatment, lithium still remained treatment of choice. If CKD had occurred at this point, stopping lithium would only be an option if the likelihood of progression to ESRD exceeded 41.3% or if anticonvulsants always outperformed lithium regarding relapse prevention. At the current state of knowledge, lithium initiation and continuation even in the presence of long-term adverse renal effects should be recommended in most cases.

- **Cognitive Dysfunction and Anxious-Impulsive Personality Traits Are Endophenotypes for Drug Dependence**

  Am J Psychiatry 2012;169:926-36

  The authors assessed cognitive function and personality traits associated with drug dependence in stimulant-dependent individuals, their biological siblings without a history of drug dependence, and unrelated healthy volunteers (n=50 each). Deficits in executive function and response control as well as elevated anxious-impulsive personality traits were identified in both the stimulant-dependent individuals and in their non-drug-dependent siblings. The identification of addiction endophenotypes may be useful in facilitating the rational development of therapeutic and preventive strategies.

- **Latent *Toxoplasmosis gondii*: Emerging Evidence for Influences on Neuropsychiatric Disorders**

  (Review) J Neuropsych Clin Neurosci 2012;24:376-383.

  Toxoplasmosis gondii is present in about one-third of the world's population; once infected, hosts remain seropositive for life. Various studies worldwide have found personality/adjustment difficulties, such as increased anxiety, in otherwise-healthy seropositive individuals, and seropositivity in schizophrenia patients was found to be almost three times that of a control population. Unlike the acute form, chronic latent T. gondii infection resides in intact neurons; and there is considerable variation in findings of structures affected, although there does appear to be a predilection for dopaminergic neurons.

Instructions for contributors

The Journal of Mental Health and Human Behaviour (JMHHB) is the official publication of the Indian Psychiatric Society – North Zone, that considers for publication articles in all fields of Psychiatry. The Journal aims to provide an update on the research work in Northern India in the field of mental health. Submissions should be sent, preferably by e-mail, along with a covering letter and a contributor's form signed by all authors to:

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Editorial process

The manuscripts will be reviewed for a possible publication with the understanding that they are being submitted to one journal at a time and have not been published, simultaneously submitted, or already accepted for publication elsewhere. All submitted manuscripts shall undergo an editorial review initially. Manuscripts with insufficient originality, serious scientific flaws or absence of importance of message are rejected. Rest manuscripts shall be sent to expert reviewers without revealing the identity of the contributors to the reviewers. Within a period of three months, the contributors will be informed about the reviewers' comments and acceptance/ rejection of manuscript. Accepted articles would be copy-edited for clarity, readability, grammar, punctuation, print style and format.

Type of manuscripts

The Journal publishes editorials, review articles, original articles, brief communications, case reports and letters to editor. Editorials generally reflect on an important current theme of psychiatry. Review articles (up to 4,500 words, excluding abstract and references) summarize an important area of literature. Original articles describe an original research work (up to 3,500 words). Brief communications (up to 1,500 words) provide a short account of an innovative, novel work or preliminary findings from work still in progress. Case reports (up to 1,000 words) highlight an unusual case of significance to the field. Letters to editor (generally up to 500 words) can deal with a recently published article or personal observations on a theme of relevance or can be a short, succinct research-based letter.

From time to time, the journal shall also invite guest editorials, articles for debate, viewpoints, book reviews etc.

Preparation of manuscript

Manuscripts must be prepared in accordance with "Uniform requirements for Manuscripts submitted to Biomedical Journal" developed by International Committee of Medical Journal Editors (2006).The manuscript should be typed on A4 size (212 × 297 mm)

paper, with margins of 1 inch from all the four sides, using double-spacing throughout. Type or print on only one side of the paper and number the pages serially, beginning with the title page. Arrange manuscript in following order:

Title page

Mention the type of manuscript, title of the article, running title not more than 50 characters, names of the contributor (In full, first name, middle name, last name), along with designations and institutional affiliations, the name of the department(s) and institution(s) to which the work should be attributed. Designate a corresponding author with name, address, phone numbers, facsimile numbers and e-mail address of the contributor responsible for correspondence. Mention the total number of pages, tables and word counts separately for abstract and for the text (excluding the references and abstract). If the manuscript was presented at a meeting or conference, mention the related details.

Abstract page

It should carry the full title of the manuscript and an abstract (of no more than 250 words for original/review articles and 150 words for case reports). Abstract should briefly state the background, aims, methods, results and conclusion. Three to six keywords should be provided.

Main manuscript

It should be organized under four broad headings: Introduction, Material and methods, Results and Discussion. There should be a clear description of the sampling and statistical techniques used for the study.

Reports of clinical trials should be based on the CONSORT statement. Reporting guidelines for specific study designs should be followed. Refer to the following weblink:

http://www.equator-network.org/home/

When reporting experiments on human subjects, procedures followed should be in accordance with the standards ethical committee on human experimentation and with the Helsinki Declaration of 1975, as revised in 2000, of which a clear mention should be made in the text. The manuscript should ensure full confidentially in presentation of data and meet all ethical considerations. Avoid the duplication of findings between the tables and text. Discussion should be relevant and focused.

Acknowledgement

Specify contributions that need acknowledging, but do not justify authorship, such as general support by a departmental chair and acknowledgments of technical, financial and material support.

References

References should be numbered consecutively in the order of their first mention in text. Identify references in text by Arabic numerals in superscript. References cited only in tables or figure legends should be numbered in accordance with the sequence established by the first identification in the text of the particular table or figure. The titles of journals should be abbreviated according to the style used in Index Medicus. List the first six contributors followed by et al.

Standard journal article

- Seshadri L, George SS, Vasudevan B, Krishna S. Cervical intraepithelial neoplasia and human papilloma virus infection in renal transplant recipients. Indian J Cancer 2001; 38: 92-5.

Chapter in a book

- Phillips SJ, Whisnant JP. Hypertension and stroke. In: Laragh JH, Brenner BM, editors. Hypertension: pathophysiology, diagnosis, and management. 2nd ed. New York: Raven Press; 1995. pp 465-78.

Personal author

Book

- Ringsven MK, Bond D. Gerontology and leadership skills for nurses. 2nd ed. Albany (NY): Delmar Publishers; 1996.
  For further details, refer to the following weblink: http://www.nlm.nih.gov/bsd/uniform_requirements.html

Tables

Tables should be self-explanatory and not duplicate text material. Type each table with double-spacing on a separate sheet of paper. Limit number of tables to the minimum required.

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- Place explanatory matter in footnotes, not in the heading. Explain in footnotes all non-standard abbreviations or symbols that are used in each table.
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General rules for submission of IPS-NZ award papers

For any paper to be considered for an award, it shall be necessary for the author to submit four copies of the full paper to the Chairman, Awards Committee by a date determined by the Chairman, Awards Committee.

To be eligible for the award, the paper must fulfill each of the following criteria:

(a) It must be a research paper based on work done in India and must not have been published in a scientific journal nor presented at a National or Inter-national Conference.

(b) The principal author and at least 50% of all authors and the person presenting the paper must be members of the North Zone, I.P.S.

(c) The coauthors who are not members of the society are not eligible for receiving cash prize or certificate.

The full papers received for consideration for the Awards shall be considered by a panel of judges appointed by the Chairman, Awards Committee who shall select papers of sufficient merit for final rating at the time of presentation. Out of the papers considered to be of sufficient merit by majority of judges, the Chairman, Awards Committee shall select three papers for each award with the highest pooled percentage scores for presentation at the Annual Conference.

A panel of judges will be appointed by the Chairman, Awards Committee. Out of the total marks, 60% will be for preparation and compilation of the paper and 40% for its presentation at the Conference. The paper with the highest pooled rank order shall be declared the winner, In case of a tie, both the papers will be declared as joint winners.

All the authors of the Award winning papers, who are the members of the IPS, North Zone. shall be considered to have won the award and will be issued certificates and be eligible for the award money as follows:

(a) 25% of the money shall go to the author presenting the paper.

(b) The remaining 75% shall be distributed as follows:

  (i) If there are two authors who are eligible for the award money, 60% to the principal author and 40% to the co-author.

  (ii) If there are more than two authors who are eligible for the award money, 50% to the principal author and 50% to be equally divided amongst the co-authors.

If in the opinion of a majority of judges, no paper is of high enough merit, there will be no award that year.

No paper shall be eligible to context for an award where a member who has won that award in the immediately preceding year appears as an author or co-author.

None of the judges of the award and none of the members of the Awards Committee shall be contestant for any Award that year.

The assessment of papers by the panel of judges as certified by the Chairman, Awards Committee shall be ratified by the Executive Council of IPS (NZ).

The practical and logistic problems from time to time in assessment process will be dealt with appropriately by the Chairman Awards Committee in consultation with President.

General rules for submission of IPS-NZ award papers

No one paper or substantially similar paper shall win more than one award on the basis of presentation at the Annual Conference, in case more than one award is announced at a Conference.

The paper can be considered only for the category for which it has been nominated.

All the papers submitted for awards will be the property of the zone for publication in the Journal of the Society.

The authors should furnish a declaration containing following items at the time of submission.

(a) The Principal author and 50% of the co-authors are members of society

(b) This or substantially similar paper has not won an IPS North Zone Award earlier or been submitted for another award this year.

(c) This or substantially similar paper has not been published or been submitted for publication in any scientific journal.

(d) Consent from all authors about sub-mission of the paper and a certificate that there is no copy right infringement in the contents of the paper.

(e) None of the author has won the same awards in the immediate preceding year

SPECIFIC GUIDELINES

Dr. A.K. Kala Award

This award will be given for original research in Biological psychiatry. There is no age bar. Award Money: Rs. 2,500/-.

Dr. Buckshey Award

This award will be given to the paper presented by the member of North Zone IPS who is not above 35 years of Age at the time of presentation. Award Money Rs. 1000/- The paper must be accompanied with proof certifying age of the Principal/Presenting author.

Dr. G.C. Boral Award

There is no age bar to compete for this award. Award Money: Rs.1000/-

Nomination for Bombay Psychiatric Society Silver Jubilee Award (Best Paper of the conference):

All the award papers can compete for the best paper award. The authors, if they desire to compete for this award, should send a declaration about their desire and willingness to compete for the nomination for the BPS award. It may please be noted that the papers submitted for the Awards of IPS-North Zone will not be automatically considered for the nomination for the BPS Award, unless a specific declaration to that effect is provided in writing at the time of submitting the paper or before the last notified date for submission of the award papers.

Free papers (i.e. the papers other than the award papers) can also compete for the best paper award to the nomination for BPS award. For this, the authors of the free paper must submit four copies of the full text of their paper along with the declaration as explained above, to the Chairpersons, Awards Committee. This submission will have to be in addition to the four copies of abstract of the free paper to be submitted to the President.

The last date for sending the full text of the paper with the declaration will be the same as the last date notified for the submission of the Award Papers.

GUIDELINES FOR EVALUATION OF AWARD PAPERS

A panel of judges shall rate the papers. There shall be three judges in each panel. Out of the total numbers i.e. 100, 60% will be for preparation and compilation of the manuscript & 40% for presentation during the conference. The assessment of the written manuscript will be on the following pattern:

Written manuscript evaluation	**60 marks**
(a) Topic/Title, its relevance and methodology.	12
(b) Survey of literature/reference bibliography.	12
(c) Presentation of results/discussion.	12
(d) Conclusion and how far they are substantiated by the study.	12
(e) Clarity, lucidity, precision of language and over all elegance of paper.	12

Presentation during conference:	**40 marks**
(a) Style, clarity, compactness of expression and presentation	20
(b) Use of audiovisual aids (if any) appropriateness, quality visibility comprehensibility and novelty	10
(c) Response to points raised in discussion	10

*In case no paper is found to be of sufficient merit (e”50% marks), there shall be no award.

Panel for selection of best paper to be nominated for BPS award

There will be two panels of three judges, one for evaluation of manuscript and one for presentation, for award papers submitted, and the full papers/manuscripts of the free papers submitted for BPS award.

Presentation during conference	**25 marks**
(a) Style, clarity, compactness of expression and presentation.	10
(b) Response to points raised in discussion.	10
(c) Use of audiovisual aids, if any Appropriateness, quality, visibility, comprehensibility, and novelty.	5

Written manuscript evaluation	**75 marks**
(a) Topic Title its relevance and methodology.	15
(b) Survey of literature/reference bibliography.	15
(c) Presentation of results and discussion.	15
(d) Conclusion and how far they are substantiated by the study.	15
(e) Clarity, lucidity, precision of language and over all elegance of paper.	15

INDIAN PSYCHIATRY SOCIETY

NORTH ZONE

1. **Full name in block letter:**

   ……

   ……....

2. **Place & Date of Birth** ……....

3. **Mailing Address** ……

   ……

   ……..…….

Affix Photo

4. **Permanent Address** (if different from the above):

   ……

   ……

   ……

5. **Email id** ……... **Contact No**……...

Remarks by Gen Secretary and Treasurer

Decision by the Council

President

Date of Election

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6. **Qualifications:**

(Bachelor's degree and above): Degree/ Diploma University Month & Year

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7. **Professional training in your specialty:**

Designation Name of Institution From to (Month & Year)

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8. Appointment and further experience (List all appointments held since graduation and or completion of professional training in chronological order. Also mention here, full time private practice).

Designation	Name & Address	From to (Month & Year)

9. Additional information (List honours, distinctions, awards or any other important information):

   .....

10. Proposed by Seconded by
    (Must be by a fellow of the Indian Psychiatric Society, North Zone)

    Name in block letters …….... ……

    Signature & Date …….... ……

    Name in block letters …….... ……

    Signature & Date …….... ……

11. Which category of membership are you applying for?

LIFE FELLOW/LIFE ORDINARY MEMBER/LIFE ASSOCIATE MEMBER

I Solemnly affirm that :.....

1. I will uphold the aim and objectives of the Indian Psychiatric Society, North Zone to the best of my ability and agree to abide by its constitution and bye-laws which come to force time to time
2. I am /applied for a member of Indian Psychiatric Society.
   My Membership Number of IPS is ……

Date Signature

Fee Details:
Life Fellow = Rs 1500/-
LAM / LOM = Rs 1000/-

Application form should be accompanied by a photocopy of qualification attested by either proposer or seconder. **DD in favour of Indian Psychiatric Society –NZ, Payable at Chandigarh** and should be sent to:

Dr. Ajeet Sidana
Treasurer, IPS-NZ
Department of Psychiatry, Government Medical College & Hospital, Sector 32, Chandigarh 160030